

1969

Water Resources Data for Indiana

Part 1. Surface Water Records

Part 2. Water Quality Records



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Prepared in cooperation with the State of Indiana
and with other agencies

CALENDAR FOR WATER YEAR 1969

OCTOBER 1968

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JUNE 1969

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AUGUST 1969

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SEPTEMBER 1969

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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
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Indianapolis, Indiana 46204

1970

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WATER RESOURCES DATA FOR INDIANA, 1969

PART 1. SURFACE-WATER RECORDS

INTRODUCTION

Surface-water records for the 1969 water year for Indiana, including records of streamflow or reservoir storage at gaging stations, partial-record stations, and miscellaneous sites, are given in this report and their locations shown in figures 1 3. Records for a few pertinent gaging stations in bordering States also are included. The records were collected and computed by the Water Resources Division of the U.S. Geological Survey under the direction of M. D. Hale, district chief. These data represent that portion of the National Water Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies in Indiana.

Through September 30, 1960, the records of discharge and stage of streams and canals 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."

Beginning with the 1961 water year, surface-water records have been released by the Geological Survey in annual reports on a State-boundary basis. Distribution of these reports is limited; they are designed primarily for rapid release of data shortly after the end of the water year to meet local needs. The discharge and reservoir storage records for 1961-65 also will be published in a Geological Survey water-supply paper series entitled "Surface Water Supply of the United States 1961-65."

COOPERATION

The U.S. Geological Survey and organizations of the State of Indiana have had cooperative agreements for the systematic collection of surface-water records since 1930. Organizations that supplied data are acknowledged in station descriptions. Organizations that assisted in collecting data through cooperative agreement with the Survey are:

State Department of Natural Resources, F. P. Provost, director,
succeeded by J. R. Lloyd, through Bureau of Water and Mineral
Resources, W. J. Andrews, deputy director.

State Board of Health, A. C. Offutt, commissioner, and B. A. Poole, Assistant Commissioner for Environmental Health.

State Highway Commission, R. W. Steele, chairman, R. H. Harrell, executive director, and F. L. Ashbaucher, chief engineer.

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

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

Acre-foot (AC-FT, acre-ft) is the 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.

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, 1.9835 acre-feet, or 646,317 gallons, and represents a runoff of 0.0372 inch from 1 square mile.

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.

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, an artificial structure, or a uniform cross section over a long reach of the channel.

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.

Cubic foot per second (cfs) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second, and is equivalent to 7.48 gallons per second or 448.8 gallons per minute.

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

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

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

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

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

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.

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.

WRD is used as an abbreviation for "Water-Resources Data" in the summary REVISIONS paragraph to refer to previously published State annual basic-data reports.

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

SPECIAL NETWORKS AND PROGRAMS

Hydrologic bench-mark station is one that provides hydrologic data for a basin in which the hydrologic regimen 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.

DOWNSTREAM ORDER AND STATION NUMBERS

Records are listed in a downstream direction along the main stream, and stations on tributaries are listed between stations on the main stream in the order in which those tributaries enter the main stream. Stations on tributaries entering above all mainstream stations are listed before the first mainstream station. Stations on tributaries to tributaries are listed in a similar manner. In the list of gaging stations in the front of this report the rank of tributaries is indicated by indentation, each indentation representing one rank.

As an added means of identification, each gaging station and partial-record station has been assigned a station number. These are in the same downstream order used in this report. In assigning station numbers, no distinction is made between partial-record stations and continuous-record gaging stations; therefore, 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 6-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 SURFACE-WATER DATA

Collection and Computation of Data

The base data collected at gaging stations consists of records of stage and measurements of discharge of streams or canals, and stage, surface area, and contents of lakes or reservoirs. In addition, observations of factors affecting the stage-discharge relation or the stage-capacity relation, weather records, and other information are used to supplement base data in determining the daily flow or volume of water in storage. Records of stage are obtained from a water-stage recorder that gives a continuous graph 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, using the general methods adopted by the Geological Survey on the basis of experience in stream gaging since 1888. These methods are described in standard textbooks on the measurement of stream discharge. (See also SELECTED REFERENCES.) Surface areas of lakes or reservoirs are determined from instrument surveys using standard methods. The configuration of the reservoir bottom is determined by sounding at many points.

For a stream-gaging station 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, computation of flow over dams or weirs), velocity-area studies, and logarithmic plotting. The application of the daily mean gage heights to the rating table 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 basically the shifting-control method.

At some stream-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; at these stations the rate of change in stage is used as a factor in determining discharge.

At some stream-gaging stations the stage-discharge relation is affected by ice in 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 hydrologists, and comparable records of discharge for other stations in the same or nearby basins.

For a lake or reservoir station, capacity tables giving the contents for any stage are prepared from stage-area relation curves defined by surveys. Discharge over spillways is computed from a stage-discharge relation curve defined by discharge measurements. The application of the stage to the capacity table gives the contents, from which the daily, monthly, or yearly change in contents is computed.

If the stage-capacity curve is subject to changes because of deposition of sediment in the reservoir, periodic resurveys of the reservoir are necessary to define new stage-capacity curves. During the period between reservoir surveys the computed contents may be increasingly in error due to the gradual accumulation of sediment.

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 daily discharge or contents. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, the 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. Likewise daily contents may be estimated on the basis of operator's log, adjoining good record, inflow-outflow studies, and other information.

The data in this report generally comprise a description of the station and tabulations of basic data. For gaging stations on streams

or canals a table showing the daily discharge and monthly and yearly discharge is given. For gaging stations on lakes and reservoirs a monthly summary table of stage and contents or a table showing the daily contents is given. Tables of daily mean gage heights are included for some streamflow stations and for some reservoir stations. Records are published for the water year, which begins on October 1 and ends on September 30. A calendar for the 1969 water year is shown on the reverse side of the front cover to facilitate finding the day of the week for any date.

The description of the gaging station gives the location, drainage area, period of record, type and history of gages, average discharge, extremes of discharge or contents, 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 or other agencies. Periods for which there are published records for the present station or for stations generally equivalent to the present one are given under "PERIOD OF RECORD." The type of gage currently in use, the datum of the present gage above mean sea level, and a condensed history of the types, locations, and datums of previous gages used during the period of record are given under "GAGE." In reference to datum of gage, the phrase "mean sea level" denotes "Sea Level Datum of 1929" as used by the Topographic Division of the Geological Survey, unless otherwise qualified. The average discharge for the number of years indicated is given under "AVERAGE DISCHARGE"; it is not given for stations having fewer than 5 complete years of record or for stations where changes in water development during the period of record cause the figure to have little significance. In addition, the median of yearly mean discharges is given for stream-gaging stations having 10 or more complete years of record if the median differs from the average by more than 10 percent. The maximum discharge (or contents) and the maximum gage height, the minimum discharge if there is little or no regulation (or the minimum contents), and the minimum gage height if it is significant are given under "EXTREMES." The minimum daily discharge is given if there is extensive regulation (also the minimum discharge and gage height if they are abnormally low). In the first paragraph headed "Current year:" the data given are for the complete current water year unless otherwise specified. In the second paragraph under "EXTREMES" headed "Period of record:" the data given are for the period of record given in the PERIOD OF RECORD paragraph. Reliable information concerning major floods that occurred outside the period of record is given in the third or last paragraph under "EXTREMES." Unless otherwise qualified, the maximum discharge (or contents) corresponds to the crest stage obtained by use of a water-stage recorder (graphic or digital); a crest-stage

gage, or a nonrecording gage read at the time of the crest. If the maximum gage height did not occur at the same time as the maximum discharge or contents, it is given separately. Information pertaining to the accuracy of the discharge records, to conditions that affect the natural flow at the gaging station, and availability of Water Quality records, is given under "REMARKS"; for reservoir stations information on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir, is also given under "REMARKS."

Previously published records of some stations have been found to be in error on the basis of data or information later obtained. Revisions of such records are usually published along with the current records in one of the annual or compilation reports. In order to make it easier to find such revised records, a paragraph headed "REVISIONS (WATER YEARS)" has been added to the description of all stations for which revised records have been published. Listed therein are all the reports in which revisions have been published, each followed by the water years for which figures are revised in that report. In listing the water years only one number is given; for instance, 1933 stands for the water year October 1, 1932, to September 30, 1933. If no daily, monthly, or annual figures of discharge were revised, that fact is brought out by notations after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report in which the revised figure was first published is given. It should be noted that for all stations for which cubic feet per second per square mile and runoff in inches are published, a revision of the drainage area necessitates corresponding revision of all figures based on the drainage area. Revised figures of cubic feet per second per square mile and runoff in inches resulting from a revision of the drainage area only are usually not published in the annual series of reports.

The daily tables for stream-gaging stations give 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 discharge 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.

The monthly summary is given below the daily table. For stream-gaging stations the line headed "TOTAL" gives the sum of the daily figures; it is the total cubic feet per second per day for the month. The line headed "MEAN" gives the average flow in cubic feet per second during the month. The lines headed "MAX" and "MIN" give the maximum and minimum daily discharges, respectively, for the month. Discharge for the month also may be expressed in cubic feet per second per square mile (line headed "CFSM"), or in inches (line headed "IN."). Figures of cubic feet per second per square mile and runoff in inches are omitted if there is extensive regulation or diversion, or if the drainage area includes large noncontributing areas.

For reservoir stations the monthly summary gives the elevation (or gage height) at the end of the month and the change in contents during the month. For reservoir stations the yearly summary gives the change in contents for the calendar year and for the water year.

In the yearly summary below the monthly summary, the figures of maximum are the maximum daily discharges for the calendar and water years; likewise, the minimums in this summary are the minimum daily discharges.

Peak discharges and their times of occurrence and corresponding gage heights for many stations are listed below 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 canals, ditches, drains, or for any stream for which the peaks are subject to substantial control by man. Time of day is expressed in 24-hour local standard time; for example, 12:30 a.m. is 0030 and 1:30 p.m. is 1330.

In a general footnote, introduced by the word "NOTE" certain periods are indicated for which the discharge is computed or estimated by special methods because of no gage-height record, backwater from various sources, or other unusual conditions. Periods of no gage-height record are indicated if the period is continuous for a month or more or includes the maximum discharge for the year. Periods of backwater from an unusual source, of indefinite stage-discharge relation, or of any other unusual condition at the gage are indicated only if they are a month or more in length and the accuracy of the records is affected. Days on which the stage-discharge relation is affected by ice are not indicated. The methods used in computing discharge for various unusual conditions have been explained in preceding paragraphs. Footnotes to reservoir tables may be used to explain the use of new capacity tables or for other special conditions.

Accuracy of Data

The accuracy of discharge 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" means that about 95 percent of the daily discharges are within 5 percent; "good" within 10 percent; and "fair" within 15 percent. "Poor" means that daily discharges have less than "fair" accuracy.

Figures of daily mean discharge in this report are shown to the nearest hundredth of a cubic foot per second for discharges of less than 1 cfs; to tenths between 1.0 and 10 cfs; to whole numbers between 10 and 1,000 cfs; and to 3 significant figures above 1,000 cfs. The number of significant figures used is based solely on the magnitude of the figure. The same rounding rules apply to discharge figures listed for partial-record stations and miscellaneous sites.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumptive use, regulation, evaporation, or other factors. For such stations, discharge in cubic feet per second per square mile and runoff in inches are not published unless satisfactory adjustments can be made for such effects. 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 if adjustments or unadjusted losses (consumptive use, evaporation, seepage, etc.) are large in comparison with the observed discharge.

Publications

Each volume of the 1960 series of U.S. Geological Survey water-supply papers entitled "Surface Water Supply of the United States" contains a listing of the numbers of all water-supply papers in which records of surface-water data were published for the area covered by the individual volumes. Each volume also contains a list of water-supply papers that give detailed information on major floods for the area. A new series of water-supply papers containing surface-water records for the 5-year period October 1, 1960, to September 30, 1965, also will include lists of annual and special reports published as water-supply papers.

Records through September 1950 for the area covered by this report have been compiled and published in Water-Supply Papers 1305 (3A), 1307 (4), and 1308 (5); records for October 1950 to September 1960 have been compiled and published in Water-Supply Papers 1725 (3A), 1727 (4), and 1728 (5). These reports contain summaries of monthly and annual discharge and month-end storage for all previously published records, as well as some records not contained in the annual series of water-supply papers. All records were reexamined and revised where warranted. Estimates of discharge were made to fill short gaps whenever practical. The yearly summary table for each gaging station lists the numbers of the water-supply papers in which daily records were published for that station.

Special reports on major floods or droughts or of other hydrologic studies for the area have been issued in publications other than water-supply papers. Information relative to these reports may be obtained from the district office.

Other Data Available

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

More detailed information than that published for most of the gaging stations, such as discharge measurements, gage-height records, and rating tables, is on file in the district office. Many gaging-station records in Indiana through 1966 have been analyzed to give several statistical summaries: (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, or suspended-sediment concentration, and on the particle-size distribution of suspended sediment and bed material. These data are given in Part 2 of this report. Under the "REMARKS" paragraph of the gaging-station description, reference is made to water-quality records collected on a regular basis.

HYDROLOGIC CONDITIONS

Precipitation varied from light to heavy on small areas throughout the year. The only general storms occurred during late December and late January when normal amounts of precipitation fell on frozen ground. Heavy summer storms caused damaging floods in some areas.

Deficient streamflow during October was alleviated by a six-week period of wet, sunless weather during November and early December. Following a period of freezing temperatures, rainfall near the end of December generally produced stages two to three feet above flood stage on most river systems. In January, normal rainfall on frozen ground produced high runoff throughout the state. By late January both the Wabash River and White River basins experienced floods that had a frequency of occurrence of ten or more years. A new levee system was constructed along the Wabash River at Mt. Carmel, Illinois prior to this period of flooding. The gaging station at Mt. Carmel indicated the flood crest was the highest since March 1913.

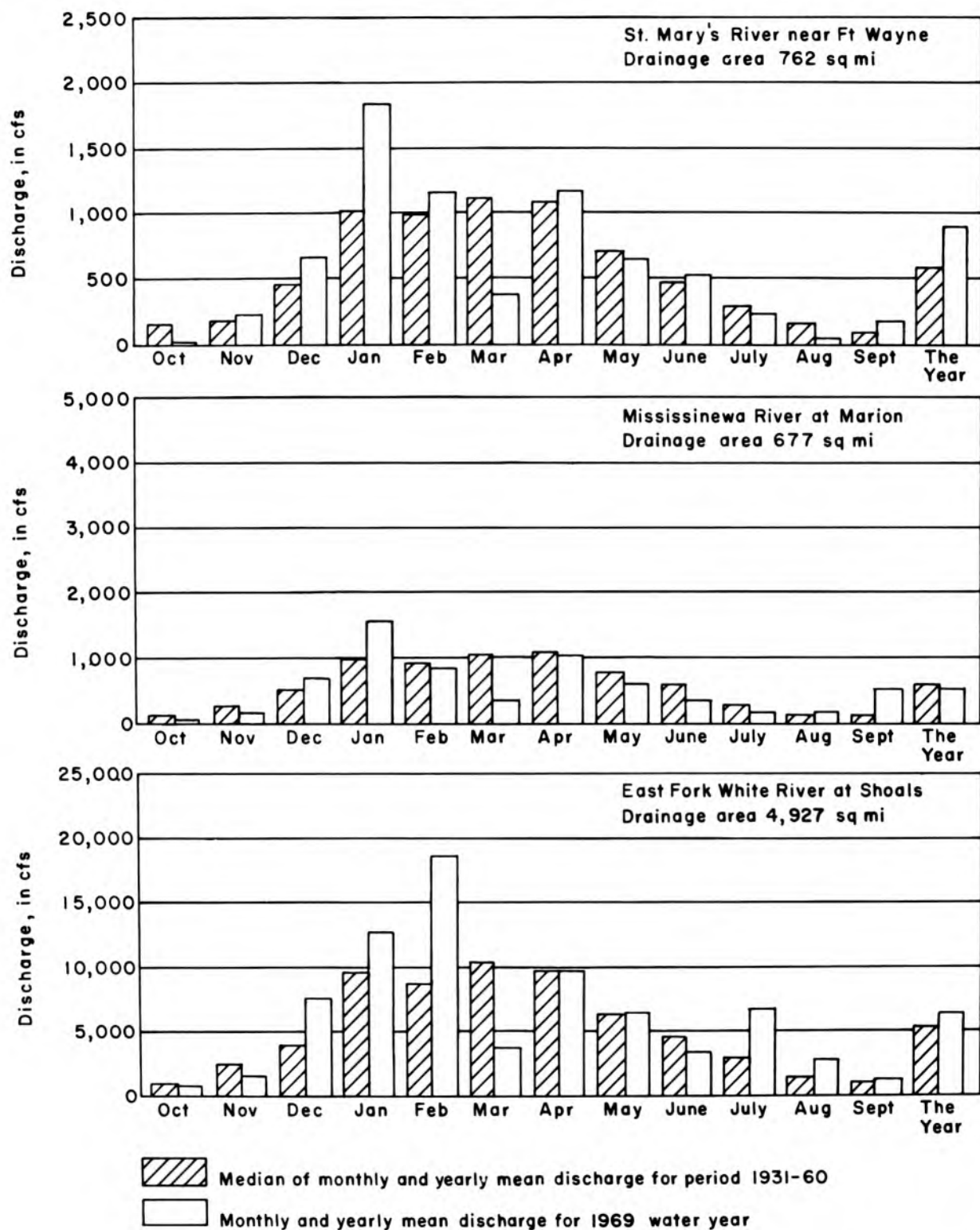
Near record low precipitation during February and March caused streamflow to drop to generally deficient ranges. Ground-water discharge sustained the flow during this period. Various local storms raised streamflow to about normal in some parts of the state by the end of May. Streamflow and precipitation was generally normal in June.

A quasi-stationary frontal system lying across the central part of the state during July caused locally heavy thunder-storms and almost continuous rainfall. Extreme flash flooding in southern Marion, Morgan, and Johnson counties on July 20 caused heavy property damage to a highly urbanized area. More than 9 inches of rain was reported to have fallen during a period of less than nine hours at Greenwood on July 20. Floods on small streams in Greenwood and Franklin caused the evacuation of between 400 and 500 people. This storm was followed on July 22 by locally heavy rainfall in southern Morgan, southern Johnson, and Bartholomew counties which washed out many bridges and severely damaged crops in Bartholomew county. (See table of miscellaneous measurements).

Record low precipitation in the northern part of the state during August was offset in the central and southern parts by precipitation spawned by the passing of Hurricane Camille. Deficient streamflow conditions in the north were relieved by normal rainfall during September and at the end of the water year streamflow in the state was about normal.

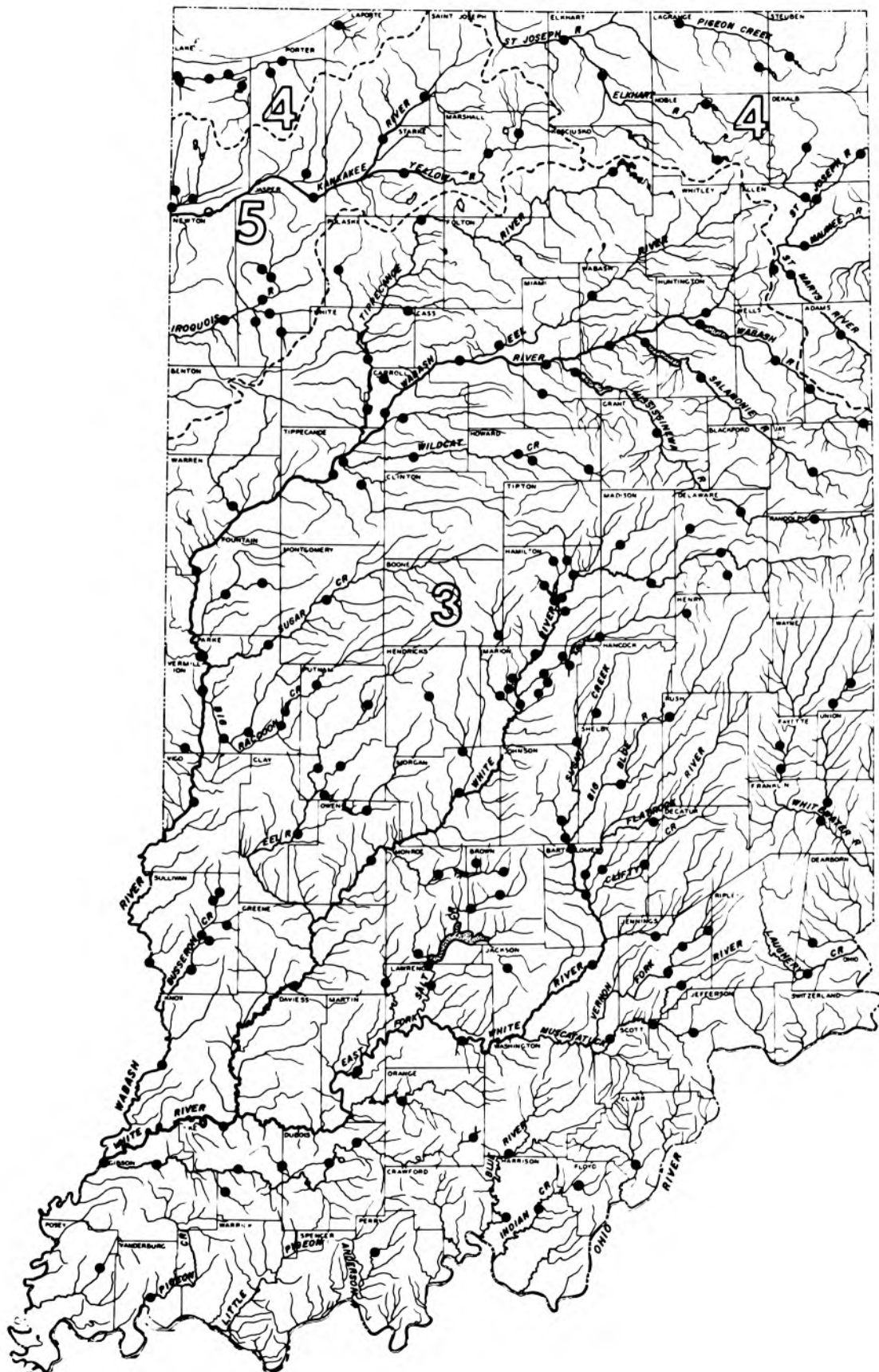
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Comparison of discharge at three long-term representative gaging stations during 1969 water year with median discharge for period 1931-60

GAGING STATIONS IN INDIANA



GREAT MIAMI RIVER BASIN

3-2749.5. Little Williams Creek at Connersville, Ind.

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

DRAINAGE AREA.--8.62 sq mi.

PERIOD OF RECORD.--September 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is 842.00 ft above mean sea level.

EXTREMES.--Current year: Maximum discharge, 664 cfs Jan. 17 (gage height, 7.80 ft); minimum daily, 1.0 cfs Oct. 11, 12; minimum gage height, 2.59 ft Sept. 14-16.

Period of record: Maximum discharge, 664 cfs Jan. 17, 1969 (gage height, 7.80 ft); minimum daily, 1.0 cfs Oct. 11, 12, 1968; minimum gage height, 2.59 ft Sept. 14-16, 1969.

REMARKS.--Records good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	1.1	21	9.8	31	6.9	10	9.2	5.8	6.3	5.8	3.3
2	1.6	1.1	20	9.2	24	6.9	11	8.6	6.3	5.8	4.8	6.2
3	1.8	1.3	15	8.6	22	6.9	9.8	8.0	5.4	5.2	4.1	2.9
4	1.3	1.3	36	6.9	17	6.9	9.2	8.0	5.2	4.7	3.8	3.9
5	1.3	1.1	17	6.3	15	6.3	23	7.4	5.8	4.5	3.4	3.6
6	2.0	1.4	13	6.9	17	6.9	18	7.4	4.9	50	3.4	3.8
7	1.8	3.4	10	6.2	16	6.9	14	7.4	4.5	20	3.1	3.8
8	1.4	3.1	8.6	5.5	52	7.4	12	9.2	4.5	15	4.5	3.6
9	1.3	2.0	7.4	5.1	39	9.2	11	11	3.4	12	35	2.4
10	1.3	1.6	6.9	4.8	23	6.9	9.7	10	3.8	10	16	2.2
11	1.0	1.4	6.9	4.5	20	6.9	8.0	9.2	3.8	8.6	7.4	2.1
12	1.0	1.4	7.4	4.3	16	6.3	7.2	8.0	8.6	6.9	5.2	2.0
13	1.1	1.3	8.6	4.1	13	5.8	6.9	7.4	9.7	5.9	4.5	1.8
14	1.1	1.3	6.9	4.1	11	5.8	11	7.4	21	4.5	4.1	1.8
15	1.1	4.5	5.2	4.1	10	5.2	16	6.9	36	3.8	3.4	1.6
16	1.1	40	5.0	4.5	10	5.2	14	6.3	14	3.4	6.9	1.8
17	1.1	10	5.2	258	9.8	5.2	11	6.3	9.9	3.1	4.5	29
18	1.3	9.1	6.9	105	9.4	5.2	52	25	9.8	2.9	8.7	8.8
19	1.3	6.5	13	20	8.8	5.2	38	51	9.2	2.9	8.0	4.0
20	1.1	4.7	9.8	16	8.6	5.2	23	20	8.0	75	14	2.8
21	1.1	3.9	8.0	13	8.5	5.2	19	15	7.4	21	4.1	2.7
22	1.1	3.5	30	12	8.8	5.2	16	13	10	14	3.4	2.7
23	1.1	3.2	23	16	9.2	5.8	15	11	44	11	2.9	2.7
24	1.3	22	12	20	8.4	11	13	10	16	21	2.6	4.2
25	1.6	9.3	9.8	10	8.0	9.2	12	9.8	68	17	2.3	3.0
26	1.3	6.4	9.2	9.2	8.0	8.6	11	8.6	18	9.8	2.2	2.8
27	1.3	5.1	46	8.6	7.4	7.8	10	8.0	12	11	2.2	3.2
28	1.1	32	96	27	7.4	7.4	11	6.9	9.8	20	2.1	3.3
29	1.1	18	24	228	-----	20	10	6.3	8.0	9.8	2.0	3.0
30	1.1	12	16	134	-----	11	9.2	6.3	6.9	6.9	2.1	2.9
31	1.1	-----	13	48	-----	10	-----	5.8	-----	6.3	2.1	-----
TOTAL	39.5	213.0	516.8	1,019.7	438.3	228.4	441.0	334.4	379.8	398.2	178.6	121.9
MEAN	1.27	7.10	16.7	32.9	15.7	7.37	14.7	10.8	12.7	12.8	5.76	4.06
MAX	2.0	40	96	258	52	20	52	51	68	75	35	29
MIN	1.0	1.1	5.0	4.1	7.4	5.2	6.9	5.8	3.8	2.9	2.0	1.6
CFSM	.15	.82	1.93	3.82	1.82	.85	1.71	1.25	1.47	1.49	.67	.47
IN.	.17	.92	2.23	4.40	1.89	.49	1.90	1.44	1.64	1.72	.77	.53

CAL YR 1968 TOTAL MEAN MAX MIN CFSM IN
WTR YR 1969 TOTAL 4,309.6 MEAN 11.8 MAX 258 MIN 1.0 CFSM 1.37 IN 18.59

PEAK DISCHARGE (BASE, 180 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-28	0330	4.67	195	06-25	0145	5.58	320
01-17	1715	7.80	664	07-20	1130	5.44	300
01-29	1830	5.82	356	08-09	2000	4.72	202

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., Fayette County, 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.

PERIOD OF RECORD.--October 1928 to current year. Prior to October 1936, published as West Fork Whitewater River near Alpine.

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

AVERAGE DISCHARGE.--41 years, 537 cfs (13.79 inches per year).

EXTREMES.--Current year: Maximum discharge, 16,800 cfs July 21 (gage height, 14.33 ft); minimum, 126 cfs Nov. 2, 3 (gage height, 3.32 ft).

Period of record: Maximum discharge, 37,100 cfs Jan. 14, 1937 (gage height, 16.61 ft); minimum, 14 cfs Sept. 22, 1931; minimum daily, 30 cfs Aug. 6, 1934.

REMARKS.--Records good. Records of suspended sediment loads for the current year are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1143: 1943-44(M), 1947(M), WSP 1335: 1929-30, 1932(M), 1938, 1946-47(m), 1949-50, WSP 1505: 1942(P). WSP 1908: 1937(M), 1944, 1949(M), drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	155	129	805	618	2,610	374	488	509	382	435	458	210
2	158	128	1,250	564	1,930	366	481	484	374	395	415	252
3	162	129	952	511	1,760	358	448	462	362	378	382	362
4	152	130	1,380	411	1,390	350	419	442	350	358	362	290
5	143	130	1,170	395	1,080	343	697	430	350	343	346	289
6	143	139	739	382	977	340	1,820	425	343	476	319	253
7	148	153	584	362	949	340	1,050	410	329	803	315	250
8	146	166	502	347	1,660	340	786	457	318	775	323	237
9	141	160	451	340	4,020	370	643	530	312	584	866	221
10	141	154	422	311	1,830	350	577	531	304	976	2,960	210
11	139	150	400	294	1,400	340	503	589	301	668	1,280	207
12	137	149	395	267	1,150	326	448	547	329	662	678	198
13	135	146	400	280	894	326	421	476	500	530	487	189
14	135	144	382	273	750	315	430	444	554	420	399	183
15	134	157	358	266	651	304	569	425	1,500	374	354	183
16	133	692	343	270	605	301	807	400	1,260	346	384	183
17	132	782	340	2,620	564	304	642	390	656	329	349	549
18	135	578	350	10,400	524	304	3,310	1,200	530	315	331	653
19	132	536	395	3,820	488	301	4,620	3,160	476	304	303	359
20	130	435	483	1,460	464	301	2,110	2,620	425	3,110	302	293
21	130	378	437	1,010	442	294	1,580	1,550	386	11,900	281	268
22	131	350	567	794	435	287	1,230	1,080	374	2,750	263	255
23	130	329	1,150	763	433	284	1,010	838	2,730	1,770	250	247
24	133	707	720	961	424	358	863	704	1,470	1,380	239	247
25	137	978	525	722	411	520	759	620	1,830	1,350	235	230
26	134	579	482	520	405	510	686	554	1,370	838	230	210
27	130	474	893	468	390	449	624	524	873	789	223	205
28	130	763	6,080	606	378	400	604	488	668	1,040	216	200
29	130	1,980	3,410	6,200	-----	672	574	452	554	722	213	195
30	130	959	1,500	10,700	-----	795	537	430	476	596	207	195
31	130	-----	968	5,320	-----	558	-----	405	-----	506	204	-----
TOTAL	4,276	12,684	28,833	52,275	29,014	11,780	29,736	22,576	20,686	36,222	14,174	7,823
MEAN	138	423	930	1,686	1,036	380	991	728	690	1,168	457	261
MAX	162	1,980	6,080	10,700	4,020	795	4,620	3,160	2,730	11,900	2,960	653
MIN	130	128	340	266	378	284	419	390	301	304	204	183
CFSM	.26	.80	1.76	3.19	1.96	.72	1.87	1.38	1.30	2.21	.86	.49
IN.	.30	.89	2.03	3.68	2.04	.83	2.09	1.59	1.45	2.55	1.00	.55

CAL YR 1968 TOTAL 247,889 MEAN 677 MAX 16,100 MIN 128 CFSM 1.28 IN 17.43
WTR YR 1969 TOTAL 270,079 MEAN 740 MAX 11,900 MIN 128 CFSM 1.40 IN 18.99

PEAK DISCHARGE (BASE, 6,500 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-28	1645	9.90	6,660	04-18	2230	10.03	6,850
01-18	1900	12.42	11,300	07-21	1300	14.33	16,800
01-30	0115	12.38	11,200				

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., Wayne County, on left bank 50 ft downstream from highway bridge, 0.8 mile south of Richmond, and 2 miles upstream from Short Creek.

DRAINAGE AREA.--121 sq mi.

PERIOD OF RECORD.--April 1949 to current year.

GAGE.--Water-stage recorder. Datum of gage is 854.01 ft above mean sea level (levels by Indiana Flood Control and Water Resources Commission). Prior to July 27, 1949, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--20 years, 120 cfs (13.47 inches per year).

EXTREMES.--Current year: Maximum discharge, 15,000 cfs July 20 (gage height, 12.68 ft); minimum daily, 14 cfs Nov. 2, 14.
Period of record: Maximum discharge, 15,000 cfs July 20, 1969 (gage height, 12.68 ft), from rating curve extended above 5,000 cfs on basis of contracted-opening measurement of peak flow at stage of 12.44 ft; minimum, 0.6 cfs Sept. 21, 1955; minimum gage height, -0.12 ft Sept. 16, 1959.
Flood in March 1913 reached a stage of 15.0 ft (discharge not determined), from floodmarks.

REMARKS.--Records good. Some regulation at low flow by powerplant upstream from 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.

REVISIONS (WATER YEARS).--WSP 1235: 1951. WSP 1908: Drainage area, 1960.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	17	218	142	425	68	102	78	74	63	70	59
2	38	14	362	153	308	66	104	74	76	58	64	45
3	37	17	227	110	271	65	96	71	73	56	60	39
4	24	16	520	96	216	62	91	69	70	55	57	34
5	25	16	287	92	191	62	183	67	79	53	54	33
6	43	26	183	82	185	62	214	65	70	199	53	37
7	31	41	131	75	181	62	139	65	71	202	52	34
8	26	25	110	65	560	66	114	70	66	138	57	31
9	24	29	89	58	636	69	100	89	62	99	177	25
10	30	28	78	52	235	65	94	98	58	92	595	25
11	22	24	72	48	184	62	85	124	58	99	192	25
12	19	20	72	45	158	60	79	107	64	83	125	24
13	18	16	75	42	131	61	75	89	76	61	92	22
14	17	14	72	40	121	58	85	80	75	55	79	21
15	18	49	58	40	113	53	102	73	222	52	69	22
16	17	402	49	46	103	53	96	68	184	50	108	23
17	17	233	46	996	92	53	86	67	119	49	79	100
18	21	206	62	2,490	88	53	596	286	101	47	69	58
19	22	160	96	438	83	53	682	1,810	90	47	62	43
20	18	115	142	221	79	53	255	415	80	5,950	56	32
21	16	96	92	183	75	51	183	234	72	1,180	50	28
22	17	75	145	175	75	48	154	177	78	296	45	27
23	17	62	312	175	77	48	133	145	1,860	213	41	27
24	17	270	138	215	76	93	118	131	419	147	39	30
25	24	215	110	168	74	99	107	122	399	118	39	25
26	21	142	89	138	73	92	99	109	218	96	37	25
27	19	106	608	120	73	82	92	99	154	113	34	24
28	18	342	1,640	179	72	77	94	93	123	112	31	25
29	17	438	462	1,890	-----	194	89	88	98	85	30	24
30	16	207	239	2,450	-----	149	83	85	74	97	30	25
31	16	-----	191	849	-----	111	-----	80	-----	81	26	-----
TOTAL	686	3,471	6,975	11,873	4,955	2,250	4,530	5,228	5,262	10,046	2,572	992
MEAN	22.1	116	225	383	177	72.6	151	169	175	324	83.0	33.1
MAX	43	438	1,640	2,490	636	194	682	1,810	1,860	5,950	595	100
MIN	16	14	46	40	72	48	75	65	58	47	26	21
CFSM	.18	.96	1.86	3.17	1.46	.60	1.25	1.39	1.45	2.68	.69	.27
INF.	.21	1.07	2.14	3.65	1.52	.69	1.39	1.61	1.62	3.09	.79	.30

CAL YR 1968 TOTAL 57,826 MEAN 158 MAX 4,400 MIN 14 CFSM 1.31 IN 17.77
WTR YR 1969 TOTAL 58,840 MEAN 161 MAX 5,950 MIN 14 CFSM 1.33 IN 18.08

PEAK DISCHARGE (BASE, 2,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-28	0700	5.37	2,220	05-19	0700	6.17	2,790
01-18	0145	7.46	3,860	06-23	0600	7.32	3,740
01-30	0245	7.45	3,860	07-20	1200	12.68	15,000

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., Union County, 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.

DRAINAGE AREA.--198 sq mi.

PERIOD OF RECORD.--October 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is 791.00 ft above mean sea level.

EXTREMES.--Current year: Maximum discharge, 13,400 cfs July 20 (gage height, 16.18 ft); minimum, 31 cfs Sept. 30 (gage height, 3.90 ft).
Period of record: Maximum discharge, 13,400 cfs July 20, 1969 (gage height, 16.18 ft); minimum, 19 cfs Aug. 7, 8, 1966 (gage height, 1.94 ft).

REMARKS.--Records good. Records of suspended sediment loads for current year are published in Part 2 of this report.

REVISIONS.--The figures of peak discharge for water year 1968 have been revised as shown in the following table. They supersede figures published in WRD Ind. 1968.

REVISED PEAK DISCHARGE.--1968: July 16 (0215) 4,660 cfs (9.88 ft); Aug. 10 (0800) 3,580 cfs (8.93 ft).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47	51	432	256	794	162	213	158	96	144	169	112
2	51	49	618	238	596	151	217	151	104	125	147	94
3	93	53	426	220	542	151	192	147	96	112	125	88
4	60	53	939	172	442	144	184	147	88	104	118	67
5	55	53	552	175	385	137	405	144	104	93	110	61
6	68	66	355	164	360	137	492	144	91	430	102	60
7	68	107	274	155	355	137	330	144	88	525	96	83
8	60	96	225	142	985	147	266	169	79	345	125	59
9	58	81	209	130	1,180	166	221	225	73	238	393	50
10	66	79	177	120	574	144	204	238	66	248	988	45
11	56	75	166	113	470	137	180	274	64	196	350	44
12	53	73	166	110	400	125	154	225	68	355	225	43
13	53	66	177	108	330	125	144	188	115	169	167	40
14	51	54	158	105	284	115	169	169	115	134	136	36
15	51	99	137	105	243	107	234	158	479	112	118	36
16	51	794	125	102	238	104	213	144	375	99	234	39
17	51	476	125	1,300	225	107	188	144	200	91	150	207
18	62	365	158	4,580	213	107	1,130	874	158	84	126	130
19	56	292	256	855	204	110	1,140	3,070	141	79	114	81
20	51	217	288	492	196	110	848	768	118	6,610	101	62
21	51	144	217	380	188	107	410	470	96	2,880	88	53
22	51	158	365	340	188	102	340	345	126	701	78	50
23	51	137	591	360	188	99	288	274	2,760	530	70	49
24	53	492	325	476	188	252	248	230	848	395	63	53
25	68	400	221	325	180	252	225	200	1,020	320	62	47
26	56	270	196	243	173	230	204	173	520	261	61	44
27	53	213	957	225	169	200	188	151	330	288	57	42
28	53	603	2,980	402	169	177	200	141	238	284	52	40
29	53	743	855	3,580	-----	492	180	128	188	225	51	39
30	51	400	498	4,550	-----	365	169	118	162	225	51	39
31	51	-----	385	1,440	-----	248	-----	107	-----	200	45	-----
TOTAL	1,752	6,809	13,553	21,963	10,459	5,147	9,576	10,018	9,006	16,602	4,772	1,893
MEAN	56.5	227	437	708	374	166	319	323	300	536	154	63.1
MAX	93	794	2,980	4,580	1,180	492	1,140	3,070	2,760	6,610	988	207
MIN	47	49	125	102	169	99	144	107	64	79	45	36
CFSM	.29	1.15	2.21	3.58	1.89	.84	1.61	1.63	1.52	2.70	.78	.32
IN.	.33	1.28	2.55	4.13	1.96	.97	1.80	1.88	1.69	3.12	.90	.36

CAL YR 1968 TOTAL 110,265 MEAN 301 MAX 7,250 MIN 46 CFSM 1.52 IN 20.71
WTR YR 1969 TOTAL 111,550 MEAN 306 MAX 6,610 MIN 36 CFSM 1.54 IN 20.95

PEAK DISCHARGE (BASE, 2,500 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-28	0700	9.35	4,040	05-19	0530	9.81	4,570
01-18	0430	11.54	6,650	06-23	0930	9.90	4,680
01-30	0230	11.52	6,620	07-20	1600	16.18	13,400
02-08	2230	7.83	2,530				

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

LOCATION.--Lat 39°26'02", long 85°00'12", in NE¼NE¼ sec. 20, T. 9 N., R. 2 W., Franklin County, 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.

PERIOD OF RECORD.--March 1954 to current year.

GAGE.--Water-stage recorder. Datum of gage is 621.76 ft above mean sea level. Prior to May 22, 1954, nonrecording gage at site 100 ft downstream at datum 2.00 ft higher. May 22, 1954, to Aug. 20, 1965, water-stage recorder at site 165 ft downstream at datum 2.00 ft higher.

AVERAGE DISCHARGE.--15 years, 383 cfs (13.69 inches per year).

EXTREMES.--Current year: Maximum discharge, 10,500 cfs Jan. 30 (gage height, 9.98 ft); minimum, 63 cfs Sept. 16, 17 (gage height, 2.21 ft).
Period of record: 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.--Records good. Records of suspended sediment loads for the current year are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1555: 1954(M), 1955(P). WSP 1908: 1955, drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	74	77	764	550	1,610	328	445	348	238	271	220	106
2	78	77	1,090	450	1,170	307	445	332	230	240	189	172
3	136	77	771	400	1,010	303	425	319	230	219	170	145
4	105	78	1,730	350	790	303	396	315	213	205	153	120
5	85	77	1,070	320	712	291	544	315	210	191	145	113
6	85	93	666	320	686	291	865	315	226	422	136	96
7	108	112	509	300	703	291	646	310	199	659	131	103
8	95	185	421	280	1,400	291	543	354	193	533	138	99
9	88	152	364	260	2,300	338	487	606	183	382	665	86
10	87	141	335	240	1,070	307	460	529	174	371	1,550	77
11	91	132	303	230	838	290	413	526	168	332	608	76
12	82	129	302	210	719	260	377	467	166	446	378	75
13	79	123	315	210	602	250	355	400	218	317	275	72
14	77	116	295	205	527	230	360	369	221	248	226	69
15	76	122	266	200	480	220	507	343	546	215	196	65
16	75	1,310	255	200	470	220	468	321	671	193	315	65
17	75	852	249	2,500	440	215	422	317	385	178	356	127
18	79	554	261	7,520	425	215	977	1,110	305	167	240	283
19	91	460	374	2,060	400	210	1,740	3,620	282	157	205	134
20	83	354	464	899	392	210	939	1,530	249	1,670	175	107
21	78	239	383	728	378	210	716	866	219	6,400	150	93
22	77	270	753	639	378	212	629	650	204	1,070	132	85
23	77	246	1,120	656	378	212	554	525	2,310	711	118	92
24	79	613	578	797	378	333	494	449	1,330	593	109	88
25	89	652	455	614	369	425	454	398	2,020	505	103	87
26	95	451	400	505	351	405	424	357	962	390	100	78
27	84	370	810	460	338	374	397	321	559	341	95	75
28	80	960	4,710	790	333	346	402	303	406	374	90	73
29	78	1,360	2,160	5,430	-----	555	389	284	328	302	87	70
30	77	719	1,010	8,970	-----	626	365	266	284	283	84	69
31	76	-----	745	3,010	-----	490	-----	252	-----	257	81	-----
TOTAL	2,639	11,171	23,928	40,303	19,644	9,558	16,638	17,417	13,929	18,642	7,620	2,990
MEAN	85.1	372	772	1,300	702	308	555	542	464	601	246	99.7
MAX	136	1,350	4,710	8,970	2,300	626	1,740	3,620	2,310	6,400	1,550	283
MIN	74	77	249	200	333	210	355	252	166	157	81	65
CFSM	.22	.98	2.03	3.42	1.85	.81	1.46	1.48	1.22	1.58	.65	.26
IN.	.26	1.39	2.34	3.94	1.92	.94	1.63	1.70	1.36	1.82	.75	.29

CAL YR 1968 TOTAL 202,078 MEAN 552 MAX 18,600 MIN 74 CFSM 1.45 IN 19.78
WTR YR 1969 TOTAL 184,479 MEAN 505 MAX 8,970 MIN 65 CFSM 1.33 IN 18.05

PEAK DISCHARGE (BASE, 4,500 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-28	0530	7.57	5,430	05-19	1145	7.06	4,510
01-18	1515	8.87	7,940	07-21	1300	9.83	10,100
01-30	0100	9.98	10,500				

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., Franklin County, 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.

PERIOD OF RECORD.--June 1915 to September 1917, October 1917 to May 1920 (gage heights only), and July 1923 to current year. Monthly discharge only for some periods, published in WSP 1305.

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

AVERAGE DISCHARGE.--48 years (1915-17, 1923-69), 1,259 cfs (13.97 inches per year).

EXTREMES.--Current year: Maximum discharge, 31,400 cfs Jan. 30 (gage height, 17.15 ft); minimum, 273 cfs Oct. 21-24, 30, 31, Nov. 1-5 (gage height, 1.27 ft).

Period of record: 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.

Flood of Mar. 25, 1913, reached a stage of 39.0 ft, present datum, from floodmarks (discharge not determined).

REMARKS.--Records good.

REVISIONS (WATER YEARS).--WSP 1335: 1915-17, 1929, 1930(M), 1933(M), 1934, 1935(M), 1936. WSP 1505: 1916(M). WSP 1908: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	ALG	SEP
1	283	273	2,300	1,680	6,290	957	1,260	1,020	720	861	946	370
2	294	273	3,120	1,460	4,510	917	1,280	909	720	758	848	500
3	488	274	2,240	1,300	3,480	882	1,260	912	684	683	760	542
4	354	276	4,720	1,140	2,740	867	1,110	860	635	628	695	554
5	308	276	2,930	1,010	2,420	824	1,660	775	618	579	642	548
6	307	298	1,930	1,030	2,270	820	2,660	766	637	1,010	590	470
7	334	355	1,520	973	2,350	821	1,990	751	559	1,700	552	452
8	321	501	1,290	914	4,040	806	1,610	819	540	1,460	559	440
9	310	440	1,120	850	7,630	916	1,430	1,460	510	1,320	1,170	395
10	310	405	1,030	760	3,710	872	1,310	1,360	477	1,370	4,310	360
11	308	375	934	722	2,740	805	1,210	1,380	455	1,330	2,460	344
12	298	355	915	675	2,340	747	1,090	1,180	460	1,400	1,380	336
13	291	345	934	659	1,960	743	998	1,040	926	1,130	1,050	320
14	285	330	891	635	1,710	736	1,030	945	793	869	866	313
15	281	340	788	624	1,560	695	2,070	865	2,050	723	738	306
16	278	3,070	710	629	1,490	681	1,690	763	2,420	636	866	299
17	277	2,040	700	4,580	1,410	674	1,440	776	1,390	572	1,040	365
18	284	1,440	743	19,500	1,340	674	3,360	2,440	1,060	524	770	1,090
19	292	1,230	991	8,950	1,270	674	7,060	10,600	946	481	688	681
20	283	1,000	1,220	3,640	1,220	653	3,700	5,960	818	5,040	618	530
21	276	852	1,090	2,640	1,170	624	2,500	3,140	708	16,400	572	458
22	276	755	2,360	2,250	1,150	603	2,090	2,280	665	6,200	530	428
23	275	683	3,210	2,230	1,140	589	1,790	1,860	5,160	3,420	506	390
24	281	1,570	1,940	2,600	1,120	769	1,570	1,570	3,560	2,440	464	390
25	305	1,920	1,390	2,130	1,080	1,100	1,410	1,370	4,940	2,690	458	370
26	314	1,420	1,260	1,690	1,050	1,130	1,310	1,210	2,880	1,710	440	344
27	293	1,170	3,010	1,570	1,000	1,070	1,220	1,080	1,790	1,400	422	328
28	282	2,970	12,300	3,440	972	963	1,200	985	1,330	1,620	405	324
29	280	3,840	6,750	13,700	-----	1,470	1,160	904	1,080	1,370	385	320
30	277	2,220	3,290	27,100	-----	1,730	1,080	831	938	1,190	370	313
31	274	-----	2,370	12,200	-----	1,350	-----	772	-----	1,060	365	-----
TOTAL	9,319	31,296	69,996	123,281	65,162	27,162	54,548	51,583	40,469	62,574	26,465	12,880
MEAN	301	1,043	2,258	3,977	2,327	876	1,818	1,664	1,349	2,019	854	429
MAX	488	3,840	12,300	27,100	7,630	1,730	7,060	10,600	5,160	16,400	4,310	1,090
MIN	274	273	700	624	972	589	998	751	455	481	365	299
CFSM	.25	.85	1.84	3.25	1.90	.72	1.49	1.36	1.10	1.65	.70	.35
IN.	.28	.95	2.13	3.75	1.98	.83	1.66	1.57	1.23	1.90	.80	.39

CAL YR 1968 TOTAL 600,422 MEAN 1,640 MAX 46,700 MIN 273 CFSM 1.34 IN 18.24
WTR YR 1969 TOTAL 574,735 MEAN 1,575 MAX 27,100 MIN 273 CFSM 1.29 IN 17.46

PEAK DISCHARGE (BASE, 12,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-28	0945	10.99	15,200	05-19	1145	10.23	13,400
01-18	0730	13.17	20,400	07-21	1315	12.94	19,900
01-30	0615	17.15	31,400				

HOGAN CREEK BASIN

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

LOCATION.--Lat 39°01'47", long 85°02'17", in NW¼ sec. 7, T. 4 N., R. 2 W., Dearborn County, on left downstream abutment of bridge on county road at Dillsboro Station, 1.2 miles northeast of Dillsboro, and 1.5 miles downstream from Whitaker Creek.

DRAINAGE AREA.--38.2 sq mi.

PERIOD OF RECORD.--July 1961 to current year. Occasional low-flow measurements, water year 1960.

GAGE.--Water-stage recorder. Datum of gage is 571.00 ft above mean sea level.

AVERAGE DISCHARGE.--8 years, 35.2 cfs (12.51 inches per year). 7 years, 35.7 cfs (12.69 inches per year); figure published in Water Resources Data for Indiana, 1968, in error.

EXTREMES.--Current year: Maximum discharge, 2,010 cfs Jan. 30 (gage height, 5.48 ft); no flow for several days.
Period of record: 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.--Records good. Records of chemical analysis for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.70	.15	41	25	78	10	19	15	1.8	.26	.50	0
2	.80	.15	61	19	50	9.4	21	14	2.1	.15	.53	0
3	.30	.15	50	15	46	8.6	21	11	2.5	.67	.42	73
4	.20	.15	347	14	30	8.2	28	9.3	1.9	.05	.30	14
5	.20	.15	59	10	27	7.5	146	8.3	1.1	.02	.47	4.7
6	.20	.20	26	11	25	7.3	130	7.8	.85	0	.11	2.5
7	.11	.70	18	11	45	7.9	51	6.8	.57	3.8	.03	2.1
8	.10	1.5	14	9.9	80	7.5	35	31	.45	.51	.62	1.6
9	.10	2.2	12	8.0	141	9.0	28	54	.34	.16	19	1.6
10	.04	1.5	11	6.5	54	8.1	28	46	.23	14	63	.77
11	.02	1.1	10	5.5	40	6.8	24	28	.17	26	7.2	.34
12	.06	1.0	11	5.0	32	5.6	18	20	1.7	22	3.0	.19
13	.20	.80	12	4.6	23	5.5	16	16	2.1	5.4	1.2	.11
14	.15	.70	12	4.3	20	5.1	367	15	4.0	3.6	.74	.05
15	.10	1.7	9.2	4.2	21	4.9	265	14	4.9	1.6	.42	.04
16	.10	31	8.0	5.5	15	4.7	74	12	12	1.1	.86	0
17	.15	14	7.7	334	14	4.7	45	9.9	5.2	.54	.49	.50
18	.26	6.8	17	504	13	4.7	304	86	2.4	.57	1.1	.36
19	.26	3.9	42	90	13	4.7	175	86	1.6	.37	6.5	.13
20	.20	2.9	41	43	12	4.4	70	39	1.1	31	3.4	.06
21	.15	2.2	22	38	12	3.7	45	22	.74	33	1.8	.02
22	.15	2.0	248	40	12	3.2	36	18	.68	97	.99	.02
23	.11	1.7	129	59	13	3.1	28	16	1.3	36	.49	.05
24	.11	2.6	37	80	13	49	22	12	1.1	11	.27	.21
25	.15	5.9	29	32	12	49	20	9.9	6.0	5.8	.12	.10
26	.15	4.5	19	24	12	31	18	8.8	3.3	3.7	.07	.07
27	.15	4.7	239	16	12	29	15	6.3	1.7	2.2	.62	.20
28	.15	193	661	567	11	23	26	4.4	.68	1.4	0	.33
29	.15	63	81	959	-----	31	24	3.4	.31	1.0	0	.32
30	.15	22	41	1,090	-----	29	18	2.6	.15	.80	0	.29
31	.15	-----	31	181	-----	21	-----	1.9	-----	.60	0	-----
TOTAL	5.82	362.35	2,345.9	4,215.5	876	406.5	2,117	634.4	62.97	108.10	113.25	103.66
MEAN	.19	12.1	75.7	136	31.3	13.1	70.6	20.5	2.10	9.94	3.65	3.46
MAX	.80	193	661	1,090	141	49	367	86	12	97	63	73
MIN	.02	.15	7.7	4.2	11	3.1	15	1.9	.15	0	0	0
CFSM	.005	.32	1.98	3.56	.82	.34	1.85	.54	.05	.26	.10	.09
IN.	.006	.35	2.28	4.10	.85	.40	2.06	.62	.06	.30	.11	.10

CAL YR 1968 TOTAL 19,917.41 MEAN 54.4 MAX 3,320 MIN 0 CFSM 1.42 IN 19.39
WTR YR 1969 TOTAL 11,551.45 MEAN 31.6 MAX 1,090 MIN 0 CFSM .83 IN 11.25

PEAK DISCHARGE (BASE, 2,500 CFS).--No peak above base.

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

LOCATION.--Lat 38°57'08", long 85°04'15", in sec. 2, T. 4 N., R. 3 W., Ohio County, on right bank 2.4 miles southeast of Farmers Retreat and 3.8 miles downstream from Bear Creek.

DRAINAGE AREA.--248 sq mi.

PERIOD OF RECORD.--October 1940 to current year.

GAGE.--Water-stage recorder. Datum of gage is 528.54 ft above mean sea level (levels by Indiana Department of Natural Resources). Prior to Apr. 16, 1941, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--29 years, 270 cfs (14.78 inches per year).

EXTREMES.--Current year: Maximum discharge, 9,520 cfs Jan. 30 (gage height, 10.89 ft); minimum daily, 0.76 cfs Oct. 16.
Period of record: Maximum discharge, 47,800 cfs Jan. 21, 1959 (gage height, 21.13 ft); from rating curve extended above 14,000 cfs on basis of slope-area measurement of peak flow; no flow at times in most years.

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

REVISIONS.--WSP 973: 1942(M). WSP 1275: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	1.3	213	241	1,140	74	173	119	31	23	38	3.2
2	1.8	1.3	370	195	601	67	161	102	30	19	30	3.0
3	1.6	1.3	474	150	434	64	180	90	30	18	24	3.6
4	1.4	1.3	1,510	115	375	61	237	80	24	13	20	3.0
5	1.2	1.3	1,250	108	285	56	708	73	18	9.6	16	3.4
6	1.5	2.0	382	121	252	53	1,090	64	15	8.1	14	10
7	1.9	3.0	215	100	444	53	574	57	13	7.2	12	57
8	1.7	5.0	148	88	849	52	346	133	13	8.5	9.7	33
9	1.4	6.9	110	75	2,250	58	252	154	14	9.3	11	24
10	1.2	7.7	90	65	923	56	214	185	12	109	36	15
11	1.4	7.0	79	55	448	54	183	186	11	671	54	10
12	1.4	5.5	74	47	357	53	156	195	11	1,130	28	7.7
13	1.5	4.5	73	42	270	46	135	141	91	236	17	5.9
14	1.5	4.0	75	37	194	44	890	147	179	149	13	4.5
15	1.2	13	79	36	155	41	2,240	123	157	75	11	3.8
16	.76	127	73	35	140	38	941	97	700	45	11	3.0
17	.98	156	68	889	127	38	477	86	301	31	10	3.0
18	1.5	142	87	4,380	113	38	1,300	240	127	33	20	4.7
19	1.7	139	157	2,400	104	38	1,490	1,420	78	28	32	3.8
20	1.7	93	206	576	96	37	849	683	54	593	29	3.0
21	1.3	25	222	385	89	36	449	350	40	911	25	2.6
22	1.3	13	573	344	85	36	341	211	34	2,310	17	2.2
23	1.0	9.4	1,380	374	87	32	263	153	32	637	12	2.0
24	1.0	8.6	605	589	88	181	200	129	97	423	9.2	2.0
25	1.2	9.0	278	514	87	233	162	108	441	231	7.5	2.0
26	1.3	10	150	293	85	284	141	88	137	215	6.7	2.0
27	1.3	11	375	179	81	234	127	73	79	165	6.0	1.9
28	1.3	278	4,660	1,560	77	195	135	59	70	59	5.2	2.0
29	1.3	457	2,380	5,620	-----	189	143	48	44	77	4.3	1.9
30	1.3	396	540	8,280	-----	274	141	41	29	70	3.4	1.5
31	1.3	-----	344	4,940	-----	243	-----	36	-----	52	3.2	-----
TOTAL	42.74	1,938.1	17,240	32,833	10,236	2,958	14,698	5,671	2,912	8,405.7	535.2	224.7
MEAN	1.38	64.6	556	1,059	366	95.4	490	183	97.1	271	17.3	7.49
MAX	1.9	457	4,660	8,280	2,250	284	2,240	1,420	700	2,310	54	57
MIN	.76	1.3	68	35	77	32	127	36	11	7.2	3.2	1.5
CFSM	.006	.26	2.24	4.27	1.47	.38	1.98	.74	.39	1.09	.67	.03
IN.	.006	.29	2.59	4.92	1.53	.44	2.20	.85	.44	1.26	.08	.03

CAL YR 1968 TOTAL 113,619.64 MEAN 310 MAX 12,600 MIN .76 CFSM 1.25 IN 17.04
WTR YR 1969 TOTAL 97,694.44 MEAN 268 MAX 8,280 MIN .76 CFSM 1.08 IN 14.65

PEAK DISCHARGE (BASE, 6,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-28	0400	9.18	6,170	07-11	2300	9.56	6,380
01-30	0715	10.89	9,520	07-22	1445	10.26	7,670

SILVER CREEK BASIN

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., Clark County, 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.

PERIOD OF RECORD.--January 1965 to current year.

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

EXTREMES.--Current year: Maximum contents, 3,404 acre-ft Jan. 30, 31 (elevation, 37.70 ft); minimum, 964 acre-ft Sept. 30 (elevation, 22.04 ft).

Period of record: Maximum contents, 3,468 acre-ft April 30, 1966 (elevation, 37.99 ft); minimum contents since reaching minimum pool elevation of 535.00 ft, 964 acre-ft Sept. 30, 1969 (elevation, 22.04 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 1968 to September 1969

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	34.92	2,834	-
Oct. 31.....	34.68	2,786	-48
Nov. 30.....	34.86	2,822	+36
Dec. 31.....	35.72	2,994	+172
Calendar year 1968.....	-	-	+20
Jan. 31.....	37.55	3,371	+377
Feb. 28.....	35.70	2,990	-381
Mar. 31.....	35.79	3,008	+18
Apr. 30.....	24.03	1,173	-1,835
May 31.....	26.22	1,429	+256
June 30.....	26.03	1,404	-25
July 31.....	25.40	1,328	-76
Aug. 31.....	25.10	1,292	-36
Sept. 30.....	22.04	964	-328
Water year 1968-69.....	-	-	-1,870

3-2940, Silver Creek near Sellersburg, Ind.

LOCATION.--Lat 38°22'15", long 85°43'35", in SW¼ lot 68, Clark Military Grant, Clark County, 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.

PERIOD OF RECORD.--October 1954 to current year.

GAGE.--Nonrecording gage and crest-stage gage. Altitude of gage is 430 ft (from topographic map).

AVERAGE DISCHARGE.--15 years, 206 cfs (14.88 inches per year).

EXTREMES.--Current year: Maximum discharge, 4,760 cfs Jan. 30 (gage height, 19.65 ft); minimum, 0.22 cfs Oct. 4 (gage height, 3.60 ft).

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

REMARKS.--Records fair.

REVISIONS (WATER YEARS).--WSP 1705: 1955-58.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.36	.36	69	122	821	83	147	76	130	22	5.1	1.6
2	.28	.65	174	93	464	92	155	68	84	24	2.4	1.4
3	.36	.65	99	83	350	83	157	62	61	20	4.2	2.9
4	.22	.65	412	58	256	76	138	52	34	16	6.4	5.6
5	.28	.36	220	54	224	68	154	47	30	12	6.7	6.7
6	.40	.45	95	49	212	62	200	41	28	11	2.4	4.2
7	.60	.50	62	45	342	70	141	34	26	12	1.2	2.9
8	.70	.50	46	40	266	67	118	50	24	16	8.6	3.8
9	.76	.50	36	35	947	74	138	90	31	11	25	5.1
10	.65	.45	29	30	480	76	276	60	33	14	25	3.3
11	.60	.50	138	26	336	66	252	50	22	15	27	2.1
12	.45	.60	24	24	260	58	226	39	18	14	11	2.1
13	.32	.55	138	21	196	52	208	33	175	12	7.3	2.4
14	.50	.60	28	20	160	49	750	105	105	10	5.9	2.7
15	1.0	.55	23	19	139	43	2,180	138	251	8.6	6.7	3.5
16	1.2	.88	18	21	122	39	756	82	172	7.0	4.6	5.6
17	1.0	1.9	16	213	109	43	472	70	84	7.3	2.4	6.7
18	.76	4.0	21	2,240	106	41	1,470	464	61	6.1	2.1	7.3
19	.76	2.5	102	1,260	109	41	2,430	1,410	43	5.6	9.6	6.1
20	.50	2.0	123	498	101	39	809	1,100	30	4.9	175	5.6
21	.50	2.0	66	400	92	38	412	376	199	11	175	5.1
22	.76	1.1	476	356	85	35	304	232	84	24	18	4.4
23	.50	1.0	968	368	112	30	232	192	239	36	12	3.8
24	.36	1.1	256	601	109	487	188	158	215	30	7.9	74
25	.45	2.0	134	340	94	718	146	124	280	18	7.0	18
26	.50	3.5	101	240	84	348	122	97	124	11	7.0	6.7
27	.36	8.3	93	168	77	270	102	77	63	8.6	7.3	28
28	.50	150	1,320	940	74	218	101	63	44	5.3	6.4	32
29	.45	270	614	3,700	-----	208	112	56	33	4.9	5.1	30
30	.40	69	296	4,280	-----	214	86	49	25	5.3	3.5	14
31	.28	-----	208	3,370	-----	164	-----	321	-----	4.6	2.0	-----
TOTAL	16.76	527.15	6,405	19,714	6,727	3,952	12,982	5,816	2,748	407.2	589.8	297.6
MEAN	.54	17.6	207	636	240	127	433	188	91.6	13.1	19.0	9.92
MAX	1.2	270	1,320	4,280	947	718	2,430	1,410	280	36	175	74
MIN	.22	.36	16	19	74	30	86	33	18	4.6	1.2	1.4
CFSM	.003	.09	1.10	3.38	1.28	.68	2.30	1.00	.49	.07	.10	.05
IN.	.003	.10	1.27	3.90	1.33	.78	2.57	1.15	.54	.08	.12	.06

CAL YR 1968 TOTAL 66,235.41 MEAN 181 MAX 3,550 MIN .22 CFSM .96 IN 13.10
WTR YR 1969 TOTAL 60,182.51 MEAN 165 MAX 4,280 MIN .22 CFSM .88 IN 11.91

PEAK DISCHARGE (BASE, 2,500 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-18	1700	15.81	2,770	04-15	0600	15.92	2,820
01-30	2200	19.65	4,760	04-19	0800	16.82	3,220

INDIAN CREEK BASIN

3-3023, Little Indian Creek near Galena, Ind.

LOCATION.--Lat 38°19'19", long 85°55'53", in NE¼SW¼ sec. 23, T. 2 S., R. 5 E., Floyd County, on right bank at downstream side of county road bridge, 2 miles south of Galena, 3.6 miles upstream from mouth, and 7.0 miles northwest of New Albany.

DRAINAGE AREA.--16.1 sq mi.

PERIOD OF RECORD.--October 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is 703.00 ft above mean sea level.

EXTREMES.--Current year: Maximum discharge, 958 cfs Jan. 30 (gage height, 4.93 ft); no flow Oct. 4, 5, 14-16, Sept. 24-30.
Period of record: Maximum discharge, 958 cfs Jan. 30, 1969 (gage height, 4.93 ft); no flow Oct. 4, 5, 14-16, 1968, Sept. 24-30, 1969.

REMARKS.--Records good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.10	.05	12	15	57	9.8	17	8.6	8.7	4.0	.48	.15
2	.10	.03	11	11	40	12	18	7.9	7.5	2.9	.63	.20
3	.10	.03	7.8	9.0	30	13	16	7.6	5.1	2.4	.42	.15
4	0	.03	37	7.5	23	12	15	7.3	3.5	2.1	.31	2.9
5	0	.03	12	6.5	21	10	16	7.4	2.7	1.5	.25	.77
6	.10	.12	6.7	5.5	26	11	14	7.4	22	1.4	.25	.42
7	.10	.39	4.7	5.0	26	11	12	7.1	6.1	1.5	.20	.31
8	.10	.28	3.4	4.5	44	11	11	12	3.5	13	.63	.20
9	.10	.15	3.1	4.0	55	13	14	9.8	6.4	5.7	14	.11
10	.10	.09	2.8	3.5	35	11	15	8.0	3.5	7.1	7.5	.08
11	.10	.05	2.5	3.2	28	10	12	6.1	2.7	4.5	1.1	.05
12	.10	.07	2.3	2.8	22	10	10	5.2	2.6	3.1	.77	.03
13	.10	.05	2.7	2.6	18	9.0	9.5	4.1	9.3	2.1	.70	.03
14	0	.03	2.1	2.4	16	7.3	215	18	89	1.5	.70	.03
15	0	.05	1.7	2.2	16	6.5	130	11	54	1.2	.70	.03
16	0	.45	1.6	2.2	12	5.9	55	7.5	30	1.0	.77	.02
17	.03	.39	1.4	163	11	5.6	38	14	17	.85	.77	.08
18	.05	.39	4.9	212	10	5.4	178	94	12	.77	.63	.48
19	.12	.23	8.0	59	9.6	5.2	122	150	9.1	.63	16	.15
20	.15	.15	5.8	37	8.5	4.7	57	54	6.4	.63	4.6	.05
21	.12	.09	4.5	30	7.9	3.9	39	30	10	8.5	1.5	.03
22	.09	.07	53	27	8.2	3.6	29	21	19	3.3	2.1	.02
23	.07	.03	33	38	10	3.8	23	15	44	3.1	1.1	.02
24	.05	.15	19	57	8.9	114	19	12	38	1.6	.77	0
25	.09	.19	12	31	8.2	62	16	10	25	1.3	.63	0
26	.07	.12	12	23	7.6	42	14	7.5	15	1.0	.48	0
27	.09	1.1	16	17	6.8	32	12	5.7	9.9	.85	.42	0
28	.09	30	115	319	7.2	25	13	4.5	6.8	.85	.36	0
29	.07	7.9	33	291	-----	27	10	3.8	5.1	.70	.31	0
30	.05	3.2	22	487	-----	21	9.4	17	4.0	.55	.25	0
31	.05	-----	18	114	-----	18	-----	20	-----	.48	.20	-----
TOTAL	2.29	45.91	471.0	1,991.9	572.9	535.7	1,158.9	593.5	477.9	80.11	59.33	6.31
MEAN	.074	1.53	15.2	64.3	20.5	17.3	38.6	19.1	15.9	2.58	1.91	.21
MAX	.15	30	115	487	57	114	215	150	89	13	16	2.9
MIN	0	.03	1.4	2.2	6.8	3.6	9.4	3.8	2.6	.48	.20	0
CFSM	.005	.10	.94	3.99	1.27	1.07	2.40	1.19	.99	.16	.12	.01
IN.	.005	.11	1.09	4.60	1.32	1.24	2.68	1.37	1.10	.19	.14	.01

CAL YR 1968 TOTAL MEAN MAX MIN CFSM IN
WTR YR 1969 TOTAL 5,995.75 MEAN 16.4 MAX 487 MIN 0 CFSM 1.02 IN 13.85

PEAK DISCHARGE (BASE, 250 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-28	0415	3.51	314	04-18	2030	3.32	256
01-17	1615	3.95	470	05-19	0045	3.51	314
01-30	0730	4.93	958	06-14	1330	3.30	250
04-14	1730	4.26	602				

INDIAN CREEK BASIN

27

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., Harrison County, on upstream side of bridge on State Highway 335, 0.6 mile upstream from Raccoon Branch, and 4.5 miles north of Corydon.

DRAINAGE AREA.--129 sq mi.

PERIOD OF RECORD.--October 1943 to current year. Prior to October 1961, published as Big Indian Creek near Corydon.

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

AVERAGE DISCHARGE.--26 years, 163 cfs (17.16 inches per year).

EXTREMES.--Current year: Maximum discharge, 5,720 cfs Jan. 30 (gage height, 14.20 ft); minimum, 0.06 cfs Oct. 4-5; minimum gage height, 3.97 ft Sept. 29, 30.
Period of record: Maximum discharge, 26,700 cfs Mar. 5, 1964 (gage height, 22.64 ft); no flow at times during 1943-44, 1951-54, 1959, 1965.

REMARKS.--Records good.

REVISIONS (WATER YEARS).--WSP 1275: Drainage area. WSP 1385: 1951(M). WSP 1909: 1964(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	ALG	SEP
1	.29	.55	45	115	683	58	126	69	73	27	5.6	4.2
2	.29	.42	116	96	427	62	124	63	50	24	5.0	4.2
3	.21	.31	77	90	299	64	117	57	45	20	4.4	4.2
4	.10	.29	217	60	211	66	105	52	34	18	4.2	5.8
5	.06	.29	152	61	178	62	109	47	27	15	4.2	5.6
6	.66	.46	84	55	170	61	108	44	40	14	3.7	8.1
7	.58	.66	59	49	187	64	95	39	48	14	3.2	8.1
8	.25	.46	45	44	182	61	90	76	28	20	3.7	6.6
9	.15	.59	34	39	487	65	87	72	24	47	5.0	4.7
10	.32	.66	27	35	325	62	108	58	28	45	89	3.9
11	.58	.66	25	31	249	58	96	54	22	53	37	3.5
12	.66	.67	22	28	192	54	85	46	29	40	15	3.0
13	.66	.66	23	25	143	52	79	40	89	28	9.7	2.8
14	.53	.66	22	22	118	49	435	69	362	19	7.7	2.4
15	.51	.86	19	21	106	45	1,240	118	384	14	6.2	2.2
16	.51	1.8	16	21	98	43	469	79	252	12	5.8	1.9
17	.51	1.8	14	408	90	41	285	74	122	9.6	5.8	1.9
18	.51	2.4	17	2,040	82	40	926	529	83	7.8	6.2	2.6
19	.40	2.5	38	756	77	40	1,680	1,210	67	6.2	53	2.2
20	.39	2.5	66	384	70	38	580	580	53	6.0	109	1.8
21	.39	2.3	56	285	66	35	371	299	74	13	41	1.6
22	.38	2.2	228	236	64	33	271	198	66	67	27	1.6
23	.39	2.2	520	254	67	32	202	147	271	42	24	1.6
24	.52	3.3	195	411	66	320	162	118	222	34	17	1.6
25	.60	3.4	122	259	61	512	137	99	267	22	12	1.2
26	.69	3.6	96	177	58	302	116	82	127	17	9.7	1.1
27	.82	4.5	102	151	55	231	99	68	83	13	8.5	.80
28	.67	39	1,030	1,420	53	188	97	57	59	10	7.3	.70
29	.74	136	476	2,420	-----	177	87	49	44	8.9	6.2	.60
30	.83	52	246	4,330	-----	154	76	43	33	7.7	5.3	.50
31	.66	-----	176	1,550	-----	134	-----	177	-----	6.6	4.7	-----
TOTAL	14.86	267.70	4,365	15,873	4,864	3,203	8,562	4,713	3,106	680.8	546.1	91.00
MEAN	.48	8.92	141	512	174	103	285	152	104	22.0	17.6	3.03
MAX	.83	136	1,030	4,330	683	512	1,680	1,210	384	67	169	8.1
MIN	.06	.29	14	21	53	32	76	39	22	6.0	3.2	.50
CFSM	.004	.07	1.09	3.97	1.35	.80	2.21	1.18	.80	.17	.14	.02
IN.	.004	.08	1.26	4.58	1.40	.92	2.47	1.36	.90	.20	.16	.03

CAL YR 1968 TOTAL 45,044.28 MEAN 123 MAX 4,000 MIN .06 CFSM .95 IN 12.99
WTR YR 1969 TOTAL 46,286.46 MEAN 127 MAX 4,330 MIN .06 CFSM .98 IN 13.34

PEAK DISCHARGE (BASE, 4,500 CFS)

DATE TIME G.HT. DISCHARGE DATE TIME G.HT. DISCHARGE
01-30 1900 14.20 5,720

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., Washington County, attached to downstream side of 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.

PERIOD OF RECORD.--June 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is 590.00 ft above mean sea level.

EXTREMES.--Current year: Maximum discharge, 9,450 cfs Jan. 30 (gage height, 19.95 ft); minimum, 5.6 cfs Oct. 18 (gage height, 1.85 ft).

Period of record: Maximum discharge, 9,450 cfs Jan. 30, 1969 (gage height, 19.95 ft); minimum, 5.6 cfs Oct. 18, 1968 (gage height, 1.85 ft).

Flood of Jan. 21, 1959 reached a stage of 29.20 ft, from floodmarks.

REMARKS.--Records good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.9	11	172	389	1,440	121	222	143	97	32	37	15
2	8.5	11	421	320	985	117	233	132	94	32	95	99
3	8.4	11	287	280	745	113	219	120	90	29	52	141
4	8.0	11	966	236	560	107	200	110	74	27	34	76
5	7.3	12	616	228	483	101	254	102	65	25	29	62
6	9.4	13	359	211	450	99	314	95	63	23	25	45
7	12	13	254	169	468	101	274	85	56	22	23	33
8	14	25	195	153	462	96	247	154	51	44	35	28
9	12	15	155	144	1,370	97	228	188	68	85	60	24
10	11	14	134	118	852	94	236	155	65	47	147	21
11	11	14	121	105	663	86	206	141	48	57	65	18
12	11	14	113	90	513	81	177	125	42	42	36	16
13	11	13	113	82	388	77	162	108	90	32	28	16
14	13	13	106	71	316	74	403	160	284	25	23	15
15	10	13	89	70	281	71	1,440	211	286	21	20	14
16	9.0	15	81	67	255	69	816	155	260	19	23	13
17	8.2	21	78	589	226	68	577	133	144	18	78	13
18	6.1	24	81	3,900	202	66	1,720	728	110	14	41	12
19	6.8	23	165	1,570	185	65	2,170	2,750	93	15	72	11
20	8.3	20	234	820	169	65	1,090	1,520	77	16	275	11
21	9.5	18	180	618	158	59	760	783	64	93	115	11
22	10	16	479	523	153	53	540	527	64	543	73	10
23	10	16	1,160	541	155	53	448	433	119	910	57	10
24	10	13	555	808	147	174	347	329	116	245	42	9.8
25	11	22	366	538	136	573	279	271	84	157	34	10
26	11	25	286	379	129	372	238	222	69	112	28	9.8
27	11	26	391	325	122	322	206	183	55	85	24	9.4
28	11	213	3,330	1,480	119	276	209	152	45	67	21	9.0
29	11	493	1,350	4,560	-----	269	191	133	38	55	19	9.0
30	10	213	780	8,470	-----	260	160	119	34	46	17	8.6
31	11	-----	579	3,670	-----	228	-----	109	-----	39	16	-----
TOTAL	309.4	1,353	14,196	31,524	12,133	4,408	14,605	10,576	2,845	2,979	1,644	779.6
MEAN	9.98	45.6	458	1,017	433	142	487	341	94.8	96.1	53.0	26.0
MAX	14	433	3,330	8,470	1,440	573	2,170	2,750	286	910	275	141
MIN	6.1	11	78	67	119	53	160	85	34	15	16	8.6
CFSM	.04	.15	1.62	3.59	1.53	.50	1.72	1.21	.34	.34	.19	.09
IN.	.04	.13	1.87	4.14	1.53	.58	1.92	1.39	.37	.39	.22	.10

CAL YR 1968 TOTAL MEAN MAX MIN CFSM IN
WTR YR 1969 TOTAL 97,357.0 MFAN 267 MAX 8,470 MIN 6.1 CFSM .04 IN 12.80

PEAK DISCHARGE (BASE, 2,100 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-28	1430	14.20	4,840	04-19	0215	10.52	2,760
01-18	1800	13.18	4,210	05-19	0915	11.93	3,460
01-30	1745	19.95	9,450	07-23	0115	9.67	2,370

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

LOCATION.--Lat 38°14'15", long 86°13'42", in NW¼SE¼ sec. 19, T. 3 S., R. 3 E., Harrison County, on left bank 400 ft downstream from Spring Creek, 0.2 mile upstream from bridge on State Highway 62, and 0.8 mile north of White Cloud.

DRAINAGE AREA.--461 sq mi.

PERIOD OF RECORD.--October 1930 to current year. Monthly figures only for some periods, published in WSP 1305.

GAGE.--Water-stage recorder. Datum of gage is 434.26 ft above mean sea level (levels by Indiana Department of Natural Resources from adjusted elevation of U.S. Coast and Geodetic Survey bench mark). Prior to Nov. 16, 1938, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--39 years, 601 cfs (17.70 inches per year).

EXTREMES.--Current year: Maximum discharge, 14,200 cfs Jan. 30 (gage height, 15.06 ft); minimum, 24 cfs Oct. 23, 24; minimum gage height, 1.79 ft Oct. 5.

Period of record: Maximum discharge, 28,500 cfs Jan. 22, 1959 (gage height, 23.07 ft); minimum, 9.0 cfs Oct. 17, 1964; minimum gage height, 1.40 ft Sept. 20, 1940, Sept. 30, 1941.

REMARKS.--Records good. Records of suspended sediment loads for the current year are published in Part 2 of this report.

REVISIONS.--WSP 1335: 1931-32, 1933(M), 1935-38(M), 1944. WSP 1385: Drainage area. WSP 1555: 1953.

DISCHARGE, IN CURIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	29	457	1,050	4,030	318	549	429	327	177	145	61
2	31	29	711	784	2,570	314	547	395	312	157	132	62
3	30	29	784	685	1,870	313	539	368	289	147	155	328
4	28	29	1,380	595	1,400	306	506	343	273	146	159	296
5	27	29	1,860	475	1,140	292	489	322	242	151	119	203
6	32	36	940	456	997	286	560	303	216	138	107	151
7	38	38	638	415	977	285	572	285	215	137	103	124
8	33	34	494	374	960	282	527	364	214	289	100	104
9	30	32	397	340	2,050	277	501	464	202	411	124	88
10	35	36	327	290	2,050	270	502	464	197	877	306	75
11	36	41	282	250	1,500	263	502	409	202	879	385	67
12	33	34	257	230	1,230	250	449	366	187	734	246	62
13	29	31	248	210	558	243	413	328	211	468	159	56
14	30	30	233	190	778	233	730	403	698	320	124	52
15	29	29	214	180	689	227	2,380	580	1,130	232	105	49
16	28	32	190	180	646	222	2,020	516	962	186	55	48
17	29	33	168	740	593	217	1,350	427	605	157	104	45
18	30	34	176	6,520	534	218	3,260	1,610	433	138	117	45
19	28	36	270	5,190	489	213	5,390	6,340	360	123	495	45
20	27	42	443	2,240	455	212	3,110	4,330	313	115	524	41
21	26	53	470	1,540	424	205	1,960	2,230	273	318	515	38
22	26	40	905	1,230	406	190	1,420	1,420	285	1,170	358	37
23	26	34	2,480	1,150	398	181	1,120	1,040	519	2,200	260	37
24	25	34	1,600	1,450	390	412	887	862	445	951	260	36
25	27	35	975	1,360	371	1,040	739	715	383	579	160	36
26	29	40	735	991	350	991	652	620	312	416	132	36
27	30	48	785	801	335	801	582	535	272	324	111	33
28	30	294	5,220	2,100	324	717	549	465	242	264	55	32
29	29	1,030	4,760	7,680	-----	660	534	411	219	219	84	32
30	29	678	2,050	12,000	-----	634	477	374	198	187	74	31
31	29	-----	1,420	11,300	-----	585	-----	346	-----	161	87	-----
TOTAL	921	2,949	31,869	62,996	28,914	11,657	33,816	28,064	10,736	12,771	5,860	2,350
MEAN	29.7	98.3	1,028	2,032	1,033	376	1,127	905	358	412	189	78.3
MAX	38	1,030	5,220	12,000	4,030	1,040	5,390	6,340	1,130	2,200	524	328
MIN	25	29	168	180	324	181	413	285	187	115	67	31
CFSM	.06	.21	2.23	4.41	2.24	.82	2.45	1.96	.78	.89	.41	.17
IN.	.07	.24	2.57	5.08	2.33	.94	2.73	2.26	.87	1.03	.47	.19

CAL YR 1968 TOTAL 225,779 MEAN 617 MAX 8,110 MIN 25 CFSM 1.34 IN 18.21
WTR YR 1969 TOTAL 232,903 MEAN 638 MAX 12,000 MIN 25 CFSM 1.38 IN 18.79

PEAK DISCHARGE (BASE, 7,500 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
01-18	1545	11.25	8,560	01-30	2215	15.06	14,200

ANDERSON RIVER BASIN

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., Perry County, on left bank at downstream side of bridge on State Highway 145 at Bristow, 2.0 miles downstream from Coon Branch, and 6.0 miles upstream from Sulphur Fork Creek.

DRAINAGE AREA.--41.9 sq mi.

PERIOD OF RECORD.--August 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is 395.00 ft above mean sea level.

AVERAGE DISCHARGE.--8 years, 49.2 cfs (15.95 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,600 cfs Jan. 29 (gage height, 15.29 ft); no flow Oct. 25 to Nov. 5.
 Period of record: Maximum discharge, 6,360 cfs Mar. 9, 1964; maximum gage height, 19.33 ft Mar. 4, 1964; no flow 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). This is the maximum flood since 1905, from information by local resident.

REMARKS.--Records fair. Occasional regulation of Soil Conservation Service control structure No. 6 may affect peaks and recessions. Records of suspended sediment loads for current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.33	0	90	89	511	23	45	24	5.9	6.2	10	3.1
2	.28	0	110	48	449	26	44	20	8.1	5.4	8.1	25
3	.33	0	82	25	332	29	41	18	7.3	4.6	6.2	16
4	.19	0	271	19	119	28	37	16	5.9	4.1	4.3	19
5	.11	0	110	16	73	26	35	15	5.0	3.7	3.1	18
6	.89	.01	56	14	67	25	31	14	4.1	2.9	2.3	13
7	.89	.11	36	13	58	24	28	12	3.7	3.9	1.6	11
8	.57	.13	27	13	71	23	26	46	3.1	5.6	1.3	8.4
9	.45	.09	22	12	106	23	32	103	2.6	12	3.1	6.2
10	.45	.09	19	12	74	21	49	48	2.3	7.65	11	4.1
11	.51	.11	17	12	60	20	42	34	2.3	655	6.4	2.9
12	.51	.09	16	12	47	19	36	26	2.2	445	4.3	2.5
13	.39	.09	529	12	37	18	33	21	10	171	2.8	2.0
14	.33	.09	45	12	31	17	235	86	55	67	2.0	1.6
15	.33	.11	14	13	29	16	237	67	63	39	1.5	1.4
16	.23	.28	13	15	27	16	130	41	55	27	7.6	1.3
17	.33	.33	13	100	25	15	132	34	28	20	4.1	1.2
18	.72	.45	13	920	24	15	947	793	18	15	3.3	.89
19	.39	.45	13	565	23	15	737	883	13	11	127	.89
20	.23	.45	15	286	22	15	481	461	10	8.1	58	.89
21	.23	.45	13	130	21	13	373	168	8.4	93	362	.72
22	.19	.39	17	92	22	13	146	64	8.1	176	302	.57
23	.11	.39	70	164	26	13	78	37	84	231	57	.51
24	.02	.98	50	156	26	262	56	28	37	111	33	.45
25	0	1.3	32	85	24	263	42	21	27	168	22	.45
26	0	1.5	24	55	23	141	30	17	19	87	17	.33
27	0	4.3	80	43	21	93	26	13	13	51	12	.23
28	0	234	800	652	21	67	52	11	9.8	36	9.8	.23
29	0	137	660	945	-----	73	39	9.1	8.4	25	7.3	.19
30	0	38	350	1,070	-----	60	30	7.8	7.0	19	5.4	.16
31	0	-----	160	662	-----	47	-----	7.0	-----	13	4.1	-----
TOTAL	9.01	421.19	3,767	6,262	2,369	1,459	4,250	3,144.9	526.2	3,281.5	1,059.6	143.21
MEAN	.29	14.0	122	202	84.6	47.1	142	101	17.5	106	35.5	4.77
MAX	.89	234	800	1,070	511	263	947	883	84	765	362	25
MIN	0	0	13	12	21	13	26	7.0	2.2	2.9	1.3	.16
CFSM	.007	.34	2.90	4.82	2.02	1.12	3.38	2.42	.42	2.53	.85	.11
IN.	.008	.37	3.34	5.56	2.10	1.29	3.77	2.79	.47	2.51	.58	.13
CAL YR 1968	TOTAL 20,771.48			MEAN 56.8		MAX 917		MIN 0		CFSM 1.35		IN 18.44
WTR YR 1969	TOTAL 26,732.61			MEAN 73.2		MAX 1,070		MIN 0		CFSM 1.75		IN 23.73

PEAK DISCHARGE (BASE, 2,000 CFS).--No peak above base.

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., Vanderburgh County, on downstream side of center span of Oak Hill Road Bridge at Evansville and 7.1 miles upstream from mouth.

DRAINAGE AREA.--326 sq mi.

PERIOD OF RECORD.--October 1960 to current year.

GAGE.--Nonrecording gage. Datum of gage is 352.24 ft above mean sea level. Prior to Oct. 1, 1968, water-stage recorder at same site and datum. Auxiliary water-stage recorder 1.3 miles downstream at same datum.

AVERAGE DISCHARGE.--8 years, 283 cfs (11.79 inches per year).

EXTREMES.--Current year: Maximum discharge, 5,860 cfs Feb. 2 (gage height, 19.70 ft); minimum, 5.4 cfs Oct. 30; minimum gage height, 1.51 ft Aug. 16.

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

REMARKS.--Records poor.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	7.7	885	1,660	5,770	115	264	58	42	212	35	18
2	11	14	1,120	825	5,640	224	239	53	37	136	38	1,450
3	14	20	1,070	332	4,450	276	208	46	32	104	32	950
4	18	15	1,440	170	2,920	237	172	42	29	316	23	867
5	19	7.2	1,090	133	1,680	203	154	39	24	159	19	582
6	27	26	792	107	980	154	194	24	20	112	18	386
7	13	38	366	89	864	107	145	28	18	208	14	246
8	12	33	184	73	938	106	96	53	17	560	13	206
9	20	37	114	67	832	110	134	81	16	510	15	123
10	25	33	80	61	605	92	340	69	17	431	22	72
11	17	24	66	50	595	62	324	49	22	1,550	96	51
12	14	17	60	42	548	58	208	38	20	1,120	48	38
13	11	16	60	35	372	57	140	39	228	750	23	33
14	14	16	62	32	336	54	1,490	216	260	415	16	28
15	14	16	54	30	349	54	1,240	590	197	217	13	23
16	11	16	32	36	172	49	1,210	410	305	118	10	22
17	20	12	30	1,060	128	45	1,260	290	240	77	13	20
18	400	32	42	2,970	133	43	1,780	770	120	55	13	16
19	310	35	94	2,780	150	42	1,400	2,250	63	37	48	16
20	108	34	155	2,870	154	41	1,300	1,370	50	29	190	16
21	52	26	110	2,780	143	38	1,000	1,410	37	1,530	183	18
22	34	20	713	2,260	134	34	650	1,370	239	1,330	435	18
23	25	15	1,200	1,570	163	31	450	760	1,510	1,050	659	16
24	34	33	835	1,350	168	896	300	470	1,040	690	390	16
25	33	37	587	1,100	128	1,180	200	280	1,030	472	199	15
26	19	49	258	717	89	1,180	120	174	875	298	102	16
27	11	118	1,070	437	79	985	96	123	450	201	64	16
28	9.1	1,420	2,620	1,810	74	529	85	89	199	154	46	16
29	8.6	1,280	2,120	2,710	-----	490	76	70	163	118	21	14
30	7.2	797	2,110	4,280	-----	546	65	56	244	68	22	13
31	9.1	-----	2,280	5,150	-----	368	-----	50	-----	44	18	-----
TOTAL	1,330.0	4,243.9	21,699	37,586	28,594	8,406	15,340	11,367	7,544	13,071	2,848	5,321
MEAN	42.9	141	700	1,212	1,021	271	511	367	251	422	91.9	177
MAX	400	1,420	2,620	5,150	5,770	1,180	1,780	2,250	1,510	1,550	659	1,450
MIN	7.2	7.2	30	30	74	31	65	24	16	29	10	13
CFSM	.13	.43	2.15	3.72	3.13	.83	1.57	1.12	.77	1.29	.28	.54
IN.	.15	.48	2.48	4.29	3.26	.96	1.75	1.30	.86	1.49	.32	.61
CAL YR 1968	TOTAL 138,694.2	MEAN 379	MAX 3,580	MIN 6.7	CFSM 1.16	IN 15.82						
WTR YR 1969	TOTAL 157,349.9	MEAN 431	MAX 5,770	MIN 7.2	CFSM 1.32	IN 17.95						

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., Jay County, on left bank, 10 ft downstream from county bridge on Indiana-Ohio State line road, 2 miles east of New Corydon, 2.8 miles downstream from Beaver Creek, and at mile 465.6.

DRAINAGE AREA.--262 sq mi.

PERIOD OF RECORD.--April 1951 to current year.

GAGE.--Water-stage recorder. Datum of gage is 830.10 ft above mean sea level. Prior to June 24, 1953, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--18 years, 181 cfs (9.38 inches per year).

EXTREMES.--Current year: Maximum discharge, 3,710 cfs Jan. 18 (gage height, 17.59 ft); minimum 7.2 cfs Oct. 1 (gage height, 6.94 ft).

Period of record: Maximum discharge, 8,720 cfs Jan. 22, 1959 (gage height, 20.47 ft, from floodmarks); minimum, 0.7 cfs Sept. 13, 1954; minimum gage height, 5.40 ft Aug. 18, 1951.

REMARKS.--Records fair except those for winter periods, which are poor. Occasional regulation by Grand Lake Reservoir, diversion from or into St. Marys River basin, and into Miami and Erie Canal. Records of chemical analyses for the current year are contained in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1555: 1957(P). WSP 1909: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.8	14	201	256	1,330	190	103	46	69	77	32	9.4
2	8.5	14	250	210	673	185	94	43	62	67	29	9.3
3	8.3	14	254	180	681	182	88	41	54	94	27	9.9
4	9.1	14	215	160	518	182	76	39	46	166	26	11
5	7.8	14	225	140	364	180	266	37	47	286	24	11
6	8.3	17	190	120	289	179	799	37	50	593	21	11
7	8.5	27	150	110	256	174	333	35	45	834	20	14
8	9.6	49	131	100	237	89	206	34	45	620	18	15
9	9.6	45	100	92	353	76	154	38	46	303	17	13
10	10	32	92	86	351	98	127	58	42	202	53	12
11	11	21	86	78	313	83	104	111	38	156	76	12
12	11	14	78	74	288	60	82	108	36	128	38	13
13	9.9	11	74	70	237	53	68	73	47	109	26	13
14	8.8	11	70	70	200	47	61	53	42	97	20	13
15	8.0	10	70	70	180	41	57	43	59	84	17	13
16	8.3	238	70	72	160	38	58	36	135	77	15	13
17	9.6	419	80	281	150	36	58	94	96	69	15	137
18	12	277	88	3,290	140	37	783	1,010	62	62	14	282
19	15	229	98	1,640	150	42	2,240	2,250	49	58	12	102
20	15	175	107	608	150	52	771	960	42	59	14	44
21	15	146	113	395	160	62	333	439	38	82	15	28
22	14	123	110	337	170	58	214	262	37	77	12	22
23	15	179	182	386	199	46	154	189	705	62	10	18
24	15	101	199	558	210	71	112	146	673	53	9.6	44
25	15	98	150	413	218	404	91	119	738	48	9.1	46
26	16	100	144	270	213	366	77	102	376	45	7.8	74
27	15	170	232	226	204	237	65	91	214	42	7.8	83
28	15	110	2,640	235	194	194	58	80	150	42	8.0	97
29	14	350	1,520	1,920	-----	182	55	71	109	37	7.5	86
30	14	295	610	3,400	-----	181	51	64	92	35	8.3	83
31	14	-----	340	2,740	-----	132	-----	67	-----	34	8.5	-----
TOTAL	358.1	3,167	8,869	18,587	8,588	3,957	7,738	6,771	4,239	4,698	617.6	1,338.6
MEAN	11.6	106	286	600	307	128	258	218	141	152	19.9	44.6
MAX	16	419	2,640	3,400	1,330	404	2,240	2,250	738	834	76	282
MIN	7.8	10	70	70	140	36	51	34	36	34	7.5	9.3
CFSM	.04	.40	1.09	2.29	1.17	.49	.98	.83	.54	.58	.08	.17
IN.	.05	.45	1.26	2.64	1.22	.56	1.10	.96	.60	.67	.09	.19

CAL YR 1968 TOTAL 74,752.4 MEAN 204 MAX 4,560 MIN 6.6 CFSM .78 IN 10.61
 WTR YR 1969 TOTAL 68,928.3 MEAN 189 MAX 3,400 MIN 7.5 CFSM .72 IN 9.78

PEAK DISCHARGE (BASE, 2,500 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-28	1115	16.79	2,790	01-30	0945	17.47	3,560
01-18	1030	17.59	3,710				

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

LOCATION.--Lat 40°39'22", long 85°01'58", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 34, T. 26 N., R. 13 E., Adams County, 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.--453 sq mi (revised).

PERIOD OF RECORD.--September 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 808.00 ft above mean sea level.

AVERAGE DISCHARGE.--5 years, 290 cfs (8.69 inches per year).

EXTREMES.--Current year: Maximum discharge, 5,500 cfs Jan. 31 (gage height, 12.50 ft); minimum, 9.9 cfs Aug. 31, Sept. 1 (gage height, 3.30 ft).

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

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

REMARKS.--Records good except those for winter periods, which are fair. Occasional regulation of Grand Lake Reservoir, diversion from or into St. Marys River basin, and into Miami and Erie Canal.

REVISIONS(WATER YEARS).--WRD Ind. 1966: 1964(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	16	428	1,400	4,540	253	190	90	93	128	33	10
2	13	16	449	900	3,090	243	170	82	95	104	30	11
3	15	16	504	600	2,010	236	156	76	88	96	27	11
4	13	16	399	420	1,320	234	142	71	78	160	25	11
5	12	16	332	320	964	229	508	66	72	435	24	11
6	13	18	303	260	629	226	1,050	61	70	1,170	22	12
7	13	20	223	210	421	229	1,090	59	72	1,500	21	14
8	13	34	180	180	340	208	621	76	71	1,530	19	13
9	13	78	150	150	365	150	313	92	68	1,300	19	13
10	14	75	130	130	480	160	241	132	67	625	21	12
11	13	51	120	110	431	158	190	298	61	278	49	12
12	14	35	100	100	379	130	154	275	56	199	82	11
13	14	27	96	92	310	109	125	208	119	158	46	11
14	15	23	92	90	260	96	109	156	78	125	28	11
15	14	22	88	90	230	88	106	117	168	107	22	12
16	13	265	86	90	210	78	112	95	280	93	20	13
17	13	817	90	743	200	72	112	81	238	83	18	229
18	12	817	96	2,260	200	74	946	393	160	75	17	897
19	11	617	110	3,790	210	76	1,840	1,140	112	69	16	571
20	13	365	135	4,550	220	88	2,750	1,680	88	69	15	210
21	14	250	142	3,170	240	102	2,200	1,710	74	93	15	101
22	16	196	158	2,010	255	102	1,130	1,090	65	121	14	58
23	17	166	280	1,090	273	93	438	449	765	89	13	40
24	17	150	280	1,230	290	125	273	255	1,270	70	13	119
25	17	139	230	1,000	308	547	212	201	1,420	60	13	178
26	18	135	270	720	308	793	174	168	1,260	53	12	116
27	19	138	380	580	293	649	148	146	793	50	12	114
28	18	177	1,660	613	270	414	126	128	325	46	11	176
29	17	499	2,040	1,670	-----	310	114	116	208	45	11	176
30	17	593	2,450	2,950	-----	293	102	104	160	40	11	140
31	17	-----	1,980	5,370	-----	250	-----	95	-----	36	9.9	-----
TOTAL	450	5,777	13,981	36,888	19,046	6,815	15,842	9,710	8,474	9,007	688.9	3,313
MEAN	14.5	133	451	1,190	680	220	528	313	282	291	22.2	110
MAX	19	817	2,450	5,370	4,540	793	2,750	1,710	1,420	1,530	82	897
MIN	11	16	86	90	200	72	102	59	56	36	9.9	10
CFSM	.03	.43	1.00	2.63	1.50	.49	1.17	.69	.62	.64	.05	.24
IN.	.04	.47	1.15	3.03	1.56	.56	1.30	.80	.70	.74	.06	.27

CAL YR 1968 TOTAL 115,793 MEAN 316 MAX 4,340 MIN 11 CFSM .70 IN 9.51
WTR YR 1969 TOTAL 129,991.9 MEAN 356 MAX 5,370 MIN 9.9 CFSM .79 IN 10.67

PEAK DISCHARGE (BASE, 1,900 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-30	0745	10.12	2,500	01-31	0945	12.50	5,500
01-19	1600	12.32	4,970	04-20	1430	10.17	2,870

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., Wells County, 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.--532 sq mi (revised).

PERIOD OF RECORD.--October 1930 to current year. 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. Prior to Mar. 31, 1934, nonrecording gage at same site and datum. Mar. 31 to Dec. 5, 1934, nonrecording gage at nearby site at same datum.

AVERAGE DISCHARGE.--39 years, 388 cfs (9.90 inches per year).

EXTREMES.--Current year: Maximum discharge, 5,780 cfs Jan. 31 (gage height, 12.75 ft); minimum, 11 cfs Sept. 2 (gage height, 0.96 ft).

Period of record: Maximum discharge, 11,800 cfs Feb. 15, 1950 (gage height, 16.07 ft); minimum, 3.9 cfs July 18, 1936; minimum gage height, 0.83 ft Sept. 13, 14, 1964.

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

REMARKS.--Records good except those for winter periods, which are fair. Occasional regulation by Grand Lake Reservoir, diversion from or into St. Marys River basin, and into Miami and Erie Canal. Records of suspended sediment loads for the current year are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 823: 1932-35. WSP 1235: Drainage area. WSP 1505: 1936(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	17	465	1,520	5,420	282	245	112	99	158	46	12
2	16	16	418	772	4,150	270	212	102	99	127	43	12
3	16	16	495	561	2,650	260	191	95	99	123	39	12
4	17	16	420	470	1,650	255	174	88	88	143	36	13
5	17	16	336	380	1,230	252	1,040	82	90	352	33	13
6	16	17	316	300	812	248	1,420	77	77	1,220	31	20
7	16	21	255	240	536	248	1,350	74	79	1,670	29	15
8	16	23	198	200	413	245	940	95	83	1,670	27	15
9	16	44	161	160	386	200	452	119	74	1,520	28	15
10	17	80	140	140	497	178	312	172	70	964	29	15
11	16	69	130	120	491	189	248	368	68	398	28	15
12	16	49	120	110	431	160	198	362	63	272	74	14
13	16	36	110	100	360	130	163	292	204	215	76	13
14	16	29	100	100	290	108	141	218	210	171	48	13
15	17	30	96	100	240	101	132	169	270	145	32	13
16	16	68	96	100	220	90	134	134	401	123	30	19
17	14	624	98	504	210	83	145	112	325	104	25	83
18	14	754	110	2,620	220	83	1,400	262	232	91	23	835
19	14	642	137	2,900	230	85	2,300	1,200	163	85	22	749
20	14	410	146	3,170	248	98	2,500	1,610	116	85	21	330
21	13	279	154	3,530	260	112	2,600	1,840	91	87	19	163
22	14	222	169	2,420	272	119	1,720	1,470	76	149	18	88
23	15	184	250	1,510	298	116	685	629	740	138	17	65
24	17	163	250	1,750	308	166	368	315	1,410	106	17	183
25	17	152	240	1,260	328	662	282	240	1,490	87	16	238
26	17	144	210	774	338	980	232	196	1,410	77	15	178
27	17	144	382	512	330	860	196	167	1,030	72	15	123
28	18	182	2,240	744	308	564	169	147	446	67	14	167
29	18	420	2,540	2,640	-----	407	147	130	265	61	13	205
30	17	573	2,510	3,860	-----	338	130	116	196	56	13	171
31	17	-----	2,430	5,250	-----	312	-----	104	-----	49	12	-----
TOTAL	496	5,440	15,722	38,817	23,126	8,201	20,226	11,097	10,064	10,585	889	3,807
MEAN	16.0	181	507	1,252	826	265	674	358	335	341	28.7	127
MAX	18	754	2,540	5,250	5,420	980	2,600	1,840	1,490	1,670	76	835
MIN	13	16	96	100	210	83	130	74	63	49	12	12
CFSM	.03	.34	.95	2.35	1.55	.50	1.27	.67	.63	.64	.05	.24
IN.	.03	.38	1.10	2.71	1.62	.57	1.41	.78	.70	.74	.06	.27

CAL YR 1968	TOTAL 137,933	MEAN 377	MAX 4,860	MIN 13	CFSM .71	IN 9.64
WTR YR 1969	TOTAL 148,470	MEAN 407	MAX 5,420	MIN 12	CFSM .76	IN 10.38

PEAK DISCHARGE (BASE, 3,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-21	0700	10.05	3,640	01-31	2230	12.75	5,780

3-3234.5. Huntington Reservoir near Huntington, Ind.

LOCATION.--Lat 40°50'43", long 85°28'06", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 25, T. 28 N., R. 9 E., Huntington County, on right bank at upstream side of State Highway 5, 1.5 miles southeast of Huntington, and at mile 411.4.

DRAINAGE AREA.--717 sq mi.

PERIOD OF RECORD.--January 1969 to current year.

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

EXTREMES.--Current year: Maximum contents observed, 40,060 acre-ft Feb. 4 (elevation, 769.71 ft); minimum, 240 acre-ft Mar. 5 (elevation, 733.84 ft), lowered reservoir for repairs.

Period of record: Maximum contents observed, 40,060 acre-ft Feb. 4, 1969 (elevation, 769.71 ft); minimum, 240 acre-ft Mar. 5, 1969 (elevation, 733.84 ft), lowered reservoir for repairs.

REMARKS.--Reservoir is formed by concrete and rolled-earth fill dam which is State Highway 5. Releases normally controlled by six sluices, 6.0 ft wide and 6.0 ft high and by spillway (crest elevation, 765 ft), with three taintor gates, 45 ft by 36.5 ft setting atop spillway. Minimum design capacity is 4,100 acre-ft (elevation, 737 ft). Seasonal pool capacity is 12,500 acre-ft (elevation, 749 ft). Capacity at flood control pool is 153,100 acre-ft (elevation, 798 ft). Reservoir is used for flood control and recreation. Reservoir put into operation on Jan. 9, 1969.

COOPERATION.--Records furnished by Corps of Engineers.

Month-end elevation and contents, water year October 1968 to September 1969

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	-	-	-
Oct. 31.....	-	-	-
Nov. 30.....	-	-	-
Dec. 31.....	-	-	-
Calendar year.....	-	-	-
Jan. 31.....	765.02	31,870	-
Feb. 28.....	737.36	4,300	-27,570
Mar. 31.....	736.99	4,120	-180
Apr. 30.....	749.15	12,620	+8,500
May 31.....	749.45	12,890	+270
June 30.....	749.31	12,760	-130
July 31.....	749.46	12,900	+140
Aug. 31.....	749.17	12,630	-270
Sept. 30.....	736.98	4,110	-8,520
Water year 1968-69	-	-	-

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., Huntington County, on right bank at the Huntington Water and Light Plant, 2 miles south of Huntington, 3.2 miles upstream from Little River, and at mile 409.

DRAINAGE AREA.--721 sq mi (revised).

PERIOD OF RECORD.--January 1951 to current year.

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

AVERAGE DISCHARGE.--18 years, 565 cfs (10.64 inches per year).

EXTREMES.--Current year: Maximum discharge, 5,130 cfs Feb. 6 (gage height, 14.43 ft); minimum, 15 cfs Aug. 21-23 (gage height, 9.10 ft).

Period of record: Maximum discharge, 14,900 cfs Feb. 10, 1959; maximum gage height, 23.20 ft Feb. 10, 1959 (backwater from ice); minimum discharge, 2.3 cfs Oct. 28, 1964 (gage height, 8.87 ft).

Flood in March 1913 reached a stage of 22.7 ft (from high-water mark by Corps of Engineers).

REMARKS.--Records good except those for winter periods, which are fair. Flow regulated by Huntington Reservoir (See sta 3-3234.5). Records of water temperatures for the current year are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1235: Drainage area. WSP 1909: 1959.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	31	760	2,200	3,420	415	498	156	212	242	72	21
2	31	29	622	1,670	4,080	355	392	156	218	218	69	21
3	33	29	667	1,050	4,660	452	341	156	170	223	62	23
4	31	27	676	830	4,840	699	348	156	110	328	52	23
5	31	27	550	870	4,620	411	1,330	156	79	378	44	23
6	31	27	462	810	4,840	33	3,270	141	118	824	38	23
7	31	36	414	721	4,590	33	2,870	141	218	1,960	27	25
8	31	42	355	667	4,380	248	1,740	132	191	2,400	21	25
9	31	40	310	297	3,760	341	1,160	235	136	2,350	23	25
10	33	42	260	72	1,000	255	636	362	141	2,070	23	25
11	27	72	240	104	790	218	618	583	82	1,250	23	25
12	25	80	220	134	609	261	583	663	57	503	29	25
13	25	68	218	110	540	261	328	481	237	249	38	23
14	25	58	195	72	481	181	255	385	506	207	52	23
15	25	58	180	380	328	132	133	335	762	207	67	23
16	23	86	170	502	170	132	36	255	744	165	62	31
17	23	198	165	341	170	132	42	223	690	136	62	364
18	23	790	165	1,640	438	132	923	414	498	136	57	378
19	23	820	190	2,860	498	132	2,840	1,690	335	141	52	744
20	23	640	190	2,860	385	132	3,050	1,830	255	165	29	753
21	23	446	195	2,520	341	146	3,130	2,070	170	218	16	850
22	23	341	212	3,270	341	175	3,180	2,060	114	218	16	1,120
23	21	278	284	4,230	341	207	1,820	973	420	160	16	1,330
24	21	242	446	3,420	385	268	627	549	1,340	54	18	1,300
25	23	200	450	2,920	456	752	328	532	1,980	74	16	980
26	21	180	450	2,040	456	610	122	335	1,970	74	16	351
27	23	170	550	743	456	1,560	54	294	1,700	77	20	16
28	25	218	2,660	1,040	447	1,090	36	202	1,030	74	18	18
29	23	518	3,190	2,080	-----	780	36	170	490	74	20	18
30	27	770	2,900	2,700	-----	609	92	181	301	77	20	18
31	36	-----	2,840	3,100	-----	549	-----	181	-----	72	21	-----
TOTAL	822	6,563	21,186	46,253	48,222	11,701	30,818	16,197	15,274	15,444	1,099	8,624
MEAN	26.5	219	683	1,492	1,722	377	1,027	522	509	458	35.5	287
MAX	36	820	3,190	4,230	4,860	1,560	3,270	2,070	1,980	2,400	72	1,330
MIN	21	27	165	72	170	33	36	132	57	72	16	16
CAL YR 1968	TOTAL 212,344		MEAN 580		MAX 6,770		MIN 21					
WTR YR 1969	TOTAL 222,203		MEAN 609		MAX 4,860		MIN 16					

3-3240. Little River near Huntington, Ind.

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

DRAINAGE AREA.--263 sq mi (revised).

PERIOD OF RECORD.--October 1943 to current year. Prior to January 1944 monthly discharge only, published in WSP 1305. Published as Little River at Huntington, January 1944 to September 1948, Little River near Huntington, October 1948 to September 1956, and Little Wabash River near Huntington, October 1956 to September 1961.

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

AVERAGE DISCHARGE.--26 years, 223 cfs (11.51 inches per year).

EXTREMES.--Current year: Maximum discharge, 4,250 cfs Jan. 31 (gage height, 18.01 ft); minimum, 12 cfs Sept. 2 (gage height, 1.67 ft).

Period of record: Maximum discharge, 5,990 cfs Jan. 4, 1950; maximum gage height, 18.43 ft Feb. 11, 1959; minimum discharge, 1.0 cfs Oct. 8, 1946, site and datum then in use; minimum gage height since October 1948, 1.30 ft Oct. 1, 1949.

REMARKS.--Records good except those for winter periods, which are fair. Records of suspended sediment loads for the current year are published in Part 2 of this report.

REVISIONS.--WSP 1275: Drainage area. Revised figures of discharge, in cubic feet per second, for high water period in water year 1967, superseding figures published in WRD Ind. 1967 are given below:

Date	Discharge	Date	Discharge
Feb. 16, 1967	2,290	Feb. 18, 1967	1,100
Feb. 17, 1967	1,800	Feb. 19, 1967	700

Month	Cfs-days	Maximum	Minimum	Mean	Per square mile	Runoff in inches
February 1967	14,731	2,290	75	526	1.98	2.06
WTR YR 1967	101,675.2	4,300	5.8	279	1.05	14.21

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	27	133	339	3,490	78	157	105	117	68	38	14
2	23	27	124	240	2,390	75	180	94	168	56	36	14
3	23	27	124	190	1,640	72	205	87	107	63	32	16
4	25	27	110	140	926	71	177	82	77	109	30	15
5	23	27	95	130	597	68	931	75	112	453	28	15
6	24	28	75	115	436	69	1,540	70	128	656	26	17
7	24	33	71	105	338	72	756	68	89	722	25	19
8	24	40	63	100	261	69	383	96	517	746	24	22
9	24	35	56	92	222	75	268	140	565	377	25	20
10	25	32	48	86	181	76	224	246	239	221	27	17
11	25	30	53	80	154	74	172	953	142	153	25	16
12	25	29	46	74	131	72	139	548	106	126	23	15
13	25	29	52	70	110	67	123	282	439	98	22	15
14	25	27	49	66	97	64	115	193	931	79	20	15
15	25	35	49	64	87	59	118	147	1,700	65	20	15
16	25	79	51	62	85	57	119	119	1,440	57	18	18
17	25	100	44	226	79	57	108	101	693	50	20	49
18	26	115	42	1,680	74	57	525	182	346	47	18	59
19	27	114	45	1,720	78	61	1,390	1,110	223	51	18	33
20	27	78	51	1,010	78	72	1,120	597	166	340	17	24
21	27	57	46	453	80	85	488	280	127	278	16	20
22	26	47	48	298	88	79	323	186	113	114	16	20
23	26	44	172	377	88	75	234	147	356	74	16	19
24	26	42	150	776	85	149	181	122	289	59	15	24
25	27	38	120	476	87	1,070	152	104	174	51	13	23
26	27	37	107	398	86	954	133	88	130	43	14	20
27	27	35	332	300	83	542	117	76	102	108	16	20
28	27	86	1,670	906	80	440	146	71	91	104	15	23
29	26	357	1,870	3,010	-----	332	175	65	76	65	15	21
30	26	212	1,320	3,950	-----	228	127	59	76	51	14	19
31	27	-----	540	4,190	-----	175	-----	59	-----	43	15	-----
TOTAL	785	1,894	7,756	21,723	12,131	5,494	10,826	6,552	9,839	5,527	657	637
MEAN	25.3	63.1	250	701	433	177	361	211	328	178	21.2	21.2
MAX	27	357	1,870	4,190	3,490	1,070	1,540	1,110	1,700	746	38	59
MIN	23	27	42	62	74	57	108	59	76	43	13	14
CFSM	.10	.24	.95	2.66	1.65	.67	1.37	.80	1.25	.68	.08	.08
IN.	.11	.27	1.10	3.07	1.72	.78	1.53	.93	1.39	.78	.09	.09

CAL YR 1968 TOTAL 84,719 MEAN 231 MAX 3,170 MIN 16 CFSM .88 IN 11.98
WTR YR 1969 TOTAL 83,821 MEAN 230 MAX 4,190 MIN 13 CFSM .87 IN 11.85

PEAK DISCHARGE (BASE, 2,800 CFS).--Jan. 31 (0715) 4,250 cfs (18.01 ft).

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., Jay County, 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.--85.6 sq mi (revised).

PERIOD OF RECORD.--September 1959 to current year.

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

AVERAGE DISCHARGE.--10 years, 64.6 cfs (10.25 inches per year).

EXTREMES.--Current year: Maximum discharge, 2,140 cfs Jan. 18 (gage height, 13.32 ft, from graph based on gage readings); minimum, 1.2 cfs Sept. 3 (gage height, 1.32 ft).

Period of record: Maximum discharge, 3,460 cfs Mar. 5, 1963 (gage height, 16.96 ft); minimum, 0.2 cfs Sept. 27, 1965; minimum gage height, 1.30 ft Oct. 31, 1960.

REMARKS.--Records good except those for winter periods, which are fair. Natural flow partially affected by sewage effluent.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	6.0	59	47	242	22	36	14	7.2	10	3.3	2.2
2	3.1	5.5	149	36	117	19	36	13	6.8	8.3	2.4	3.3
3	6.2	4.4	83	30	246	18	32	11	6.8	14	2.4	1.7
4	4.0	4.2	64	25	98	19	28	9.5	7.2	17	2.2	2.2
5	4.0	5.1	63	21	55	18	338	9.5	8.0	28	3.1	2.2
6	3.7	6.2	34	17	44	18	442	8.9	7.0	73	2.9	1.8
7	3.3	8.6	22	15	37	18	116	8.6	6.8	104	2.4	2.2
8	2.9	12	17	13	48	18	69	12	5.5	55	2.6	1.7
9	3.1	10	14	11	161	30	51	14	6.0	29	14	2.0
10	4.2	5.5	11	10	90	38	43	21	5.3	18	82	2.4
11	3.1	3.5	10	9.0	58	28	32	68	5.1	12	24	2.4
12	2.6	2.9	10	8.6	46	21	24	44	5.3	10	8.3	2.0
13	2.9	3.5	9.2	8.4	35	18	21	26	8.6	8.0	5.5	2.2
14	2.9	3.7	8.6	8.4	26	16	20	21	7.2	6.0	4.0	1.8
15	4.4	6.2	8.0	8.4	21	14	26	16	44	6.0	3.1	1.8
16	4.6	294	7.8	8.6	18	13	30	13	51	5.3	3.3	3.7
17	5.5	207	7.2	258	16	13	26	36	44	5.1	1.8	264
18	5.8	120	7.2	1,710	15	14	1,080	581	11	4.8	1.7	243
19	5.8	87	13	347	16	18	1,050	607	8.9	4.2	2.4	39
20	5.3	46	16	83	16	23	225	156	7.8	6.5	2.9	15
21	5.3	28	18	56	18	26	106	76	6.5	5.5	2.4	8.3
22	6.5	21	20	60	25	20	75	46	7.0	5.1	2.2	6.2
23	6.5	17	96	102	30	17	45	34	527	5.1	2.4	5.3
24	6.8	16	50	242	41	55	34	25	194	4.8	1.7	12
25	7.5	14	30	77	42	267	32	18	413	4.4	1.3	24
26	6.0	14	20	87	39	196	25	14	86	4.0	2.0	12
27	4.4	13	196	51	32	102	21	12	38	5.3	2.2	9.2
28	4.4	46	1,460	96	26	80	21	11	24	3.7	2.0	6.8
29	6.0	208	521	1,210	-----	106	18	10	16	4.2	3.1	6.2
30	5.8	79	116	1,710	-----	76	16	8.3	12	4.4	2.4	6.0
31	5.8	-----	68	865	-----	44	-----	7.2	-----	4.0	1.7	-----
TOTAL	145.5	1,297.3	3,208.0	7,230.4	1,658	1,385	4,118	1,951.0	1,583.0	474.7	197.7	692.6
MEAN	4.69	43.2	103	233	59.2	44.7	137	62.9	52.8	15.3	6.38	23.1
MAX	7.5	294	1,460	1,710	246	267	1,080	607	527	104	82	264
MIN	2.6	2.9	7.2	8.4	15	13	16	7.2	5.1	3.7	1.3	1.7
CFSM	.05	.51	1.21	2.72	.69	.52	1.60	.74	.62	.18	.07	.27
IN.	.06	.56	1.39	3.14	.72	.60	1.79	.85	.69	.21	.09	.30

CAL YR 1968 TOTAL 26,005.2 MEAN 71.1 MAX 1,840 MIN 1.5 CFSM .83 IN 11.30
WTR YR 1969 TOTAL 23,941.2 MEAN 65.6 MAX 1,710 MIN 1.3 CFSM .77 IN 10.40

PEAK DISCHARGE (BASE, 1,400 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-28	1130	11.71	1,670	01-30	1130	12.35	1,840
01-18	Unknown	13.32	2,140	04-18	2200	11.36	1,580

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., Huntington County, on right downstream side of county road bridge, 1,700 ft downstream from small right and left bank tributaries, 4,000 ft upstream from abandoned concrete and stone dam, and 2.4 miles northwest of Warren.

DRAINAGE AREA.--425 sq mi (revised).

PERIOD OF RECORD.--March 1957 to current year.

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

AVERAGE DISCHARGE.--12 years, 355 cfs (11.34 inches per year).

EXTREMES.--Current year: Maximum discharge, 6,620 cfs Jan. 30; maximum gage height, 13.16 ft Jan. 18; minimum discharge, 11 cfs Aug. 27-29; minimum gage height, 6.40 ft Aug. 6, 7.

Period of record: 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.--Records good except those below 50 cfs, which are fair, and those for winter periods, which are poor. Records of suspended sediment loads for the current year are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	18	294	592	4,880	146	198	121	76	94	24	16
2	15	16	294	350	2,870	129	193	112	72	76	20	15
3	15	15	412	270	1,020	121	198	108	63	69	18	19
4	19	14	294	210	822	117	165	100	63	138	16	22
5	19	15	219	200	535	112	1,080	100	72	317	16	24
6	20	18	179	160	392	112	1,870	94	72	618	15	25
7	20	22	142	130	312	112	1,270	90	69	694	15	26
8	20	24	108	100	267	112	543	108	66	503	18	162
9	19	24	86	88	262	112	366	174	63	300	22	76
10	19	31	76	76	360	121	289	224	63	198	30	20
11	18	30	72	68	290	138	229	535	60	151	25	24
12	18	26	69	72	240	133	179	527	60	256	66	19
13	15	22	64	60	200	117	160	324	125	214	43	16
14	18	20	60	58	160	104	146	229	146	125	26	15
15	19	25	57	58	140	97	146	184	235	86	22	15
16	15	35	56	58	120	90	151	146	348	69	19	24
17	16	258	54	235	115	86	160	125	306	58	20	343
18	14	439	52	3,800	110	90	1,940	201	165	52	18	1,920
19	18	330	55	3,610	108	97	3,770	1,490	117	50	19	1,790
20	20	245	60	3,350	108	112	3,680	1,380	94	50	18	527
21	20	155	63	1,930	117	125	2,260	519	76	55	16	250
22	20	112	76	575	146	125	711	294	66	117	14	160
23	28	86	209	600	170	121	467	209	1,040	60	15	117
24	26	76	318	1,700	174	174	336	165	1,800	50	14	112
25	21	69	209	1,220	198	668	262	142	1,060	41	15	184
26	20	60	179	300	203	911	224	112	788	33	14	142
27	21	55	245	250	188	652	188	94	324	37	12	117
28	20	90	2,950	1,440	165	453	170	83	198	37	12	112
29	20	380	3,890	4,560	-----	360	151	76	133	37	12	138
30	22	503	3,260	6,140	-----	312	138	72	108	31	14	100
31	20	-----	1,520	6,170	-----	267	-----	72	-----	28	18	-----
TOTAL	590	3,213	15,622	38,430	14,672	6,426	21,640	8,210	7,928	4,644	626	6,530
MEAN	19.0	107	504	1,240	524	207	721	265	264	150	20.2	218
MAX	28	503	3,890	6,170	4,880	911	3,770	1,490	1,800	694	66	1,920
MIN	14	14	52	58	108	86	138	72	60	28	12	15
CFSM	.04	.25	1.19	2.92	1.23	.49	1.70	.62	.62	.35	.05	.51
IN.	.05	.28	1.37	3.36	1.28	.56	1.89	.72	.69	.41	.05	.57

CAL YR 1968 TOTAL 125,486 MEAN 343 MAX 6,000 MIN 14 CFSM .81 IN 10.98
WTR YR 1969 TOTAL 128,531 MEAN 352 MAX 6,170 MIN 12 CFSM .83 IN 11.25

PEAK DISCHARGE (BASE, 3,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-29	0430	10.90	4,190	01-30	2130	13.02	6,620
01-18	1830	13.16	4,500	04-19	0900	10.56	3,820

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WABASH RIVER BASIN

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., Miami County, in discharge tower of reservoir on Salamonie River, 1.1 miles northwest of Dora, and 3.4 miles upstream from mouth.

DRAINAGE AREA.--553 sq mi.

PERIOD OF RECORD.--April 1967 to current year.

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

EXTREMES.--Current year: Maximum contents, 90,200 acre-ft Feb. 4 (elevation, 763.91 ft); minimum, 10,000 acre-ft Mar. 11 (elevation, 726.44 ft).

Period of record: Maximum contents, 90,200 acre-ft Feb. 4, 1969 (elevation, 763.91 ft); minimum, 10,000 acre-ft Mar. 11, 1969 (elevation, 726.44 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 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 1968 to September 1969

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	-	44,860	-
Oct. 31.....	731.60	14,740	-30,120
Nov. 30.....	730.26	13,360	-1,380
Dec. 31.....	741.94	30,200	+16,840
Calendar year 1968.....	-	-	+15,700
Jan. 31.....	758.26	70,530	+40,330
Feb. 28.....	730.16	13,260	-57,270
Mar. 31.....	730.30	13,400	+140
Apr. 30.....	752.85	54,770	+41,370
May 31.....	755.14	61,100	+6,330
June 30.....	755.00	60,690	-410
July 31.....	755.03	60,780	+90
Aug. 31.....	754.82	60,180	-600
Sept. 30.....	750.98	49,980	-10,200
Water year 1968-69	-	-	+5,120

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., Wabash County, on right bank 1.5 miles northwest of Dora and 3 miles upstream from mouth.

DRAINAGE AREA.--557 sq mi (revised).

PERIOD OF RECORD.--November 1923 to current year. Monthly discharge only for some periods, published in WSP 1305.

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

AVERAGE DISCHARGE.--45 years (1924-69), 494 cfs (12.04 inches per year).

EXTREMES.--Current year: Maximum discharge, 6,240 cfs Feb. 12 (gage height, 10.70 ft); minimum, 0.63 cfs Aug. 11; (gage height, 1.96 ft).

Period of record: 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.--Records good. Flow regulated by Salamonie Reservoir (see sta 3-3244.5) about 0.5 mile upstream.

REVISIONS (WATER YEARS).--WSP 1275: 1931(M), 1932, 1933(M), 1935-36(M), 1938-40(M), 1941-42, 1945, 1952, drainage area.
WSP 1335: 1934(M). WSP 1555: 1952, 1955-56(M), 1957.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	632	619	587	1,070	131	257	135	21	70	128	23	11
2	628	357	454	1,750	131	209	18	22	70	69	22	11
3	628	67	334	2,960	131	178	18	23	70	70	22	11
4	623	60	341	3,180	538	138	18	23	70	80	22	11
5	619	52	362	1,760	1,130	148	34	24	72	93	22	11
6	619	52	390	376	2,230	158	826	24	70	80	22	11
7	650	113	292	170	3,180	655	1,350	25	85	596	22	11
8	680	118	178	143	3,140	1,380	398	24	117	1,210	23	12
9	670	52	140	126	3,280	233	191	24	115	1,210	23	12
10	675	52	113	124	3,970	178	21	25	115	1,200	13	12
11	742	54	102	122	4,380	180	21	23	115	1,190	.85	12
12	778	54	82	122	4,970	180	21	23	115	1,190	21	12
13	772	55	83	98	6,040	104	21	135	117	916	24	13
14	766	55	89	47	5,650	8.6	21	338	331	303	109	13
15	592	100	102	70	3,450	8.6	22	240	488	160	58	139
16	462	148	102	83	1,570	8.6	22	183	484	133	26	303
17	394	173	95	180	650	8.6	22	160	484	72	26	1,020
18	398	631	85	306	188	9.2	26	185	484	72	25	1,530
19	430	732	83	317	219	9.2	28	712	197	69	19	1,640
20	560	338	85	724	219	9.2	219	1,300	89	82	149	814
21	595	320	85	952	219	9.2	650	1,560	60	122	15	886
22	706	185	98	868	215	9.8	660	730	48	120	9.8	2,470
23	700	185	183	868	233	9.8	1,050	160	583	120	9.8	341
24	690	140	317	874	247	55	1,480	178	1,820	117	9.8	502
25	690	117	317	880	261	317	1,040	203	2,100	72	9.8	619
26	680	117	313	1,630	292	542	20	200	1,310	25	11	614
27	670	72	438	3,460	292	880	20	153	542	52	11	619
28	665	120	610	3,100	289	1,220	21	69	219	57	11	596
29	214	646	760	614	-----	1,200	20	69	158	24	11	524
30	.7	735	1,700	131	-----	632	20	69	158	24	11	542
31	325	-----	2,040	128	-----	287	-----	70	-----	24	11	-----
TOTAL	18,253.7	6,490	10,960	27,233	47,245	9,221.8	8,413	6,995	10,756	9,680	792.05	13,322
MEAN	589	216	354	878	1,687	297	280	226	359	312	25.6	444
MAX	778	732	2,040	3,460	6,040	1,380	1,480	1,560	2,100	1,210	149	2,470
MIN	.70	52	82	47	131	8.6	18	21	48	24	.85	11
CAL YR 1968	TOTAL 151,887.60	MEAN 415			MAX 6,330	MIN .70						
WTR YR 1969	TOTAL 169,361.55	MEAN 464			MAX 6,040	MIN .70						

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., Wabash County, 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.--1,768 sq mi (revised).

PERIOD OF RECORD.--August 1923 to current year. Monthly discharge only for some periods, published in WSP 1305

GAGE.--Water-stage recorder. Datum of gage is 642.66 ft above mean sea level. Prior to Sept. 30, 1954, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--46 years, 1,446 cfs (11.11 inches per year).

EXTREMES.--Current year: Maximum discharge, 12,700 cfs Jan. 29 (gage height, 15.71 ft); minimum, 59 cfs Sept. 15 (gage height, 2.09 ft).

Period of record: Maximum discharge, 49,600 cfs May 18, 1943; maximum gage height, 24.44 ft Feb. 11, 1959 (ice jam);

minimum discharge observed, 17 cfs Aug. 4, 5, 9, 1934, July 21, 22, 1936; minimum gage height, 1.66 ft Aug. 4, 5, 9, 1934.

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

REMARKS.--Records good except those for winter periods, which are fair. Flow partially regulated by Huntington Reservoir (see sta 3-3234.5) and Salamonie Reservoir (see sta. 3-3244.5).

REVISIONS (WATER YEARS).--WSP 1275: 1931-37(M), 1938-39, 1940(M), drainage area. WSP 1385: 1942. WSP 1505: 1955.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	705	721	1,860	5,200	8,310	841	1,030	428	417	618	204	65
2	705	617	1,590	4,090	7,140	988	784	403	591	429	197	65
3	703	155	1,300	4,700	6,740	661	760	382	525	408	184	64
4	694	144	1,350	9,000	6,070	940	717	358	413	1,670	168	64
5	690	133	1,240	11,000	6,150	1,010	3,500	344	504	4,050	155	65
6	688	134	1,120	3,000	6,500	437	5,910	332	547	3,830	142	66
7	710	169	944	738	7,410	496	6,190	320	514	3,960	132	67
8	758	282	711	699	7,340	1,890	3,420	345	732	5,030	117	66
9	758	164	561	629	6,890	747	2,280	434	1,450	4,380	115	63
10	766	154	469	637	6,290	643	1,300	732	848	4,000	119	64
11	799	150	410	492	5,710	574	878	1,920	605	3,270	96	65
12	853	179	414	414	5,390	550	900	2,000	462	2,530	98	64
13	845	193	427	358	6,410	596	700	1,300	963	1,650	106	62
14	836	178	409	228	5,800	388	513	1,230	3,800	839	202	61
15	727	238	384	192	4,000	294	534	999	5,060	585	197	93
16	541	385	373	478	2,500	266	361	779	4,080	539	140	327
17	444	556	383	700	1,200	261	326	666	2,840	373	138	1,060
18	454	1,580	345	1,200	620	265	783	634	1,940	344	137	1,960
19	446	2,250	375	1,300	983	269	5,130	3,040	1,220	357	132	2,360
20	603	1,330	386	2,500	820	284	4,810	4,380	858	657	322	1,730
21	612	1,120	377	3,200	722	312	4,710	4,120	637	1,160	127	1,560
22	769	737	420	4,210	726	333	4,420	3,630	453	706	76	3,540
23	769	619	742	5,660	750	361	4,050	2,040	1,900	547	73	1,730
24	762	523	1,080	5,870	764	615	2,800	885	3,340	439	71	1,980
25	758	438	1,040	5,900	859	2,390	1,950	1,060	4,630	342	71	1,920
26	751	408	1,020	6,200	912	4,080	527	811	3,760	235	70	1,370
27	743	366	1,480	6,800	904	3,790	401	656	2,850	261	68	890
28	736	477	6,690	7,480	895	3,440	407	493	1,750	370	67	715
29	495	1,730	7,130	11,800	-----	2,910	517	368	1,060	283	66	614
30	91	2,230	6,930	11,500	-----	1,990	414	383	671	234	66	621
31	220	-----	6,910	10,200	-----	1,190	-----	371	-----	214	66	-----
TOTAL	20,431	18,390	48,870	126,375	108,805	33,811	61,022	35,843	49,420	44,310	3,922	23,371
MEAN	659	613	1,576	4,077	3,886	1,091	2,034	1,156	1,647	1,429	127	779
MAX	853	2,260	7,130	11,800	8,310	4,080	6,190	4,380	5,060	5,030	322	3,540
MIN	91	133	345	192	620	261	326	320	413	214	66	61
CFSM	.37	.35	.89	2.31	2.20	.62	1.15	.65	.93	.81	.07	.44
IN.	.43	.39	1.03	2.66	2.29	.71	1.28	.75	1.04	.93	.08	.49

CAL YR 1968 TOTAL 532,126 MEAN 1,454 MAX 13,400 MIN 91 CFSM .82 IN 11.19
WTR YR 1969 TOTAL 574,570 MEAN 1,574 MAX 11,800 MIN 61 CFSM .89 IN 12.09

PEAK DISCHARGE (BASE, 11,000 CFS).--Jan. 29 (0745) 12,700 cfs (15.71 ft).

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., Randolph County, on right bank 10 ft downstream from highway bridge, 0.8 mile downstream from Mud Creek, and 2 miles east of Ridgeville.

DRAINAGE AREA.--133 sq mi (revised).

PERIOD OF RECORD.--August 1946 to current year.

GAGE.--Water-stage recorder. Datum of gage is 965.28 ft above mean sea level (levels by Indiana Flood Control and Water Resources Commission). Prior to Oct. 5, 1950, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--23 years, 124 cfs (12.66 inches per year).

EXTREMES.--Current year: Maximum discharge, 2,350 cfs Jan. 30 (gage height, 11.00 ft); minimum, 3.6 cfs Sept. 16 (gage height, 2.20 ft).

Period of record: Maximum discharge, 13,900 cfs June 10, 1958 (gage height, 16.25 ft), from rating curve extended above 5,000 cfs on basis of contracted-opening measurement of peak flow; minimum, 0.1 cfs Oct. 24, 1946; minimum gage height, 1.65 ft Sept. 11, 1953.

REMARKS.--Records good except those for winter periods, which are fair.

REVISIONS (WATER YEARS).--WSP 1235: 1948, drainage area. WSP 1335: 1953.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.2	7.1	131	110	479	46	89	45	37	27	9.7	5.7
2	5.2	7.9	268	88	251	42	86	42	38	24	8.9	7.9
3	4.9	8.7	159	70	594	41	73	41	32	42	8.3	13
4	4.9	10	245	56	208	41	68	38	28	46	7.7	7.3
5	4.9	8.3	178	50	137	38	566	37	28	29	7.9	6.2
6	4.7	11	95	45	119	41	659	37	27	42	8.0	6.2
7	4.7	20	67	42	101	42	244	36	25	36	7.3	8.1
8	4.4	60	51	37	221	40	156	39	23	31	7.1	5.9
9	5.2	31	41	35	457	53	121	128	21	26	93	5.3
10	5.5	19	37	33	219	61	103	147	21	22	565	5.4
11	5.8	13	35	32	179	50	76	249	20	24	139	5.4
12	5.5	11	36	31	155	42	64	137	19	166	59	5.4
13	5.5	10	37	31	102	39	58	95	21	54	33	5.2
14	5.2	9.5	33	31	77	36	55	77	19	30	21	4.9
15	4.4	12	26	30	63	32	67	64	53	22	15	4.3
16	5.8	380	27	35	52	32	72	53	73	18	13	4.4
17	6.4	313	26	52	46	32	65	146	39	16	12	197
18	6.8	229	27	1,460	42	36	763	843	30	15	10	195
19	6.3	154	40	508	40	44	1,050	1,580	29	14	11	44
20	8.3	90	71	179	40	51	360	588	24	19	12	21
21	6.4	61	45	121	40	51	202	264	20	22	9.3	14
22	5.8	49	57	117	48	41	152	169	18	15	8.3	9.3
23	7.1	41	222	162	54	39	114	120	277	13	8.2	8.6
24	7.9	76	92	257	64	131	89	92	212	13	7.2	14
25	11	95	108	109	64	297	76	74	396	12	6.8	13
26	9.1	62	104	92	62	197	68	61	133	11	6.8	8.8
27	7.5	49	365	84	56	135	61	52	73	13	6.9	8.1
28	7.1	153	1,630	166	49	126	60	47	50	16	6.7	8.0
29	6.1	389	676	1,360	-----	260	54	43	37	11	6.6	6.4
30	7.5	161	226	2,100	-----	158	48	40	31	14	6.6	6.7
31	7.5	-----	147	1,180	-----	103	-----	35	-----	11	6.0	-----
TOTAL	194.6	2,540.5	5,302	8,703	4,019	2,377	5,719	5,419	1,854	854	1,127.3	654.5
MEAN	6.28	84.7	171	281	144	76.7	191	175	61.8	27.5	36.4	21.8
MAX	11	389	1,630	2,100	594	297	1,050	1,580	396	166	565	197
MIN	4.4	7.1	26	30	40	32	48	35	18	11	6.0	4.3
CFSM	.05	.65	1.32	2.16	1.10	.59	1.47	1.34	.48	.21	.28	.17
IN.	.06	.73	1.52	2.49	1.15	.68	1.64	1.55	.53	.24	.32	.19

CAL YR 1968 TOTAL 37,993.9 MEAN 104 MAX 2,010 MIN 3.2 CFSM .80 IN 10.87
WTR YR 1969 TOTAL 38,763.9 MEAN 106 MAX 2,100 MIN 4.3 CFSM .82 IN 11.09

PEAK DISCHARGE (BASE, 2,400 CFS).--No peak above base.

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., Delaware County, on right bank at downstream side of bridge, 1.5 miles upstream from Estey Creek and 2.5 miles southeast of Eaton.

DRAINAGE AREA.--310 sq mi (revised).

PERIOD OF RECORD.--March 1952 to current year.

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

AVERAGE DISCHARGE.--17 years, 272 cfs (11.92 inches per year).

EXTREMES.--Current year: Maximum discharge, 4,880 cfs Jan. 31 (gage height, 11.66 ft); minimum, 7.0 cfs Aug. 8, 9; minimum gage height, 2.64 ft Oct. 2, 5.

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

REMARKS.--Records fair except those for winter periods, which are poor.

REVISIONS.--WSP 1275: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	16	259	330	2,400	107	215	99	72	89	17	14
2	11	15	360	240	889	98	203	90	76	70	15	17
3	13	16	451	190	680	92	186	84	77	58	11	17
4	12	17	284	150	500	91	163	77	64	62	9.7	19
5	11	17	393	130	353	88	632	71	60	85	8.9	27
6	11	18	250	110	248	85	1,920	68	56	61	8.2	29
7	14	23	148	100	225	92	1,210	67	56	72	7.6	178
8	14	32	100	90	226	92	535	72	48	95	7.3	78
9	14	78	80	84	838	99	362	94	46	69	78	44
10	14	70	73	80	680	129	296	261	41	53	1,520	27
11	13	46	58	72	402	134	229	512	37	44	1,200	20
12	13	35	65	68	347	110	177	443	37	285	356	17
13	14	29	65	66	241	98	151	279	43	323	174	15
14	14	25	63	64	167	87	140	199	42	127	96	14
15	13	27	64	64	140	79	152	161	144	65	62	12
16	13	84	46	70	110	73	186	132	498	45	63	13
17	12	790	50	425	94	71	178	129	239	35	47	1,390
18	12	512	53	3,060	82	72	2,190	917	134	29	40	2,260
19	12	414	51	3,630	76	78	3,620	2,310	97	25	35	795
20	12	234	59	1,010	78	91	2,250	2,700	76	26	29	359
21	12	144	91	335	80	104	854	1,160	60	29	29	218
22	13	100	77	246	94	98	546	508	51	38	28	144
23	15	81	194	300	116	83	375	332	695	29	23	102
24	16	58	368	724	142	104	268	239	932	23	21	113
25	17	90	285	423	158	506	213	187	1,450	20	19	169
26	17	123	187	360	154	596	182	151	917	18	19	121
27	16	36	243	310	140	395	155	121	372	18	18	82
28	19	83	2,130	286	121	300	142	104	274	18	17	67
29	18	395	3,060	1,740	-----	359	129	93	171	21	16	57
30	17	530	1,570	4,060	-----	523	113	84	116	20	16	51
31	16	-----	514	4,510	-----	287	-----	77	-----	16	15	-----
TOTAL	429	4,198	11,691	23,327	9,781	5,221	17,972	11,821	6,981	1,968	4,005.7	6,469
MEAN	13.8	140	377	752	349	168	599	381	233	63.5	129	216
MAX	19	790	3,060	4,510	2,400	596	3,620	2,700	1,450	323	1,520	2,260
MIN	11	15	46	64	76	71	113	67	37	16	7.3	12
CFSM	.05	.46	1.24	2.48	1.15	.55	1.97	1.25	.77	.21	.43	.71
IN.	.05	.51	1.43	2.85	1.20	.64	2.20	1.45	.85	.24	.49	.79

CAL YR 1968 TOTAL 96,670 MEAN 264 MAX 4,590 MIN 11 CFSM .87 IN 11.83
WTR YR 1969 TOTAL 103,863.7 MEAN 285 MAX 4,510 MIN 7.3 CFSM .94 IN 12.71

PEAK DISCHARGE (BASE, 3,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-19	0945	10.60	3,980	04-19	1245	10.09	3,770
01-31	0430	11.66	4,880				

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., Grant County, 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.

PERIOD OF RECORD.--September 1923 to current year. 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. Prior to Dec. 9, 1933, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--46 years, 624 cfs (12.52 inches per year).

EXTREMES.--Current year: Maximum discharge, 9,490 cfs Jan. 31 (gage height, 10.41 ft); minimum, 3.2 cfs Oct. 25 (gage height, 0.48 ft), caused by taintor gates above gage being temporarily closed.

Period of record: 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 gage height, -0.27 ft Sept. 25, 1935.

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

REMARKS.--Records good except those for winter periods, which are fair. Flow periodically regulated by dam above station.

REVISIONS (WATER YEARS).--WSP 1275: Drainage area. WSP 1335: 1927(M), 1931(M). WSP 1385: 1948.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	46	655	753	5,660	306	432	274	202	218	86	46
2	50	46	515	520	2,560	279	392	254	176	183	73	48
3	59	46	655	400	1,670	258	355	242	169	162	66	48
4	50	46	613	350	1,590	246	330	234	169	152	66	48
5	50	53	426	290	1,230	238	673	226	169	172	59	55
6	53	57	462	270	872	230	2,170	218	158	274	59	57
7	53	89	335	240	732	230	2,180	214	152	279	57	532
8	53	71	242	220	648	230	1,230	270	149	238	50	404
9	57	68	186	200	837	238	809	345	142	270	91	389
10	59	68	172	180	1,280	242	620	585	136	242	311	158
11	57	94	155	165	991	262	501	1,250	133	190	1,540	80
12	55	97	145	155	774	254	515	1,220	136	210	900	6.8
13	55	81	149	140	641	230	340	858	155	288	340	39
14	53	71	145	135	474	210	192	634	180	355	218	66
15	50	91	133	133	370	190	279	480	242	230	166	57
16	48	158	111	139	340	183	310	382	387	169	136	120
17	48	250	117	365	310	176	335	325	578	139	108	1,740
18	53	830	114	4,340	292	172	2,210	399	335	123	108	4,590
19	48	648	123	5,260	262	176	5,130	1,980	246	111	97	3,340
20	46	468	129	3,270	258	190	4,140	2,540	202	111	84	1,140
21	46	320	126	1,170	266	206	2,060	2,150	172	114	78	732
22	46	234	180	893	306	214	1,290	974	285	106	68	474
23	23	190	397	907	345	210	758	634	600	97	66	345
24	18	162	350	2,020	370	145	704	468	1,610	139	64	365
25	3.4	145	300	1,300	398	718	536	376	1,300	106	59	340
26	3.8	133	254	800	404	1,130	450	325	1,540	94	55	302
27	4.8	172	479	515	382	935	392	279	724	94	52	266
28	36	206	3,850	1,380	345	711	365	246	487	86	52	218
29	43	444	5,030	5,290	-----	585	335	230	365	84	52	194
30	46	732	3,600	8,100	-----	627	302	210	270	78	50	166
31	44	-----	1,610	8,550	-----	627	-----	218	-----	78	48	-----
TOTAL	1,355.0	6,116	21,758	48,450	24,607	10,648	30,335	19,040	11,569	5,192	5,259	16,365.8
MEAN	43.7	204	702	1,563	879	343	1,011	614	386	167	170	546
MAX	59	830	5,030	8,550	5,660	1,130	5,130	2,540	1,610	355	1,540	4,590
MIN	3.4	46	111	133	258	145	192	210	133	78	48	6.8
CFSM	.06	.30	1.04	2.31	1.30	.51	1.49	.91	.57	.25	.25	.81
IN.	.07	.34	1.20	2.66	1.35	.58	1.67	1.05	.64	.29	.29	.90
CAL YR 1968	TOTAL 191,093.2	MEAN 522	MAX 9,580	MIN 3.4	CFSM .77	IN 10.50						
WTR YR 1969	TOTAL 200,694.8	MEAN 550	MAX 8,550	MIN 3.4	CFSM .81	IN 11.02						

PEAK DISCHARGE (BASE, 5,600 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
01-18	1430	9.68	8,210	01-31	0100	10.41	9,490

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., Wabash County, in discharge tower of reservoir on Mississinewa River at Peoria, 6.8 miles southeast of Peru, and 7.1 miles above mouth.

DRAINAGE AREA.--809 sq mi.

PERIOD OF RECORD.--April 1968 to current year.

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

EXTREMES.--Current year: Maximum contents, 90,800 acre-ft Sept. 19 (elevation, 741.49 ft); minimum, 22,940 acre-ft Jan. 13 (elevation, 711.73 ft).

Period of record: Maximum contents, 90,800 acre-ft Sept. 19, 1969 (elevation, 741.49 ft); minimum, 22,940 acre-ft Jan. 13, 1969 (elevation, 711.73 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 1968 to September 1969

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	-	63,940	-
Oct. 31.....	721.45	37,750	-26,190
Nov. 30.....	712.62	24,100	-13,650
Dec. 31.....	721.64	38,090	+13,990
Calendar year 1968.....	-	-	-
Jan. 31.....	734.90	68,780	+30,690
Feb. 28.....	712.23	23,590	-45,190
Mar. 31.....	712.37	23,770	+180
Apr. 30.....	736.67	74,140	+50,370
May 31.....	737.07	75,410	+1,270
June 30.....	737.15	75,660	+250
July 31.....	737.05	75,340	-320
Aug. 31.....	737.00	75,180	-160
Sept. 30.....	721.09	37,100	-38,080
Water year 1968-69.....	-	-	-26,840

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., Miami County, on right bank at Peoria, 3,000 ft downstream from flood control dam, 5.5 miles upstream from mouth, and 6.5 miles southeast of Peru.

DRAINAGE AREA.--808 sq mi (revised).

PERIOD OF RECORD.--October 1952 to current year.

GAGE.--Water-stage recorder. Datum of gage is 660.00 ft above mean sea level. Prior to Oct. 7, 1954, nonrecording gage and crest-stage gage on highway bridge 2,500 ft upstream and Oct. 7, 1954, to Sept. 30, 1962, water-stage recorder on right bank at site 2,500 ft upstream at same datum.

AVERAGE DISCHARGE.--17 years, 674 cfs (11.33 inches per year).

EXTREMES.--Current year: Maximum discharge, 8,140 cfs Feb. 4 (gage height, 10.77 ft); minimum, 6.8 cfs Jan. 15 (gage height, 0.23 ft).

Period of record: 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.--Records good. Flow regulated by Mississinewa Reservoir (see sta 3-3269.5) since April 1968.

REVISIONS (WATER YEARS).--WSP 1335: 1953.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	479	194	924	4,600	6,240	472	372	41	210	313	129	92
2	164	173	739	3,920	7,450	401	39	42	210	256	89	29
3	309	174	578	1,780	7,630	346	38	55	208	210	89	55
4	600	174	654	513	7,890	302	38	66	208	190	89	92
5	598	174	617	435	7,270	331	58	115	208	140	89	87
6	595	174	486	482	4,250	331	42	173	208	397	89	205
7	592	300	412	401	2,120	304	594	198	208	560	61	394
8	824	259	322	248	850	289	845	295	208	484	29	325
9	1,170	170	231	248	850	331	603	492	208	316	67	349
10	1,160	170	203	292	1,040	359	439	772	155	316	135	346
11	1,150	211	204	252	1,330	340	257	1,190	129	250	672	366
12	1,140	231	205	218	1,140	331	37	1,250	131	334	955	295
13	1,130	407	183	178	808	331	36	970	228	178	760	277
14	1,230	441	156	158	656	274	37	644	352	322	322	250
15	1,450	419	156	119	532	265	38	544	325	304	178	138
16	1,400	565	156	134	408	277	38	425	208	250	175	12
17	514	719	156	200	290	277	38	376	394	180	301	14
18	162	1,010	156	261	490	256	40	376	472	135	220	596
19	224	1,170	190	279	314	218	88	1,150	310	135	85	1,180
20	188	914	191	296	472	218	225	2,080	205	138	93	5,820
21	158	778	167	302	343	241	387	2,470	205	135	93	6,180
22	180	652	177	2,370	319	271	390	1,790	208	135	81	1,300
23	180	600	244	5,650	390	280	1,650	905	373	105	127	1,080
24	180	556	323	5,400	432	366	1,790	684	1,260	131	129	1,000
25	180	485	352	5,180	468	622	1,780	476	1,860	215	55	965
26	152	456	352	4,250	468	1,240	1,770	373	1,850	215	25	1,310
27	116	454	483	1,890	492	1,170	692	340	1,350	340	25	5,360
28	117	457	1,050	812	512	845	41	277	600	233	29	5,180
29	117	804	1,480	1,020	-----	748	40	277	472	123	44	5,210
30	125	950	2,880	2,390	-----	696	41	256	380	87	64	2,540
31	236	-----	4,020	3,600	-----	696	-----	210	-----	87	185	-----
TOTAL	16,820	14,241	18,447	47,878	55,454	13,428	12,483	19,312	13,343	7,214	5,484	41,047
MEAN	543	475	595	1,544	1,981	433	416	623	445	233	177	1,368
MAX	1,450	1,170	4,020	5,650	7,890	1,240	1,790	2,470	1,860	560	955	6,180
MIN	116	170	156	119	290	218	36	41	129	87	25	12
CAL YR 1968	TOTAL 211,964		MEAN 579		MAX 6,770		MIN 10					
WTR YR 1969	TOTAL 265,151		MEAN 726		MAX 7,890		MIN 12					

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., Miami County, on right bank at upstream side of bridge on U.S. Highway 31, 0.5 mile southwest of Peru, 4.3 miles downstream from Mississinewa River, and at mile 370.5.

DRAINAGE AREA.--2,686 sq mi (revised).

PERIOD OF RECORD.--August 1943 to current year.

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

AVERAGE DISCHARGE.--26 years, 2,300 cfs (11.63 inches per year).

EXTREMES.--Current year: Maximum discharge, 15,900 cfs Jan. 30 (gage height, 12.56 ft); minimum, 134 cfs Sept. 3 (gage height, 1.91 ft).

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

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

REMARKS.--Records good except those for winter periods, which are poor. Flow regulated by Huntington Reservoir (see sta 3-3234.5), Salamonie Reservoir (see sta 3-3244.5), and Mississinewa Reservoir (see sta 3-3269.5).

REVISIONS.--WSP 1275: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,350	704	2,710	9,200	14,500	1,450	1,960	565	666	1,270	420	361
2	1,230	893	2,540	8,400	14,500	1,310	1,050	565	788	1,050	390	176
3	900	560	1,970	9,000	14,300	1,150	956	550	872	865	361	162
4	1,430	380	1,990	10,000	13,700	1,190	928	540	746	1,750	356	220
5	1,330	375	1,990	12,000	13,400	1,380	3,860	535	746	3,790	343	220
6	1,350	370	1,740	4,000	10,900	1,110	5,860	600	872	4,940	325	252
7	1,350	425	1,520	1,500	9,800	760	6,710	594	795	4,680	312	356
8	1,430	648	1,220	1,100	8,160	1,900	4,590	666	816	5,510	260	450
9	1,950	455	935	960	7,520	1,250	3,270	963	1,610	4,820	252	400
10	1,960	380	760	860	7,040	1,150	2,160	1,470	1,290	4,360	343	410
11	1,960	380	697	760	6,950	1,030	1,520	3,190	879	3,680	476	410
12	2,000	435	660	700	6,280	956	1,170	3,540	746	3,290	1,220	420
13	2,010	525	678	640	7,020	986	978	2,660	1,130	2,180	1,340	316
14	2,030	732	624	600	6,620	858	760	2,150	4,370	1,430	500	316
15	2,230	704	535	580	5,550	660	711	1,770	5,630	1,140	570	320
16	2,050	935	510	580	2,710	594	618	1,500	4,480	928	415	236
17	1,350	1,390	535	3,500	1,900	582	510	1,220	3,290	760	435	654
18	1,370	1,950	555	11,000	1,270	570	648	1,190	2,540	576	535	1,860
19	666	3,390	565	12,000	1,390	545	4,470	2,770	1,870	576	334	3,200
20	746	2,530	648	10,100	1,450	550	5,030	6,080	1,160	830	258	6,310
21	774	2,070	648	9,000	1,260	576	4,890	5,990	893	1,320	522	6,620
22	900	1,620	660	9,000	1,120	618	4,550	5,580	781	1,070	276	4,680
23	949	1,370	970	10,000	1,200	648	4,830	3,230	2,880	816	252	3,010
24	949	1,250	1,390	10,400	1,270	830	4,640	1,910	4,110	935	272	2,840
25	949	1,070	1,510	9,740	1,370	2,320	4,000	1,690	6,200	914	272	2,850
26	942	970	1,510	9,640	1,450	4,830	2,700	1,370	5,580	630	172	2,520
27	872	942	1,790	5,940	1,470	4,830	1,720	1,190	4,470	727	162	5,340
28	865	963	7,080	9,520	1,500	4,240	624	935	2,800	802	158	5,420
29	830	1,930	8,300	14,500	-----	3,740	648	802	2,070	618	168	5,320
30	395	3,170	8,620	15,700	-----	2,880	642	732	1,440	460	186	3,680
31	348	-----	9,660	14,600	-----	2,140	-----	660	-----	410	228	-----
TOTAL	39,465	33,516	65,520	215,520	165,600	47,633	77,003	57,207	66,520	57,127	12,153	59,329
MEAN	1,273	1,117	2,114	6,952	5,914	1,537	2,567	1,845	2,217	1,843	392	1,978
MAX	2,230	3,390	9,660	15,700	14,500	4,830	6,710	6,080	6,200	5,510	1,340	6,620
MIN	348	370	510	580	1,120	545	510	535	666	410	158	162
CFSM	.47	.42	.79	2.59	2.20	.57	.96	.69	.83	.69	.15	.74
IN.	.55	.46	.91	2.98	2.29	.66	1.07	.79	.92	.79	.17	.82

CAL YR 1968 TOTAL 757,705 MEAN 2,070 MAX 20,000 MIN 230 CFSM .77 IN 10.49
WTR YR 1969 TOTAL 896,593 MEAN 2,456 MAX 15,700 MIN 158 CFSM .91 IN 12.41

PEAK DISCHARGE (BASE, 18,000 CFS).--No peak above base.

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 Miami County Road 125 West, 0.5 mile northeast of Bunker Hill.

DRAINAGE AREA.--159 sq mi (revised).

PERIOD OF RECORD.--Occasional low-flow measurements, water years 1960-67, May 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is 736.00 ft above mean sea level.

EXTREMES.--Current year: Maximum discharge, 3,050 cfs Jan. 30 (gage height, 13.43 ft); minimum, 5.2 cfs Oct. 3, 22 (gage height, 2.09 ft).

Period of record: Maximum discharge, 3,050 cfs Jan. 30, 1969 (gage height, 13.43 ft); minimum, 5.2 cfs Sept. 17, 18, Oct. 3, 22, 1968 (gage height, 2.09 ft).

REVISIONS.--The minimum discharge for the period May to September 1968 has been revised to 5.2 cfs Sept. 17, 18 (gage height, 2.09 ft), superseding figure published in WRD Ind. 1968.

REMARKS.--Records good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.9	7.6	68	147	1,940	55	89	59	46	43	58	8.2
2	5.7	7.6	60	100	1,020	52	92	57	46	38	58	15
3	5.5	7.7	58	80	601	49	82	57	45	35	36	50
4	5.5	7.3	56	70	377	48	76	55	41	33	29	16
5	5.8	7.3	51	60	243	47	836	53	41	74	25	12
6	6.1	8.1	44	54	185	47	592	50	40	79	22	13
7	6.3	13	38	50	154	49	348	49	37	114	20	12
8	6.4	18	35	45	129	49	208	53	37	120	19	9.9
9	6.2	15	34	42	118	50	169	60	36	97	28	9.3
10	7.4	12	29	40	103	49	159	134	34	71	54	9.5
11	7.8	10	28	37	90	47	124	229	33	59	32	8.8
12	7.2	9.9	27	35	82	45	101	176	32	53	27	8.9
13	7.2	9.3	28	34	75	46	89	138	36	49	22	8.3
14	6.4	9.2	27	34	69	44	83	116	46	44	19	8.4
15	6.3	13	29	34	61	41	82	99	47	37	18	7.6
16	6.4	39	23	34	56	40	76	86	55	33	17	15
17	6.5	46	21	150	52	40	71	77	56	30	18	363
18	8.7	67	21	860	52	42	131	78	47	27	18	274
19	14	79	24	694	49	45	452	138	43	25	17	112
20	8.5	68	25	354	47	50	385	168	39	36	16	68
21	6.4	50	23	171	47	53	220	117	35	28	14	49
22	6.1	40	33	143	50	50	164	93	32	24	13	38
23	5.9	34	53	188	56	47	126	81	543	23	12	32
24	6.2	30	59	387	57	80	101	72	158	290	12	31
25	8.3	27	70	269	57	240	88	66	112	187	11	29
26	8.6	25	51	158	58	303	80	60	95	66	11	26
27	7.7	23	118	117	58	214	75	56	77	83	11	30
28	7.3	32	667	1,030	56	180	78	51	62	64	9.9	37
29	7.0	56	698	2,240	-----	151	70	49	52	46	9.4	31
30	7.2	81	548	2,960	-----	114	63	49	47	36	9.2	29
31	7.1	-----	249	2,750	-----	95	-----	47	-----	31	9.1	-----
TOTAL	217.6	852.0	3,295	13,367	5,943	2,462	5,310	2,673	2,050	1,975	674.6	1,360.9
MEAN	7.02	28.4	106	431	212	79.4	177	86.2	68.3	63.7	21.8	45.4
MAX	14	81	698	2,960	1,940	303	836	229	543	290	58	363
MIN	5.5	7.3	21	34	47	40	63	47	37	23	9.1	7.6
CFSM	.04	.18	.67	2.71	1.33	.50	1.11	.54	.43	.40	.14	.29
IN.	.05	.20	.77	3.13	1.33	.58	1.24	.63	.48	.46	.16	.32

CAL YR 1968 TOTAL MEAN MAX MIN CFSM IN
WTR YR 1969 TOTAL 40,180.1 MEAN 110 MAX 2,960 MIN 5.5 CFSM .69 IN 9.40

PEAK DISCHARGE (BASE, 500 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
12-29	0230	6.51	732	04-19	1300	5.12	516
01-18	0630	7.65	935	06-23	0445	7.43	891
01-30	1300	13.43	3,050	07-24	1315	5.57	600
04-05	0615	8.34	1,100	09-17	1445	5.47	586

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., Wabash County, on right bank 200 ft downstream from Main Street Bridge in North Manchester and 1.2 miles upstream from Pony Creek. Records include flow of Pony Creek.

DRAINAGE AREA.--417 sq mi (revised), includes that of Pony Creek.

PERIOD OF RECORD.--October 1929 to current year. Prior to April 1930, monthly discharge only, published in WSP 1305. Gage-height records since October 1924 are available in the district office.

GAGE.--Water-stage recorder. Datum of gage is 738.00 ft above mean sea level. Prior to July 24, 1953, nonrecording gage on downstream side of Second Street Bridge, 700 ft upstream at same datum.

AVERAGE DISCHARGE.--40 years, 349 cfs (11.37 inches per year).

EXTREMES.--Current year: Maximum discharge, 5,220 cfs Jan. 29 (gage height, 11.72 ft); minimum, 57 cfs Aug. 31 (gage height, 1.09 ft).

Period of record: 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.--Records good except those below 100 cfs and those for winter periods, which are fair. Diurnal fluctuation caused by grist mill above station.

REVISIONS (WATER YEARS).--WSP 1275: 1930-37, 1939, 1940(M), 1942, 1948, drainage area. WSP 1909: 1957.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	81	135	469	811	3,290	734	359	361	206	175	168	58
2	79	136	414	660	2,700	227	445	319	356	160	152	60
3	81	138	379	540	2,240	221	602	287	302	154	137	68
4	79	139	346	480	1,730	217	502	295	233	438	130	71
5	78	141	316	450	1,180	211	831	257	390	960	127	73
6	79	145	278	420	875	210	1,160	239	331	980	122	80
7	79	156	252	380	707	210	758	232	248	1,320	114	96
8	75	165	237	340	606	207	542	250	386	1,450	108	84
9	77	161	222	310	533	207	462	328	558	847	106	79
10	83	161	215	290	471	204	446	542	346	537	109	77
11	84	160	209	280	441	197	394	1,680	257	404	105	76
12	86	162	212	270	402	189	347	1,340	235	380	101	76
13	86	164	250	260	367	189	316	837	1,060	296	97	76
14	87	165	278	250	335	186	296	558	1,220	243	93	75
15	89	204	264	250	315	179	303	439	1,680	206	89	76
16	92	448	244	254	296	178	310	366	1,190	181	86	79
17	97	634	237	329	282	177	291	317	717	167	83	106
18	111	645	228	2,320	268	179	487	392	481	171	87	99
19	113	587	261	2,100	265	182	1,490	852	383	210	81	89
20	110	407	325	1,360	259	192	1,440	601	363	373	79	82
21	110	326	272	764	257	205	941	445	276	349	77	77
22	113	294	274	633	263	203	645	370	246	228	73	75
23	117	258	594	730	258	197	515	325	525	176	71	76
24	119	240	446	882	252	257	438	288	410	158	68	80
25	123	224	360	565	253	1,140	383	259	320	150	65	75
26	126	214	490	496	248	1,250	342	232	264	140	63	74
27	126	206	694	453	244	850	311	212	227	291	61	74
28	126	340	2,570	1,340	239	715	472	197	206	486	60	76
29	129	1,100	2,670	4,860	-----	600	519	184	174	353	58	74
30	131	679	2,060	5,110	-----	478	421	176	168	260	58	72
31	132	-----	1,420	4,320	-----	396	-----	176	-----	199	58	-----
TOTAL	3,098	8,894	17,486	32,507	19,576	10,287	16,768	13,356	13,758	12,442	2,881	2,333
MEAN	99.9	296	564	1,049	699	332	559	431	459	401	92.9	77.8
MAX	132	1,100	2,670	5,110	3,290	1,250	1,490	1,680	1,680	1,450	168	106
MIN	75	135	209	250	239	177	291	176	168	140	58	58
CFSM	.24	.71	1.35	2.51	1.68	.80	1.34	1.03	1.10	.96	.22	.19
IN.	.28	.79	1.56	2.90	1.75	.92	1.50	1.19	1.23	1.11	.26	.21

CAL YR 1968 TOTAL 158,631 MEAN 433 MAX 4,600 MIN 75 CFSM 1.04 IN 14.15
WTR YR 1969 TOTAL 153,386 MEAN 420 MAX 5,110 MIN 58 CFSM 1.01 IN 13.68

PEAK DISCHARGE (BASE, 2,200 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-28	2115	9.12	3,060	01-29	1000	11.72	5,220
01-18	1330	8.77	2,860				

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., Cass County, on right bank at downstream side of bridge on Adamsboro Road, 5.5 miles northeast of Logansport, and 6.9 miles upstream from mouth.

DRAINAGE AREA.--789 sq mi (revised).

PERIOD OF RECORD.--July 1943 to current year. Monthly discharge only for some periods, published in WSP 1305.

GAGE.--Water-stage recorder. Datum of gage is 621.50 ft above mean sea level. Prior to Aug. 16, 1956, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--26 years, 711 cfs (12.24 inches per year).

EXTREMES.--Current year: Maximum discharge, 11,600 cfs Jan. 30 (gage height, 11.23 ft); minimum, 172 cfs Sept. 15, 16 (gage height, 3.23 ft).

Period of record: 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).

REMARKS.--Records good except those for winter periods, which are fair. Records of suspended sediment loads for current year are published in Part 2 of this report.

REVISIONS.--WSP 1275: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	196	193	1,180	1,650	7,420	425	697	816	450	465	683	190
2	190	193	955	1,070	4,730	412	802	711	481	445	704	193
3	193	193	851	960	3,530	403	1,050	636	636	416	497	196
4	190	193	760	880	2,790	394	1,240	590	560	978	430	205
5	188	190	662	840	2,180	389	2,250	584	739	3,820	389	196
6	193	196	572	820	1,640	380	1,630	542	1,080	5,130	362	202
7	199	259	497	740	1,350	380	1,060	525	732	3,470	340	199
8	199	394	445	660	1,170	380	1,040	548	597	2,930	323	211
9	199	367	430	600	1,050	385	1,030	690	802	2,200	323	202
10	205	315	394	540	925	376	1,010	978	873	1,550	327	193
11	205	279	376	520	844	367	888	2,710	636	1,200	311	185
12	202	259	371	490	774	353	760	2,670	530	1,640	295	185
13	196	248	440	470	697	340	669	1,890	918	1,170	283	183
14	193	241	519	450	636	340	616	1,350	2,500	888	275	180
15	190	331	497	440	572	327	629	1,070	4,190	732	263	175
16	188	1,160	425	440	520	319	655	888	2,970	629	259	193
17	193	1,610	412	580	514	319	636	774	1,860	560	283	303
18	271	1,580	407	1,000	486	323	851	767	1,320	508	267	335
19	283	1,550	440	4,000	475	335	2,310	1,460	1,030	536	263	287
20	263	1,110	597	3,080	465	358	2,510	1,390	918	1,270	252	231
21	234	816	597	2,060	460	380	1,850	1,060	844	1,160	245	211
22	220	662	590	1,660	465	380	1,350	865	683	816	234	202
23	211	572	1,130	1,450	475	385	1,090	753	1,950	610	231	205
24	208	514	1,150	1,610	460	676	918	676	1,600	1,220	227	241
25	208	470	697	1,310	450	2,000	802	616	1,060	1,270	224	241
26	205	430	603	910	450	2,080	718	566	844	697	217	220
27	202	407	925	767	440	1,530	662	525	718	918	211	214
28	199	739	4,200	3,430	430	1,310	865	497	655	1,050	205	214
29	196	1,910	5,400	9,470	-----	1,120	1,150	475	554	1,000	202	208
30	193	1,760	3,860	11,400	-----	910	970	460	497	760	196	202
31	193	-----	2,670	10,200	-----	760	-----	440	-----	610	193	-----
TOTAL	6,405	19,141	33,052	64,497	36,398	18,836	32,708	28,522	33,227	40,648	9,514	6,402
MEAN	207	638	1,066	2,081	1,300	608	1,090	920	1,108	1,311	307	213
MAX	283	1,910	5,400	11,400	7,420	2,080	2,510	2,710	4,190	5,130	704	335
MIN	188	170	371	440	430	319	616	440	450	416	193	175
CFSM	.26	.91	1.35	2.64	1.65	.77	1.38	1.17	1.40	1.66	.39	.27
IN.	.30	.90	1.56	3.04	1.72	.89	1.54	1.34	1.57	1.92	.45	.30

CAL YR 1968 TOTAL 337,235 MEAN 927 MAX 10,100 MIN 188 CFSM 1.17 IN 15.99
 WTR YR 1969 TOTAL 329,350 MEAN 902 MAX 11,400 MIN 175 CFSM 1.14 IN 15.52

PEAK DISCHARGE (BASE, 5,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-29	0945	8.41	5,580	01-30	1045	11.23	11,600
01-05	0530	8.18	5,160	07-06	1130	8.47	5,690
01-19	0600	10.67	10,200				

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., Cass County, 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.--3,779 sq mi (revised).

PERIOD OF RECORD.--April to September, November and December 1903, March to November 1904, March 1905 to July 1906, May 1923 to current year. January, February and December 1904, January and February 1905 (gage heights only). Gage-height records collected at same site December 1910 to December 1916, and since January 1926 are contained in reports of U.S. Weather Bureau.

GAGE.--Water-stage recorder. Datum of gage is 573.28 ft above mean sea level (levels by Corps of Engineers). See WSP 1705 for history of changes prior to Oct. 1, 1927.

AVERAGE DISCHARGE.--46 years (1923-69), 3,215 cfs (11.55 inches per year).

EXTREMES.--Current year: Maximum discharge, 33,100 cfs Jan. 30 (gage height, 12.72 ft); minimum, 389 cfs Aug. 29, 30 (gage height, 2.87 ft).

Period of record: Maximum discharge, 89,800 cfs May 18, 1943 (gage height, 21.32 ft); minimum, 97 cfs Sept. 25, 1941; minimum daily, 135 cfs Sept. 26, 1941; minimum gage height, 2.27 ft July 23, 1936.

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

REMARKS.--Records good. Flow partially regulated by Huntington Reservoir (see sta 3-3234.5), Salamonie Reservoir (see sta 3-3244.5), and Mississinewa Reservoir (see sta 3-3269.5).

REVISIONS (WATER YEARS).--WSP 783: 1934. WSP 1275: Drainage area. WSP 1335: 1904, 1925(M), 1926-30, 1931(M), 1932-35, 1937-39, 1948. WSP 1385: 1903, 1905-6, 1923-25. WSP 1505: 1906(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,270	735	4,200	13,700	26,100	1,940	2,940	1,540	1,150	1,660	1,110	509
2	1,300	1,090	3,800	11,000	22,600	1,780	2,070	1,430	1,230	1,470	1,260	476
3	973	988	3,030	8,930	20,200	1,620	2,060	1,330	1,450	1,250	986	475
4	1,250	662	2,870	6,760	18,100	1,530	2,110	1,270	1,330	1,760	881	449
5	1,410	617	2,850	5,860	17,300	1,750	6,280	1,240	1,400	7,180	824	472
6	1,440	625	2,440	4,080	14,300	1,680	9,920	1,230	1,890	11,700	779	468
7	1,430	731	2,090	3,070	13,000	1,240	10,000	1,230	1,550	9,150	735	546
8	1,450	1,050	1,750	2,400	10,600	1,910	7,250	1,300	1,400	8,920	685	731
9	1,980	958	1,520	2,000	9,860	2,030	5,300	1,640	2,060	7,750	672	661
10	2,100	780	1,240	1,700	8,940	1,570	3,900	2,470	2,310	6,310	770	670
11	2,040	710	1,140	1,500	8,890	1,440	2,960	6,220	1,560	5,250	769	649
12	2,100	734	1,100	1,300	8,000	1,330	2,220	7,260	1,290	5,180	1,450	664
13	2,100	752	1,190	1,200	8,530	1,330	1,890	5,410	1,800	3,730	1,500	589
14	2,090	950	1,220	1,150	8,200	1,310	1,620	3,970	7,430	2,590	925	567
15	2,300	1,060	1,130	1,100	7,380	1,080	1,530	3,140	11,400	2,040	876	552
16	2,230	2,170	1,040	1,100	3,880	1,000	1,520	2,660	8,790	1,610	758	576
17	1,860	3,150	1,070	4,000	2,930	976	1,350	2,120	5,980	1,460	830	1,000
18	982	3,470	1,050	15,800	1,950	975	1,750	2,070	4,450	1,190	839	2,150
19	938	5,380	1,070	16,300	1,910	964	6,930	3,670	3,420	1,140	724	3,520
20	966	4,090	1,260	11,300	1,910	968	9,070	8,200	2,310	1,960	612	5,990
21	1,010	3,100	1,260	8,500	1,830	1,020	7,940	7,760	2,020	2,360	700	7,280
22	1,020	2,460	1,270	7,300	1,640	1,070	6,850	7,410	1,630	2,050	643	5,990
23	1,120	1,980	2,040	11,900	1,710	1,100	6,480	4,740	7,560	1,490	527	4,040
24	1,130	1,800	2,470	12,800	1,780	1,310	6,460	3,050	6,220	2,490	539	3,270
25	1,130	1,590	2,080	12,600	1,840	3,450	5,530	2,410	7,870	3,170	536	3,210
26	1,120	1,410	2,160	11,400	1,940	7,870	4,010	2,050	7,240	1,650	488	2,960
27	1,080	1,340	2,620	8,730	1,950	7,750	3,090	1,780	6,050	1,920	417	5,020
28	1,040	1,730	12,300	15,000	1,970	6,500	1,860	1,530	3,920	2,100	406	6,090
29	1,040	3,620	16,200	27,900	-----	5,760	1,970	1,340	2,860	1,760	400	5,890
30	853	5,480	14,300	32,600	-----	4,490	1,840	1,220	2,030	1,350	402	4,750
31	558	-----	14,400	30,100	-----	3,210	-----	1,170	-----	1,120	421	-----
TOTAL	43,310	55,222	108,160	293,080	229,240	71,953	128,700	93,860	111,600	104,760	23,464	70,214
MEAN	1,397	1,841	3,489	9,454	8,187	2,321	4,290	3,028	3,720	3,379	757	2,340
MAX	2,300	5,480	16,200	32,600	26,100	7,870	10,000	8,200	11,400	11,700	1,500	7,280
MIN	558	617	1,040	1,100	1,640	964	1,350	1,170	1,150	1,120	400	449
CFSM	.37	.49	.92	2.50	2.17	.61	1.14	.80	.98	.89	.20	.62
IN.	.43	.54	1.06	2.88	2.26	.71	1.27	.92	1.10	1.03	.23	.69

CAL YR 1968 TOTAL 1,233,985 MEAN 3,372 MAX 32,900 MIN 500 CFSM .89 IN 12.14

WTR YR 1969 TOTAL 1,333,563 MEAN 3,654 MAX 32,600 MIN 400 CFSM .97 IN 13.12

PEAK DISCHARGE (BASE, 22,000 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
01-18	1345	12.45	31,800	01-30	1600	12.72	33,100

3-3294. Rattlesnake Creek near Patton, Ind.

LOCATION.--Lat 40°42'46", long 86°41'49", on line between sec. 7, T. 26 N., R. 2 W., and sec. 12, T. 26 N., R. 3 W., Carroll County, on left bank 5 ft downstream from bridge on County Road 900 West, 2.5 miles northeast of Patton.

DRAINAGE AREA.--6.83 sq mi.

PERIOD OF RECORD.--October 1968 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 645 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 157 cfs June 23; maximum gage height, 3.70 ft July 5; minimum discharge, 0.55 cfs Oct. 2; minimum gage height, 0.51 ft Sept. 10, 13, 14, 15.

REMARKS.--Records fair except those for winter periods, which are poor.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.60	1.6	8.6	11	32	2.5	5.2	4.1	4.9	4.7	5.7	.86
2	.60	1.6	7.4	8.6	22	2.4	6.5	3.6	4.8	4.2	4.7	.81
3	.80	1.7	6.9	7.2	15	2.4	6.5	3.1	4.1	3.9	3.9	.81
4	.75	1.6	6.2	6.2	11	2.4	7.6	3.0	3.9	3.6	3.5	.81
5	.80	1.5	5.5	5.4	9.1	2.3	41	2.9	3.9	65	3.1	.76
6	.01	1.6	4.3	5.0	7.8	2.5	22	2.8	3.7	75	2.9	.76
7	.70	2.6	3.8	4.5	6.5	2.5	14	2.6	3.7	50	2.6	.70
8	.65	2.6	3.3	4.0	6.0	2.6	10	3.9	3.8	42	2.3	.66
9	.40	2.2	3.0	3.6	5.2	2.6	32	7.1	3.6	35	3.9	.56
10	.80	2.0	2.6	3.2	5.0	2.5	26	20	3.5	26	3.2	.56
11	.65	1.8	2.6	3.0	4.5	2.6	15	22	3.3	20	2.4	.66
12	.70	1.8	2.7	2.7	4.0	2.4	11	13	3.2	19	2.1	.61
13	.65	1.8	2.8	2.5	3.7	2.1	8.6	10	3.2	12	1.9	.61
14	.75	1.8	2.5	2.4	3.5	2.0	7.6	9.7	34	8.4	1.8	.56
15	.70	4.6	2.4	2.3	3.2	2.1	10	8.2	30	6.8	1.7	.56
16	.75	19	2.3	2.3	3.1	2.1	9.5	6.7	16	5.7	1.7	1.4
17	.75	11	2.2	27	2.9	2.1	7.8	6.2	10	4.9	1.7	3.5
18	.97	20	2.2	83	7.7	2.2	9.3	32	8.4	4.5	1.6	1.4
19	.91	10	2.2	27	2.6	2.2	16	27	6.7	4.2	1.4	.98
20	.97	6.5	2.4	15	2.5	2.6	11	17	5.2	11	1.4	.86
21	1.0	5.4	3.0	15	2.6	2.5	8.9	12	5.2	5.7	1.2	.86
22	1.3	4.3	13	17	2.6	2.5	7.1	9.5	9.7	4.3	1.1	.81
23	1.4	3.9	16	20	2.6	2.6	5.8	8.0	56	3.7	1.1	3.6
24	1.5	3.3	8.9	14	2.5	15	4.9	7.2	42	28	1.1	17
25	1.5	2.9	6.9	10	2.5	27	4.4	6.3	30	30	1.1	3.4
26	1.4	2.8	6.3	5.8	2.5	16	4.2	5.4	18	16	1.0	2.0
27	1.5	2.6	24	4.9	2.5	11	4.1	5.2	11	48	.92	2.2
28	1.6	23	72	82	2.5	11	4.6	4.9	7.4	31	.92	3.2
29	1.6	17	38	105	-----	7.4	4.4	4.9	6.3	16	.98	1.8
30	1.6	10	22	88	-----	5.8	4.3	4.6	5.6	10	.98	1.6
31	1.6	-----	15	52	-----	4.9	-----	4.6	-----	7.3	.86	-----
TOTAL	31.21	172.5	301.0	639.6	172.6	152.8	329.3	277.5	351.1	605.9	64.76	54.90
MEAN	1.01	5.75	9.71	20.6	6.16	4.93	11.0	8.95	11.7	19.5	2.09	1.83
MAX	1.6	23	72	105	32	27	41	32	56	75	5.7	17
MIN	.60	1.5	2.2	2.3	2.5	2.0	4.1	2.6	3.2	3.6	.86	.56
CFSM	.15	.84	1.42	3.02	.90	.72	1.61	1.31	1.71	2.86	.31	.27
IN.	.17	.94	1.64	3.48	.94	.83	1.79	1.51	1.91	3.30	.35	.30

CAL YR 1968 TOTAL MEAN MAX MIN CFSM IN
WTR YR 1969 TOTAL 3,153.17 MEAN 8.64 MAX 105 MIN .56 CFSM 1.26 IN 17.17

PEAK DISCHARGE (BASE, 65 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
12-28	0200	2.70	80	07-05	1200	3.70	137
01-18	0030	3.12	113	07-24	1330	2.90	69
01-28	1930	3.60	153	07-27	0700	2.92	70
06-23	0100	3.64	157				

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., Carroll County, 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.

PERIOD OF RECORD.--October 1939 to current year. Prior to January 1940 monthly discharge only, published in WSP 1305.

GAGE.--Water-stage recorder. Datum of gage is 519.90 ft above mean sea level (Corps of Engineers bench mark).
Prior to July 20, 1942, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--30 years, 3,338 cfs (11.24 inches per year).

EXTREMES.--Current year: Maximum discharge, 41,000 cfs Jan. 30 (gage height, 21.71 ft); minimum, 512 cfs Sept. 10 (gage height, 1.53 ft).
Period of record: 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).

REMARKS.--Records good except those for winter periods, which are fair. Flow partially regulated by Huntington Reservoir (see sta 3-3234.5), Salamonie Reservoir (see sta 3-3244.5), and Mississinewa Reservoir (see sta 3-3269.5).

REVISIONS.--WSP 1275: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,400	676	4,830	11,800	29,100	2,250	3,220	2,010	1,460	2,200	1,500	556
2	1,460	1,010	4,230	9,630	23,200	2,100	2,750	1,800	1,540	1,970	1,650	658
3	1,350	1,220	3,550	7,770	19,600	2,000	2,330	1,670	1,600	1,730	1,460	592
4	1,090	990	3,100	6,470	17,200	1,830	2,490	1,550	1,760	1,530	1,230	622
5	1,530	742	3,070	4,800	16,200	1,960	5,290	1,490	1,600	6,690	1,130	592
6	1,560	736	2,810	3,600	14,200	2,080	11,000	1,450	2,000	12,100	1,060	604
7	1,580	820	2,470	2,700	12,500	1,690	10,200	1,460	2,060	10,900	1,010	604
8	1,550	1,050	2,170	2,200	10,600	1,610	8,480	1,540	1,740	9,030	983	706
9	1,750	1,310	1,840	2,000	9,700	2,730	6,440	1,800	1,780	8,860	1,050	878
10	2,180	1,110	1,650	1,700	8,890	1,880	5,530	2,610	2,800	7,110	1,180	784
11	2,140	934	1,430	1,600	8,690	1,770	4,010	5,350	2,140	6,050	1,150	796
12	2,130	878	1,380	1,400	8,150	1,660	2,990	7,750	1,690	5,700	1,210	772
13	2,190	879	1,400	1,300	7,980	1,600	2,520	6,270	1,720	4,720	1,800	790
14	2,170	955	1,460	1,300	8,100	1,630	2,200	4,660	6,060	3,410	1,820	688
15	2,250	1,220	1,360	1,200	7,540	1,460	2,020	3,710	11,700	7,590	1,100	670
16	2,360	2,010	1,260	1,200	5,080	1,300	1,990	3,210	10,200	2,180	1,170	754
17	2,150	3,520	1,240	1,500	3,530	1,220	1,820	2,730	7,210	1,920	1,170	1,150
18	1,640	3,930	1,320	3,000	2,620	1,200	1,900	2,490	5,400	1,680	1,080	2,020
19	1,090	5,110	1,340	21,000	2,190	1,210	5,140	3,030	4,180	1,450	1,140	3,270
20	1,090	4,930	1,410	21,900	2,270	1,170	9,460	7,050	3,100	2,100	934	4,510
21	1,130	3,610	1,570	18,300	2,250	1,180	8,260	7,740	2,540	2,800	826	6,890
22	1,130	3,000	1,550	16,200	2,040	1,230	7,240	7,600	2,170	2,710	955	6,720
23	1,210	2,430	2,070	17,100	2,010	1,270	6,410	5,770	9,590	2,050	784	4,410
24	1,260	2,140	2,650	15,000	2,090	1,490	6,610	3,980	8,620	3,000	700	3,760
25	1,260	1,990	2,400	11,800	2,120	2,980	5,740	2,830	8,260	5,190	706	3,400
26	1,260	1,740	2,190	10,500	2,200	7,170	4,700	2,630	7,990	3,030	700	3,210
27	1,220	1,640	2,610	10,400	2,260	8,090	3,590	2,240	6,760	3,020	622	3,730
28	1,170	1,820	8,760	12,500	2,270	6,910	2,720	2,030	5,050	3,240	562	5,980
29	1,170	3,330	15,600	25,600	-----	6,130	2,380	1,760	3,530	2,670	556	5,710
30	1,150	5,430	13,900	39,600	-----	5,020	2,320	1,590	2,750	2,110	545	5,440
31	838	-----	13,000	37,100	-----	3,780	-----	1,500	-----	1,690	545	-----
TOTAL	47,458	61,150	109,620	322,170	234,580	79,600	141,750	103,300	129,000	125,430	32,328	71,266
MEAN	1,531	2,038	3,536	10,390	8,378	2,568	4,725	3,332	4,300	4,046	1,043	2,376
MAX	2,360	5,430	15,600	39,600	29,100	8,090	11,000	7,750	11,700	12,100	1,820	6,890
MIN	838	676	1,240	1,200	2,010	1,170	1,820	1,450	1,460	1,450	545	556
CFSM	.38	.51	.88	2.58	2.08	.64	1.17	.83	1.07	1.00	.26	.59
IN.	.44	.55	1.01	2.97	2.16	.73	1.31	.95	1.19	1.16	.30	.66

CAL YR 1968 TOTAL 1,322,609 MEAN 3,614 MAX 34,300 MIN 571 CFSM .90 IN 12.20
WTR YR 1969 TOTAL 1,457,652 MEAN 3,994 MAX 39,600 MIN 545 CFSM .99 IN 13.44

PEAK DISCHARGE (BASE 24,000 CFS).--Jan. 30 (1715) 41,000 cfs (21.71 ft).

3-3297. Deer 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., Carroll County, on downstream side of left wingwall of highway bridge, 3 miles northeast of Delphi, and 4.5 miles upstream from mouth.

DRAINAGE AREA.--278 sq mi.

PERIOD OF RECORD.--October 1943 to current year. Prior to March 1944 monthly discharge only, published in WSP 1305.

GAGE.--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).

AVERAGE DISCHARGE.--26 years, 231 cfs (11.28 inches per year).

EXTREMES.--Current year: Maximum discharge, 6,510 cfs Jan. 29 (gage height, 11.68 ft); minimum, 24 cfs Oct. 3-6 (gage height, 2.27 ft).

Period of record: 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).

REMARKS.--Records good except those for winter periods, which are fair. Records of suspended sediment loads for the current year are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1275: Drainage area, 1944, 1947-48.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	34	269	364	2,550	106	225	220	107	114	146	33
2	24	34	237	310	1,510	103	230	203	116	103	198	53
3	25	33	206	270	1,010	101	208	185	101	95	138	44
4	24	33	192	240	694	100	203	170	95	89	106	55
5	24	33	177	210	520	97	2,400	158	91	844	92	52
6	28	35	147	190	436	97	2,160	150	89	748	82	44
7	28	51	128	170	375	100	1,160	144	89	448	74	39
8	27	31	120	150	324	103	718	150	88	376	65	43
9	29	31	110	140	298	107	748	160	86	309	228	38
10	32	74	98	120	263	104	916	215	80	255	460	34
11	30	62	91	110	240	101	575	339	74	233	240	33
12	30	54	94	100	220	98	424	306	71	345	155	32
13	29	49	107	96	190	98	348	265	235	235	112	31
14	28	45	99	92	170	97	309	245	628	180	94	30
15	27	64	95	90	160	92	295	220	424	144	83	28
16	27	431	90	90	150	92	283	198	303	124	112	55
17	29	561	84	259	140	94	263	180	223	109	89	444
18	51	490	80	2,450	132	97	388	193	185	98	100	858
19	58	438	82	1,490	124	104	1,090	270	158	92	89	330
20	50	310	84	708	116	114	830	273	134	392	73	213
21	44	233	85	481	114	124	540	230	112	351	64	153
22	41	192	107	415	116	120	436	200	107	203	56	118
23	39	153	302	410	120	114	342	178	1,680	144	50	101
24	37	143	230	380	116	180	283	160	760	248	48	100
25	36	123	210	334	112	565	253	148	380	844	45	91
26	35	111	220	284	110	688	230	138	283	312	43	82
27	34	132	251	285	107	490	218	128	220	380	40	79
28	35	177	1,440	2,610	106	432	290	118	178	339	38	77
29	34	423	1,480	5,970	-----	360	298	112	144	228	38	79
30	34	331	805	5,720	-----	285	248	109	128	170	36	76
31	33	-----	533	4,330	-----	243	-----	104	-----	134	34	-----
TOTAL	1,026	5,031	8,253	28,868	10,524	5,606	16,901	5,869	7,371	8,686	3,228	3,445
MEAN	33.1	157	266	931	376	181	563	189	246	280	104	115
MAX	58	561	1,480	5,970	2,550	688	2,400	339	1,680	844	460	858
MIN	24	33	80	90	106	92	203	104	71	89	34	28
CFSM	.12	.60	.96	3.35	1.35	.65	2.03	.68	.88	1.01	.37	.41
IN.	.14	.57	1.10	3.86	1.41	.75	2.26	.79	.99	1.16	.43	.46

CAL YR 1968 TOTAL 97,532 MEAN 266 MAX 5,400 MIN 24 CFSM .96 IN 13.05
WTR YR 1969 TOTAL 104,778 MEAN 287 MAX 5,970 MIN 24 CFSM 1.03 IN 14.02

PEAK DISCHARGE (BASE, 2,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-18	0215	9.05	3,590	06-23	0300	6.46	2,150
01-29	2100	11.68	6,510	07-05	1300	6.43	2,120
04-05	1400	7.89	3,290				

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., Kosciusko County, 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.

PERIOD OF RECORD.--October 1949 to current year.

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

AVERAGE DISCHARGE.--20 years, 97.8 cfs (11.55 inches per year).

EXTREMES.--Current year: Maximum discharge, 442 cfs occurred during period Feb. 5-10 (gage height, 8.21 ft); minimum, 1.0 cfs Aug. 24 (gage height, 4.61 ft).

Period of record: Maximum discharge, 700 cfs Oct. 17, 1954 (gage height, 8.64 ft); minimum, 0.08 cfs Aug. 4, 5, 1967 (gage height, 4.25 ft).

REMARKS.--Records fair except those for winter periods and periods of no gage-height record, which are poor. Occasional regulation by flashboards at lake outlet.

REVISIONS.--WSP 1275: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	32	140	170	318	118	127	184	63	75	100	31
2	12	30	140	184	368	110	131	178	103	73	92	30
3	13	28	140	194	411	103	140	171	89	64	84	30
4	13	27	140	201	434	98	148	164	62	45	77	30
5	13	27	130	204	440	96	159	157	65	49	63	30
6	13	29	120	207	440	93	165	148	64	49	63	30
7	13	31	120	207	430	89	169	140	63	66	63	29
8	14	35	120	205	420	84	171	135	63	88	42	24
9	19	41	115	201	410	79	173	131	62	89	43	6.6
10	32	63	110	196	390	73	174	132	62	91	57	2.1
11	39	41	105	190	370	69	174	134	49	91	40	2.3
12	39	40	100	183	350	66	172	135	28	91	16	2.1
13	38	40	99	176	320	64	167	136	27	90	16	3.0
14	35	40	99	161	310	60	160	135	43	80	16	2.9
15	28	40	99	146	290	58	154	131	60	53	20	5.0
16	28	41	94	134	270	37	147	123	59	53	48	34
17	29	46	90	127	260	8.1	141	121	59	53	69	2.9
18	46	58	89	130	240	7.3	149	123	57	53	67	4.5
19	46	78	89	127	220	8.5	159	122	41	54	66	4.5
20	37	84	87	124	200	10	165	119	21	73	49	4.5
21	29	98	83	126	180	13	169	116	21	82	14	14
22	27	104	86	132	170	15	175	99	22	42	16	29
23	27	103	83	139	159	17	182	46	27	43	4.6	34
24	26	101	83	148	150	63	188	26	25	43	1.2	52
25	26	100	83	155	142	105	189	9.4	29	43	7.2	50
26	27	97	85	164	135	107	190	14	34	50	35	50
27	28	95	94	169	129	110	187	38	55	64	31	49
28	29	114	116	181	124	113	193	39	64	80	31	31
29	31	130	129	211	-----	119	191	38	78	94	31	8.8
30	32	140	139	246	-----	122	187	54	77	102	31	8.5
31	32	-----	159	279	-----	125	-----	62	-----	100	31	-----
TOTAL	833	1,923	3,366	5,417	8,080	2,239.9	4,996	3,360.4	1,566	2,122	1,119.0	634.7
MEAN	26.9	64.1	109	175	289	72.3	167	108	52.2	68.5	42.5	21.2
MAX	46	140	159	279	440	125	193	184	103	102	100	52
MIN	12	27	83	124	124	7.3	127	9.4	21	42	1.2	2.1
CFSM	.23	.56	.94	1.52	2.51	.63	1.45	.94	.45	.60	.37	.18
IN.	.27	.62	1.09	1.75	2.61	.72	1.62	1.09	.51	.69	.43	.21

CAL YR 1968 TOTAL 39,756.33 MEAN 109 MAX 410 MIN .83 CFSM .94 IN 12.86
 WTR YR 1969 TOTAL 35,857.0 MEAN 98.2 MAX 440 MIN 1.2 CFSM .85 IN 11.60

PEAK DISCHARGE (BASE, 200 CFS)

NOTE.--No gage-height record Oct. 20 to Nov. 18, Nov. 29 to Dec. 11, Feb. 5-10, 12-21.

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-06	0630	7.03	208	02-21	0530	8.07	408
+	Unknown	8.21	442				

+ Occurred during period Feb. 5-10.

3-3315. Tippecanoe River near Ora, Ind.

LOCATION.--Lat 41°09'26", long 86°33'49", in SE $\frac{1}{4}$ sec. 6, T. 31 N., R. 1 W., Pulaski County, on right bank at downstream side of highway bridge, 1.0 mile upstream from Bartoe ditch, and 1.3 miles southwest of Ora.

DRAINAGE AREA.--839 sq mi.

PERIOD OF RECORD.--September 1943 to current year. Monthly discharge only for some periods, published in WSP 1305.

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

AVERAGE DISCHARGE.--26 years, 784 cfs (12.69 inches per year).

EXTREMES.--Current year: Maximum discharge, 4,890 cfs Feb. 1 (gage height, 13.13 ft); minimum, 166 cfs Sept. 15, 16 (gage height, 4.71 ft).

Period of record: Maximum discharge, 7,800 cfs Apr. 5, 1950 (gage height, 14.40 ft site then in use); minimum, 86 cfs Sept. 14, 1966; minimum gage height, 4.15 ft Aug. 14, 1944, Oct. 16, 17, 1946.

REMARKS.--Records good except those for winter periods, which are fair. Records of suspended sediment loads for current year are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1275: Drainage area. WSP 1335: 1944(M). WSP 1505: 1949-50(P).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	241	243	1,430	2,270	4,790	825	1,130	1,340	564	510	741	185
2	230	236	1,310	1,900	4,310	804	1,150	1,280	654	519	660	184
3	233	213	1,230	1,600	3,630	786	1,290	1,210	693	510	591	182
4	228	213	1,150	1,400	3,150	765	1,290	1,150	672	540	534	185
5	228	233	1,060	1,300	2,910	741	1,390	1,070	705	647	489	189
6	241	241	951	1,100	2,460	720	1,620	990	750	915	454	196
7	251	259	855	1,000	2,240	717	1,610	933	735	975	428	198
8	251	324	768	950	2,070	693	1,480	1,010	774	1,150	405	196
9	262	316	726	880	1,930	687	1,510	1,210	978	1,180	397	196
10	272	425	678	840	1,760	675	1,650	1,350	957	1,080	399	220
11	275	339	645	800	1,640	657	1,610	1,570	849	1,010	389	202
12	275	379	636	760	1,560	633	1,460	1,790	786	1,170	371	185
13	275	373	657	740	1,480	609	1,330	1,690	786	1,160	366	177
14	230	334	678	720	1,370	588	1,230	1,530	867	1,010	350	172
15	275	431	654	700	1,760	561	1,190	1,410	1,080	876	324	167
16	267	720	618	700	1,200	543	1,180	1,290	1,200	792	306	174
17	264	1,010	606	1,160	1,180	531	1,150	1,160	1,040	702	303	211
18	292	1,110	600	1,610	1,140	528	1,230	1,150	939	756	311	272
19	373	1,240	637	2,370	1,090	522	1,660	1,230	858	759	298	301
20	410	1,110	756	2,820	1,040	516	2,040	1,200	777	954	306	298
21	399	1,050	780	2,770	990	525	2,120	1,110	714	1,040	301	249
22	376	948	774	2,620	981	522	1,980	1,020	648	966	288	220
23	347	854	975	2,560	960	525	1,790	954	654	831	275	209
24	329	792	1,120	1,900	936	624	1,600	894	702	801	249	241
25	327	735	1,070	1,790	915	1,170	1,450	846	678	838	223	280
26	314	670	1,610	1,760	894	1,530	1,330	786	642	786	211	267
27	303	651	1,790	1,850	870	1,510	1,230	714	579	819	200	275
28	280	714	1,650	2,090	849	1,450	1,290	648	525	1,070	193	275
29	267	1,220	1,940	3,040	-----	1,440	1,480	600	483	966	193	262
30	256	1,570	2,190	3,380	-----	1,350	1,420	576	492	855	193	259
31	249	-----	2,040	4,130	-----	1,220	-----	555	-----	783	189	-----
TOTAL	3,860	19,223	32,586	53,420	49,505	24,967	43,890	34,266	22,781	27,140	10,937	6,627
MEAN	246	641	1,051	1,723	1,763	805	1,463	1,105	759	875	353	221
MAX	410	1,570	2,190	4,130	4,790	1,530	2,120	1,790	1,200	1,180	741	301
MIN	228	213	600	700	849	516	1,130	555	483	510	189	167
CFSM	.34	.76	1.25	2.05	2.11	.96	1.74	1.32	.91	1.04	.42	.26
IN.	.39	.35	1.44	2.37	2.19	1.11	1.95	1.52	1.01	1.20	.48	.29

CAL YR 1969 TOTAL 363,267 MEAN 993 MAX 6,490 MIN 226 CFSM 1.18 IN 16.10
WTR YR 1969 TOTAL 334,232 MEAN 916 MAX 4,790 MIN 167 CFSM 1.09 IN 14.81

PEAK DISCHARGE (BASE, 2,300 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
01-01	0630	10.96	2,560	02-01	0530	13.13	4,890
01-20	2030	11.44	2,900				

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

LOCATION.--Lat 40°52'53", long 86°35'26", in NW¹/₄ sec. 13, T. 28 N., R. 2 W., White County, 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.

PERIOD OF RECORD.--July 1959 to current year.

GAGE.--Water-stage recorder. Datum of gage is 692.73 ft above mean sea level.

AVERAGE DISCHARGE.--10 years, 25.9 cfs (10.05 inches per year).

EXTREMES.--Current year: Maximum discharge, 393 cfs Jan. 30 (gage height, 6.84 ft); minimum, 3.5 cfs Sept. 14, 15 (gage height, 0.81 ft).

Period of record: Maximum discharge, about 500 cfs Mar. 5, 1963 (gage height, unknown); minimum daily, 0.5 cfs Dec. 17-22, 1963; minimum gage height, 0.63 ft Mar. 16, 1960.

Maximum stage known, 11.2 ft in Spring of 1957, from information by local residents.

REMARKS.--Records fair except those for winter periods, which are poor.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.5	4.5	44	47	253	14	24	23	19	32	51	5.1
2	4.3	4.3	40	38	170	13	32	20	24	30	47	5.4
3	4.8	4.8	37	33	120	13	32	18	20	27	33	5.1
4	4.8	4.5	35	29	82	13	36	16	18	26	28	5.1
5	4.3	4.5	30	25	60	13	87	16	18	38	24	5.1
6	5.4	5.7	24	22	52	13	64	15	17	110	20	5.1
7	5.7	9.4	23	20	42	13	42	15	18	128	18	4.8
8	4.8	12	20	18	29	13	34	33	18	78	16	4.5
9	5.1	9.4	18	17	34	14	68	75	18	65	16	4.5
10	6.7	7.7	16	15	31	14	83	139	17	48	16	4.5
11	5.4	6.7	15	15	20	12	48	203	16	39	14	4.3
12	5.4	6.7	17	14	27	11	37	140	20	54	13	4.3
13	5.1	6.1	21	13	24	10	31	90	33	35	12	4.0
14	4.8	5.7	19	13	22	9.4	28	69	85	27	12	4.0
15	4.8	17	16	12	19	9.2	32	52	105	22	11	4.0
16	5.1	48	14	12	18	9.0	30	42	63	19	11	6.1
17	5.1	40	13	13	16	9.1	27	35	44	17	12	11
18	7.4	49	13	273	16	9.6	30	57	37	24	11	8.4
19	7.1	42	24	168	16	10	57	68	33	51	9.8	5.4
20	6.1	31	26	86	15	11	42	48	28	44	9.1	4.8
21	5.4	24	21	77	16	11	34	38	25	27	8.4	4.5
22	5.7	22	36	74	16	10	29	35	27	20	7.7	4.5
23	5.7	20	66	82	16	10	24	31	215	16	7.4	5.4
24	4.8	18	37	60	16	32	21	28	199	125	7.1	9.1
25	5.1	16	28	47	16	112	19	25	115	285	6.7	6.7
26	4.8	16	25	37	15	75	18	23	72	209	6.4	5.6
27	4.5	15	30	30	15	51	18	21	50	209	6.1	6.5
28	4.5	50	182	136	14	51	43	19	40	180	6.1	6.6
29	4.5	85	146	346	-----	39	35	18	37	114	5.7	5.8
30	4.3	53	79	387	-----	30	27	18	37	75	5.4	5.5
31	4.0	-----	59	340	-----	25	-----	17	-----	56	5.1	-----
TOTAL	160.0	638.0	1,176	2,498	1,210	680.3	1,132	1,447	1,468	2,230	451.0	165.7
MEAN	5.16	21.3	37.9	80.6	43.2	21.9	37.7	46.7	48.9	71.9	14.5	5.52
MAX	7.4	85	182	387	253	112	87	203	215	285	51	11
MIN	4.0	4.3	13	12	14	9.0	18	15	16	16	5.1	4.0
CFSM	.15	.61	1.08	2.30	1.23	.63	1.08	1.33	1.40	2.06	.42	.16
IN.	.17	.68	1.25	2.65	1.29	.72	1.20	1.54	1.56	2.37	.48	.18

CAL YP 1968 TOTAL 13,925.7

MEAN 38.0

MAX 430

MIN 3.8

CFSM 1.09

IN 14.80

WTR YP 1969 TOTAL 13,256.0

MEAN 36.3

MAX 387

MIN 4.0

CFSM 1.04

IN 14.09

PEAK DISCHARGE (BASE, 250 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-18	1215	5.64	297	07-25	0900	5.41	295
01-30	0715	6.84	393				

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., Pulaski County, on right bank at downstream side of county road bridge, 1.1 miles east of Francesville, 1.6 miles downstream from right-bank tributary, and 10.2 miles upstream from mouth.

DRAINAGE AREA.—145 sq mi.

PERIOD OF RECORD.—August 1959 to current year.

GAGE.—Water-stage recorder. Datum of gage is 653.17 ft above mean sea level.

AVERAGE DISCHARGE.—10 years, 137 cfs (12.83 inches per year).

EXTREMES.—Current year: Maximum discharge, 1,590 cfs Apr. 19 (gage height, 13.17 ft); minimum, 29 cfs Sept. 22, 23; minimum gage height, 1.31 ft Nov. 3, 4.

Period of record: Maximum discharge, 2,750 cfs Dec. 25, 1965 (gage height, 15.14 ft, from floodmarks); maximum gage height, 15.90 ft Feb. 2, 1968; minimum discharge, 4.0 cfs Oct. 3, 1964 (gage height, 1.17 ft).

Maximum stage known, about 18.60 ft in Spring of 1957, from information by local residents.

REMARKS.—Records good except those for winter periods, which are fair.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	34	197	210	532	107	200	194	140	142	119	31
2	41	32	180	190	391	107	268	174	261	107	105	31
3	40	32	173	170	315	110	273	155	201	91	90	32
4	38	33	159	150	241	110	278	159	162	87	83	32
5	38	34	136	130	238	106	458	150	158	85	77	32
6	40	35	118	120	221	110	370	146	152	90	72	40
7	41	41	100	110	200	111	275	138	139	100	68	33
8	40	43	92	96	194	111	231	222	145	111	65	31
9	40	39	84	88	184	114	687	519	174	105	67	31
10	42	42	76	82	171	111	939	855	154	95	67	31
11	40	40	70	78	166	98	575	927	133	94	61	29
12	40	39	66	72	148	93	380	630	116	220	58	29
13	40	40	68	68	130	88	299	441	107	169	55	29
14	38	39	74	64	120	83	267	362	104	123	52	31
15	36	59	70	62	116	77	287	288	107	100	51	30
16	35	94	66	62	110	79	260	242	98	87	53	31
17	35	97	62	189	105	79	250	209	90	76	61	46
18	39	112	60	557	103	84	1,150	267	84	90	54	48
19	36	112	58	473	102	90	1,430	388	83	102	50	36
20	35	96	58	343	100	96	1,010	303	77	92	48	32
21	34	87	90	310	101	93	616	244	76	83	47	33
22	36	82	140	300	103	94	439	218	80	71	43	30
23	35	78	160	280	107	94	345	201	105	67	41	31
24	35	75	160	270	107	202	285	184	88	129	39	50
25	38	72	150	240	107	672	244	165	90	185	38	41
26	39	70	170	200	108	541	215	150	95	118	37	37
27	36	67	293	290	109	384	197	141	74	439	34	33
28	35	163	512	470	109	384	260	134	65	414	34	34
29	35	325	473	1,140	-----	311	258	125	60	221	34	33
30	34	241	293	1,370	-----	242	221	118	85	157	32	34
31	35	-----	243	864	-----	206	-----	115	-----	130	32	-----
TOTAL	1,169	2,343	4,646	8,958	4,758	5,187	12,967	8,564	3,503	4,180	1,767	1,021
MEAN	37.7	78.1	150	289	170	167	432	276	117	135	57.0	34.0
MAX	43	325	512	1,370	532	672	1,430	927	261	439	119	58
MIN	34	32	58	62	100	77	197	115	60	67	32	29
CFSM	.26	.54	1.02	1.99	1.17	1.15	2.98	1.91	.81	.93	.39	.23
IN.	.30	.60	1.19	2.30	1.22	1.33	3.33	2.20	.90	1.07	.45	.26

CAL YR 1968 TOTAL 66,915 MEAN 183 MAX 1,990 MIN 32 CFSM 1.26 IN 17.16
 WTR YR 1969 TOTAL 59,063 MEAN 162 MAX 1,430 MIN 29 CFSM 1.12 IN 15.15

PEAK DISCHARGE (BASE, 1,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
01-30	0845	12.92	1,550	04-19	0915	13.17	1,590
04-10	0045	11.01	1,240	05-11	0545	10.32	1,130

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., White County, at Norway plant of Northern Indiana Public Service Co., 2 miles north of Monticello.

DRAINAGE AREA.--1,710 sq mi.

PERIOD OF RECORD.--October 1931 to current year.

AVERAGE DISCHARGE.--38 years, 1,460 cfs (11.59 inches per year).

EXTREMES.--Current year: Maximum daily discharge, 12,400 cfs Jan. 30; minimum daily, 304 cfs Sept. 14.
Period of record: Maximum daily discharge, 16,800 cfs June 13, 1958; minimum daily, 103 cfs July 27, 1934.

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

COOPERATION.--Records of daily discharges furnished by Northern Indiana Public Service Co.

REVISIONS.--WSP 1275: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	348	521	2,470	1,510	8,210	1,430	2,140	2,310	1,380	916	1,540	364
2	573	521	2,210	1,600	7,740	1,300	2,600	2,310	1,540	1,160	1,500	364
3	459	521	1,940	1,650	6,940	1,370	2,680	1,960	1,620	916	1,550	348
4	332	434	1,960	1,420	5,490	1,320	2,610	1,980	1,240	916	1,260	521
5	521	348	1,640	1,320	4,990	1,340	3,890	1,870	1,430	1,520	916	348
6	521	521	1,530	1,320	4,580	1,220	4,170	1,810	1,560	3,060	1,130	369
7	521	636	1,430	1,430	4,000	1,320	3,250	1,510	1,430	3,390	916	521
8	412	521	1,150	1,430	3,330	1,340	3,190	2,290	1,430	2,900	916	521
9	648	521	1,110	1,430	3,300	1,300	4,120	2,920	1,560	2,450	1,020	369
10	521	553	1,220	1,430	2,840	1,280	5,740	4,260	1,660	2,180	801	434
11	521	636	1,090	1,260	2,660	1,130	4,450	5,790	1,600	2,040	850	521
12	521	702	1,070	1,240	2,700	1,130	3,550	4,630	1,240	2,990	768	521
13	369	520	1,070	1,220	2,010	1,200	2,990	4,080	1,490	2,490	669	413
14	521	521	1,070	1,300	2,140	916	2,620	3,530	1,510	2,120	784	304
15	521	867	916	1,220	1,940	1,090	2,660	3,170	2,100	1,670	570	328
16	521	1,130	916	1,200	1,890	916	2,700	2,690	2,020	1,440	786	521
17	391	1,220	916	1,480	1,620	1,040	2,390	2,330	1,810	1,260	731	768
18	391	1,720	1,020	4,360	1,740	915	4,120	2,380	1,600	1,150	681	521
19	521	1,810	1,170	3,200	1,600	1,110	5,600	2,950	1,620	1,800	718	434
20	521	1,650	1,170	2,620	1,590	1,070	4,890	2,620	1,280	1,590	559	521
21	602	1,590	1,240	3,460	1,490	1,110	4,360	2,230	1,280	1,790	521	521
22	620	1,370	1,300	4,180	1,510	1,040	4,190	2,080	1,240	1,710	669	521
23	636	1,430	2,010	4,400	1,560	1,000	3,210	2,060	3,480	1,420	521	455
24	521	1,170	1,220	4,040	1,430	1,880	3,150	1,810	1,990	792	521	616
25	521	1,130	1,370	2,010	1,490	4,060	2,660	1,810	1,920	4,330	521	734
26	570	1,170	1,300	1,650	1,430	4,190	2,330	1,510	1,600	2,620	521	520
27	521	915	1,570	1,520	1,430	3,420	2,260	1,430	1,260	4,220	563	520
28	521	1,450	4,060	3,920	1,430	3,640	2,580	1,430	1,130	4,040	521	520
29	521	2,310	3,640	10,500	-----	3,060	2,390	1,220	916	2,770	413	520
30	587	2,310	3,560	12,400	-----	2,710	2,700	1,130	1,170	2,110	413	520
31	348	-----	3,180	9,280	-----	2,400	-----	1,090	-----	2,040	521	-----
TOTAL	15,622	30,855	51,518	91,000	83,080	52,247	100,190	75,190	47,106	65,800	24,370	14,458
MEAN	504	1,029	1,662	2,935	2,967	1,685	3,340	2,425	1,570	2,123	786	482
MAX	648	2,310	4,060	12,400	8,210	4,190	5,740	5,790	3,480	4,330	1,550	768
MIN	332	348	916	1,200	1,430	915	2,140	1,090	916	792	413	304

CAL YR 1968 TOTAL 707,957
WTR YR 1969 TOTAL 651,449

MEAN 1,940
MEAN 1,785

MAX 16,700
MAX 12,400

MIN 332
MIN 304

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., Carroll County, 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.

PERIOD OF RECORD.--March to December 1903, March to December 1904, March 1905 to July 1906, November and December 1908, July 1939 to current year. Published as "at Springboro" 1903.

GAGE.--Water-stage recorder. Datum of gage is 552.01 ft above mean sea level (levels by Corps of Engineers). Mar. 14, 1903, to July 20, 1906, and Nov. 2 to Dec. 31, 1908, nonrecording gage at site 5.5 miles downstream at different datum.

AVERAGE DISCHARGE.--30 years (1939-69), 1,586 cfs (11.60 inches per year).

EXTREMES.--Current year: Maximum discharge, 14,600 cfs Jan. 30 (gage height, 11.98 ft); minimum, 261 cfs Sept. 15, 16 (gage height, 2.49 ft).

Period of record: 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, 6.5 miles upstream.

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

REVISIONS (WATER YEARS).--WSP 973: 1942. WSP 1335: 1905-6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	460	455	2,480	1,670	8,610	1,750	2,290	2,500	1,520	1,320	1,790	497
2	540	741	2,430	2,390	7,780	1,350	2,600	2,470	1,710	1,290	1,820	494
3	626	454	2,050	1,900	7,060	1,330	2,980	2,090	1,860	1,190	1,740	500
4	460	453	2,120	1,650	6,700	1,420	2,800	2,140	1,240	706	1,390	633
5	450	453	1,760	1,500	5,300	1,420	3,880	2,090	1,870	3,340	1,200	447
6	704	509	1,740	1,500	4,700	1,420	4,570	1,860	1,520	4,840	1,170	465
7	491	852	1,380	1,650	4,100	1,440	3,380	1,840	1,630	4,430	1,150	556
8	571	533	1,270	1,700	3,430	1,240	3,320	2,480	1,500	3,650	1,180	683
9	587	572	1,190	1,700	3,160	1,450	3,710	2,870	1,710	3,290	1,350	384
10	682	691	1,380	1,550	2,660	1,450	6,020	4,160	1,910	2,620	680	433
11	726	836	1,180	1,500	2,590	1,300	4,550	6,310	1,520	2,550	1,100	670
12	628	628	1,130	1,450	2,510	1,120	3,650	4,680	1,610	3,240	760	656
13	466	657	1,250	1,400	1,950	1,450	3,140	4,180	1,440	3,030	960	459
14	600	504	1,240	1,400	2,080	1,110	2,670	3,500	1,780	2,320	900	463
15	682	1,240	1,060	1,390	1,940	1,070	2,800	3,530	2,560	1,920	680	352
16	692	1,270	1,060	1,400	1,800	1,070	2,770	2,830	2,060	1,680	1,100	809
17	470	1,430	1,060	1,330	1,810	1,070	2,800	2,610	1,900	1,560	700	1,120
18	712	1,910	991	4,710	1,630	1,080	3,690	2,620	1,810	1,340	1,250	515
19	467	2,100	1,270	3,950	1,630	1,320	5,410	2,970	1,800	1,790	561	479
20	731	1,760	1,260	2,940	1,720	1,190	5,230	2,690	1,440	2,160	985	711
21	698	1,770	1,440	3,250	1,580	1,080	4,330	2,500	1,390	1,830	535	470
22	756	1,470	1,460	4,040	1,810	1,130	4,110	2,310	1,270	1,930	663	780
23	675	1,410	2,260	4,190	1,700	1,190	3,230	2,090	4,500	1,560	695	467
24	646	1,380	1,260	4,260	1,440	1,970	3,270	2,000	2,940	2,500	769	1,220
25	510	1,220	1,750	2,330	1,710	4,100	2,750	1,850	2,480	4,640	572	850
26	697	1,320	1,590	2,040	1,610	4,450	2,580	1,700	1,960	2,850	720	583
27	561	1,090	1,780	1,760	1,410	3,670	2,370	1,470	1,490	4,180	601	675
28	665	1,530	4,120	4,520	1,540	3,600	2,760	1,470	1,420	4,220	489	635
29	454	2,670	5,020	11,700	-----	3,430	2,580	1,700	1,210	2,970	644	473
30	694	2,370	3,570	13,800	-----	2,650	2,690	1,240	1,210	2,310	494	720
31	454	-----	3,280	9,780	-----	2,580	-----	1,240	-----	2,270	672	-----
TOTAL	18,476	34,373	56,931	100,340	85,460	55,910	102,030	79,990	54,250	79,526	29,350	18,199
MEAN	596	1,146	1,836	3,237	3,052	1,804	3,431	2,580	1,809	2,565	947	607
MAX	756	2,670	5,020	13,800	8,610	4,450	6,020	6,310	4,500	4,840	1,820	1,220
MIN	454	453	991	1,330	1,410	1,070	2,290	1,240	1,210	706	489	352
CFSM	.72	.62	.99	1.74	1.64	.97	1.85	1.39	.97	1.38	.51	.33
IN.	.37	.69	1.14	2.01	1.71	1.12	2.06	1.60	1.09	1.59	.59	.36
CAL YR 1968	TOTAL 774,890			MEAN 2,117		MAX 17,900		MIN 453		CFSM 1.14		IN 15.52
WTR YR 1969	TOTAL 715,745			MEAN 1,961		MAX 13,900		MIN 352		CFSM 1.06		IN 14.33

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., Howard County, on right bank at downstream side of bridge on County Road 1100 East, 0.5 miles downstream from Mud Creek, and 1.5 miles southeast of Jerome.

DRAINAGE AREA.--148 sq mi.

PERIOD OF RECORD.--July 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is 820.04 ft, (revised) above mean sea level.

AVERAGE DISCHARGE.--8 years, 105 cfs (9.63 inches per year).

EXTREMES.--Current year: Maximum discharge, 2,790 cfs Jan. 30 (gage height, 10.48 ft); minimum, 4.8 cfs Oct. 1, 2; minimum gage height, 1.47 ft Sept. 12, 13, 14, 15, 16.

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

Flood in March 1913 reached a stage of about 18 ft, from information by local residents.

REMARKS.--Records good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.8	9.2	101	179	1,220	92	92	67	50	31	10	6.4
2	5.5	9.2	116	201	689	82	95	63	49	26	9.2	6.7
3	7.7	9.2	112	135	462	77	77	61	42	21	8.8	6.7
4	6.1	9.2	100	86	332	74	74	57	36	21	8.0	6.7
5	5.5	9.2	85	62	266	68	177	55	36	29	7.7	7.3
6	5.5	10	63	49	238	72	299	57	35	119	7.3	7.3
7	5.8	13	51	42	222	74	223	50	33	128	7.0	7.3
8	5.5	16	41	37	207	69	178	74	31	112	6.7	7.0
9	5.5	14	35	33	220	73	156	113	33	153	34	6.7
10	6.1	13	32	30	191	71	153	160	29	117	450	6.4
11	6.1	13	30	28	179	71	125	256	26	102	378	6.1
12	6.1	12	33	26	155	65	103	218	28	101	164	5.8
13	6.1	12	36	25	117	63	95	165	30	68	90	5.5
14	6.1	11	31	24	98	58	92	134	30	45	58	5.5
15	6.4	14	34	24	84	51	92	110	46	33	41	5.5
16	6.7	87	21	25	84	50	83	96	69	25	30	7.8
17	7.0	138	21	120	78	50	81	86	50	21	22	289
18	9.2	162	22	993	65	51	362	91	43	18	19	781
19	11	152	26	650	62	56	554	266	41	16	16	472
20	11	93	28	289	63	60	421	207	37	21	14	280
21	9.6	66	23	210	68	62	308	147	31	23	12	178
22	9.6	52	35	194	84	52	239	116	28	17	11	121
23	9.2	43	149	265	102	52	181	96	34	14	9.2	90
24	9.6	37	117	482	109	84	140	83	36	18	8.8	107
25	10	31	96	298	109	192	119	76	45	20	8.4	99
26	9.6	26	78	180	109	224	106	68	58	24	8.0	75
27	9.2	23	129	125	105	197	97	60	57	18	7.7	59
28	9.2	44	855	551	99	165	95	55	44	16	7.3	48
29	9.2	159	858	1,980	-----	141	82	52	36	15	7.0	39
30	8.8	131	428	2,630	-----	109	72	50	32	12	6.7	35
31	8.8	-----	289	2,190	-----	94	-----	48	-----	11	6.7	-----
TOTAL	236.5	1,418.0	4,075	12,163	5,812	2,689	4,971	3,232	1,175	1,395	1,473.5	2,777.7
MEAN	7.63	47.3	131	392	208	86.7	166	104	39.2	45.0	47.5	92.6
MAX	11	162	858	2,630	1,220	224	554	266	69	153	450	781
MIN	4.8	9.2	21	24	62	50	72	48	26	11	6.7	5.5
CFSM	.05	.32	.89	2.65	1.40	.59	1.12	.70	.26	.30	.32	.63
IN.	.05	.36	1.02	3.06	1.46	.68	1.25	.81	.30	.35	.37	.70

CAL YR 1968 TOTAL 41,292.6 MEAN 113 MAX 2,920 MIN 4.8 CFSM .76 IN 10.38
WTR YR 1969 TOTAL 41,417.7 MEAN 113 MAX 2,630 MIN 4.8 CFSM .77 IN 10.41

PEAK DISCHARGE (BASE, 1,200 CFS).--Jan. 30 (2200) 2,790 cfs (10.48 ft).

3-3336. Kokomo Creek near Kokomo, Ind.

LOCATION.--Lat 40°26'28", long 86°05'20", on line between secs. 16 and 17, T. 23 N., R. 4 E., Howard County, on left bank at upstream side of bridge on County Road 200 East, 3.4 miles southeast of Kokomo, and 4.2 miles upstream from mouth.

DRAINAGE AREA.--24.3 sq mi.

PERIOD OF RECORD.--July 1959 to current year.

GAGE.--Water-stage recorder. Datum of gage is 807.68 ft above mean sea level (unadjusted).

AVERAGE DISCHARGE.--10 years, 16.8 cfs (9.39 inches per year).

EXTREMES.--Current year: Maximum discharge, 456 cfs Jan. 30 (gage height, 7.51 ft); minimum, 0.42 cfs Aug. 8, 9; minimum gage height, 1.53 ft Oct. 1, 2.

Period of record: Maximum discharge, 1,040 cfs Apr. 20, 1964 (gage height, 9.88 ft); minimum, 0.11 cfs Oct. 3, 1967; minimum gage height, 1.30 ft Aug. 12, 27, 1959.

REMARKS.--Records fair except those for winter periods and those for no gage-height record, which are poor.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.74	2.1	18	34	183	17	22	10	4.9	2.9	1.7	.94
2	.79	2.1	20	28	123	14	22	9.5	4.7	2.7	1.4	.98
3	.94	2.1	19	22	94	13	17	8.7	4.4	2.4	1.1	1.0
4	.90	2.2	17	15	71	12	18	8.1	4.0	2.3	1.0	1.1
5	.94	2.2	13	11	60	11	106	7.8	4.2	3.5	.80	1.2
6	1.1	2.3	9.2	8.5	55	13	103	7.5	3.9	63	.75	1.3
7	1.2	3.1	7.6	7.4	43	12	66	6.9	4.1	41	.59	1.2
8	1.1	3.3	6.1	6.6	46	12	51	8.1	3.8	31	.54	1.2
9	1.2	2.8	5.5	6.0	42	13	47	10	3.9	34	37	1.2
10	1.4	2.6	5.3	5.4	36	13	47	13	3.5	18	58	1.2
11	1.3	2.3	5.1	5.4	35	13	37	16	3.3	10	24	1.1
12	1.2	2.4	5.5	5.1	30	11	30	16	3.1	7.8	10	1.1
13	1.3	2.3	5.9	4.9	23	9.7	26	13	3.3	5.2	13	1.2
14	1.4	2.1	4.8	4.9	19	8.6	24	12	3.1	4.1	18	1.4
15	1.8	2.5	4.2	4.8	17	7.5	24	10	4.8	3.3	12	4.0
16	2.1	25	4.0	5.1	17	7.5	21	9.3	4.6	2.7	5.6	12
17	2.1	27	4.1	27	14	7.3	20	8.6	4.1	2.4	3.5	36
18	2.4	45	4.4	180	12	7.9	50	10	3.4	2.1	2.6	110
19	1.6	33	5.1	60	12	9.2	86	15	3.9	1.8	1.9	68
20	1.4	19	5.0	40	11	11	67	14	3.7	1.8	1.5	37
21	1.2	13	4.2	31	12	10	51	11	3.2	1.7	1.2	20
22	1.3	9.8	10	35	16	7.9	41	9.8	3.1	1.5	1.1	8.8
23	1.6	7.9	34	60	20	8.2	31	9.0	3.5	1.2	1.0	7.2
24	1.7	6.3	20	76	20	24	24	7.9	3.7	1.5	1.0	9.1
25	1.7	5.7	14	40	19	54	21	7.5	4.9	2.4	.96	8.6
26	1.7	5.3	11	25	20	59	19	6.7	5.2	3.8	.92	7.1
27	1.9	4.9	41	22	20	46	17	6.0	4.5	6.1	.90	6.0
28	2.0	10	186	64	18	43	17	5.6	3.8	4.3	.90	5.6
29	2.1	29	114	230	-----	34	13	5.3	3.3	3.4	.88	5.5
30	2.0	22	66	430	-----	26	12	5.1	3.1	2.2	.89	6.4
31	2.0	-----	45	344	-----	22	-----	4.9	-----	1.9	.90	-----
TOTAL	46.11	299.8	714.0	1,838.1	1,093	556.8	1,130	292.3	117.5	272.0	205.63	367.42
MEAN	1.49	9.99	23.0	59.3	39.0	18.0	37.7	9.43	3.92	8.77	6.63	12.2
MAX	2.4	45	186	430	183	59	106	16	5.2	63	58	110
MIN	.74	2.1	4.0	4.8	11	7.3	12	4.9	3.1	1.2	.54	.94
CFSM	.06	.41	.95	2.44	1.61	.74	1.55	.39	.16	.36	.27	.50
IN.	.07	.46	1.09	2.81	1.67	.85	1.73	.45	.18	.42	.31	.56

CAL YR 1968 TOTAL 6,008.93 MEAN 16.4 MAX 453 MIN .73 CFSM .68 IN 9.20
WTR YR 1969 TOTAL 6,932.66 MEAN 19.0 MAX 430 MIN .54 CFSM .78 IN 10.61

PEAK DISCHARGE (BASE, 260 CFS).--Jan. 30 (1945) 456 cfs (7.51 ft).

NOTE.--No gage-height record Jan. 20-30, Aug. 15 to Sept. 20.

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., Howard County, on right bank on property of Continental Steel Corporation in Kokomo, 0.3 mile downstream from Kokomo Creek, and 0.4 mile upstream from Dixon Road Bridge.

DRAINAGE AREA.--245 sq mi.

PERIOD OF RECORD.--October 1955 to current year.

GAGE.--Water-stage recorder. Datum of gage is 775.62 ft above mean sea level (levels by Indiana Department of Natural Resources).

AVERAGE DISCHARGE.--14 years, 202 cfs (11.20 inches per year).

EXTREMES.--Current year: Maximum discharge, 4,420 cfs Jan. 30 (gage height, 8.88 ft); minimum, 11 cfs Oct. 5, 6, 20; minimum gage height observed, 1.07 ft Oct. 20.

Period of record: Maximum discharge, 8,100 cfs Feb. 10, 1959; maximum gage height, 11.77 ft Apr. 21, 1964; minimum discharge, 5.0 cfs Sept. 30, 1956; minimum gage height, 0.90 ft Nov. 1, 1966.

REMARKS.--Records 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 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	15	188	325	2,220	152	169	120	71	40	33	27
2	21	14	169	259	1,280	143	179	107	66	38	30	53
3	16	12	179	238	830	136	160	100	58	37	28	37
4	12	12	159	151	616	129	143	98	55	31	32	32
5	11	14	118	125	492	122	360	95	67	79	31	31
6	11	32	131	108	432	124	520	90	53	229	30	30
7	12	78	93	94	388	124	424	82	58	273	30	26
8	14	64	73	82	352	134	324	107	58	212	29	29
9	17	46	67	74	336	133	311	160	57	211	289	28
10	19	34	62	66	328	124	281	223	41	200	242	28
11	14	22	58	60	296	127	245	263	36	196	548	29
12	15	16	59	55	275	125	205	328	39	166	294	29
13	12	15	65	52	240	115	177	256	48	133	171	26
14	12	15	53	51	198	102	177	212	42	95	121	23
15	14	22	40	52	169	97	173	174	108	72	96	26
16	14	119	50	60	160	91	163	154	60	58	65	154
17	21	197	51	178	152	90	160	139	69	48	57	512
18	52	309	52	948	142	83	396	187	61	43	47	682
19	16	287	64	972	129	48	756	255	57	36	52	727
20	12	197	56	547	122	47	680	303	51	49	47	431
21	14	136	46	369	122	48	504	230	44	38	40	259
22	14	105	111	314	133	44	396	179	43	42	37	180
23	16	85	171	362	156	42	302	148	60	39	33	145
24	16	72	200	587	171	125	240	130	81	64	29	137
25	20	67	138	535	175	195	203	114	81	45	33	142
26	14	61	126	301	175	392	179	112	76	39	33	118
27	13	57	270	233	175	348	167	92	72	79	33	108
28	14	116	946	1,540	171	296	181	84	61	42	33	78
29	15	189	1,270	3,100	-----	260	152	78	49	35	32	67
30	15	231	817	4,100	-----	208	136	73	45	34	28	58
31	15	-----	505	3,870	-----	185	-----	70	-----	35	25	-----
TOTAL	505	2,639	6,387	19,812	10,435	4,389	8,463	4,763	1,767	2,738	2,628	4,252
MEAN	16.3	88.0	206	639	373	142	282	154	58.9	88.3	84.8	142
MAX	52	309	1,270	4,100	2,220	392	756	328	108	273	548	727
MIN	11	12	40	51	122	42	136	70	36	31	25	23
CFSM	.07	.36	.84	2.61	1.52	.58	1.15	.63	.24	.36	.35	.58
IN.	.08	.40	.97	3.01	1.58	.67	1.28	.72	.27	.42	.40	.65

CAL YR 1968 TOTAL 64,750
WTR YR 1969 TOTAL 68,778

MEAN 177
MEAN 188

MAX 4,250
MAX 4,100

MIN 11
MIN 11

CFSM .72
CFSM .77

IN 9.83
IN 10.44

PEAK DISCHARGE (BASE, 2,100 CFS).--Jan. 30 (1900) 4,420 cfs (8.88 ft).

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., Carroll County, on left bank 500 ft downstream from bridge on State Highway 39, 0.5 mile northwest of Owasco, and 15 miles upstream from South Fork Wildcat Creek.

DRAINAGE AREA.--390 sq mi.

PERIOD OF RECORD.--October 1943 to current year. Prior to March 1944 monthly discharge only, published in WSP 1305.

GAGE.--Water-stage recorder. Datum of gage is 624.63 ft above mean sea level. Prior to Oct. 1, 1950 nonrecording gage at site 500 ft upstream at same datum.

AVERAGE DISCHARGE.--26 years, 350 cfs (12.19 inches per year).

EXTREMES.--Current year: Maximum discharge, 6,220 cfs Jan. 31 (gage height, 10.11 ft); minimum, 39 cfs Sept. 15; minimum gage height, 1.13 ft Oct. 8.

Period of record: Maximum discharge, 10,200 cfs Jan. 5, 1950 (gage height, 13.3 ft), from rating curve extended above 6,700 cfs; minimum observed, 10 cfs Sept. 25, 1944.

Flood of May 18, 1943, reached a stage of 14.0 ft, from floodmarks.

REMARKS.--Records good. 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).

REVISIONS (WATER YEARS).--WSP 1335: Drainage area. WSP 1625: 1958.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

JAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	50	340	496	5,380	270	320	240	126	80	63	46
2	44	50	315	410	3,170	250	315	218	124	74	60	50
3	45	49	298	350	1,590	240	310	203	122	68	57	68
4	44	47	303	300	1,020	235	290	192	117	70	51	98
5	44	44	293	260	775	225	475	186	111	85	48	64
6	45	44	243	230	628	220	784	182	113	162	50	59
7	43	59	243	210	560	225	708	178	103	381	49	67
8	41	123	208	195	496	225	552	178	103	455	46	62
9	44	112	175	180	464	240	524	196	93	467	355	48
10	49	73	163	170	441	233	608	240	106	390	1,140	50
11	60	60	142	160	417	223	482	301	86	357	603	48
12	54	54	136	150	385	223	408	334	76	408	580	49
13	50	55	144	140	353	228	365	351	96	301	373	48
14	45	57	151	130	320	213	343	307	96	219	257	49
15	43	71	121	125	293	195	340	268	111	173	200	43
16	43	270	110	120	273	185	325	235	182	145	182	58
17	47	373	96	268	260	183	310	213	144	126	160	539
18	58	350	121	1,730	250	183	429	220	124	103	139	1,060
19	95	435	123	2,730	240	185	928	289	117	90	113	911
20	69	360	140	2,240	235	158	1,050	340	106	125	104	707
21	51	320	125	1,080	240	151	829	334	93	95	99	456
22	47	273	147	576	240	147	616	286	87	85	86	328
23	46	238	303	464	253	138	488	245	95	86	79	262
24	47	203	315	536	270	185	407	215	117	79	72	228
25	51	175	313	588	280	390	344	192	124	115	65	213
26	51	158	298	485	280	503	304	176	138	114	60	205
27	58	147	325	390	278	548	277	170	122	114	63	180
28	53	178	883	1,170	275	489	310	155	108	138	56	168
29	50	308	1,390	4,200	-----	435	289	146	96	100	64	138
30	53	335	1,410	5,620	-----	380	259	138	84	77	61	128
31	50	-----	910	5,970	-----	335	-----	128	-----	68	53	-----
TOTAL	1,552	5,071	10,274	31,673	19,666	8,040	13,989	7,056	3,320	5,350	5,390	6,430
MEAN	50.1	169	331	1,022	702	259	466	228	111	173	174	214
MAX	85	435	1,410	5,970	5,380	548	1,050	351	182	467	1,140	1,060
MIN	41	44	96	120	235	138	259	128	76	68	46	43
CFSM	.13	.43	.85	2.62	1.80	.67	1.20	.58	.28	.44	.45	.55
IN.	.15	.48	.98	3.02	1.88	.77	1.33	.67	.32	.51	.51	.61

CAL YR 1968 TOTAL 108,240

MEAN 296

MAX 5,490

MIN 41

CFSM .76

IN 10.32

WTR YR 1969 TOTAL 117,811

MEAN 323

MAX 5,970

MIN 41

CFSM .83

IN 11.23

PEAK DISCHARGE (BASE, 3,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-19	0245	9.12	4,670	01-31	1600	10.11	6,220

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., Tippecanoe County, on right bank 40 ft upstream from bridge on State Highway 26, 0.5 mile upstream from Middle Fork, 4.2 miles upstream from mouth, and 5 miles east of Lafayette.

DRAINAGE AREA.--246 sq mi.

PERIOD OF RECORD.--October 1943 to current year. Prior to March 1944 monthly discharge only, published in WSP 1305.

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

AVERAGE DISCHARGE.--26 years, 227 cfs (12.53 inches per year).

EXTREMES.--Current year: Maximum discharge, 4,970 cfs Jan. 29 (gage height, 10.95 ft); minimum, 12 cfs Aug. 31 (gage height, 1.39 ft).

Period of record: 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, 12 cfs Aug. 31, 1969.

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

REMARKS.--Records good.

REVISIONS (WATER YEARS).--WSP 1275: Drainage area. WSP 1335: 1948(M). WSP 1505: 1947. WSP 1725: 1951-53(M), 1955(M). WSP 1909: 1955(P), 1965.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	39	44	352	400	1,900	175	236	200	100	66	45	15	
2	39	44	312	330	1,310	165	236	180	110	62	43	33	
3	39	44	273	250	1,020	155	213	165	98	59	40	33	
4	38	44	249	200	796	153	200	155	90	57	38	26	
5	38	44	224	180	644	145	592	148	88	57	36	36	
6	42	43	195	160	548	143	872	140	84	73	35	31	
7	42	60	170	150	524	148	636	140	82	173	34	26	
8	40	163	150	140	504	148	480	145	86	145	32	25	
9	40	126	140	130	612	155	560	165	86	140	66	21	
10	44	100	136	120	512	148	792	205	78	153	263	18	
11	48	84	128	117	444	143	584	220	72	270	460	17	
12	43	73	130	105	380	136	444	218	72	218	227	17	
13	42	66	143	99	288	136	360	198	380	160	124	16	
14	40	63	143	96	245	134	324	195	239	126	84	15	
15	38	77	122	95	218	128	324	178	203	102	62	15	
16	38	552	116	104	203	124	300	165	245	84	50	21	
17	38	568	116	227	208	126	270	155	180	72	44	320	
18	50	472	120	1,730	180	132	636	160	140	65	38	912	
19	72	360	122	1,340	170	140	960	218	126	57	36	772	
20	56	230	128	880	163	150	820	213	114	56	33	456	
21	50	165	118	580	160	153	660	175	100	62	30	270	
22	47	130	148	488	163	140	510	158	88	60	25	190	
23	47	108	352	536	178	134	360	150	90	57	22	150	
24	47	94	300	592	185	218	300	138	106	51	21	132	
25	47	78	230	404	183	584	250	132	193	78	20	114	
26	47	68	230	284	183	620	220	126	128	98	20	100	
27	47	62	320	296	183	520	210	118	98	90	19	88	
28	44	155	1,400	2,210	180	460	250	112	82	80	18	77	
29	44	608	1,380	4,580	-----	404	245	106	73	66	16	68	
30	44	472	916	4,240	-----	312	230	102	68	57	15	62	
31	44	-----	636	3,380	-----	256	-----	98	-----	50	15	-----	
TOTAL	1,374	5,197	9,499	24,443	12,284	6,685	13,074	4,978	3,699	2,944	2,011	4,076	
MEAN	44.3	173	306	788	439	216	436	161	123	95.0	64.9	136	
MAX	72	608	1,400	4,580	1,900	620	960	220	380	270	460	912	
MIN	38	43	116	95	160	124	200	98	68	50	19	15	
CFSM	.18	.70	1.25	3.21	1.78	.88	1.77	.65	.50	.39	.26	.55	
IN.	.21	.79	1.44	3.70	1.86	1.01	1.98	.75	.56	.45	.30	.62	
CAL YR 1968	TOTAL	79,558		MEAN	217	MAX	3,860	MIN	38	CFSM	.88	IN	12.03
WTR YR 1969	TOTAL	90,264		MEAN	247	MAX	4,580	MIN	15	CFSM	1.01	IN	13.65

PEAK DISCHARGE (BASE, 3,000 CFS).--Jan. 29 (0715) 4,970 cfs (10.95 ft).

3-3350, Wildcat Creek near Lafayette, Ind.

LOCATION.--Lat 40°26'26", long 86°49'46", on line between NW¼ sec. 13 and NE¼ sec. 14, T. 23 N., R. 4 W., Tippecanoe County, on downstream side of bridge on County Road 2A East, 2.5 miles upstream from mouth, and 3 miles downstream from South Fork Wildcat Creek.

DRAINAGE AREA.--791 sq mi.

PERIOD OF RECORD.--May 1954 to current year.

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

AVERAGE DISCHARGE.--15 years, 691 cfs (11.86 inches per year).

EXTREMES.--Current year: Maximum discharge, 12,300 cfs Jan. 30 (gage height, 15.08 ft); minimum, 96 cfs Sept. 16 (gage height, 2.43 ft).

Period of record: Maximum discharge, 25,000 cfs June 10, 1958 (gage height, 21.52 ft), from rating curve extended above 18,000 cfs; minimum, 46 cfs Sept. 27-29, 1954, Sept. 6, 7, 1964; minimum gage height, 2.22 ft Sept. 3, 4, 1966.

REMARKS.--Records good except those for winter periods, which are fair. Some regulation during low flow for municipal water supply for Kokomo. Records of suspended sediment loads for current year are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1555: 1955, 1957(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	108	125	790	1,700	8,790	526	680	580	295	197	148	112
2	106	125	710	1,340	6,470	504	675	526	306	184	138	125
3	110	122	645	1,050	3,890	478	640	490	284	175	135	135
4	108	122	615	880	2,560	402	605	462	270	169	128	163
5	108	120	571	740	1,890	446	1,320	438	264	197	120	163
6	118	115	504	620	1,560	438	2,120	426	250	410	118	145
7	122	142	446	540	1,420	442	1,660	410	260	858	118	135
8	110	246	405	485	1,300	450	1,280	430	242	880	98	132
9	115	309	370	440	1,310	466	1,330	462	246	1,060	468	120
10	125	236	345	400	1,190	462	1,770	566	232	952	2,350	106
11	132	194	325	370	1,090	434	1,300	680	218	836	1,440	106
12	140	172	316	345	973	430	1,020	680	204	300	1,120	104
13	128	160	326	325	841	434	858	695	872	690	735	104
14	122	155	350	315	740	426	785	635	553	474	490	104
15	112	184	350	310	650	402	760	562	526	378	374	100
16	110	726	335	425	600	382	740	504	595	320	326	120
17	112	1,130	315	900	595	382	690	454	462	274	306	752
18	135	984	306	2,000	548	390	1,020	474	358	242	274	2,500
19	166	1,060	295	4,850	517	410	2,170	585	320	211	228	1,760
20	184	885	306	3,790	494	402	2,250	660	295	225	204	1,370
21	150	700	298	2,030	486	394	1,740	660	256	222	187	912
22	132	571	320	1,240	486	378	1,330	566	242	208	169	655
23	128	490	695	1,230	508	362	1,070	499	250	190	155	508
24	125	434	800	1,210	530	482	874	450	274	181	145	434
25	125	386	760	1,100	540	1,110	760	414	390	200	138	382
26	128	346	700	700	544	1,310	680	390	330	260	132	350
27	132	330	800	840	544	1,300	635	362	284	242	128	320
28	135	394	2,560	3,200	535	1,180	785	346	246	256	125	292
29	128	951	3,470	10,500	-----	1,040	755	323	222	228	120	260
30	125	890	2,760	12,000	-----	874	635	309	200	190	122	225
31	128	-----	2,200	11,000	-----	750	-----	295	-----	160	115	-----
TOTAL	3,907	12,804	23,988	66,875	41,601	17,946	32,937	15,333	9,746	11,769	10,854	12,694
MEAN	126	427	774	2,157	1,486	579	1,098	495	325	380	350	423
MAX	184	1,130	3,470	12,000	8,790	1,310	2,250	695	872	1,060	2,350	2,500
MIN	106	115	295	310	486	362	605	295	200	160	98	100
CFSM	.16	.54	.98	2.73	1.88	.73	1.39	.63	.41	.48	.44	.53
IN.	.18	.60	1.13	3.14	1.96	.84	1.55	.72	.46	.55	.51	.60

CAL YR 1968 TOTAL 229,530 MEAN 627 MAX 10,000 MIN 106 CFSM .79 IN 10.79
WTR YR 1969 TOTAL 260,454 MEAN 714 MAX 12,000 MIN 98 CFSM .90 IN 12.25

PEAK DISCHARGE (BASE, 6,300 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
01-18	----	----	6,440	01-30	0800	15.08	12,300

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., Tippecanoe County, 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.

PERIOD OF RECORD.--February 1901 to January 1902, March to December 1902, January to May 1903, (gage heights only), October 1923 to current year. Monthly discharge only for some periods, published in WSP 1305. Gage-height records collected at present 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. Prior to May 2, 1903, nonrecording gage 0.5 mile upstream at different datum. Oct. 7, 1923, to Nov. 20, 1933, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--46 years (1923-69), 6,232 cfs (11.68 inches per year).

EXTREMES.--Current year: Maximum discharge, 69,100 cfs Jan. 30 (gage height, 22.92 ft); minimum, 959 cfs Sept. 7 (gage height, 1.37 ft).

Period of record: Maximum discharge, 131,000 cfs May 19, 1943 (gage height, 28.47 ft); minimum, 265 cfs Jan. 12, 1954.

Flood of Mar. 26, 1913, reached a stage of 32.9 ft, from floodmark determined by U.S. Weather Bureau (discharge, 190,000 cfs, estimated).

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

REVISIONS (WATER YEARS).--WSP 1275: Drainage area. WSP 1335: 1929, 1932-33, 1936. WSP 1505: 1950. WSP 1555: 1928(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,170	1,350	9,040	15,300	54,600	5,060	7,420	6,380	3,470	4,340	4,240	1,170
2	2,000	1,370	8,180	11,500	46,100	4,730	7,100	5,550	4,200	3,960	3,540	1,080
3	2,160	1,960	7,280	5,800	38,700	4,370	6,570	5,400	3,720	3,710	3,830	1,170
4	2,060	1,700	6,380	18,400	33,100	4,320	6,650	4,900	4,100	3,340	3,570	1,110
5	1,620	1,360	5,590	7,300	29,100	4,080	10,400	4,700	3,780	6,340	2,550	1,300
6	2,080	1,260	5,380	6,500	26,200	4,280	20,800	4,660	4,100	16,300	2,630	1,060
7	2,330	1,680	5,000	5,900	22,800	4,310	19,800	4,360	4,380	20,400	2,650	1,260
8	2,290	1,730	4,440	5,200	19,500	3,500	17,100	4,660	4,010	16,800	2,510	1,000
9	2,250	2,240	3,580	4,780	16,500	4,700	13,700	5,710	3,800	16,900	3,100	1,480
10	2,700	2,030	3,640	4,450	15,200	4,520	16,100	6,900	4,850	12,400	5,720	1,190
11	2,910	1,800	3,500	4,200	14,600	4,260	13,200	11,800	4,680	11,000	4,340	1,160
12	3,020	1,900	3,310	4,000	13,800	3,770	10,200	15,200	4,010	11,100	3,450	1,560
13	2,920	1,760	3,170	3,740	12,400	3,760	8,420	13,600	4,190	10,900	3,570	1,260
14	2,660	1,530	3,500	3,500	10,600	3,820	7,240	11,200	7,010	7,550	2,150	1,200
15	2,540	2,100	2,130	3,500	9,100	3,480	6,900	9,530	15,300	6,300	2,470	1,120
16	3,120	3,400	2,990	3,400	8,200	3,230	6,610	8,180	16,200	5,160	2,250	1,150
17	3,050	5,770	2,830	3,800	7,420	3,130	6,050	6,810	12,100	4,610	2,360	1,570
18	2,660	6,830	2,820	10,800	6,120	3,050	6,450	6,400	9,150	4,200	2,270	5,200
19	2,230	7,960	3,190	23,700	5,300	3,120	11,800	6,900	7,440	3,610	2,220	5,390
20	1,660	8,890	3,200	25,600	5,220	3,470	19,100	10,200	5,980	4,880	1,930	6,110
21	2,000	6,630	3,410	22,900	5,020	3,090	17,900	12,400	5,020	5,550	1,630	8,750
22	2,040	5,790	3,610	19,100	5,040	3,130	15,800	12,000	4,190	5,530	1,520	8,700
23	2,650	4,920	4,460	21,200	4,920	3,340	13,400	10,100	11,700	4,860	1,640	6,650
24	2,120	4,440	5,600	26,500	4,740	3,650	12,400	7,910	16,300	4,220	1,300	5,740
25	2,030	4,160	5,600	22,500	4,730	7,380	11,500	6,040	12,700	10,300	1,530	5,260
26	2,000	3,720	5,100	24,500	5,100	12,500	9,780	5,510	12,000	6,260	1,220	4,960
27	2,020	3,590	5,060	28,300	4,660	15,500	8,090	4,850	10,500	6,560	1,450	4,460
28	1,590	3,590	11,000	31,400	4,780	13,700	7,710	4,500	8,280	5,150	1,050	7,110
29	1,500	6,380	24,600	49,600	-----	12,700	6,900	4,260	6,060	7,150	1,150	7,010
30	1,760	8,750	25,100	63,400	-----	10,800	6,590	4,020	5,100	5,720	1,050	6,830
31	1,660	-----	22,400	64,900	-----	8,680	-----	3,300	-----	4,760	1,040	-----
TOTAL	72,220	110,790	207,090	550,130	434,750	173,870	332,290	227,930	218,320	248,900	77,870	103,010
MEAN	2,330	3,693	6,680	17,750	15,530	5,609	11,080	7,353	7,277	8,029	2,512	3,434
MAX	3,120	8,890	25,100	64,900	54,600	15,500	20,800	15,200	16,300	20,400	5,720	8,750
MIN	1,760	1,260	2,820	3,400	4,730	3,090	6,450	3,300	3,470	3,340	1,040	1,000
CFSM	.32	.51	.92	2.45	2.14	.77	1.53	1.01	1.00	1.11	.25	.47
IN.	.37	.57	1.06	2.82	2.23	.89	1.71	1.17	1.12	1.28	.40	.53

CAL YR 1968 TOTAL 2,577,530 MEAN 7,042 MAX 67,100 MIN 1,240 CFSM .97 IN 13.23
WTR YR 1969 TOTAL 2,757,170 MEAN 7,554 MAX 64,900 MIN 1,000 CFSM 1.04 IN 14.15

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

LOCATION.--Lat 40°19'03", long 87°17'26", in SE¼ sec. 26, T. 22 N., R. 8 W., Warren County, on downstream side of county road bridge, 1.6 miles north of city limits of Williamsport, and 2.5 miles upstream from mouth.

DRAINAGE AREA.--329 sq mi.

PERIOD OF RECORD.--October 1955 to current year.

GAGE.--Water-stage recorder. Datum of gage is 511.68 ft above mean sea level (levels by Indiana Flood Control and Water Resources Commission). Prior to May 19, 1967, nonrecording gage and crest-stage gage at same site and datum.

AVERAGE DISCHARGE.--14 years, 244 cfs (10.07 inches per year).

EXTREMES.--Current year: Maximum discharge, 5,670 cfs Jan. 29 (gage height, 11.93 ft); minimum, 18 cfs Sept. 15, 16 (gage height, 3.16 ft).

Period of record: 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.--Records good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	33	184	240	1,550	109	308	312	178	171	64	25
2	27	34	170	170	1,130	103	324	286	316	145	77	23
3	27	34	152	140	815	100	297	265	255	133	70	23
4	27	34	143	120	620	100	308	248	202	124	65	24
5	26	34	135	105	515	95	1,420	230	185	118	60	25
6	29	36	119	95	475	97	1,630	220	171	1,040	56	26
7	31	46	103	88	452	103	1,230	209	157	1,520	53	26
8	30	50	97	82	430	106	870	258	154	1,360	50	25
9	32	47	92	78	398	109	1,360	336	142	1,260	65	22
10	33	43	89	74	348	97	1,530	529	130	1,330	209	20
11	32	39	82	72	332	92	1,130	830	127	1,030	195	20
12	31	37	78	70	283	90	770	770	121	845	109	20
13	30	36	77	70	210	90	595	556	106	770	79	20
14	29	36	76	70	227	87	533	470	127	590	65	19
15	28	52	75	70	202	82	670	407	272	372	58	18
16	27	116	72	80	192	82	640	356	265	297	56	36
17	28	128	68	507	185	92	547	316	220	251	60	171
18	32	142	67	2,040	148	109	1,040	356	188	220	55	145
19	31	158	68	1,450	139	118	1,170	352	174	192	49	87
20	31	129	72	901	130	118	1,010	304	154	272	43	53
21	31	107	77	353	127	118	760	272	127	265	40	41
22	31	97	86	451	130	109	620	262	118	155	37	37
23	31	89	150	553	136	106	493	244	910	160	36	38
24	32	83	180	531	127	356	407	230	1,220	142	33	52
25	33	77	140	380	118	900	360	220	1,120	127	32	56
26	33	71	120	310	115	860	332	202	710	109	31	47
27	33	67	260	250	112	655	308	188	398	124	30	40
28	33	109	550	1,500	109	590	448	178	283	223	29	37
29	32	272	729	4,180	-----	515	394	171	220	148	28	34
30	32	229	526	4,280	-----	398	344	164	192	112	27	33
31	33	-----	320	2,370	-----	332	-----	160	-----	95	26	-----
TOTAL	942	2,465	5,157	21,680	9,755	6,918	21,848	9,901	8,942	13,740	1,907	1,243
MEAN	30.4	82.2	166	659	348	223	728	319	298	443	61.5	41.4
MAX	33	272	729	4,280	1,550	900	1,630	830	1,220	1,520	209	171
MIN	26	33	67	70	109	82	297	160	106	95	26	18
CFSM	.09	.25	.51	2.13	1.06	.68	2.21	.57	.91	1.35	.15	.13
IN.	.11	.28	.58	2.45	1.10	.78	2.47	1.12	1.01	1.55	.22	.14

CAL YR 1968 TOTAL 109,540 MEAN 299 MAX 7,050 MIN 26 CFSM .91 IN 12.38
WTR YR 1969 TOTAL 104,498 MEAN 286 MAX 4,280 MIN 18 CFSM .87 IN 11.81

PEAK DISCHARGE (BASE, 2,800 CFS).--Jan. 29 (2230) 5,670 cfs (11.93 ft).

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., on Fountain-Warren county line, near center of span on downstream side of bridge on U.S. Highway 136 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.

PERIOD OF RECORD.--October 1939 to current year. Gage-height records collected at site 0.4 mile downstream January 1927 to December 1930 and at present site since December 1930 are contained in reports of U.S. Weather Bureau.

GAGE.--Nonrecording gage. Datum of gage is 473.97 ft above mean sea level.

AVERAGE DISCHARGE.--30 years, 6,996 cfs (11.57 inches per year).

EXTREMES.--Current year: Maximum discharge observed, 70,300 cfs Jan. 31 (gage height, 26.98 ft); minimum daily, 1,500 cfs Sept. 15. Period of record: 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).

Flood in March 1913 reached a stage of 35.1 ft, from floodmark determined by U.S. Weather Bureau (discharge, 200,000 cfs estimated).

REMARKS.--Records poor. Natural flow of stream affected by reservoirs.

REVISIONS.--WSP 1275: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,500	2,130	9,830	20,000	68,100	5,900	10,200	7,220	4,620	6,960	5,300	1,570
2	2,480	2,110	9,300	15,000	57,200	5,900	8,570	6,770	4,650	4,980	4,700	1,570
3	2,450	2,050	8,500	12,000	49,600	5,400	7,790	6,530	4,890	4,530	4,200	1,550
4	2,430	2,050	7,800	10,000	41,300	5,200	7,500	5,990	4,640	4,290	3,900	1,540
5	2,380	2,080	7,200	9,000	36,700	5,100	7,920	5,600	4,550	3,860	3,600	1,520
6	2,350	2,200	6,700	8,000	31,400	5,000	18,000	5,240	4,470	14,200	3,300	1,530
7	2,320	2,150	6,000	7,200	29,300	5,000	21,500	5,200	4,510	19,300	3,100	1,700
8	2,470	2,100	5,400	6,600	26,500	5,000	24,000	5,250	4,530	19,700	3,000	1,760
9	2,620	2,200	4,800	6,000	23,800	5,000	23,500	5,970	4,620	19,400	3,100	1,710
10	2,650	2,350	4,500	5,600	21,200	4,900	22,500	6,580	4,470	17,200	3,500	1,680
11	2,750	2,400	4,300	5,300	18,900	4,800	18,900	8,100	4,380	14,700	5,900	1,640
12	2,900	2,550	4,000	4,800	17,800	4,600	15,400	11,000	4,420	13,000	4,650	1,610
13	3,100	2,510	3,900	4,600	15,400	4,500	12,400	13,000	4,520	12,700	4,000	1,560
14	3,200	2,450	3,800	4,400	13,900	4,400	9,940	12,000	5,630	11,500	3,980	1,520
15	3,200	2,510	3,700	4,200	13,000	4,300	9,820	11,000	11,400	8,600	3,900	1,500
16	3,200	2,800	3,600	4,300	11,900	4,200	8,300	9,700	16,300	8,110	3,940	1,550
17	3,200	4,570	3,500	5,000	11,300	4,100	8,570	9,500	15,300	6,760	3,280	2,100
18	3,300	6,930	3,600	16,400	10,700	4,100	8,910	8,600	12,200	5,040	3,060	4,390
19	3,200	8,400	3,700	21,400	9,930	4,100	11,800	8,800	9,250	4,650	3,030	5,930
20	3,100	9,370	3,760	24,900	9,100	4,100	17,300	9,000	8,240	4,680	2,920	5,520
21	2,800	8,570	3,630	27,500	8,400	4,100	20,500	10,200	7,890	5,520	2,820	5,420
22	2,500	7,120	4,010	24,000	8,000	4,000	21,000	11,400	6,590	6,080	2,710	8,770
23	2,500	6,710	4,260	27,000	7,400	3,800	19,000	12,600	5,040	5,780	2,470	7,950
24	2,500	5,870	5,870	32,000	7,100	3,660	14,900	10,900	16,400	5,330	2,230	6,930
25	2,540	5,600	10,200	30,000	6,800	6,650	13,300	8,400	16,300	5,380	1,910	6,650
26	2,490	4,780	9,930	28,000	6,400	12,000	11,900	7,200	14,000	10,900	1,840	5,450
27	2,470	4,000	10,100	25,000	6,300	16,400	10,700	6,500	12,500	7,310	1,790	4,950
28	2,460	4,010	17,300	26,000	6,100	16,300	9,760	6,000	11,000	8,110	1,750	5,500
29	2,380	4,340	23,400	25,000	-----	14,800	9,830	5,300	9,960	9,390	1,710	5,950
30	2,320	6,230	30,400	56,000	-----	13,400	8,820	4,900	9,250	7,200	1,680	5,500
31	2,190	-----	26,000	69,400	-----	12,300	-----	4,700	-----	6,080	1,610	-----
TOTAL	82,950	123,000	247,990	564,600	573,230	202,910	411,530	248,050	246,510	280,290	98,880	106,520
MEAN	2,676	4,100	8,000	18,210	20,470	6,545	13,720	8,002	8,217	9,042	3,190	3,551
MAX	3,300	9,370	30,400	69,400	68,100	16,400	24,000	13,000	16,400	19,700	5,900	8,770
MIN	2,190	2,050	3,500	4,200	6,100	3,660	7,500	4,700	4,380	3,860	1,610	1,500
CFSM	.33	.50	.97	2.22	2.49	.80	1.67	.97	1.00	1.10	.39	.43
IN.	.39	.56	1.12	2.56	2.60	.92	1.86	1.12	1.12	1.27	.45	.48
CAL YR 1968	TOTAL 3,064,230			MEAN 8,372			MAX 63,400			MIN 1,550		
WTR YR 1969	TOTAL 3,136,460			MEAN 8,730			MAX 69,400			MIN 1,500		
							CFSM 1.02			IN 13.88		
							CFSM 1.06			IN 14.44		

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., Vermilion County, on left bank 1.5 miles upstream from Stony Creek and 2.5 miles southeast of Danville.

DRAINAGE AREA.--1,279 sq mi.

PERIOD OF RECORD.--October 1914 to September 1921, June 1928 to current year. Monthly discharge only for some periods, published in WSP 1305.

GAGE.--Water-stage recorder. Datum of gage is 503.33 ft above mean sea level (levels by Corps of Engineers). Prior to Jan. 9, 1935, nonrecording gage at site 0.3 mile upstream at same datum.

AVERAGE DISCHARGE.--48 years, 889 cfs (9.44 inches per year).

EXTREMES.--Current year: Maximum discharge, 15,100 cfs Jan. 29 (gage height, 18.99 ft); minimum, 48 cfs Sept. 1.
Period of record: 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.

REVISIONS (WATER YEARS).--WSP 853: 1936(M). WSP 973: 1939. WSP 1173: 1915-16, 1920, 1929. WSP 1335: 1934(M). WSP 1725: 1960 (monthly and yearly figures). WSP 909: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	70	71	983	750	7,900	595	1,210	1,050	605	285	85	51
2	68	71	715	600	3,860	575	1,240	850	860	249	94	51
3	52	73	541	400	2,730	555	1,220	813	728	227	76	50
4	75	73	405	320	2,060	545	1,190	795	567	215	79	52
5	68	72	395	260	1,590	525	2,150	778	447	252	73	56
6	77	94	364	220	1,270	525	4,790	760	418	295	65	59
7	75	194	334	210	1,540	535	3,540	747	398	300	63	62
8	72	165	254	210	2,340	555	2,580	828	386	452	65	64
9	70	142	251	210	4,800	570	2,470	1,400	363	390	300	64
10	79	119	275	200	3,820	520	3,490	1,900	340	354	284	67
11	72	96	231	200	2,750	500	3,080	2,170	327	398	310	65
12	72	79	258	200	2,100	480	2,340	2,080	283	350	160	60
13	76	71	240	200	1,600	475	1,770	1,680	250	397	113	57
14	77	70	213	200	1,300	470	2,010	1,320	204	322	94	56
15	73	107	165	210	1,100	455	4,000	1,100	299	222	82	56
16	91	198	189	216	550	445	4,980	939	294	171	80	72
17	82	313	155	268	850	465	3,940	800	280	149	104	378
18	83	345	178	1,870	782	580	4,480	1,300	230	132	85	626
19	79	311	178	3,540	716	686	6,080	1,190	244	149	77	417
20	77	299	175	2,340	680	692	6,100	1,080	250	235	72	210
21	74	253	170	1,370	655	655	4,250	836	234	153	66	136
22	70	227	175	1,860	650	610	2,950	722	257	260	63	104
23	67	203	168	3,960	660	575	2,220	722	272	249	61	96
24	67	191	138	3,480	650	502	1,930	686	1,500	239	55	131
25	68	162	207	2,080	635	2,880	1,820	665	1,630	210	57	153
26	72	128	237	1,040	620	3,880	1,650	740	973	173	57	167
27	68	128	307	1,180	610	2,730	1,500	660	559	172	54	115
28	65	197	726	3,940	600	2,380	1,580	560	440	149	53	95
29	67	502	1,830	10,100	-----	2,410	1,240	555	363	141	54	82
30	67	1,040	1,690	14,400	-----	2,000	1,170	555	320	110	53	76
31	65	-----	1,230	12,300	-----	1,510	-----	550	-----	90	51	-----
TOTAL	2,278	5,994	13,381	68,334	49,818	31,280	82,970	30,831	14,321	7,490	2,997	3,728
MEAN	73.5	200	432	2,204	1,779	1,009	2,766	995	477	242	96.7	124
MAX	92	1,040	1,830	14,400	7,900	3,880	6,100	2,170	1,630	452	310	626
MIN	65	70	138	200	600	445	1,170	550	204	90	51	50
CFSP	.06	.16	.34	1.72	1.39	.79	2.16	.78	.37	.19	.08	.10
IN.	.07	.17	.39	1.99	1.45	.91	2.41	.50	.42	.22	.05	.11

CAL YR 1968 TOTAL 461,486 MEAN 1,261 MAX 19,100 MIN 65 CFSP .99 IN 13.42
WTR YR 1969 TOTAL 313,422 MEAN 859 MAX 14,400 MIN 50 CFSP .67 IN 9.11

PEAK DISCHARGE (BASE, 6,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-29	1945	18.99	15,100	04-19	1445	10.78	6,470

3-3391.08, East Fork Coal Creek near Hillsboro, Ind.

LOCATION.--Lat 40°06'06", long 87°07'54", in NW¼SW¼ sec. 8, T. 19 N., R. 6 W., Fountain County, at center pier on downstream side of bridge on County Road 700 East, 1.5 miles east of Hillsboro, 3.7 miles northwest of Waynetown, and 9.6 miles upstream from mouth.

DRAINAGE AREA.--33.4 sq mi.

PERIOD OF RECORD.--September 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is 673.76 ft above mean sea level (revised).

EXTREMES.--Current year: Maximum discharge, 1,270 cfs Jan. 28 (gage height, 7.40 ft); minimum, 4.7 cfs Aug. 30, 31, Sept. 1; minimum gage height, 1.81 ft Oct. 3, 4.

Period of record: Maximum discharge, 1,270 cfs Jan. 28, 1969 (gage height, 7.40 ft); minimum, 4.7 cfs Aug. 30, 31, Sept. 1, 1969; minimum gage height, 1.81 ft Oct. 3, 4, 1968.

REMARKS.--Records good except those for winter periods, which are fair.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

CAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.8	10	45	41	127	23	30	36	16	11	7.6	5.0
2	9.0	10	43	35	92	22	29	33	17	11	7.6	7.1
3	9.1	11	37	30	81	21	27	29	15	10	7.1	7.6
4	8.6	11	33	26	71	21	28	27	14	10	7.1	5.8
5	9.0	11	29	22	56	21	86	25	14	19	6.7	6.7
6	11	12	24	20	59	21	66	24	13	42	6.7	9.1
7	10	28	22	19	63	22	52	23	13	34	6.3	8.0
8	9.2	27	20	18	144	23	42	26	13	19	6.3	6.7
9	11	18	20	18	120	23	85	34	13	16	124	5.8
10	15	15	19	18	82	24	82	43	13	13	49	5.8
11	11	13	19	18	67	23	56	39	12	13	16	5.4
12	11	12	20	18	56	20	46	32	11	27	11	5.4
13	11	11	23	18	50	19	40	27	12	22	9.1	5.4
14	9.9	12	20	18	46	19	45	26	13	16	8.0	5.4
15	9.7	27	20	20	41	18	60	23	20	12	7.6	5.0
16	9.9	223	20	30	38	19	51	21	15	11	7.1	18
17	10	91	19	210	36	23	45	20	13	10	7.1	316
18	13	118	18	332	34	25	101	30	13	9.0	7.1	75
19	11	61	22	57	32	24	76	25	13	45	7.1	35
20	11	42	20	21	31	23	56	22	13	22	6.7	21
21	11	33	18	55	30	20	48	20	11	11	6.3	15
22	11	29	40	72	29	19	42	19	13	9.0	5.8	13
23	11	27	47	74	27	19	37	19	21	8.0	5.8	12
24	11	24	32	55	26	67	33	18	64	7.5	5.8	13
25	11	22	28	30	25	73	31	17	56	7.0	5.4	11
26	11	21	26	20	24	60	29	16	27	30	5.4	10
27	11	20	127	35	24	53	32	16	18	19	5.4	11
28	11	106	340	672	23	52	82	15	15	11	5.4	11
29	11	109	104	562	-----	39	52	14	13	9.0	5.4	9.6
30	10	55	61	605	-----	33	42	15	13	8.0	5.0	9.6
31	10	-----	46	200	-----	29	-----	15	-----	7.6	5.0	-----
TOTAL	327.2	1,209	1,362	3,369	1,534	898	1,531	749	527	499.1	375.9	674.4
MEAN	10.6	40.3	43.9	109	54.8	29.0	51.0	24.2	17.6	16.1	12.1	22.5
MAX	15	223	340	672	144	73	101	43	64	45	124	316
MIN	8.6	10	18	18	23	18	27	14	11	7.0	5.0	5.0
CFSM	.32	1.21	1.32	3.25	1.64	.87	1.53	.72	.53	.48	.36	.67
IN.	.36	1.35	1.52	3.75	1.71	1.00	1.70	.83	.59	.56	.42	.75

CAL YR 1968	TOTAL	MEAN	MAX	MIN	CFSM	IN
WTR YR 1969	TOTAL 13,055.6	MEAN 35.8	MAX 672	MIN 5.0	CFSM 1.07	IN 14.54

PEAK DISCHARGE (BASE, 500 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-28	1400	7.40	1,270	09-17	1045	5.38	645
01-30	1145	5.88	794				

3-3391.2, Coal Creek at Coal Creek, Ind.

LOCATION.--Lat 40°01'42", long 87°22'30", in SW¼ sec. 6, T. 18 N., R. 8 W., Fountain County, on downstream side of county road bridge, 3,500 ft southeast of Coal Creek.

DRAINAGE AREA.--214 sq mi.

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Nonrecording gage and crest-stage gage. Datum of gage is 505.96 ft above mean sea level (levels by Corps of Engineers).

AVERAGE DISCHARGE.--5 years, 177 cfs (11.23 inches per year).

EXTREMES.--Current year: Maximum discharge, 5,150 cfs Jan. 30 (gage height, 12.69 ft); minimum, 14 cfs Sept. 2 (gage height, 0.95 ft, observed).

Period of record: Maximum discharge, 10,100 cfs Aug. 4, 1968 (gage height, 17.5 ft estimated by gage observer); minimum, 6.0 cfs Sept. 12, 13, 1966 (gage height, 0.85 ft).

REMARKS.--Records poor prior to Jan. 23 and fair thereafter.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	37	202	190	960	124	186	200	84	52	33	17
2	34	37	168	150	615	121	196	181	173	49	31	15
3	34	37	144	120	496	118	176	162	110	47	30	18
4	34	37	140	110	396	112	173	152	88	46	28	24
5	34	37	123	97	362	110	404	144	73	46	24	21
6	34	37	112	90	370	108	476	137	71	81	23	23
7	34	40	102	86	396	110	344	134	69	91	21	49
8	34	76	102	81	690	118	291	164	69	77	20	31
9	37	69	93	77	832	124	500	193	68	66	296	24
10	37	59	86	75	532	121	615	210	63	60	384	22
11	37	52	86	74	436	100	390	233	61	52	113	20
12	37	50	81	74	366	90	295	196	56	169	78	20
13	37	44	81	74	295	92	266	169	54	132	60	18
14	37	44	81	74	233	95	264	156	54	88	47	18
15	37	54	76	74	214	101	316	145	92	61	45	17
16	37	315	72	90	181	107	302	131	110	49	42	20
17	37	358	72	239	179	110	271	123	78	47	39	829
18	37	370	74	2,690	169	110	470	140	73	45	37	456
19	37	276	83	1,070	158	115	550	159	71	41	36	214
20	37	166	86	416	152	108	424	139	66	161	33	95
21	37	132	86	224	145	98	322	128	63	57	30	71
22	37	108	93	244	154	94	276	118	71	46	29	61
23	37	98	93	430	154	101	240	106	76	41	26	56
24	37	90	86	356	150	196	210	101	78	37	24	53
25	37	82	85	239	144	416	193	98	215	41	24	50
26	37	71	82	237	139	370	179	92	116	34	23	47
27	37	68	682	260	139	296	178	87	81	113	22	44
28	37	310	822	2,420	132	275	282	86	68	76	21	41
29	37	435	554	4,420	-----	250	276	80	58	49	20	38
30	37	274	345	4,440	-----	212	221	76	54	37	18	35
31	37	-----	220	1,920	-----	196	-----	74	-----	35	18	-----
TOTAL	1,123	3,865	5,212	21,141	9,189	4,698	9,286	4,314	2,463	2,026	1,675	2,447
MEAN	36.2	129	168	682	328	152	310	139	82.1	65.4	54.0	81.6
MAX	37	435	822	4,440	960	416	615	233	215	169	384	829
MIN	34	37	72	74	132	90	173	74	54	34	18	15
CFSM	.17	.60	.79	3.19	1.53	.71	1.45	.65	.38	.31	.25	.38
IN.	.20	.67	.91	3.67	1.60	.82	1.61	.75	.43	.35	.29	.43

CAL YR 1968 TOTAL 83,149 MEAN 227 MAX 6,390 MIN 34 CFSM 1.06 IN 14.45
WTR YR 1969 TOTAL 67,439 MEAN 185 MAX 4,440 MIN 15 CFSM .86 IN 11.72

PEAK DISCHARGE (BASE, 2,600 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-18	00400	10.75	3,620	01-30	0800	12.69	5,150

A--about

3-3391.5. Little Vermilion River near Newport, Ind.

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

DRAINAGE AREA.--240 sq mi.

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Nonrecording gage and crest-stage gage. Datum of gage is 489.78 ft above mean sea level (Indiana State Highway Commission bench mark, levels by Corps of Engineers).

AVERAGE DISCHARGE.--5 years, 199 cfs (11.26 inches per year).

EXTREMES.--Current year: Maximum discharge observed, 6,300 cfs Jan. 30 (gage height, 11.40 ft); minimum observed, 2.4 cfs Aug. 31 (gage height, 0.22 ft).

Period of record: Maximum discharge, 6,520 cfs Dec. 8, 1966 (gage height, 11.54 ft); no flow Oct. 3-6, 1964.

REMARKS.--Records fair.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.3	6.2	148	201	1,470	179	178	228	948	62	10	3.6
2	3.9	6.0	144	171	1,040	165	198	217	213	54	8.8	4.0
3	4.1	6.0	132	140	768	156	182	203	157	49	8.8	3.8
4	3.9	6.7	118	122	570	151	171	185	111	48	7.6	2.8
5	3.9	7.5	110	102	496	137	323	178	89	45	7.0	3.4
6	4.6	7.8	96	97	496	139	438	170	81	97	6.4	9.8
7	4.6	11	82	90	552	146	348	165	74	287	5.8	34
8	5.2	15	72	84	960	146	294	191	67	132	6.4	13
9	7.1	15	63	31	1,860	153	442	192	62	89	26	7.9
10	7.1	11	58	79	1,380	124	592	186	56	70	43	5.8
11	7.5	10	52	77	954	114	416	178	52	57	30	5.2
12	7.3	9.0	47	76	700	117	318	167	52	43	19	4.9
13	7.1	8.8	44	76	510	111	266	135	50	40	13	4.9
14	7.1	8.0	40	76	400	106	358	139	46	36	10	4.9
15	6.2	9.0	38	77	340	102	470	129	58	32	8.8	4.6
16	5.0	90	36	84	298	101	548	119	62	29	8.2	7.9
17	5.0	132	34	140	266	110	470	108	47	25	8.2	444
18	5.6	112	32	1,210	234	130	755	124	45	23	7.0	300
19	5.4	122	32	1,430	213	135	1,200	206	48	21	6.4	135
20	5.0	102	32	718	200	130	885	193	45	87	5.8	74
21	5.8	75	33	430	191	126	610	150	39	52	5.2	45
22	5.6	66	55	568	192	105	470	130	37	30	4.6	36
23	5.8	56	91	708	192	100	410	124	99	26	4.0	30
24	5.8	51	77	635	192	193	338	111	212	24	3.6	38
25	5.8	43	74	436	188	336	296	102	572	22	3.6	33
26	5.8	38	74	322	188	310	270	96	241	20	3.4	27
27	5.8	38	145	340	185	267	248	86	165	30	3.4	24
28	5.2	61	732	1,580	184	250	292	81	114	21	3.4	20
29	5.0	170	700	4,700	-----	237	261	77	82	19	3.4	18
30	5.8	177	470	5,870	-----	195	238	75	71	15	3.2	17
31	6.2	-----	318	3,320	-----	178	-----	73	-----	13	2.4	-----
TOTAL	172.5	1,470.0	4,179	24,040	15,219	4,949	12,285	4,518	3,995	1,598	286.4	1,361.5
MEAN	5.56	49.0	135	775	544	160	410	146	133	51.5	9.24	45.4
MAX	7.5	177	732	5,870	1,860	336	1,200	228	948	287	43	444
MIN	3.9	6.0	32	76	184	100	171	73	37	13	2.4	2.8
CFSM	.02	.20	.56	3.23	2.26	.67	1.71	.61	.55	.21	.04	.19
IN.	.03	.23	.65	3.73	2.36	.77	1.90	.70	.62	.25	.04	.21

CAL YR 1968 TOTAL 84,760.3 MEAN 232 MAX 4,240 MIN 3.9 CFSM .96 IN 13.13
WTR YR 1969 TOTAL 74,073.4 MEAN 203 MAX 5,870 MIN 2.4 CFSM .85 IN 11.48

PEAK DISCHARGE (BASE, 2,000 CFS).--Jan. 30 (0750) 6,300 cfs (11.40 ft).

3-3395. Sugar Creek at Crawfordsville, Ind.

LOCATION.--Lat 40°02'56", long 86°53'58", in NW¼ sec. 32, T. 19 N., R. 4 W., Montgomery County, on left bank 327 ft upstream from Crawfordsville Electric Light and Power Co.'s dam, 0.5 mile upstream from bridge on State Highway 43, and 1 mile downstream from Walnut Fork Sugar Creek.

DRAINAGE AREA.--509 sq mi.

PERIOD OF RECORD.--June 1938 to current year.

GAGE.--Water-stage recorder. Datum of gage is 657.77 ft above mean sea level.

AVERAGE DISCHARGE.--31 years, 461 cfs (12.30 inches per year).

EXTREMES.--Current year: Maximum discharge, 11,200 cfs Jan. 30 (gage height, 9.35 ft); minimum, 28 cfs Sept. 14, 15, 16 (gage height, 1.15 ft).

Period of record: Maximum discharge, 26,300 cfs June 28, 1957 (gage height, 14.48 ft), no flow part of Oct. 19, 1964 (unusual regulation).

Flood in March 1913 reached a stage of 17.3 ft from information by local resident (discharge, about 36,000 cfs).

REMARKS.--Records good. Occasional regulation and diversion for cooling of power plant.

REVISIONS (WATER YEARS).--WSP 973: 1939(M). WSP 1275: Drainage area. WSP 1335: 1949. Revised figures of discharge, in cubic feet per second, for the water year 1967, superseding those published in WRD Ind. 1967, are given herewith:

Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge
1967		1967-Con.		1967-Con.		1967-Con.		1967-Con.	
July 27	37	Aug. 5	32	Aug. 14	19	Aug. 23	18	Sept. 1	14
28	88	6	30	15	19	24	18	2	13
29	79	7	28	16	19	25	18	3	13
30	54	8	28	17	18	26	23	4	13
31	46	9	28	18	18	27	32	5	13
Aug. 1	41	10	28	19	18	28	21	6	12
2	41	11	28	20	18	29	19	7	12
3	46	12	23	21	18	30	16	8	12
4	39	13	21	22	18	31	14	9	18

Month	Cfs-days	Maximum	Minimum	Mean	Per square mile	Rupoff, in inches
July 1967	1,446	88	32	46.6	.09	.11
August 1967	757	46	14	24.4	.05	.06
September 1967....	409	21	11	13.6	.03	.03
WTR YR 1967	157,166	10,200	11	431	.84	11.49
CAL YR 1967	161,291	11,900	11	442	.87	11.80

WABASH RIVER BASIN

3-3395. Sugar Creek at Crawfordsville, Ind.--Continued

DISCHARGE, IN CUBIC FEET PER SECND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	40	652	628	4,570	307	339	335	162	208	144	32
2	40	40	660	350	2,700	283	354	308	168	168	126	32
3	40	43	620	300	1,990	274	317	289	150	140	111	37
4	40	43	519	250	1,400	266	297	271	139	126	58	39
5	42	43	434	200	1,120	252	886	259	133	148	89	35
6	42	45	335	190	1,020	254	1,780	248	129	477	75	37
7	43	76	280	180	1,090	261	1,110	238	118	564	73	41
8	42	195	224	170	1,400	259	797	265	111	943	68	41
9	45	154	212	170	2,230	275	1,070	300	108	2,500	422	37
10	54	116	204	170	1,490	255	1,560	375	101	1,190	894	37
11	52	97	188	170	1,090	247	997	443	98	711	458	35
12	51	85	200	170	891	238	712	420	98	660	280	32
13	48	79	224	170	639	233	575	337	104	464	188	30
14	45	74	212	170	504	226	544	301	118	288	140	30
15	42	91	176	210	425	214	625	275	156	236	111	28
16	37	1,330	176	248	392	214	630	253	204	200	101	39
17	37	1,560	168	763	386	227	562	237	156	172	95	1,390
18	51	1,440	176	5,170	321	248	2,710	270	133	152	65	2,280
19	66	1,220	196	3,140	298	271	2,960	775	129	140	62	1,030
20	63	755	208	1,430	285	278	1,920	638	118	220	73	533
21	52	519	192	984	277	273	1,290	432	104	325	65	345
22	49	410	248	920	285	242	961	339	101	260	60	256
23	46	345	722	1,140	305	234	705	294	305	200	54	204
24	44	300	508	1,570	317	384	540	264	398	204	49	184
25	43	264	458	957	325	865	456	245	733	356	46	172
26	44	232	440	870	331	793	414	226	452	335	44	152
27	42	216	835	865	330	660	380	206	398	374	41	133
28	40	356	4,130	3,730	319	594	540	191	846	560	39	120
29	41	1,230	3,640	8,110	-----	518	450	179	446	362	37	107
30	40	906	1,860	10,500	-----	419	374	169	268	240	35	99
31	40	-----	1,190	8,750	-----	354	-----	161	-----	180	32	-----
TOTAL	1,403	12,304	20,287	52,645	26,730	10,418	26,855	9,543	6,684	13,063	4,263	7,567
MEAN	45.3	410	654	1,698	955	336	895	308	223	421	138	252
MAX	66	1,560	4,130	10,500	4,570	865	2,960	775	846	2,500	894	2,280
MIN	37	40	168	170	277	214	297	161	98	126	32	28
CFSM	.09	.81	1.29	3.34	1.88	.66	1.76	.60	.44	.83	.27	.50
IN.	.10	.90	1.48	3.85	1.95	.76	1.96	.70	.49	.95	.31	.55

CAL YR 1968 TOTAL 176,464 MEAN 482 MAX 7,280 MIN 37 CFSM .95 IN 12.85
WTR YR 1969 TOTAL 191,762 MEAN 525 MAX 10,500 MIN 28 CFSM 1.03 IN 14.01

PEAK DISCHARGE (BASE, 4000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-28	1630	4.98	4,870	01-30	1645	9.35	11,200
01-18	0430	5.95	5,990				

3-3400, Sugar Creek near Byron, Ind.

LOCATION.--Lat 39°55'52", long 87°07'33", in SW $\frac{1}{4}$ sec. 8, T. 17 N., R. 6 W., Parke County, on right bank 30 ft upstream from highway bridge, 2.5 miles northwest of Byron, and 5 miles downstream from Indian Creek.

DRAINAGE AREA.--668 sq mi.

PERIOD OF RECORD.--October 1940 to current year.

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

AVERAGE DISCHARGE.--29 years, 628 cfs (12.77 inches per year).

EXTREMES.--Current year: Maximum discharge, 15,000 cfs Jan. 30 (gage height, 14.81 ft); minimum, 51 cfs Sept. 15, 16 (gage height, 1.97 ft).

Period of record: 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.--Records good except those for winter periods and no gage height record, which are fair.

REVISIONS (WATER YEARS).--WSP 1275: Drainage area. WSP 1335: 1944.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72	68	1,010	926	5,810	426	473	534	224	309	213	58
2	72	68	986	540	3,200	396	500	477	243	247	181	61
3	75	74	938	400	2,370	369	457	435	221	211	158	60
4	69	74	809	320	1,790	357	415	400	203	188	137	71
5	69	74	677	280	1,490	338	828	376	194	169	123	71
6	72	78	535	250	1,370	329	1,970	358	184	806	114	68
7	73	140	427	240	1,440	340	1,430	337	178	1,080	106	73
8	74	340	355	230	1,990	351	1,070	359	163	662	101	74
9	78	280	327	220	2,800	384	1,360	449	157	2,770	835	67
10	90	200	311	220	1,990	354	1,990	547	146	1,610	1,330	63
11	88	170	284	220	1,500	329	1,400	627	140	1,110	861	62
12	85	130	283	220	1,260	313	1,020	628	135	1,220	459	59
13	80	125	332	220	972	307	834	509	140	717	292	57
14	75	120	327	220	799	299	806	440	156	452	222	55
15	70	159	282	400	673	288	947	394	230	329	176	52
16	68	1,770	268	898	583	279	956	353	277	267	151	65
17	65	2,240	276	1,940	608	290	850	324	244	232	136	1,190
18	85	2,000	289	7,280	508	315	2,790	373	203	205	130	2,900
19	110	1,770	295	4,240	458	343	3,540	1,130	189	182	123	1,560
20	100	1,170	314	1,870	431	359	2,380	1,020	178	677	112	827
21	90	834	294	1,330	412	357	1,660	706	155	500	102	513
22	80	668	350	1,220	417	320	1,300	532	158	435	90	360
23	78	554	898	1,430	447	296	1,010	440	469	354	83	283
24	74	480	877	1,840	461	470	805	380	690	257	79	260
25	74	411	539	1,330	468	1,060	666	341	1,160	322	75	239
26	74	355	494	796	467	1,060	600	309	824	507	73	210
27	70	318	1,050	686	454	926	554	282	513	579	70	185
28	68	559	5,690	4,880	441	825	880	261	1,150	737	69	170
29	68	1,680	5,020	10,900	-----	745	778	247	786	575	66	150
30	68	1,400	2,540	14,000	-----	605	617	235	431	351	64	140
31	68	-----	1,620	14,700	-----	507	-----	225	-----	259	61	-----
TOTAL	2,382	18,309	28,697	70,246	35,609	13,937	34,886	14,028	10,141	18,319	6,792	10,003
MEAN	76.8	610	926	2,266	1,272	450	1,163	453	338	591	219	333
MAX	110	2,240	5,690	14,000	5,810	1,060	3,540	1,130	1,160	2,770	1,330	2,900
MIN	65	68	268	220	412	279	415	225	135	169	61	52
CFSM	.12	.91	1.39	3.39	1.90	.67	1.74	.68	.51	.98	.33	.50
IN.	.13	1.02	1.60	3.91	1.98	.78	1.94	.78	.56	1.02	.38	.56

CAL YR 1968 TOTAL 256,304
WTR YR 1969 TOTAL 263,349

MEAN 700
MEAN 722

MAX 10,100
MAX 14,000

MIN 65
MIN 52

CFSM 1.05
CFSM 1.08

IN 14.27
IN 14.66

PEAK DISCHARGE (BASE, 6,500 CFS)

NOTE.--No gage-height record Oct. 8 to Nov. 13.

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-28	1700	9.92	6,890	01-30	1615	14.81	15,000
01-17	2115	11.15	8,720				

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., Parke County, in downstream side of first pier from left bank of bridge on U.S. Highway 36 at Montezuma, 2.0 miles upstream from Raccoon Creek, 4.9 miles downstream from Sugar Creek, and at mile 240.

DRAINAGE AREA.--11,100 sq mi, approximately.

PERIOD OF RECORD.--October 1927 to current year. July 1924 to September 1927 (gage heights only) in reports of Indiana Department of Conservation.

GAGE.--Water-stage recorder. Datum of gage is 457.75 ft above mean sea level (levels by Corps of Engineers). Oct. 1, 1927, to July 12, 1950, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--42 years, 9,280 cfs (11.35 inches per year).

EXTREMES.--Current year: Maximum discharge, 101,000 cfs Feb. 1 (gage height, 28.99 ft); minimum, 2,040 cfs Sept. 16; minimum gage height, 2.84 ft Sept. 10.

Period of record: 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.

Flood of Mar. 27, 1913, reached a stage of 34.0 ft, from floodmarks (discharge, 230,000 cfs, estimated).

REMARKS.--Records fair. Daily flow is affected at times by the operation of several reservoirs.

REVISIONS (WATER YEARS).--WSP 1335: 1929, 1931(M), 1936, drainage area. WSP 1505: 1954. WSP 1915: 1954(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,930	2,630	11,400	24,300	95,800	7,830	12,400	10,800	5,900	8,700	6,340	2,190
2	2,920	2,420	11,900	21,100	91,900	7,660	11,000	10,000	6,200	7,300	5,720	2,220
3	2,850	2,230	11,000	15,400	79,100	7,480	10,400	9,400	6,920	6,300	5,210	2,200
4	2,860	2,490	5,900	13,500	66,900	7,020	9,800	8,800	6,530	5,600	5,090	2,210
5	2,820	2,560	8,700	12,000	54,800	6,770	10,800	8,200	6,410	5,200	4,790	2,220
6	2,640	2,400	8,030	11,700	45,100	6,640	17,800	7,700	5,590	5,600	4,370	2,340
7	2,870	2,300	7,330	9,700	39,200	6,720	23,400	7,400	6,050	13,000	4,830	2,480
8	3,030	2,510	6,700	8,400	36,100	6,710	23,800	7,300	6,150	18,800	3,840	2,200
9	3,030	2,890	5,960	7,500	37,000	6,530	23,500	7,300	6,040	19,700	4,340	2,200
10	3,060	2,900	5,620	6,800	34,200	6,680	24,500	8,300	5,730	20,200	6,340	2,130
11	3,310	3,020	5,240	6,200	30,400	6,810	23,800	9,800	6,130	18,400	7,150	2,240
12	3,510	2,820	5,110	5,800	26,300	6,370	21,100	12,300	6,510	16,400	6,590	2,140
13	3,550	2,680	4,910	5,600	22,900	6,030	16,900	15,000	5,880	15,100	5,350	2,200
14	3,540	2,580	4,740	5,400	20,400	5,860	14,600	16,200	5,770	13,700	4,750	2,310
15	3,450	2,640	4,670	5,300	19,000	5,870	14,700	14,500	7,760	10,900	4,680	2,100
16	3,490	3,780	4,490	5,330	17,900	5,610	16,000	12,700	14,400	8,800	4,230	2,070
17	3,620	6,520	4,240	5,890	16,200	5,380	15,300	11,500	16,200	7,430	3,730	4,580
18	3,630	8,350	4,220	17,400	13,600	5,350	16,700	10,500	13,900	6,570	3,800	7,960
19	3,470	9,570	4,250	23,100	11,700	5,460	21,100	11,000	11,100	6,040	3,610	7,870
20	3,160	9,970	4,320	22,200	10,200	5,530	23,300	10,800	9,380	6,050	3,580	7,210
21	2,750	10,200	4,480	21,100	9,640	5,640	24,800	11,000	8,100	7,310	3,320	7,120
22	2,760	8,760	4,610	22,300	9,300	5,480	24,100	13,000	6,990	7,330	3,170	8,310
23	2,760	7,520	5,220	24,200	9,120	5,280	21,800	13,400	6,790	7,350	2,880	8,810
24	2,800	6,490	5,850	26,700	8,950	5,690	18,800	13,000	12,200	6,880	2,880	8,030
25	2,780	5,810	6,770	25,700	8,780	8,290	16,900	11,000	18,000	6,260	2,770	6,650
26	2,820	5,370	6,450	24,100	8,620	13,500	15,800	9,600	19,700	9,470	2,650	6,030
27	2,710	4,900	6,960	22,000	8,720	17,600	14,300	8,500	16,500	10,700	2,610	5,530
28	2,770	4,940	14,000	23,400	8,500	18,700	13,700	7,600	14,600	9,070	2,500	5,020
29	2,680	6,490	21,700	37,800	-----	18,100	13,000	7,000	12,500	10,100	2,480	6,140
30	2,720	9,110	25,100	52,200	-----	16,700	11,500	6,300	10,300	9,100	2,290	7,000
31	2,580	-----	25,700	85,000	-----	14,600	-----	6,000	-----	7,520	2,200	-----
TOTAL	93,870	146,850	259,570	597,120	844,330	257,890	525,600	315,900	284,630	310,880	127,370	131,710
MEAN	3,028	4,895	8,373	19,260	30,150	8,319	17,520	10,190	9,488	10,030	4,109	4,390
MAX	3,630	10,200	25,700	85,000	95,800	18,700	24,800	16,200	19,700	20,200	7,150	8,810
MIN	2,580	2,230	4,220	5,300	8,500	5,280	9,800	6,000	5,730	5,200	2,280	2,070
CFSM	.27	.44	.75	1.74	2.72	.75	1.58	.92	.85	.90	.37	.40
IN.	.31	.49	.87	2.00	2.83	.86	1.76	1.06	.95	1.04	.43	.44

CAL YR 1968 TOTAL 4,048,250 MEAN 11,060 MAX 91,700 MIN 2,230 CFSM 1.00 IN 13.56

WTR YR 1969 TOTAL 3,895,720 MEAN 10,670 MAX 95,800 MIN 2,070 CFSM .96 IN 13.05

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., Putnam County, on left bank at downstream side of county road bridge, 1.6 miles upstream from Ramp Creek, and 3.1 miles northwest of Fincastle.

DRAINAGE AREA.--132 sq mi.

PERIOD OF RECORD.--August 1957 to current year. Prior to October 1963, published as Raccoon Creek near Fincastle.

GAGE.--Water-stage recorder. Datum of gage is 686.03 ft above mean sea level.

AVERAGE DISCHARGE.--12 years, 125 cfs (12.86 inches per year).

EXTREMES.--Current year: Maximum discharge, 3,670 cfs Jan. 30 (gage height, 11.47 ft); minimum discharge not determined.
Period of record: 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.
Flood of June 28, 1957 reached a stage of 19.10 ft, discharge, 39,900 cfs from slope-area measurement.

REMARKS.--Records fair. Records of water temperature and suspended sediment loads for the current year are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1909: 1958.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.1	8.6	196	150	730	73	82	106	39	89	70	10
2	8.1	10	248	100	493	70	92	97	46	63	58	147
3	7.8	13	214	70	390	66	82	87	39	50	46	27
4	7.5	15	172	60	284	63	78	79	34	43	38	17
5	8.1	13	138	53	242	60	312	75	33	37	33	15
6	8.4	11	105	50	250	60	388	70	32	288	28	13
7	8.4	19	84	48	296	63	260	66	28	340	25	13
8	8.4	25	66	46	703	64	203	66	26	196	22	12
9	8.7	26	61	44	972	79	306	79	24	128	234	10
10	9.8	22	54	44	473	69	405	89	22	90	640	9.0
11	9.4	18	50	44	328	64	264	79	20	176	264	8.5
12	9.4	16	52	44	270	60	203	68	19	274	160	8.4
13	9.0	14	67	44	194	60	171	60	28	189	102	8.4
14	8.7	13	70	45	153	63	173	58	28	95	69	8.4
15	8.0	16	56	46	128	58	223	55	70	49	51	8.2
16	8.0	198	52	72	111	56	227	51	111	37	43	27
17	8.5	286	50	736	109	58	230	48	65	28	78	760
18	10	310	49	2,540	90	62	1,150	119	47	22	60	300
19	11	284	55	631	82	65	739	223	43	17	44	160
20	12	178	58	312	75	65	448	147	38	214	37	100
21	11	128	50	236	73	62	324	111	32	210	32	80
22	10	103	56	220	75	54	252	92	28	146	26	60
23	9.0	85	160	270	82	52	201	79	228	142	22	66
24	8.5	75	160	535	79	87	164	70	296	100	19	82
25	8.2	63	133	256	79	146	140	63	485	232	17	70
26	8.0	54	116	204	79	131	126	57	298	156	16	55
27	7.8	49	445	158	78	116	118	51	185	284	15	43
28	7.8	82	2,190	1,280	76	111	183	46	201	332	14	36
29	7.8	355	1,100	2,630	-----	110	140	42	196	207	12	31
30	8.0	254	500	3,410	-----	90	119	39	122	144	11	28
31	8.0	-----	300	1,770	-----	82	-----	37	-----	94	11	-----
TOTAL	271.4	2,743.6	7,107	16,148	6,994	2,319	7,803	2,409	2,863	4,472	2,297	2,212.9
MEAN	8.75	91.5	229	521	250	74.8	260	77.7	95.4	144	74.1	73.8
MAX	12	355	2,190	3,410	972	146	1,150	223	485	340	640	760
MIN	7.5	8.6	49	44	73	52	78	37	19	17	11	8.2
CFSM	.07	.69	1.74	3.95	1.89	.57	1.97	.59	.72	1.09	.56	.56
IN.	.08	.77	2.00	4.55	1.97	.65	2.20	.68	.81	1.26	.65	.62

CAL YR 1968 TOTAL 55,208.5 MEAN 151 MAX 3,050 MIN 7.5 CFSM 1.14 IN 15.55
WTR YR 1969 TOTAL 57,639.9 MEAN 158 MAX 3,410 MIN 7.5 CFSM 1.20 IN 16.24

PEAK DISCHARGE (BASE, 1,900 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
12-28	1515	9.61	2,480	01-30	1015	11.47	3,670
01-17	2115	11.18	3,380				

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., Parke County, in discharge tower of reservoir on Big Reccoon Creek at Ferndale, 4.4 miles upstream from Rocky Fork Creek, and 6.1 miles northeast of Mansfield.

DRAINAGE AREA.--208 sq mi.

PERIOD OF RECORD.--December 1960 to current year.

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

EXTREMES.--Current year: Maximum contents, 70,400 acre-ft Feb. 10 (elevation, 670.22 ft); minimum, 16,200 acre-ft Jan. 8, 16 (elevation, 640.02 ft).

Period of record: Maximum contents, 87,510 acre-ft May 4, 1964 (elevation, 676.52 ft); minimum, 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 1968 to September 1969

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	-	38,170	-
Oct. 31.....	648.34	26,930	-11,240
Nov. 30.....	640.23	16,440	-10,490
Dec. 31.....	648.38	26,990	+10,550
Calendar year 1968.....	-	-	-18,540
Jan. 31.....	665.36	58,720	+31,730
Feb. 28.....	639.97	16,150	-42,570
Mar. 31.....	640.23	16,440	+290
Apr. 30.....	656.26	40,030	+23,590
May 31.....	659.14	45,510	+5,480
June 30.....	661.06	49,370	+3,860
July 31.....	661.09	49,440	+70
Aug. 31.....	660.87	48,970	-470
Sept. 30.....	655.25	38,210	-10,760
Water year 1968-69.....	-	-	+40

3-3409, Big Raccoon Creek at Ferndale, Ind.

LOCATION.--Lat 39°41'44", long 87°05'01", in SW $\frac{1}{4}$ sec. 33, T. 15 N., R. 6 W., Parke County, 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.

PERIOD OF RECORD.--October 1956 to current year. Prior to October 1963, published as Raccoon Creek at Ferndale.

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

AVERAGE DISCHARGE.--13 years, 210 cfs (13.26 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,890 cfs Feb. 16 (gage height, 7.40 ft); minimum, 22 cfs Apr. 4 (gage height, 1.35 ft).

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

REMARKS.--Records good. Flow regulated since October 1960 by Mansfield Reservoir (see sta 3-3408.7).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	202	191	319	161	111	203	50	34	31	27	79	27
2	202	190	257	651	108	137	24	33	33	27	53	164
3	201	191	287	1,410	106	133	23	33	31	27	51	324
4	190	188	267	1,430	104	131	24	33	30	27	50	362
5	184	195	177	1,380	103	129	39	33	30	27	50	360
6	184	201	135	1,130	105	129	28	31	29	101	49	344
7	183	247	126	520	104	128	26	31	29	201	38	356
8	182	261	90	110	221	129	25	33	30	187	29	266
9	183	234	74	93	105	129	46	34	30	256	36	215
10	191	220	74	95	545	128	34	33	30	322	308	213
11	205	218	73	93	1,590	128	29	31	29	276	488	213
12	204	217	74	87	1,840	89	27	30	29	181	435	213
13	204	216	116	77	1,820	73	27	30	34	210	288	211
14	204	203	137	77	1,790	71	31	30	30	224	141	211
15	204	200	93	76	1,770	91	35	29	67	162	53	211
16	204	287	73	76	1,830	98	30	29	31	50	51	215
17	204	399	73	127	1,860	98	42	28	29	49	50	276
18	204	453	73	131	1,830	98	110	46	29	39	50	383
19	202	447	74	101	1,790	98	49	38	29	29	49	709
20	201	517	73	99	1,760	100	39	33	28	92	49	920
21	200	581	93	99	1,720	100	36	31	27	196	49	964
22	200	465	105	99	1,690	100	34	31	28	324	36	952
23	199	351	142	109	1,650	100	33	30	27	324	28	952
24	198	306	213	107	1,770	104	33	30	31	332	27	768
25	157	266	138	101	1,820	184	33	30	30	328	27	354
26	196	295	103	100	1,750	217	31	29	28	253	27	302
27	195	292	207	99	1,690	217	33	30	27	121	27	300
28	194	300	192	159	892	217	46	30	27	298	27	298
29	193	377	123	206	-----	170	36	30	27	395	27	260
30	192	500	122	200	-----	101	34	30	27	328	27	238
31	191	-----	126	122	-----	100	-----	30	-----	213	27	-----
TOTAL	6,093	9,008	4,229	9,325	32,474	3,930	1,087	983	917	5,626	2,726	11,581
MEAN	197	300	136	301	1,160	127	36.2	31.7	30.6	181	87.9	386
MAX	205	581	319	1,430	1,860	217	110	46	67	395	488	964
MIN	182	188	73	76	103	71	23	28	27	27	27	27
CFSM	.91	1.40	.63	1.40	5.39	.59	.17	.15	.14	.84	.41	1.80
IN.	1.05	1.56	.73	1.61	5.62	.68	.19	.17	.16	.97	.47	2.00
CAL YR 1968	TOTAL 93,452			MEAN 255	MAX 1,770	MIN 20	CFSM 1.19	IN 16.17				
WTR YR 1969	TOTAL 87,979			MEAN 241	MAX 1,860	MIN 23	CFSM 1.12	IN 15.22				

WABASH RIVER BASIN

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., Parke County, on left bank at downstream side of county road bridge, 300 ft downstream from small left-bank tributary, 0.4 mile upstream from Sunderland Branch, 1.2 miles south-east of Catlin, 2.4 miles upstream from Welsner Creek, and 3.8 miles upstream from mouth.

DRAINAGE AREA.--133 sq mi.

PERIOD OF RECORD.--December 1956 to current year (fragmentary prior to October 1957).

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

AVERAGE DISCHARGE.--12 years (1957-69), 118 cfs (12.05 inches per year).

EXTREMES.--Current year: Maximum discharge, 3,590 cfs Jan. 30 (gage height, 12.84 ft); minimum, 8.8 cfs part or all of each day Oct. 3-9, 14-17, Oct. 27 to Nov. 2; minimum gage height, 1.47 ft Sept. 14-16.

Period of record: 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 8.5 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.--Records fair prior to Dec. 27 and good thereafter.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.8	9.1	95	100	668	86	76	142	49	36	38	13
2	9.6	9.3	113	60	507	81	86	128	53	32	33	30
3	9.3	11	98	50	469	78	79	115	53	30	30	20
4	8.8	11	88	48	375	76	78	106	47	28	27	19
5	8.8	10	75	45	290	71	254	97	40	26	25	21
6	9.1	11	63	42	302	72	210	92	36	107	24	18
7	9.1	21	54	40	294	71	159	85	34	188	23	18
8	8.9	23	50	40	1,010	75	136	85	33	107	21	15
9	9.9	20	49	40	920	92	419	102	35	72	80	14
10	12	17	41	40	449	79	337	103	30	59	323	13
11	11	15	39	40	339	74	229	92	28	48	115	13
12	9.4	14	41	40	273	68	183	82	27	75	65	12
13	9.4	13	59	40	205	67	159	75	38	68	47	12
14	9.2	13	64	40	172	67	203	74	35	45	39	12
15	9.8	17	60	42	156	63	288	68	154	35	34	11
16	8.8	149	53	90	140	62	224	63	136	29	31	22
17	9.5	111	49	590	130	63	200	60	85	27	29	542
18	12	124	45	1,600	121	63	745	224	64	25	27	262
19	12	104	51	439	115	63	477	375	58	23	26	122
20	10	75	54	309	106	60	325	224	48	259	24	81
21	9.7	64	47	224	104	56	256	150	40	246	22	62
22	9.5	56	60	208	106	53	210	122	38	109	20	49
23	9.4	49	102	240	110	53	177	103	53	142	19	56
24	9.4	44	99	329	104	112	153	90	106	110	18	67
25	9.4	40	83	212	100	130	137	81	231	107	17	54
26	9.4	36	71	188	97	113	128	72	145	62	16	46
27	9.3	34	244	150	92	103	122	68	83	230	16	43
28	8.9	80	1,270	1,180	89	99	285	65	62	116	15	39
29	9.1	162	523	2,110	-----	95	198	60	49	75	15	36
30	8.9	110	321	3,210	-----	79	162	56	41	54	14	34
31	8.8	-----	251	1,190	-----	72	-----	53	-----	43	13	-----
TOTAL	297.2	1,452.4	4,312	12,976	7,843	2,396	6,695	3,312	1,931	2,613	1,246	1,756
MEAN	9.59	48.4	139	419	280	77.3	223	107	64.4	84.3	40.2	58.5
MAX	12	162	1,270	3,210	1,010	130	745	375	231	259	323	542
MIN	8.8	9.1	39	40	89	53	76	53	27	23	13	11
CFSM	.07	.36	1.05	3.15	2.11	.58	1.68	.80	.48	.63	.30	.44
IN.	.08	.41	1.21	3.63	2.19	.67	1.87	.93	.54	.73	.35	.49

CAL YR 1968 TOTAL 49,689.6 MEAN 136 MAX 3,810 MIN 8.8 CFSM 1.02 IN 13.89
 WTR YR 1969 TOTAL 46,829.6 MEAN 128 MAX 3,210 MIN 8.8 CFSM .96 IN 13.09

PEAK DISCHARGE (BASE, 1,900 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-18	0400	11.70	2,740	02-08	2115	10.91	2,420
01-30	0600	12.84	3,590				

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., Parke County, 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.

PERIOD OF RECORD.--October 1956 to current year. Prior to October 1963, published as Raccoon Creek at Coxville.

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

AVERAGE DISCHARGE.--13 years, 443 cfs (13.67 inches per year).

EXTREMES.--Current year: Maximum discharge, 8,180 cfs Jan. 30 (gage height, 13.55 ft); minimum, 80 cfs Aug. 31, Sept. 1 (gage height, 2.32 ft).

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

REMARKS.--Records good. Flow regulated by Mansfield Reservoir (see sta 3-3408.7).

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	217	213	692	396	1,290	650	218	316	134	122	278	80
2	217	212	516	503	974	415	182	292	145	115	212	98
3	215	222	535	1,570	902	362	166	268	132	110	182	234
4	209	217	506	1,800	728	336	156	250	126	106	166	328
5	199	219	414	1,930	633	314	550	236	119	103	154	352
6	199	223	294	1,900	660	308	433	222	115	388	145	358
7	197	212	261	1,260	645	300	298	210	110	645	137	348
8	196	330	226	602	1,590	300	252	208	109	420	121	340
9	199	310	182	337	2,100	322	764	228	112	360	152	250
10	204	274	175	338	962	296	700	238	105	448	533	240
11	215	265	167	322	1,780	280	455	218	101	433	575	238
12	218	262	165	275	2,170	262	366	198	98	358	540	236
13	220	259	200	219	2,100	224	326	186	124	332	410	234
14	221	255	254	206	2,060	214	423	182	113	326	296	232
15	221	253	224	201	2,030	206	638	172	625	310	198	230
16	225	539	171	202	2,030	218	468	162	346	204	168	240
17	230	593	160	784	2,090	218	395	156	230	160	152	992
18	234	729	165	3,820	2,060	218	1,690	398	196	146	139	755
19	230	691	173	906	2,030	214	1,000	720	188	129	132	688
20	227	648	176	614	1,990	210	655	420	162	615	126	848
21	225	738	167	498	1,970	202	525	316	143	705	122	926
22	225	681	212	473	1,940	196	445	272	139	490	115	923
23	223	552	309	555	1,920	194	382	242	148	528	102	935
24	223	459	359	777	1,920	290	344	218	194	508	97	995
25	223	423	385	446	2,040	336	318	200	420	543	94	605
26	218	436	250	397	1,990	376	300	184	306	453	91	448
27	217	411	604	355	1,930	362	288	170	204	920	89	415
28	215	523	2,540	2,180	1,620	354	610	158	166	500	86	398
29	213	723	1,140	3,530	-----	360	435	148	145	558	85	376
30	215	718	671	7,020	-----	248	354	141	130	513	83	334
31	214	-----	541	3,500	-----	224	-----	134	-----	384	82	-----
TOTAL	6,704	12,640	12,834	37,916	46,154	9,009	14,136	7,463	5,385	11,932	5,862	13,676
MEAN	216	471	414	1,223	1,648	291	471	241	180	385	189	456
MAX	234	738	2,540	7,020	2,170	650	1,690	720	625	920	575	995
MIN	196	212	160	201	633	194	156	134	98	103	82	80
CFSM	.49	.96	.94	2.78	3.75	.66	1.07	.55	.41	.87	.43	1.04
IN.	.57	1.07	1.08	3.20	3.90	.76	1.19	.63	.46	1.01	.50	1.16

CAL YR 1968 TOTAL 196,549
WTR YR 1969 TOTAL 183,711

MEAN 537
MEAN 503

MAX 12,000
MAX 7,020

MIN 73
MIN 80

CFSM 1.22
CFSM 1.14

IN 16.61
IN 15.53

WABASH RIVER BASIN

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., Vermillion County, on downstream side of bridge on State Highway 63, 0.7 mile east of Universal.

DRAINAGE AREA.--331 sq mi.

PERIOD OF RECORD.--July 1966 to current year.

GAGE.--Nonrecording gage. Datum of gage is 466.78 ft above mean sea level. Auxiliary nonrecording gage 2.0 miles downstream at datum 11.16 ft lower.

EXTREMES.--Current year: Maximum discharge observed, 8,060 cfs Jan. 30 (gage height, 14.42 ft) minimum observed, 1.9 cfs Oct. 26-31; minimum gage height, 1.39 ft Oct. 4-6.
Period of record: Maximum discharge, 13,600 cfs Dec. 8, 1966 (gage height, 17.08 ft, from floodmark); minimum observed, 1.0 cfs Sept. 7, 1966; minimum gage height, 1.39 ft Oct. 4-6, 1968.

REMARKS.--Records fair except those for winter periods and periods of backwater from the Wabash River, which are poor.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	2.2	174	352	1,160	190	148	305	71	105	66	37
2	3.6	2.2	170	260	423	168	165	275	101	88	60	47
3	2.9	4.8	156	210	339	157	138	246	214	80	57	39
4	2.5	5.2	147	180	460	154	141	226	145	78	54	39
5	2.5	4.4	131	160	477	138	420	214	112	68	51	39
6	2.5	5.2	115	140	672	139	415	202	98	238	51	39
7	2.9	13	98	130	941	147	308	186	88	521	50	97
8	2.9	16	114	120	1,580	145	275	206	80	380	48	54
9	3.2	15	100	110	3,040	163	536	210	79	265	63	45
10	4.8	15	82	103	1,480	123	800	196	71	450	68	41
11	4.8	12	75	100	1,130	112	557	180	67	248	58	40
12	4.0	11	67	100	897	107	405	157	64	174	52	40
13	4.0	8.6	71	100	665	103	345	141	76	124	48	39
14	4.0	8.0	65	100	500	104	614	145	64	103	47	39
15	3.6	9.2	63	100	445	98	683	134	124	85	45	37
16	2.9	51	52	107	375	96	560	124	101	76	44	40
17	2.2	107	60	298	322	98	560	117	78	66	42	704
18	2.2	110	49	2,510	265	100	1,560	149	72	60	42	554
19	2.5	128	53	2,660	230	101	1,760	143	73	55	42	262
20	2.2	112	50	1,660	206	101	1,160	121	66	370	42	242
21	2.2	90	45	680	198	96	830	110	57	455	41	114
22	2.2	80	48	420	202	89	638	107	54	168	40	97
23	2.2	72	103	480	210	85	500	103	64	114	40	85
24	2.2	68	210	863	206	188	425	96	118	85	40	218
25	2.2	56	212	470	206	392	368	93	743	101	40	156
26	1.9	51	150	402	224	308	335	88	488	134	39	124
27	1.9	48	208	590	208	232	300	83	302	626	39	105
28	1.9	67	1,190	1,520	202	214	536	78	204	196	38	88
29	1.9	214	1,050	5,270	-----	198	415	73	148	111	38	78
30	1.9	204	650	7,910	-----	154	345	68	121	85	37	72
31	1.9	-----	452	4,280	-----	138	-----	66	-----	66	37	-----
TOTAL	86.2	1,589.8	6,210	32,385	17,263	4,638	16,242	4,642	4,143	5,775	1,459	3,611
MEAN	2.78	53.0	200	1,045	617	150	541	150	138	186	47.1	120
MAX	4.8	214	1,190	7,910	3,040	392	1,760	305	743	626	68	704
MIN	1.9	2.2	45	100	198	85	138	66	54	55	37	37
CFSM	.008	.16	.61	3.16	1.86	.45	1.64	.45	.42	.56	.14	.36
IN.	.01	.18	.70	3.64	1.94	.52	1.82	.52	.47	.65	.16	.41
CAL YR 1968	TOTAL	107,378.3	MEAN	293	MAX	9,600	MIN	1.9	CFSM	.89	IN	12.06
WTR YR 1969	TOTAL	98,044.0	MEAN	269	MAX	7,910	MIN	1.9	CFSM	.81	IN	11.02

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

LOCATION.--Lat 39°28'00", long 87°25'08", in NW¼ sec. 21, T. 12 N., R. 9 W., Vigo County, 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.

PERIOD OF RECORD.--August 1902 to December 1903 (gage height only), February 1905 to July 1906, October 1927 to current year. 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. See WSP 1725 for history of changes prior to Oct. 27, 1928.

AVERAGE DISCHARGE.--42 years, 10,230 cfs (11.39 inches per year).

EXTREMES.--Current year: Maximum discharge, 92,500 cfs Feb. 2 (gage height, 25.57 ft); minimum, 2,080 cfs Sept. 1 (gage height, 3.97 ft).

Period of record: Maximum discharge, 189,000 cfs May 20, 1943 (gage height, 30.50 ft); minimum, 690 cfs Aug. 10, 1934 (gage height, 2.40 ft).

Flood of Mar. 27, 1913, reached a stage of 31.1 ft (present site and datum), discharge, 245,000 cfs, estimated.

REMARKS.--Records good. Natural flow affected by upstream reservoirs.

REVISIONS (WATER YEARS).--WSP 205: 1905. WSP 1335: 1944.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3,180	2,760	11,400	24,900	86,800	10,000	14,600	12,800	6,330	8,350	7,000	2,120
2	3,160	2,730	12,500	22,200	91,000	9,200	12,900	11,900	6,230	7,130	6,050	2,130
3	3,140	2,490	12,100	17,300	88,000	9,000	11,900	10,900	6,980	6,200	5,400	2,160
4	3,030	2,460	11,100	14,000	78,800	8,570	11,300	10,000	6,950	5,790	5,060	2,230
5	3,090	2,740	9,920	12,400	68,200	8,130	12,000	9,360	6,510	5,370	4,790	2,330
6	2,860	2,720	8,880	11,300	59,800	7,900	16,400	8,800	6,240	5,640	4,420	2,390
7	2,910	2,600	8,130	9,900	52,700	7,900	22,400	8,440	6,020	13,600	3,950	2,780
8	3,140	2,610	7,430	8,660	48,500	7,990	25,300	8,260	6,050	15,600	3,600	2,520
9	3,280	2,970	6,640	8,130	48,600	7,880	26,200	8,400	6,100	20,300	3,700	2,370
10	3,260	3,120	6,100	7,380	46,400	7,680	27,800	9,560	5,780	21,300	5,640	2,210
11	3,340	3,240	5,660	6,890	42,400	7,950	27,200	11,500	5,760	20,000	6,650	2,360
12	3,710	3,160	5,320	6,570	37,000	7,650	24,900	14,200	6,370	17,000	7,200	2,260
13	3,790	2,960	5,270	6,390	31,600	7,270	20,700	17,400	6,150	15,300	5,900	2,230
14	3,870	2,850	5,080	5,900	26,600	6,910	17,900	18,100	5,680	14,400	5,000	2,400
15	3,780	2,880	4,860	5,900	23,100	6,860	17,600	16,600	6,750	12,600	4,740	2,270
16	3,740	3,330	4,740	5,780	21,500	6,660	17,800	14,400	12,100	10,000	4,350	2,210
17	3,860	6,070	4,420	6,020	19,900	6,370	17,600	12,800	16,000	8,150	3,810	3,650
18	3,970	8,190	4,300	15,400	17,600	6,230	20,000	11,800	15,300	6,980	3,600	8,210
19	3,870	10,200	4,350	23,000	15,400	6,280	25,200	12,300	12,700	6,200	3,520	8,690
20	3,630	10,600	4,370	23,100	13,600	6,420	25,900	12,200	10,500	6,020	3,400	8,330
21	3,160	11,100	4,540	21,500	12,500	6,390	27,400	12,500	8,880	8,750	3,300	7,990
22	2,920	10,300	4,720	21,800	12,000	6,410	27,800	14,500	7,490	7,810	3,000	8,350
23	2,960	8,800	5,180	23,400	11,700	6,100	25,800	15,000	6,950	7,590	2,840	9,320
24	3,020	7,630	5,760	27,100	11,400	6,410	22,100	14,300	8,550	7,320	2,670	9,580
25	2,970	6,730	6,320	27,500	11,200	8,310	19,800	12,500	18,200	6,770	2,600	8,220
26	3,040	6,120	6,710	24,800	11,000	12,600	18,300	10,500	19,400	7,580	2,500	7,070
27	2,940	5,660	7,090	22,500	10,900	17,100	16,700	9,120	17,000	11,700	2,520	6,330
28	2,960	5,450	12,600	22,900	10,800	19,400	16,100	8,220	14,700	11,100	2,350	5,840
29	2,880	6,350	20,100	34,900	-----	19,500	15,600	7,470	12,800	9,940	2,400	5,880
30	2,910	8,670	23,600	51,400	-----	18,500	14,100	7,000	10,500	10,100	2,250	7,320
31	2,800	-----	25,700	71,200	-----	16,800	-----	6,690	-----	8,460	2,160	-----
TOTAL	101,170	157,490	264,890	590,120	1,009,000	290,370	599,300	357,520	284,970	327,210	126,800	141,750
MEAN	3,264	5,250	8,545	19,040	36,040	9,367	19,980	11,530	9,499	10,560	4,050	4,725
MAX	3,970	11,100	25,700	71,200	91,000	19,500	27,800	18,100	19,400	21,300	7,200	9,580
MIN	2,800	2,460	4,300	5,780	10,800	6,100	11,300	6,690	5,680	5,370	2,100	2,120
CFSM	.27	.43	.70	1.56	2.95	.77	1.64	.95	.78	.87	.34	.39
IN.	.31	.48	.81	1.80	3.08	.89	1.83	1.09	.87	1.00	.39	.43

CAL YR 1968 TOTAL 4,539,770 MEAN 12,400 MAX 85,400 MIN 2,460 CFSM 1.02 IN 13.84
WTR YR 1969 TOTAL 4,250,590 MEAN 11,650 MAX 91,000 MIN 2,120 CFSM .95 IN 12.96

WABASH RIVER BASIN

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., Sullivan County, 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.

PERIOD OF RECORD.--October 1938 to current year. 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. Prior to July 17, 1951, nonrecording gage at same site and datum, read twice daily.

AVERAGE DISCHARGE.--31 years, 11,040 cfs (11.44 inches per year).

EXTREMES.--Current year: Maximum discharge, 97,500 cfs Feb. 4 (gage height, 23.10 ft); minimum, 2,520 cfs Sept. 2, 3 (gage height, 2.35 ft).

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

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

REMARKS.--Records good. Natural flow of stream affected by storage reservoirs and power development. Records of water temperature for current year are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1335: 1939, 1950.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3,760	3,040	9,140	25,500	62,300	11,000	16,300	14,600	7,420	10,700	9,190	2,600
2	3,530	2,980	11,200	25,000	75,600	10,200	14,400	13,400	7,060	9,030	8,250	2,570
3	3,470	2,990	11,900	22,500	89,100	9,590	13,000	12,500	7,060	7,900	7,050	2,540
4	3,400	2,760	11,500	24,500	96,600	9,300	12,200	11,500	7,540	7,210	6,310	2,600
5	3,320	2,690	10,600	21,000	95,700	8,890	13,100	10,700	7,380	6,680	5,960	2,660
6	3,340	2,900	9,580	19,000	90,100	8,520	14,800	10,100	7,110	6,300	5,660	2,740
7	3,230	2,930	8,780	17,000	81,100	8,340	17,900	9,590	6,870	7,590	5,270	2,800
8	3,170	2,820	8,070	15,500	71,800	8,330	21,900	9,270	6,790	15,000	4,840	3,120
9	3,350	2,820	7,430	9,600	65,800	8,420	26,000	9,140	6,740	19,000	4,660	2,920
10	3,530	3,160	6,740	8,400	60,500	8,220	28,400	9,380	6,700	19,800	4,880	2,750
11	3,530	3,320	6,310	7,600	56,000	8,020	28,300	10,400	6,390	21,100	6,420	2,600
12	3,580	3,440	5,900	7,200	51,400	8,220	28,100	12,100	6,440	19,400	7,420	2,680
13	3,840	3,380	5,660	6,920	42,900	7,800	26,800	14,700	7,460	16,800	7,530	2,620
14	4,000	3,170	5,530	6,630	42,000	7,420	24,700	17,200	7,030	15,100	6,570	2,570
15	4,080	3,140	5,320	6,300	35,800	7,160	24,100	17,400	9,830	14,200	5,720	2,690
16	4,010	3,280	5,160	6,250	30,300	7,060	20,800	15,900	11,500	12,500	5,450	2,620
17	4,000	3,900	5,020	6,660	26,500	6,890	19,500	14,200	13,900	10,500	5,080	2,940
18	4,100	6,340	4,790	13,200	22,400	6,660	25,000	13,000	15,600	8,980	4,580	5,300
19	4,160	8,340	4,720	20,200	19,000	6,540	32,400	14,100	14,800	7,910	4,380	8,580
20	4,060	9,690	4,670	23,000	16,200	6,550	31,800	13,300	12,600	7,320	4,260	8,710
21	3,920	10,100	4,700	22,900	14,300	6,580	29,800	12,700	10,700	8,710	4,220	8,310
22	3,410	10,400	4,920	21,700	13,200	6,620	28,900	13,700	9,500	9,970	4,000	8,070
23	3,180	9,670	5,160	22,800	12,600	6,570	28,400	15,100	9,800	9,590	3,720	8,730
24	3,180	8,570	5,610	26,900	12,200	7,080	27,400	15,000	8,360	8,940	3,470	9,420
25	3,230	7,560	6,040	28,500	11,800	8,710	25,100	14,100	11,800	9,000	3,300	9,340
26	3,220	6,810	6,580	28,000	11,600	9,670	21,600	12,500	18,300	8,140	3,260	8,260
27	3,240	6,310	7,020	26,000	11,300	13,400	19,600	10,900	18,300	9,220	3,110	7,380
28	3,160	6,120	10,900	25,000	11,200	17,000	18,700	9,670	16,200	12,900	3,050	6,760
29	3,160	6,180	16,700	32,600	-----	18,900	17,700	8,940	14,300	11,400	2,920	6,250
30	3,110	7,100	20,200	45,600	-----	19,000	16,300	8,220	12,700	10,600	2,880	6,500
31	3,110	-----	23,500	53,800	-----	18,000	-----	7,720	-----	10,300	2,720	-----
TOTAL	109,380	155,910	259,350	625,760	1,229,3M	294,660	673,000	381,030	306,180	351,790	156,130	147,630
MEAN	3,528	5,177	8,366	20,190	43,900	9,505	22,430	12,290	10,210	11,350	5,036	4,921
MAX	4,160	10,400	23,500	53,800	96,600	19,000	32,400	17,400	18,300	21,100	9,190	9,420
MIN	3,110	2,690	4,670	6,250	11,200	6,540	12,200	7,720	6,390	6,300	2,720	2,540
CFSM	.27	.40	.64	1.54	3.35	.73	1.71	.94	.78	.87	.38	.38
IN.	.31	.44	.74	1.78	3.49	.84	1.91	1.08	.87	1.00	.44	.42

CAL YR 1968 TOTAL 4,946,340 MEAN 13,510 MAX 92,600 MIN 2,690 CFSM 1.03 IN 14.04
 WITH YR 1969 TOTAL 4,690,120 MEAN 12,850 MAX 96,600 MIN 2,540 CFSM .98 IN 13.31

3-3421, Busseron Creek near Hymara, Ind.

LOCATION.--Lat 39°12'54", long 87°18'41", in NW¼ sec. 21, T. 9 N., R. 8 W., Sullivan County, on right bank at downstream side of bridge on County Road 900 North, 1.9 miles northwest of Hymara, and 3.9 miles upstream from West Fork Busseron Creek.

DRAINAGE AREA.--16.7 sq mi.

PERIOD OF RECORD.--June 1966 to current year.

GAGE.--Water-stage recorder. Concrete control since Sept. 12, 1969. Datum of gage is 480.00 ft above mean sea level (U.S. Soil Conservation Service bench mark).

EXTREMES.--Current year: Maximum discharge, 1,450 cfs Jan. 29 (gage height, 17.44 ft); minimum daily, 0.04 cfs Sept. 15.
Period of record: Maximum discharge, 1,450 cfs Dec. 8, 1966, Jan. 29, 1969; maximum gage height, 17.44 ft Jan. 29, 1969; maximum gage height, 17.44 ft

REMARKS.--Records good above 20 cfs and fair below. Flow affected at times by Soil Conservation Service flood water retarding structures.

REVISIONS (WATER YEARS).--WRD Ind. 1968: 1967(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.16	.37	9.8	97	73	5.1	11	12	.92	1.8	7.0	.28
2	.32	.09	8.4	66	56	4.6	11	10	.86	1.4	5.7	.26
3	.47	1.4	6.1	15	49	4.4	10	8.6	.81	1.1	3.7	.27
4	.24	1.3	5.2	2.0	35	4.1	23	7.6	.68	1.2	2.6	15
5	.24	.50	3.9	.50	30	3.7	39	6.9	.67	.90	1.9	4.4
6	.32	.70	3.4	.45	42	3.5	24	6.0	9.2	.75	1.5	2.7
7	.32	1.1	3.5	.40	30	3.2	18	5.4	7.0	.66	1.2	1.9
8	.24	.80	10	.35	123	3.9	14	5.5	2.9	.62	1.0	1.3
9	.32	.70	12	.30	72	4.7	141	7.1	1.9	.88	3.9	.87
10	.47	.70	7.0	.25	37	4.5	52	13	1.4	40	1.8	.65
11	.32	.65	6.7	.25	30	5.6	34	9.5	1.0	25	1.3	.53
12	.32	.60	6.6	.25	24	4.1	26	6.8	.86	18	1.0	.31
13	.32	.50	6.9	.25	20	3.2	21	4.9	.88	12	.85	.06
14	.32	.55	6.8	.25	17	2.8	113	4.5	22	8.2	.76	.05
15	.32	4.0	10	.25	15	2.5	87	3.4	240	7.0	.67	.04
16	.32	2.5	8.6	39	13	2.5	44	2.6	66	5.0	.63	.09
17	.32	1.5	9.4	292	11	3.4	66	2.6	45	4.0	.61	7.0
18	.53	1.0	6.9	168	9.9	2.8	565	12	36	3.5	.55	6.0
19	.24	.60	6.3	61	9.1	2.4	132	11	26	2.2	.52	2.2
20	.10	.40	5.5	46	9.4	2.3	59	6.8	18	1.7	.46	.99
21	.06	.30	5.1	39	7.7	2.0	48	4.8	13	1.4	.48	.52
22	.06	.25	19	36	7.9	1.9	37	14	15	1.3	.45	.33
23	.05	.30	19	131	7.5	1.9	30	8.8	14	3.0	.38	.25
24	.06	1.1	18	121	7.1	26	26	6.1	21	10	.37	.21
25	.06	.40	18	48	6.7	28	22	4.3	11	25	.33	.15
26	.05	.39	14	36	6.1	20	19	2.8	5.2	21	.32	.11
27	.07	.39	44	30	5.7	15	16	2.1	3.1	18	.31	.09
28	.08	23	121	307	5.6	13	32	1.8	2.2	15	.28	.08
29	.07	10	45	828	-----	19	19	1.5	1.7	13	.28	.06
30	.06	6.5	49	721	-----	13	15	1.3	3.1	10	.22	.06
31	.06	-----	51	170	-----	11	-----	1.1	-----	9.0	.28	-----
TOTAL	6.89	62.39	545.1	3,256.50	758.7	224.1	1,754	194.8	571.38	262.61	41.41	46.76
MEAN	.22	2.07	17.6	105	27.1	7.23	58.5	6.28	19.0	8.47	1.34	1.56
MAX	.53	23	121	828	123	28	565	14	240	40	7.0	15
MIN	.05	.07	3.4	.25	5.6	1.9	10	1.1	.67	.62	.28	.04
CFSM	.01	.12	1.05	6.29	1.62	.43	3.50	.38	1.14	.51	.08	.09
IN.	.02	.14	1.21	7.25	1.69	.50	3.91	.43	1.27	.58	.09	.10
CAL YR 1968	TOTAL 5,832.56	MEAN 15.9	MAX 642	MIN .05	CFSM .95	IN 12.99						
WTR YR 1969	TOTAL 7,724.34	MEAN 21.2	MAX 828	MIN .04	CFSM 1.27	IN 17.20						

WABASH RIVER BASIN

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

LOCATION.--Lat 39°11'10", long 87°19'44", in NE 1/4 sec. 32, T. 9 N., R. 8 W., Sullivan County, on right bank at downstream side of bridge on State Highway 48, 1.4 miles upstream from mouth, 1.5 miles west of Hymara, and 3.7 miles east of U.S. Highway 41.

DRAINAGE AREA.--14.4 sq mi.

PERIOD OF RECORD.--October 1966 to current year.

GAGE.--Water-stage recorder. Datum of gage is 476.00 ft above mean sea level (Indiana State Highway Commission bench mark).

EXTREMES.--Current year: Maximum discharge, 1,230 cfs about Jan. 29 (gage height, 12.28 ft); no flow part of Nov. 10, 11, Sept. 15.
Period of record: Maximum discharge, 1,230 cfs about Jan. 29, 1969 (gage height, 12.28 ft); no flow at times each year.

REMARKS.--Records fair.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.28	.10	6.8	5.4	13	2.8	6.7	6.4	1.7	1.1	1.3	.14
2	.23	.10	11	4.9	3.9	2.7	9.9	4.6	1.9	1.1	.58	.14
3	.28	.33	3.7	3.9	6.7	2.7	8.3	4.2	1.9	1.1	.62	.28
4	.23	.18	3.0	2.5	5.6	2.5	23	3.7	1.9	1.3	.82	65
5	.28	.14	2.3	2.1	4.2	2.3	63	3.0	1.5	1.1	.58	2.3
6	.28	.14	1.4	2.1	13	2.7	16	2.7	15	1.1	.66	2.4
7	.23	.23	1.0	2.0	16	2.7	8.6	2.5	29	1.1	.55	.75
8	.23	.06	.71	2.0	61	3.2	6.4	2.7	2.7	1.1	.55	1.5
9	.28	.03	.49	1.9	48	4.9	194	3.4	1.8	2.5	9.4	.38
10	.23	.03	.55	1.5	18	3.0	44	4.4	1.4	63	1.5	.23
11	.18	.03	.58	1.4	14	2.7	21	2.7	1.2	7.1	.82	.10
12	.18	.10	.79	1.2	10	2.7	13	2.4	1.2	2.5	.49	.10
13	.18	.33	1.6	1.3	6.7	2.4	10	2.1	1.4	1.7	.62	.06
14	.23	.49	1.4	1.3	5.4	2.3	137	3.7	42	1.2	.82	.06
15	.18	.98	.96	1.4	5.1	2.3	70	2.5	296	1.1	.62	.14
16	.18	4.6	.75	3.0	4.6	2.3	25	2.1	26	.90	4.6	.18
17	.18	2.1	.61	343	4.9	2.4	33	2.7	10	.82	.61	33
18	.23	1.5	.98	241	4.6	2.5	425	24	7.1	.75	.61	4.4
19	.10	1.5	2.0	27	4.2	2.3	54	15	6.0	.75	.38	.98
20	.10	.90	2.0	14	3.9	2.1	23	6.0	3.4	5.1	.26	.49
21	.06	.43	1.5	12	3.9	1.9	16	3.2	2.1	5.6	.33	.28
22	.06	.42	24	12	3.9	1.7	12	32	12	67	.26	.38
23	.06	1.1	15	71	4.2	1.9	9.0	11	18	9.5	.16	.33
24	.06	2.5	3.7	66	4.2	39	6.7	5.1	37	83	.14	.82
25	.06	.81	2.1	4.0	3.9	32	6.4	3.4	14	20	.14	.82
26	.06	.71	1.9	3.0	3.2	14	5.4	2.5	3.9	4.6	.28	.33
27	.14	.72	43	3.0	3.0	9.4	5.1	2.3	2.1	11	.43	.28
28	.18	43	170	178	3.0	7.5	43	1.9	1.8	3.4	.23	.18
29	.14	9.5	22	414	-----	20	13	1.7	1.4	2.3	.18	.23
30	.10	2.4	23	162	-----	8.6	7.9	1.7	1.2	1.6	.14	.23
31	.10	-----	35	37	-----	5.6	-----	1.6	-----	1.5	.14	-----
TOTAL	5.31	75.86	385.82	1,624.9	282.1	195.1	1,315.4	167.2	547.0	226.52	20.70	116.51
MEAN	.17	2.53	12.4	52.4	10.1	6.29	43.8	5.39	18.2	10.5	.99	3.88
MAX	.28	.43	170	414	61	39	425	32	296	67	9.4	65
MIN	.06	.03	.49	1.2	3.0	1.7	5.1	1.6	1.2	.75	.14	.06
CFSM	.01	.18	.86	3.64	.70	.44	3.04	.37	1.27	.73	.07	.27
IN.	.01	.20	1.00	4.20	.73	.50	3.40	.43	1.41	.64	.06	.30

CAL YR 1968 TOTAL 4,250.03 MEAN 11.6 MAX 390 MIN C CFSM .81 IN 10.98
WTR YR 1969 TOTAL 5,072.42 MEAN 13.9 MAX 425 MIN .03 CFSM .97 IN 12.10

PEAK DISCHARGE (BASE, 500 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-29	Unknown	12.28	1,230	06-15	1500	11.72	832
04-18	1730	11.27	592				

a about

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., Sullivan County, on right bank at downstream side of bridge on County Road 700 East, 0.6 mile north of County Road 100 North, 1.7 miles upstream from mouth, and 2.5 miles northwest of Dugger.

DRAINAGE AREA.--11.9 sq mi.

PERIOD OF RECORD.--June 1966 to current year.

GAGE.--Water-stage recorder. Datum of gage is 466.41 ft above mean sea level (U.S. Soil Conservation Service bench mark).

EXTREMES.--Current year: Maximum discharge, 807 cfs Apr. 18 (gage height, 13.07 ft); minimum, 0.34 cfs Nov. 22, 23; minimum gage height, 6.00 ft Oct. 1, 3, 4, 5.

Period of record: Maximum discharge, 866 cfs May 24, 1968 (gage height, 13.42 ft); minimum, 0.34 cfs Nov. 22, 23, 1968; minimum gage height, 5.99 ft Aug. 25-30, Sept. 3, 11-16, 1968.

REMARKS.--Records good. Flow affected by surface-mined area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	2.4	35	128	67	7.4	7.8	12	3.3	3.7	4.6	1.6
2	2.4	2.6	23	99	48	6.9	7.8	11	3.7	2.5	3.7	1.7
3	2.8	13	16	20	41	6.6	7.0	9.5	2.9	2.9	2.9	1.7
4	1.3	8.2	16	4.0	32	6.2	18	9.1	2.5	4.1	2.5	8.6
5	1.1	5.1	13	3.5	28	5.9	28	8.6	2.1	3.3	2.9	2.1
6	2.3	7.4	12	3.0	36	6.2	20	7.7	2.1	12	2.5	2.5
7	1.5	11	11	2.6	28	5.8	12	7.3	2.1	14	2.3	2.3
8	1.2	7.5	14	2.3	60	7.8	10	12	1.9	9.1	4.1	3.3
9	3.2	6.5	14	2.0	48	8.4	116	24	1.8	12	19	1.9
10	7.4	6.6	12	1.9	29	6.5	37	24	1.7	46	6.8	1.8
11	4.8	6.0	11	1.9	24	6.0	21	14	1.7	18	3.3	1.8
12	4.8	5.8	12	1.9	20	5.9	16	11	3.7	12	2.9	1.8
13	5.3	4.8	20	1.8	17	4.8	14	10	7.3	9.1	2.5	1.7
14	5.0	5.2	28	1.8	15	4.2	71	38	2.9	6.4	2.3	1.7
15	5.8	37	18	1.8	14	3.8	92	16	4.4	4.6	2.3	1.6
16	6.2	31	16	107	13	3.7	34	10	13	3.7	5.0	1.8
17	5.4	11	15	223	12	3.6	107	11	6.4	3.3	3.7	4.1
18	10	12	20	236	12	3.1	370	30	8.2	2.5	3.7	2.5
19	6.9	4.1	21	83	11	2.8	75	24	6.4	2.5	2.5	1.8
20	3.6	.95	15	67	10	2.5	41	14	4.6	14	2.1	1.7
21	1.8	.71	18	60	11	2.3	32	10	3.3	9.1	4.1	1.7
22	1.7	.44	59	59	11	2.1	26	45	11	8.6	2.5	1.7
23	1.5	2.9	42	81	12	2.1	21	19	34	5.5	2.1	1.7
24	2.6	16	44	82	10	18	19	13	10	32	1.9	1.7
25	1.7	3.9	27	53	9.4	20	17	10	8.2	21	1.9	1.7
26	1.6	1.4	29	57	8.8	15	15	8.2	5.5	13	2.1	1.6
27	2.2	3.1	56	57	8.1	12	14	6.4	4.6	14	1.8	1.6
28	2.3	74	172	214	8.0	10	21	5.5	3.7	8.2	1.8	1.6
29	2.0	22	61	440	-----	14	15	4.6	2.9	5.9	1.7	1.5
30	1.7	17	94	260	-----	11	13	3.7	2.9	5.0	1.7	1.5
31	1.9	-----	163	101	-----	8.0	-----	3.3	-----	4.1	1.6	-----
TOTAL	103.8	329.60	1,107	2,455.5	643.3	222.6	1,297.6	431.9	208.4	312.1	104.8	64.3
MEAN	3.35	11.0	35.7	79.2	23.0	7.18	43.3	13.9	6.95	10.1	3.38	2.14
MAX	10	74	172	440	67	20	370	45	44	46	19	8.6
MIN	1.1	.44	11	1.8	8.0	2.1	7.0	3.3	1.7	2.5	1.6	1.5
CFSM	.28	.92	3.00	6.66	1.93	.60	3.63	1.17	.58	.85	.28	.18
IN.	.32	1.03	3.46	7.67	2.01	.70	4.06	1.35	.65	.98	.33	.20
CAL YR 1968	TOTAL 5,542.60			MEAN 15.1	MAX 300	MIN .44	CFSM 1.27	IN 17.32				
WTR YR 1969	TOTAL 7,280.90			MEAN 19.9	MAX 440	MIN .44	CFSM 1.68	IN 22.75				

WABASH RIVER BASIN

3-3423, Busseron Creek near Sullivan, Ind.

LOCATION.--Lat 39°04'33", long 87°23'11", in SE¼ sec. 2, T. 7 N., R. 9 W., Sullivan County, on left bank at upstream side of bridge on State Road 54, 1.5 miles southeast of Sullivan, 1.6 miles east of intersections of State Roads 41 and 54, and 1.7 miles upstream from Buttermilk Creek.

DRAINAGE AREA.--138 sq mi.

PERIOD OF RECORD.--June 1966 to current year.

GAGE.--Water-stage recorder. Datum of gage is 440.00 ft above mean sea level (Indiana State Highway Commission bench mark).

EXTREMES.--Current year: Maximum discharge, 5,480 cfs Jan. 30 (gage height, 15.83 ft); minimum, 2.4 cfs Oct. 5, 6, 30, 31; minimum gage height, 1.79 ft Oct. 5, 6.

Period of record: Maximum discharge, 5,480 cfs Jan. 30, 1969 (gage height, 15.83 ft); minimum, 0.8 cfs Sept. 8, 9, 1966; minimum gage height, 1.79 ft Oct. 5, 6, 1968.

REMARKS.--Records good except those affected by backwater from return flow and those for winter periods, which are fair. Flow affected by surface-mined areas and Soil Conservation Service flood-water retarding structures.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.3	2.8	52	165	1,790	50	89	84	29	35	37	5.0
2	3.5	3.1	99	100	721	47	118	73	27	27	33	5.4
3	3.7	3.8	56	70	543	45	134	63	25	22	25	5.5
4	2.8	8.2	44	53	316	44	117	58	22	23	19	91
5	2.5	4.9	36	38	252	41	311	53	20	18	15	49
6	2.7	5.2	25	30	364	41	190	47	20	43	12	17
7	3.3	7.4	18	27	310	41	119	42	30	38	11	13
8	3.0	5.9	25	25	423	42	96	49	38	35	12	31
9	3.1	4.6	28	23	837	56	785	66	23	58	31	16
10	4.6	4.3	18	21	333	52	1,340	140	18	257	42	9.5
11	3.6	3.8	18	19	231	66	515	84	16	212	20	8.6
12	3.4	3.6	16	18	181	95	229	61	15	92	13	9.2
13	3.4	3.2	26	17	139	94	172	47	36	64	10	7.4
14	3.4	3.4	25	17	116	65	578	131	25	46	9.1	6.1
15	2.9	11	54	16	106	35	992	92	90	34	8.3	6.8
16	2.7	37	43	40	96	33	467	55	340	26	14	8.5
17	2.8	18	34	371	93	33	307	48	170	21	23	19
18	6.3	20	32	1,200	85	34	1,480	90	116	17	14	61
19	4.7	15	25	1,410	79	35	2,540	180	108	15	11	22
20	3.4	11	25	459	73	34	1,710	130	77	35	8.6	13
21	2.9	8.2	23	244	72	31	543	78	58	59	11	9.9
22	3.1	7.0	71	206	72	28	293	120	57	103	11	8.2
23	3.0	6.2	182	355	76	28	196	240	376	273	7.4	8.1
24	2.9	21	65	981	70	191	152	110	177	216	6.5	8.6
25	3.1	24	56	1,120	65	432	128	80	240	561	6.2	7.8
26	2.9	14	51	225	95	189	112	60	109	145	6.0	7.9
27	2.7	11	68	115	110	130	97	50	66	105	5.6	7.4
28	2.7	99	853	200	89	100	179	45	52	92	5.3	19
29	2.7	160	610	800	-----	156	142	40	41	67	5.3	75
30	2.5	49	209	3,900	-----	123	101	35	33	55	4.9	71
31	2.6	-----	537	4,170	-----	85	-----	32	-----	44	5.0	-----
TOTAL	100.2	575.6	3,424	16,435	7,734	2,476	14,232	2,483	2,454	2,838	442.2	626.9
MEAN	3.23	19.2	110	530	276	79.9	474	80.1	81.8	91.5	14.3	20.9
MAX	6.3	160	853	4,170	1,790	432	2,540	240	376	561	42	91
MIN	2.5	2.8	16	16	65	28	89	32	15	15	4.9	5.0
CFSM	.02	.14	.80	3.84	2.00	.58	3.44	.58	.59	.66	.10	.15
IN.	.03	.16	.92	4.43	2.08	.67	3.84	.67	.66	.76	.12	.17

CAL YR 1968 TOTAL 49,540.6 MEAN 135 MAX 3,430 MIN 1.4 CFSM .98 IN 13.35
WTR YR 1969 TOTAL 53,820.9 MEAN 147 MAX 4,170 MIN 2.5 CFSM 1.07 IN 14.50

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., Sullivan County, on left bank at downstream side of bridge, 3 miles northeast of Paxton, and 3 miles upstream from mouth.

DRAINAGE AREA.--16.5 sq mi.

PERIOD OF RECORD.--June 1966 to current year.

GAGE.--Water-stage recorder. Datum of gage is 450.08 ft above mean sea level (U.S. Soil Conservation Service bench mark).

EXTREMES.--Current year: Maximum discharge, 441 cfs Jan. 29 (gage height, 13.01 ft); minimum, 0.14 cfs Oct. 2 (gage height, 6.29 ft).

Period of record: Maximum discharge, 442 cfs Apr. 4, 1968 (gage height, 13.02 ft); no flow at times most years.

REMARKS.--Records fair. Natural flow of stream affected by surface-mined areas.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	1.3	6.7	29	63	5.9	9.0	19	2.9	1.9	1.7	.57
2	.40	1.1	5.5	15	45	5.3	9.0	16	5.0	1.6	1.6	.64
3	.40	1.9	3.3	6.5	39	5.1	7.8	13	4.6	1.5	1.2	.71
4	.32	2.6	3.3	5.4	28	5.0	20	11	3.4	2.1	1.0	5.7
5	.83	3.1	2.0	5.0	26	4.2	32	9.0	4.4	1.3	.78	1.0
6	.71	2.6	1.1	4.5	48	4.4	21	8.8	6.1	2.0	.65	.61
7	.50	3.1	1.4	4.0	28	4.1	13	8.9	3.4	4.3	.64	.68
8	.50	3.4	.93	3.7	100	5.1	12	14	2.4	6.2	1.0	4.7
9	1.4	2.4	.75	3.4	53	5.4	208	22	2.4	4.6	4.4	.82
10	1.6	1.9	1.1	3.2	27	4.8	60	27	2.2	20	2.2	.37
11	1.4	1.8	.93	3.0	22	6.2	29	22	2.4	5.9	1.5	.42
12	1.4	2.1	1.0	2.8	18	5.0	24	20	3.7	3.1	1.3	.54
13	1.2	2.8	3.3	2.7	16	5.1	20	22	9.9	2.4	1.3	.68
14	1.1	2.4	1.6	2.6	16	6.2	150	58	5.0	1.8	.78	.48
15	1.6	4.9	.93	2.5	11	6.4	100	18	51	1.5	.71	.32
16	1.9	7.7	.93	13	10	4.5	60	12	12	1.6	3.1	.61
17	1.4	3.3	1.3	172	11	4.4	100	11	11	1.6	2.1	1.6
18	2.4	3.6	2.3	193	11	3.7	240	20	7.6	1.4	1.4	.75
19	1.8	2.3	3.5	36	9.8	3.2	150	29	6.4	1.6	1.6	.32
20	.83	2.1	2.7	22	9.8	3.0	95	16	5.4	7.9	1.2	.24
21	.55	1.5	2.0	20	9.2	2.7	70	12	4.3	6.7	1.5	.20
22	.60	1.1	25	23	9.4	2.5	50	28	16	4.4	1.5	.20
23	.40	1.7	8.2	125	8.8	2.5	43	17	62	2.8	1.7	.37
24	.50	4.1	3.1	96	8.2	22	35	11	11	20	1.5	.37
25	.70	2.3	1.8	32	7.7	23	30	8.1	6.4	13	1.4	.24
26	.75	2.3	1.5	20	6.9	17	26	6.1	4.1	4.1	1.2	.28
27	.87	1.9	33	12	6.1	12	22	4.4	2.8	5.0	.85	.20
28	.87	20	137	251	5.9	11	41	3.7	2.6	3.4	.71	.20
29	1.3	4.8	28	341	-----	16	31	3.3	2.1	2.9	.64	.61
30	.93	2.8	78	350	-----	12	23	3.1	2.0	1.9	.57	.20
31	.87	-----	95	112	-----	9.0	-----	2.9	-----	1.5	.50	-----
TOTAL	31.13	98.9	457.17	1,911.3	653.8	226.7	1,730.8	476.3	264.5	140.0	42.43	24.63
MEAN	1.00	3.30	14.7	61.7	23.4	7.31	57.7	15.4	8.82	4.52	1.37	.82
MAX	2.4	20	137	350	100	23	240	58	62	20	4.4	5.7
MIN	.32	1.1	.75	2.5	5.9	2.5	7.8	2.9	2.0	1.3	.50	.20
CFSM	.06	.20	.89	3.74	1.42	.44	3.50	.93	.53	.27	.08	.05
IN.	.07	.22	1.03	4.31	1.47	.51	3.90	1.07	.60	.32	.10	.06

CAL YR 1968 TOTAL 5,781.25

MEAN 15.8

MAX 318

MIN .07

CFSM .96 IN 13.02

WTR YR 1969 TOTAL 6,057.66

MEAN 16.6

MAX 350

MIN .20

CFSM 1.01 IN 13.65

WABASH RIVER BASIN

3-3425. Busseron Creek near Carlisle, Ind.

LOCATION.--Lat 38°58'30", long 87°25'35", in NW¼ survey 17, Vincennes Tract, Knox County, on right bank 10 ft downstream from bridge on State Highway 58, 1.5 miles northwest of Carlisle, and 6.8 miles upstream from mouth.

DRAINAGE AREA.--228 sq mi.

PERIOD OF RECORD.--October 1943 to current year.

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

AVERAGE DISCHARGE.--26 years, 210 cfs (12.51 inches per year).

EXTREMES.--Current year: Maximum discharge, 5,880 cfs Jan. 31 (gage height, 18.68 ft); minimum, 4.2 cfs Oct. 25; minimum gage height, 2.52 ft Oct. 1, 2, 5, 6.
Period of record: Maximum discharge, 8,800 cfs Jan. 5, 1950 (gage height, 20.05 ft); maximum gage height, 20.30 ft May 9, 1961; no flow many days in 1954.

REMARKS.--Records good. Natural flow of stream affected by temporary storage retention reservoirs and surface-mined areas.

REVISIONS.--WSP 1335: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.5	4.8	118	564	5,310	70	131	119	44	56	43	9.1
2	5.5	5.2	210	350	3,870	64	154	106	41	48	39	11
3	5.5	7.0	138	160	2,510	60	188	94	38	41	31	8.9
4	5.9	10	109	90	1,550	58	164	87	32	48	25	57
5	5.2	13	90	58	863	53	436	80	30	36	21	95
6	5.5	9.8	67	53	920	55	330	74	30	53	20	29
7	5.5	13	53	48	780	54	181	69	47	59	17	20
8	5.9	13	35	44	870	54	139	77	62	253	15	27
9	5.5	11	29	40	1,320	71	920	88	33	107	30	30
10	7.0	8.8	42	37	990	65	1,590	147	26	386	52	18
11	7.5	8.0	37	35	472	58	1,640	119	23	375	33	15
12	6.8	8.0	40	33	343	95	885	90	22	131	22	15
13	7.0	7.8	58	30	245	95	298	77	57	90	18	14
14	7.0	8.0	60	29	193	85	820	234	37	66	16	12
15	5.5	15	37	28	163	44	1,370	160	401	49	15	11
16	5.7	65	42	50	141	41	1,210	105	905	39	15	12
17	5.5	40	33	700	129	40	566	101	391	23	43	18
18	6.3	36	43	1,730	120	42	2,320	138	146	27	27	48
19	9.0	29	59	1,620	112	42	2,520	350	139	24	22	34
20	7.8	21	64	1,410	103	40	2,510	202	107	169	16	18
21	6.3	14	56	620	97	37	2,250	129	84	217	15	14
22	5.5	11	203	396	97	34	1,320	262	235	156	24	12
23	5.2	10	366	644	100	35	394	431	1,000	332	16	11
24	5.0	31	160	1,480	95	298	242	183	348	156	13	12
25	4.6	45	100	1,290	90	893	196	127	354	760	12	12
26	4.6	33	87	377	98	391	163	101	184	278	12	11
27	4.8	23	141	232	124	225	138	83	115	139	11	11
28	4.8	192	1,140	1,380	115	164	202	71	89	117	10	10
29	4.6	318	1,120	2,840	-----	216	208	62	73	85	9.5	48
30	5.0	123	608	5,010	-----	198	139	55	61	66	9.6	69
31	5.0	-----	1,040	5,710	-----	135	-----	48	-----	52	9.1	-----
TOTAL	181.7	1,133.4	6,385	27,088	21,820	3,812	23,624	4,069	5,154	4,488	669.6	712.0
MEAN	5.86	37.8	206	874	779	123	787	131	172	145	21.6	23.7
MAX	9.0	318	1,140	5,710	5,310	893	2,520	431	1,000	760	52	55
MIN	4.6	4.8	29	28	90	34	131	48	22	24	9.1	8.9
CFSM	.03	.17	.90	3.83	3.42	.54	3.45	.58	.75	.63	.05	.10
IN.	.03	.18	1.04	4.42	3.56	.62	3.85	.66	.84	.73	.11	.12

CAL YR 1968	TOTAL 83,927.8	MEAN 229	MAX 3,450	MIN 4.6	CFSM 1.01	IN 13.65
WTR YR 1969	TOTAL 99,136.7	MEAN 272	MAX 5,710	MIN 4.6	CFSM 1.19	IN 16.17

PEAK DISCHARGE (BASE, 2,200 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-31	1830	18.68	5,880	04-18	2100	14.63	2,660

3-3430. Wabash River at Vincennes, Ind.

LOCATION (revised).--Lat 38°42'26", long 87°31'10", Knox County, near center of span on downstream side of bridge on U.S. Highway 50 at the Indiana-Illinois state line, 5.0 miles downstream from Maria Creek, 7.5 miles upstream from Embarras River, and at mile 129.6.

DRAINAGE AREA.--13,700 sq mi, approximately.

PERIOD OF RECORD.--October 1929 to current year. Prior to December 1929 monthly discharge only, published in WSP 1305. Gage-height records for flood peaks in 1867 and 1883, intermittent records 1887-1904, and continuous since November 1904, collected at site 2.1 miles downstream, are contained in reports of U.S. Weather Bureau.

GAGE.--Water-stage recorder. Datum of gage is 394.43 ft above mean sea level. Oct. 1, 1960, to Sept. 30, 1968, nonrecording gage at site 2.1 miles downstream at same datum. Auxiliary nonrecording gage 2.1 miles downstream from base gage at same datum. Oct. 1, 1960, to Sept. 30, 1968, water-stage recorder at site 2.6 miles upstream from base gage at datum 0.80 ft lower. See WSP 1725 for history of changes prior to Oct. 1, 1960.

AVERAGE DISCHARGE.--40 years, 11,290 cfs (11.19 inches per year).

EXTREMES.--Current year: Maximum discharge, 81,000 cfs Feb. 5 (gage height, 26.28 ft); minimum discharge, 2,740 cfs Nov. 5 (gage height, 4.47 ft).

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

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

REMARKS.--Records good. Natural flow of stream affected by storage reservoirs and power development.

REVISIONS (WATER YEARS).--WSP 803: Drainage area. WSP 1173: 1943 (maximum gage height only). WSP 1335: 1930-31, 1933, 1936. WSP 1909: 1955.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

CAY	CCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	3,810	3,110	8,550	26,000	54,700	11,600	17,900	17,700	8,050	13,000	10,400	2,890	
2	3,610	3,020	11,200	25,200	63,700	10,900	16,000	15,800	7,680	11,000	9,580	2,840	
3	3,500	3,040	12,400	23,000	72,600	10,000	14,100	14,400	7,320	9,200	8,000	2,800	
4	3,440	3,000	12,500	19,000	78,900	9,600	13,000	13,400	7,720	8,000	7,000	2,820	
5	3,350	2,800	11,800	16,000	80,900	9,120	13,200	12,300	7,900	7,200	6,380	2,930	
6	3,350	2,870	10,700	14,000	79,300	8,580	15,400	11,600	7,550	6,600	6,060	2,980	
7	3,310	3,020	10,400	12,500	74,900	8,250	17,500	10,900	7,300	6,500	5,750	2,980	
8	3,170	2,930	8,880	11,000	69,100	8,100	21,200	10,500	7,120	12,300	5,310	3,130	
9	3,280	2,820	8,080	10,000	63,900	8,220	24,300	10,200	6,980	20,100	5,020	3,220	
10	3,480	2,930	7,320	9,000	59,000	8,120	28,500	10,200	6,980	22,400	5,040	3,020	
11	3,550	3,240	6,700	8,500	54,500	7,880	30,400	10,900	6,750	24,400	5,730	2,890	
12	3,550	3,330	6,250	7,900	51,200	7,980	30,700	12,200	6,550	24,000	7,200	2,840	
13	3,750	3,390	6,010	7,550	48,100	7,780	29,800	14,300	7,400	20,900	8,050	2,870	
14	3,940	3,260	5,810	7,320	46,800	7,400	28,400	17,600	7,580	17,700	7,450	2,820	
15	4,010	3,240	5,620	6,900	41,100	6,950	28,600	19,200	8,950	16,000	6,380	2,820	
16	4,010	3,440	5,420	6,780	37,300	6,700	27,600	18,300	13,300	14,400	5,770	2,910	
17	3,920	3,550	5,290	7,720	33,700	6,550	25,200	16,400	15,000	12,300	5,550	2,910	
18	3,990	4,960	5,130	14,700	29,800	6,300	28,500	14,900	16,500	10,400	5,130	3,720	
19	4,100	7,380	4,960	21,700	25,200	6,100	34,000	15,300	16,500	9,050	4,670	7,350	
20	4,100	9,220	4,910	25,200	20,800	6,060	36,600	15,400	14,600	8,080	4,560	9,120	
21	3,940	10,200	4,870	26,100	17,500	6,030	36,800	14,300	12,300	8,750	4,850	9,000	
22	3,580	10,600	5,200	25,500	15,300	6,030	35,900	14,200	11,000	11,000	5,000	8,500	
23	3,280	10,400	5,860	25,200	14,000	6,060	34,900	16,300	12,800	12,300	4,270	8,620	
24	3,170	9,500	5,880	28,600	13,200	6,480	33,800	16,800	11,600	10,900	3,880	9,520	
25	3,170	8,280	6,030	30,000	12,700	9,220	31,900	16,000	11,300	11,900	3,570	9,900	
26	3,170	7,320	6,400	30,000	12,300	9,980	28,700	14,400	17,600	10,400	3,500	9,220	
27	3,170	6,620	7,250	29,100	11,900	12,100	24,900	12,600	20,000	9,220	3,390	8,080	
28	3,170	6,550	11,200	28,700	11,800	15,900	22,300	11,000	18,700	12,800	3,240	7,250	
29	3,130	6,720	16,900	33,400	-----	18,700	21,300	10,000	16,500	13,200	3,200	6,620	
30	3,130	6,850	21,100	42,000	-----	19,900	19,700	9,150	15,000	11,700	3,060	6,380	
31	3,090	-----	25,000	48,800	-----	19,300	-----	8,520	-----	11,400	3,020	-----	
TOTAL	109,320	157,590	273,620	627,370	1,194,240	291,890	771,100	424,770	334,530	397,100	170,010	152,950	
MEAN	3,526	5,253	8,826	20,240	42,650	9,416	25,700	13,700	11,150	12,810	5,484	5,098	
MAX	4,100	10,600	25,000	48,800	80,900	19,900	36,800	19,200	20,000	24,400	10,400	9,900	
MIN	3,090	2,800	4,870	6,780	11,800	6,030	13,000	8,520	6,550	6,500	3,020	2,800	
CFSM	.26	.38	.64	1.48	3.11	.69	1.88	1.00	.81	.94	.40	.37	
IN.	.30	.43	.74	1.70	3.24	.79	2.09	1.15	.91	1.08	.46	.42	
CAL YR 1968	TOTAL 5,145,530			MEAN 14,060		MAX 76,700		MIN 2,800		CFSM 1.03		IN 13.97	
WTR YR 1969	TOTAL 4,904,450			MEAN 13,440		MAX 80,900		MIN 2,800		CFSM .98		IN 13.31	

WABASH RIVER BASIN

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., Jasper County, on left bank at downstream side of highway bridge at Ste. Marie.

DRAINAGE AREA.--1,513 sq mi.

PERIOD OF RECORD.--October 1909 to December 1912, August 1914 to current year. Prior to October 1963, published as Embarras River at Ste. Marie.

GAGE.--Water-stage recorder. Datum of gage is 445.75 ft above mean sea level (levels by Corps of Engineers). Prior to June 29, 1940, nonrecording gage and June 29, 1940, to Jan. 24, 1967, water-stage recorder at same site at datum 1.00 ft higher.

AVERAGE DISCHARGE.--58 years, 1,182 cfs (10.61 inches per year).

EXTREMES.--Current year: Maximum discharge, 23,800 cfs Jan. 31 (gage height, 22.75 ft); minimum, 46 cfs Nov. 13-15.
Period of record: 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.

REVISIONS (WATER YEARS).--WSP 1083: 1934. WSP 1113: 1910-31, 1933, 1939-40, 1945(M). WSP 1725: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	49	485	1,240	19,600	760	800	1,410	337	598	293	71
2	62	48	510	863	11,700	731	767	1,260	337	505	783	77
3	58	51	547	750	9,430	688	764	1,150	1,160	445	853	201
4	57	52	497	650	9,820	644	811	1,060	740	460	645	119
5	56	48	437	550	9,080	604	2,450	976	566	388	510	94
6	56	47	381	500	6,470	571	3,680	903	460	389	397	101
7	56	47	339	450	4,410	549	1,840	840	410	419	313	140
8	56	49	305	400	4,150	547	1,460	842	620	1,230	259	95
9	56	49	259	370	5,900	566	2,460	895	460	2,480	243	79
10	58	47	254	340	5,640	585	4,960	816	360	4,300	342	77
11	56	53	232	320	6,840	526	3,010	777	435	3,550	418	73
12	55	51	222	300	5,400	480	1,820	742	360	2,110	295	69
13	55	47	231	300	4,580	449	1,590	699	511	1,520	239	66
14	55	46	226	300	4,100	425	3,020	710	950	1,110	213	64
15	54	51	215	300	3,010	409	4,800	655	2,220	842	186	62
16	54	82	208	400	2,210	395	5,100	606	1,750	680	166	63
17	53	99	194	757	1,780	382	2,820	568	978	577	150	116
18	53	280	201	2,970	1,520	370	4,890	985	698	502	141	1,350
19	53	247	206	4,790	1,330	366	7,840	809	593	440	165	2,790
20	53	267	194	4,900	1,180	366	9,150	579	546	411	163	2,190
21	52	258	189	3,190	1,060	364	9,360	539	436	546	219	1,570
22	52	227	239	2,640	974	363	5,560	1,120	840	635	420	1,140
23	52	203	274	3,220	920	356	4,340	925	2,140	1,090	202	822
24	52	187	181	5,080	883	686	3,760	627	1,260	851	129	690
25	50	168	207	4,120	845	1,510	2,790	539	1,250	708	109	1,110
26	50	153	215	2,050	821	1,410	2,160	485	1,450	586	99	902
27	50	142	290	1,660	801	1,190	1,830	435	1,400	494	93	750
28	50	215	1,760	2,500	781	1,170	2,120	385	1,220	730	86	610
29	49	380	3,080	6,390	781	1,280	2,000	360	971	724	81	517
30	49	585	1,950	13,900	-----	1,120	1,580	360	740	424	77	443
31	49	-----	1,560	22,700	-----	912	-----	337	-----	342	74	-----
TOTAL	1,671	4,228	16,088	89,900	124,235	20,774	99,532	23,394	26,198	30,086	8,363	16,451
MEAN	53.9	141	519	2,868	4,437	670	3,284	755	873	971	270	548
MAX	62	585	3,080	22,700	19,600	1,510	9,150	1,410	2,220	4,300	853	2,790
MIN	49	46	181	300	781	356	764	337	337	342	74	62
CFSM	.04	.09	.34	1.90	2.93	.44	2.17	.50	.58	.64	.18	.36
IN.	.04	.10	.40	2.19	3.05	.51	2.42	.58	.64	.74	.21	.40

CAL YR 1968 TOTAL 468,392 MEAN 1,280 MAX 14,600 MIN 46 CFSM .85 IN 11.51
WTR YR 1969 TOTAL 458,920 MEAN 1,257 MAX 22,700 MIN 46 CFSM .83 IN 11.28

PEAK DISCHARGE (BASE, 6,500 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-31	1630	22.75	23,800	04-20	1945	19.32	9,660
02-11	0430	17.48	7,040				

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., Crawford County, 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.

PERIOD OF RECORD.--October 1940 to current year. Prior to October 1963, published as North Fork Embarras River near Oblong.

GAGE.--Water-stage recorder. Datum of gage is 456.19 ft above mean sea level. Prior to Dec. 11, 1940, nonrecording gage and Dec. 11, 1940, to Sept. 30, 1964, water-stage recorder at same site at datum 2.00 ft higher.

AVERAGE DISCHARGE.--29 years, 241 cfs (10.26 inches per year).

EXTREMES.--Current year: Maximum discharge, 12,800 cfs Jan. 30 (gage height, 20.75 ft); minimum daily, 3.6 cfs Nov. 2. Period of record: 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.

REVISIONS.--WSP 1725: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.2	3.8	126	350	3,980	82	124	187	32	38	361	14
2	4.4	3.6	148	200	1,460	79	136	144	38	34	1,280	14
3	4.8	4.8	173	150	834	73	153	118	27	31	323	30
4	4.8	4.8	124	120	561	68	178	99	26	30	96	30
5	4.6	5.2	88	90	345	65	962	85	24	28	63	42
6	4.8	5.2	66	70	537	63	1,690	77	23	26	49	40
7	7.4	6.9	49	60	1,100	61	729	68	22	26	43	26
8	6.9	6.0	33	55	1,110	63	292	65	50	178	38	19
9	7.4	5.7	23	50	2,200	74	820	77	35	934	36	17
10	7.5	5.5	24	45	2,680	90	2,140	78	30	1,200	208	14
11	6.4	6.7	22	42	1,290	73	1,630	77	25	588	108	12
12	5.6	6.7	21	40	450	63	417	70	100	201	51	11
13	5.2	6.6	20	40	294	59	261	62	240	95	37	11
14	5.6	6.2	20	40	210	56	1,060	66	463	62	31	11
15	5.7	6.7	20	40	170	54	2,220	64	1,270	46	30	10
16	5.9	9.1	20	43	148	51	1,810	62	723	38	29	9.3
17	5.4	37	21	229	134	50	525	300	181	34	31	36
18	5.2	70	22	1,490	121	50	2,100	500	108	30	98	290
19	5.0	50	24	2,020	112	51	6,800	350	89	26	39	164
20	5.3	54	26	1,570	106	51	4,310	250	73	24	30	56
21	5.8	30	28	570	99	49	1,400	200	52	700	47	37
22	5.7	27	54	456	97	47	424	600	361	379	36	28
23	6.0	20	102	996	100	46	280	250	934	761	22	22
24	6.0	17	111	1,940	102	224	210	150	344	378	19	19
25	5.7	14	93	1,570	97	1,180	172	80	469	650	18	57
26	5.2	14	58	355	93	698	148	60	365	162	17	49
27	5.1	12	98	252	89	297	140	50	160	414	16	33
28	4.7	37	1,170	1,030	85	208	555	45	73	745	14	26
29	4.5	150	1,750	4,430		268	666	39	53	158	14	21
30	4.3	229	1,150	9,860	-----	283	284	36	43	67	14	19
31	4.1	-----	573	9,330	-----	160	-----	34	-----	48	14	-----
TOTAL	169.2	854.5	6,257	36,533	19,604	4,736	32,636	4,343	6,433	9,131	3,212	1,167.3
MEAN	5.46	28.5	202	1,178	664	153	1,088	140	214	262	104	38.9
MAX	7.5	229	1,750	9,860	3,980	1,180	6,800	600	1,270	1,200	1,280	290
MIN	4.1	3.6	20	40	85	46	124	34	22	24	14	9.3
CFSM	.02	.09	.63	3.69	2.08	.48	3.41	.44	.67	.82	.32	.12
IN.	.02	.10	.73	4.26	2.17	.55	3.80	.51	.75	.95	.37	.14

CAL YR 1968 TOTAL 107,803.0 MEAN 295 MAX 2,120 MIN 3.6 CFSM .92 IN 12.57
WTR YR 1969 TOTAL 123,076.0 MEAN 337 MAX 9,860 MIN 3.6 CFSM 1.06 IN 14.35

PEAK DISCHARGE (BASE, 4,000 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
01-30	1230	20.75	12,800	04-19	0715	19.11	7,280

WABASH RIVER BASIN

3-3469. Prairie Creek Reservoir near Muncie, Ind.

LOCATION.--Lat 40°08'46", long 85°17'35", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 32, T. 20 N., R. 11 E., Delaware County, at intake tower of reservoir on Prairie Creek, 0.3 mile above mouth, and 5.8 miles southeast of Muncie.

DRAINAGE AREA.--16.8 sq mi.

PERIOD OF RECORD.--1962 to current year.

GAGE.--Water-stage recorder.

REMARKS.--Reservoir is formed by earth fill dam. Releases normally controlled by three 24-inch valves. Capacity at uncontrolled spillway elevation (990 ft) is 22,100 acre-ft. Reservoir is used for low-flow augmentation and recreation. Reservoir was filled for the first time in the spring of 1963.

COOPERATION.--Records furnished by Muncie Water Works Company.

Month-end elevation and contents, water year October 1968 to September 1969

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	989.5	21,220	-
Oct. 31.....	989.5	21,220	0
Nov. 30.....	989.8	21,600	+380
Dec. 31.....	990.0	21,850	+250
Calendar year 1968.....	-	-	-
Jan. 31.....	990.0	21,850	0
Feb. 28.....	-	-	-
Mar. 31.....	990.2	22,100	-
Apr. 30.....	990.2	22,100	0
May 31.....	990.2	22,100	0
June 30.....	990.1	21,980	-120
July 31.....	990.2	22,100	+120
Aug. 31.....	990.0	21,850	-250
Sept. 30.....	990.0	21,850	0
Water year 1968-69.....	-	-	+630

Diversion for municipal supply for city of Muncie

Water supply for the city of Muncie is from White River and augmented by Prairie Creek Reservoir. Water is diverted at Muncie Water Works on Burlington Drive, 3.0 miles upstream from White River at Muncie (3-3470) and returned at sewage disposal plant 3.9 mile downstream from station.

Diversion, monthly and yearly means in cfs-days

diversion, monthly and yearly means in cfs-days													
Oct.	Nov.	Dec.	1968 Cal. year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	1969 Water year
22.2	21.2	20.2	20.7	21.7	21.0	19.7	19.3	19.7	20.9	22.0	22.0	22.4	21.0

3-3470. White River at Muncie, Ind.

LOCATION.--Lat 40°12'15", long 85°23'14", SE $\frac{1}{4}$ NW $\frac{1}{4}$ Hackley Reserve, Delaware County, on right bank 200 ft downstream from Walnut Street Bridge in Muncie and 6 miles upstream from Bell Creek.

DRAINAGE AREA.--241 sq mi.

PERIOD OF RECORD.--November 1930 to current year. Prior to October 1948, published as West Fork White River at Muncie. Daily gage heights from October 1924 to December 1929 are available in the district office.

GAGE.--Water-stage recorder. Datum of gage is 917.10 ft above mean sea level (city of Muncie bench mark). See WSP 1705 for history of changes prior to Jan. 28, 1942. Jan. 28, 1942, to Apr. 27, 1964, water-stage recorder at present site at datum 3.00 ft higher.

AVERAGE DISCHARGE.--38 years (1931-69, 205 cfs (11.55 inches per year) (unadjusted).

EXTREMES.--Current year: Maximum discharge, 4,120 cfs Jan. 18 (gage height, 8.48 ft); minimum, 6.7 cfs Oct. 1, 2; minimum gage height, 2.66 ft Aug. 8.
Period of record: Maximum discharge, 14,300 cfs Apr. 21, 1964; maximum gage height, 21.07 ft Jan. 15, 1937, present datum; minimum discharge, 0.6 cfs Sept. 16, 1937; minimum daily, 1.1 cfs Sept. 16, 17, 23-25, 1954 and Oct. 10, 1956.
Maximum stage known, about 22.6 ft in March 1913, present datum (discharge, about 20,000 cfs).

REMARKS.--Records good except those for winter periods, which are fair. Records of diversion available since October 1937. Natural flow affected by regulation of Prairie Creek Reservoir (see sta 3-3469) and by diversion of municipal water supply by Muncie Water Works Co. (See p. 96).

REVISIONS (WATER YEARS).--WSP 1335: 1931-32(M), 1936(M), 1938, 1948. WSP 1435: 1955. WRD Ind. 1968: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

CAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.3	17	354	260	1,370	126	204	155	128	128	46	24
2	14	20	390	190	836	121	188	146	113	113	42	20
3	17	23	366	150	800	113	166	141	100	109	38	38
4	18	23	338	130	695	106	158	133	89	98	31	31
5	23	23	370	110	480	102	476	121	87	93	22	30
6	25	23	266	100	390	98	1,120	118	87	131	26	30
7	21	35	188	95	366	102	650	113	82	200	18	51
8	19	55	144	88	462	104	440	131	82	141	29	51
9	19	91	109	82	1,280	113	350	247	72	131	278	33
10	18	70	95	76	818	118	306	374	64	113	2,120	26
11	17	52	69	72	561	109	247	485	59	91	1,020	21
12	19	40	93	70	480	104	204	382	59	95	498	19
13	17	28	100	70	370	98	182	278	89	106	282	18
14	15	25	93	68	286	91	172	221	91	74	191	19
15	13	34	93	68	230	89	194	188	382	61	138	21
16	12	310	56	90	200	87	262	163	530	58	123	18
17	19	625	59	453	170	83	247	172	290	46	111	17
18	18	476	72	3,100	160	83	1,720	650	197	42	91	144
19	16	366	82	2,300	150	85	2,340	1,270	166	43	76	386
20	14	239	116	730	141	98	1,100	956	138	286	64	214
21	15	175	126	426	133	95	710	605	121	521	58	113
22	13	136	131	342	138	95	543	417	118	228	47	82
23	13	118	282	350	146	93	426	322	640	149	43	64
24	17	126	294	525	149	131	338	258	630	109	41	51
25	19	266	188	378	152	286	282	217	1,110	89	34	53
26	21	217	155	836	138	286	247	182	655	83	27	51
27	22	163	262	610	138	231	224	155	395	118	23	46
28	20	175	1,780	254	136	204	204	138	278	141	21	41
29	17	645	1,780	1,310	-----	262	188	126	214	76	19	42
30	17	485	800	3,150	-----	342	169	121	160	62	21	42
31	16	-----	480	3,110	-----	247	-----	113	-----	53	25	-----
TOTAL	531.3	5,081	9,731	19,593	11,375	4,302	14,057	9,098	7,226	3,788	5,603	1,796
MEAN	17.1	169	314	632	406	139	469	293	241	122	181	59.9
MAX	25	645	1,780	3,150	1,370	342	2,340	1,270	1,110	521	2,120	386
MIN	7.3	17	56	68	133	83	158	113	59	42	18	17
CFSM	.07	.70	1.30	2.62	1.69	.58	1.94	1.22	1.00	.51	.75	.25
IN.	.08	.78	1.50	3.02	1.76	.66	2.17	1.40	1.12	.58	.86	.28

CAL YR 1968 TOTAL 84,677.3 MEAN 231 MAX 3,280 MIN 7.3 CFSM .96 IN 13.07
WTR YR 1969 TOTAL 92,181.3 MEAN 253 MAX 3,150 MIN 7.3 CFSM 1.05 IN 14.22

PEAK DISCHARGE (BASE, 2,500 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-18	0930	8.48	4,120	04-19	0100	7.53	2,890
01-30	2145	8.24	3,810				

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., Delaware County, on left bank at downstream side of 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.

PERIOD OF RECORD.--October 1954 to current year.

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

AVERAGE DISCHARGE.--15 years, 33.3 cfs (12.74 inches per year).

EXTREMES.--Current year: Maximum discharge, 752 cfs Apr. 18 (gage height, 9.50 ft); minimum, 13 cfs Oct. 29-31, Nov. 1-3 (gage height, 2.31 ft).

Period of record: Maximum discharge, 1,780 cfs Apr. 21, 1964 (gage height, 13.96 ft); minimum, 2.8 cfs June 23, 1965 (gage height, 1.94 ft).

Maximum stage known about 15 ft, from information by local residents. Date unknown.

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

REVISIONS (WATER YEARS).--WSP 1909: 1955, 1957, 1961(m). WRD Ind. 1968: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

CAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	14	27	36	110	27	30	30	26	28	23	16
2	15	14	35	32	78	26	29	29	24	26	21	18
3	16	15	29	26	103	26	28	27	23	24	20	17
4	15	14	27	25	61	27	28	26	21	23	19	18
5	15	14	25	23	49	26	101	26	23	24	19	18
6	15	14	22	21	45	26	82	25	21	137	19	18
7	15	16	21	20	43	25	53	25	21	89	18	19
8	15	17	19	19	137	26	43	29	20	53	18	18
9	15	15	18	19	157	27	39	42	20	39	135	17
10	15	15	18	18	84	26	37	43	20	33	222	17
11	14	14	18	18	68	25	34	48	19	30	64	16
12	14	14	18	18	57	24	32	37	21	28	41	16
13	14	14	19	17	45	24	30	32	33	25	33	16
14	14	14	18	17	40	23	30	30	37	23	28	16
15	14	16	17	17	38	22	33	28	145	22	26	16
16	14	53	18	17	35	21	31	26	77	21	27	16
17	14	34	17	164	33	22	31	34	43	20	24	55
18	14	35	17	431	32	23	404	109	35	19	23	43
19	14	28	19	106	31	23	187	80	31	19	22	28
20	14	24	19	56	30	23	100	51	28	145	22	23
21	14	21	18	41	30	22	74	40	25	73	21	21
22	14	19	22	36	30	21	60	35	24	40	20	20
23	14	18	31	39	30	21	51	32	70	33	19	19
24	14	20	23	66	29	30	44	30	179	29	19	20
25	15	19	21	39	29	33	41	28	297	26	18	19
26	14	18	19	30	29	32	38	27	99	24	18	18
27	14	18	51	27	28	30	36	26	54	44	18	18
28	14	31	220	39	28	29	36	25	40	34	17	18
29	14	38	93	216	-----	38	34	24	33	27	16	18
30	13	28	54	443	-----	34	32	23	30	27	16	18
31	14	-----	43	206	-----	30	-----	24	-----	24	16	-----
TOTAL	444	624	1,016	2,282	1,509	812	1,828	1,091	1,539	1,209	1,022	610
MEAN	14.3	20.8	32.8	73.6	53.9	26.2	60.9	35.2	51.3	39.0	33.0	20.3
MAX	16	53	220	443	157	38	404	109	297	145	222	55
MIN	13	14	17	17	28	21	28	23	19	19	16	16
CFSM	.40	.59	.92	2.07	1.52	.74	1.72	.99	1.45	1.10	.93	.57
IN.	.47	.65	1.06	2.39	1.58	.85	1.92	1.14	1.61	1.27	1.07	.64

CAL YR 1968 TOTAL 13,461 MEAN 36.8 MAX 858 MIN 13 CFSM 1.04 IN 14.10
 WTR YR 1969 TOTAL 13,986 MEAN 38.3 MAX 443 MIN 13 CFSM 1.08 IN 14.65

PEAK DISCHARGE (BASE, 400 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
01-18	0200	8.57	611	04-18	1000	9.50	752
01-30	0430	8.57	611	06-24	2330	9.03	671
02-08	2130	6.95	415	08-09	2400	8.22	566

3-3480. White River at Anderson, Ind.

LOCATION.--Lat 40°06'22", long 85°40'20", in SW 1/4 sec. 7, T. 19 N., R. 8 E., Madison County, on left bank at municipal water-supply plant in Anderson, 1 mile upstream from Killbuck Creek.

DRAINAGE AREA.--406 sq mi.

PERIOD OF RECORD.--July 1925 to September 1926, October 1931 to current year. 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.--Nonrecording gage and concrete dam. Gage read twice daily. Datum of gage is 825.02 ft above mean sea level. Prior to May 12, 1934, nonrecording gage at site 250 ft upstream at same datum.

AVERAGE DISCHARGE.--39 years, 369 cfs (12.34 inches per year).

EXTREMES.--Current year: Maximum discharge, 4,540 cfs Jan. 31 (gage height, 11.68 ft); minimum, 61 cfs Oct. 22 (gage height, 7.40 ft).

Period of record: Maximum discharge, 18,700 cfs Apr. 21, 1964 (gage height, 19.41 ft); maximum gage height, 19.96 ft June 14, 1958; minimum discharge observed, 8.8 cfs Sept. 24, 1940 (gage height, 6.92 ft).

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

REMARKS.--Records fair except those for winter periods, which are poor. The City of Anderson diverts water for its municipal supply above the gage.

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

REVISIONS (WATER YEARS).--WSP 1335: 1932, 1934-35, 1936(M), 1938-40. WSP 1385: 1950(P). WRD Ind. 1968: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

CAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	76	67	508	494	4,270	238	313	291	208	260	181	109
2	76	67	452	438	2,600	228	313	258	208	238	181	109
3	76	79	593	400	1,690	218	313	258	218	208	190	208
4	76	79	480	360	1,240	208	313	258	208	199	147	123
5	76	95	438	330	1,380	208	386	238	172	199	131	163
6	82	98	432	300	900	208	1,450	248	172	355	123	123
7	88	102	319	280	650	208	981	238	190	578	123	343
8	80	228	290	260	621	208	714	258	163	418	116	190
9	80	228	250	250	1,800	208	536	291	163	286	392	181
10	95	139	210	230	1,510	208	452	466	139	269	2,330	155
11	88	139	176	220	1,030	208	399	508	139	248	1,900	123
12	82	102	176	210	882	190	325	508	139	228	909	116
13	88	106	176	208	714	180	291	480	208	208	564	109
14	82	106	176	208	564	170	291	386	228	199	412	100
15	82	109	159	208	466	170	313	373	480	172	313	131
16	85	367	159	218	386	160	313	269	1,110	163	258	172
17	85	754	159	325	361	163	466	258	578	155	258	881
18	79	682	159	2,900	337	163	1,920	543	412	139	228	1,020
19	79	529	159	3,470	313	190	3,260	1,500	313	139	194	578
20	73	380	163	1,820	313	181	1,900	1,260	280	666	194	373
21	73	319	181	786	280	181	1,200	819	269	1,070	194	280
22	61	238	186	607	280	163	900	564	258	578	190	228
23	64	218	274	550	280	163	714	452	473	373	190	208
24	64	190	269	900	280	181	578	386	1,040	280	147	238
25	64	172	380	810	269	258	494	325	2,110	218	139	208
26	64	280	340	508	269	412	425	291	920	208	131	172
27	64	233	349	550	258	355	399	258	640	302	131	181
28	64	218	2,050	621	248	313	373	258	470	373	123	191
29	64	349	2,740	1,740	-----	349	349	208	360	248	123	181
30	64	349	1,780	3,600	-----	349	337	199	300	239	123	163
31	67	-----	900	4,500	-----	313	-----	172	-----	238	95	-----
TOTAL	2,341	7,002	15,083	28,301	24,191	6,952	21,018	12,821	12,568	9,453	10,730	7,347
MEAN	75.5	233	487	913	864	224	701	414	419	305	346	245
MAX	95	754	2,740	4,500	4,270	412	3,260	1,500	2,110	1,070	2,330	1,020
MIN	61	67	159	208	248	160	291	172	139	139	95	100
CFSM	.19	.57	1.20	2.25	2.13	.55	1.73	1.02	1.03	.75	.85	.60
IN.	.21	.64	1.38	2.59	2.22	.64	1.93	1.17	1.15	.87	.98	.67

CAL YR 1968 TOTAL 153,073 MEAN 418 MAX 4,750 MIN 61 CFSM 1.03 IN 14.02
WTR YR 1969 TOTAL 157,807 MEAN 432 MAX 4,500 MIN 61 CFSM 1.06 IN 14.46

PEAK DISCHARGE (BASE, 2,700 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-28	2330	10.90	3,440	04-19	0700	10.90	3,440
01-19	0500	11.18	3,820	08-10	1800	10.40	2,790
01-31	1200	11.68	4,540				

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 Delaware 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.

PERIOD OF RECORD.--June 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage 837.00 ft above mean sea level.

EXTREMES.--Current year: Maximum discharge, 378 cfs Jan. 18; maximum gage height, 10.65 ft Jan. 30; minimum discharge, 3.1 cfs Oct. 22-24; minimum gage height, 3.62 ft Aug. 9, 30, 31, Sept. 1, 15, 16.
Period of record: Maximum discharge, 378 cfs Jan. 18, 1969; maximum gage height, 10.65 ft Jan. 30, 1969; minimum discharge, 3.1 cfs Oct. 22-24, 1968; minimum gage height, 3.62 ft Aug. 9, 30, 31, Sept. 1, 15, 16, 1969.

REMARKS.--Records fair.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

CAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.5	3.4	19	52	148	18	20	16	11	10	5.5	3.6
2	3.6	3.4	30	34	90	17	19	15	11	9.1	5.4	3.6
3	3.7	3.4	24	25	83	16	18	14	11	8.7	5.3	3.7
4	3.8	3.4	19	19	68	16	16	12	9.8	8.4	5.2	3.7
5	3.7	3.4	16	16	53	15	35	11	9.7	8.3	5.1	3.7
6	3.8	3.4	12	14	49	15	76	11	9.4	8.3	5.1	3.8
7	3.8	3.5	9.5	12	46	15	62	11	9.0	8.5	5.0	6.7
8	3.8	3.7	8.1	11	46	14	50	12	8.7	8.2	5.0	5.0
9	4.0	3.6	7.3	9.4	61	15	40	14	8.5	8.1	29	4.0
10	3.8	3.5	6.8	8.8	50	15	32	22	8.3	7.7	92	3.8
11	3.8	3.6	6.7	7.7	45	15	27	38	8.1	7.6	28	3.6
12	3.6	3.7	7.1	7.2	39	13	23	29	8.6	8.2	12	3.6
13	3.5	3.8	7.5	6.7	32	13	19	22	10	7.6	8.2	3.5
14	3.4	3.9	6.8	6.6	28	12	18	19	9.2	7.2	6.8	3.4
15	3.4	4.2	6.0	6.4	26	12	18	16	9.9	6.9	6.0	3.3
16	3.5	16	5.7	7.1	23	12	17	14	15	6.5	5.7	3.3
17	3.5	21	5.8	80	20	12	17	13	11	6.2	5.6	77
18	3.5	24	6.3	355	18	12	50	29	9.7	6.2	5.3	145
19	3.5	21	7.1	196	18	12	210	46	9.4	6.1	5.0	50
20	3.4	13	8.8	81	18	13	150	33	8.8	6.6	4.8	26
21	3.2	9.5	7.8	62	19	13	110	25	8.3	6.6	4.6	15
22	3.1	8.1	11	53	22	12	80	20	8.2	6.1	4.4	10
23	3.1	7.1	31	58	24	12	55	17	46	6.0	4.3	7.7
24	3.1	6.7	19	129	26	15	42	16	42	5.9	4.2	9.5
25	3.2	6.0	13	72	25	25	35	15	58	5.8	4.1	9.4
26	3.3	5.7	11	60	24	41	30	13	52	5.7	4.0	7.4
27	3.2	5.4	35	57	22	35	25	12	30	5.9	3.9	6.6
28	3.2	11	286	99	19	31	22	11	19	5.9	3.8	6.3
29	3.2	35	334	239	_____	26	19	11	14	5.7	3.7	5.8
30	3.2	24	145	300	_____	23	18	11	12	5.6	3.6	5.7
31	3.3	_____	74	275	_____	21	_____	11	_____	5.5	3.6	_____
TOTAL	107.7	267.4	1,186.3	2,358.9	1,142	536	1,353	559	485.6	219.1	294.2	443.7
MEAN	3.47	8.91	38.3	76.1	40.8	17.3	45.1	18.0	16.2	7.07	9.49	14.8
MAX	4.0	35	334	355	148	41	210	46	58	10	92	145
MIN	3.1	3.4	5.7	6.4	18	12	16	11	8.1	5.5	3.6	3.3
CFSM	.14	.35	1.50	2.98	1.60	.68	1.77	.71	.63	.28	.37	.58
IN.	.16	.39	1.73	3.44	1.67	.78	1.97	.82	.71	.32	.43	.65

CAL YR 1968 TOTAL MEAN MAX MIN CFSM IN
WTR YR 1969 TOTAL 8,952.9 MEAN 24.5 MAX 355 MIN 3.1 CFSM .96 IN 13.06

PEAK DISCHARGE (BASE, 250 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-29	0700	10.16	352	01-30	1915	10.65	312
01-18-	1845	10.40	378				

WABASH RIVER BASIN

101

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 Madison County Road 500 West at northeast edge of Frankton.

DRAINAGE AREA.--113 sq mi.

PERIOD OF RECORD.--May 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is 810.00 ft above mean sea level.

EXTREMES.--Current year: Maximum discharge, 1,700 cfs Jan. 18 (gage height, 10.41 ft); minimum, 9.6 cfs Oct. 16 (gage height, 3.25 ft).

Period of record: Maximum discharge, 1,700 cfs Jan. 18, 1969 (gage height, 10.41 ft); minimum, 9.6 cfs Oct. 16, 1968 (gage height, 3.25 ft).

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	12	82	190	784	62	61	56	30	36	15	11
2	12	13	124	150	482	55	65	53	31	31	15	12
3	12	12	103	96	343	52	57	49	28	28	13	18
4	12	13	81	78	247	50	52	47	26	27	13	15
5	12	14	66	64	197	47	146	46	26	25	13	15
6	12	13	51	56	179	47	280	45	25	32	13	15
7	12	13	43	50	165	48	198	44	25	30	12	19
8	12	14	37	45	167	47	147	76	24	35	12	18
9	12	14	33	42	219	52	121	89	23	40	158	14
10	13	14	30	39	180	55	105	131	22	34	769	12
11	12	14	29	37	158	52	84	269	22	29	215	12
12	12	14	29	35	139	47	68	200	22	40	82	12
13	11	15	34	34	110	44	61	137	25	29	48	12
14	11	15	32	33	92	41	58	106	23	24	34	11
15	11	16	32	32	81	39	61	84	31	21	28	11
16	11	60	26	33	75	37	56	71	33	20	24	13
17	11	74	25	301	66	37	55	62	27	18	25	305
18	12	90	26	1,370	58	38	604	66	25	17	25	621
19	12	72	30	794	57	40	778	74	25	16	22	258
20	12	52	35	315	55	43	460	66	24	66	19	125
21	12	40	32	209	55	43	280	57	21	43	17	75
22	12	35	39	168	65	39	206	51	20	27	16	52
23	12	30	132	181	73	39	161	47	171	22	15	40
24	12	28	92	551	76	63	129	45	167	21	16	37
25	15	26	104	408	78	137	107	43	197	19	14	33
26	13	24	71	211	77	142	93	39	207	18	14	29
27	13	23	138	127	74	113	82	36	110	26	14	26
28	12	39	925	358	67	98	79	35	66	22	13	24
29	12	171	1,080	1,210	-----	88	70	34	48	18	12	22
30	12	110	504	1,430	-----	74	61	31	41	16	12	21
31	12	-----	275	1,280	-----	62	-----	30	-----	15	11	-----
TOTAL	373	1,080	4,340	9,927	4,419	1,831	4,785	2,219	1,565	845	1,709	1,888
MEAN	12.0	36.0	140	320	158	59.1	160	71.6	52.2	27.3	55.1	62.9
MAX	15	171	1,080	1,430	784	142	778	269	207	66	769	621
MIN	11	12	25	32	55	37	52	30	20	15	11	11
CFSM	.11	.32	1.24	2.83	1.40	.52	1.41	.63	.46	.24	.49	.56
IN.	.12	.36	1.43	3.27	1.45	.60	1.57	.73	.52	.28	.56	.62

CAL YR 1968 TOTAL MEAN MAX MIN CFSM IN
WTR YR 1969 TOTAL 34,981 MEAN 95.8 MAX 1,430 MIN 11 CFSM .85 IN 11.51

PEAK DISCHARGE (BASE, 500 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-28	2330	9.45	1,350	04-18	2000	8.33	956
01-18	1145	10.41	1,700	08-10	1015	8.39	959
01-24	1700	7.58	725	09-18	0715	7.59	720
01-30	1515	9.94	1,520				

WABASH RIVER BASIN

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., Hamilton County, 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.

PERIOD OF RECORD.--May 1915 to September 1926, October 1928 to current year. 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 (levels by Corps of Engineers). Prior to July 1, 1922, nonrecording gage at bridge 2 miles downstream at different datum. July 1, 1922, to Nov. 21, 1933, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--52 years, 786 cfs (12.89 inches per year).

EXTREMES.--Current year: Maximum discharge, 10,300 cfs Jan. 31 (gage height, 13.58 ft); minimum, 125 cfs Oct. 2 (gage height, 4.04 ft).

Period of record: 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 discharge, 36 cfs Sept. 25, 1941.

REMARKS.--Records good except those for winter periods, which are fair. Records of water temperatures and suspended sediment loads for the current year are published in Part 2 of this report. See also period of record.

REVISIONS (WATER YEARS).--WSP 1335: 1915-16, 1918, 1920, 1921(M), 1922, 1927-28(M), 1929-30, 1933(M), 1936, 1941(M). WSP 1725: 1959(M). WRD Ind. 1968: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	136	142	874	1,250	7,880	592	710	627	376	468	314	185
2	136	139	844	920	3,920	557	688	592	372	405	292	218
3	151	142	970	680	2,780	532	642	562	344	368	273	262
4	157	163	826	580	2,540	517	592	537	325	333	259	252
5	139	154	688	520	1,820	487	814	517	318	429	256	262
6	145	148	662	480	1,540	482	2,160	502	310	1,290	248	228
7	145	182	532	450	1,420	482	2,040	492	318	1,100	242	422
8	145	245	422	410	1,430	487	1,380	617	297	886	242	356
9	142	235	368	370	2,560	527	1,090	632	273	767	510	280
10	145	235	340	350	2,570	527	940	773	273	677	3,310	228
11	142	208	323	350	1,860	527	796	1,100	259	502	3,750	208
12	139	192	329	340	1,550	482	672	1,160	256	440	1,650	198
13	136	179	333	330	1,240	454	602	922	299	418	1,010	188
14	133	166	325	320	1,020	445	577	761	380	368	710	179
15	133	172	292	310	892	418	592	662	454	321	557	172
16	133	418	256	310	808	405	587	587	1,160	288	468	188
17	130	880	259	900	755	401	627	547	880	266	449	1,400
18	136	1,040	280	2,000	704	401	2,970	677	602	252	397	2,820
19	154	874	306	6,870	652	405	6,280	1,390	487	239	364	2,000
20	142	662	314	3,700	627	414	4,990	1,740	427	511	333	1,090
21	130	502	329	1,760	612	418	2,780	1,260	368	1,340	303	738
22	130	401	360	1,340	617	401	1,960	922	329	928	280	567
23	136	348	597	1,310	642	388	1,520	744	903	637	259	477
24	136	318	773	2,470	652	477	1,200	647	1,620	542	238	440
25	148	292	650	2,140	672	716	1,040	562	2,230	497	231	422
26	163	414	600	1,200	667	952	916	507	2,210	388	225	372
27	145	376	1,070	946	652	886	826	459	1,300	596	215	340
28	136	368	3,320	1,830	622	778	796	427	892	682	208	321
29	139	704	5,610	4,970	-----	773	738	397	662	512	198	295
30	134	1,140	4,020	8,680	-----	808	688	376	537	398	195	288
31	139	-----	2,090	10,100	-----	808	-----	344	-----	337	188	-----
TOTAL	4,360	11,439	28,962	58,186	43,704	16,947	42,213	22,042	19,456	17,175	18,174	15,396
MEAN	141	381	934	1,877	1,561	547	1,407	711	649	554	586	513
MAX	163	1,140	5,610	10,100	7,880	952	6,280	1,740	2,230	1,340	3,750	2,820
MIN	130	139	256	310	612	388	577	344	256	239	188	172
CFSM	.17	.46	1.13	2.27	1.89	.66	1.70	.86	.78	.67	.71	.62
IN.	.20	.51	1.30	2.61	1.96	.76	1.90	.99	.87	.77	.82	.69

CAL YR 1968 TOTAL 285,622 MEAN 780 MAX 9,980 MIN 130 CFSM .94 IN 12.83
WTR YR 1969 TOTAL 298,054 MEAN 817 MAX 10,100 MIN 130 CFSM .99 IN 13.39

PEAK DISCHARGE (BASE, 5,500 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
12-29	1730	11.27	5,830	01-31	0830	13.58	10,300
01-19	1400	12.15	7,230	04-19	1730	11.66	6,380

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., Hamilton County, on right bank at downstream side of Logan Street Bridge in Noblesville, 1.5 miles upstream from Cicero Creek, 3.5 miles downstream from dam at Clare, and at mile 269.0.

DRAINAGE AREA.--858 sq mi.

PERIOD OF RECORD.--October 1946 to current year. Gage-height records collected at present site from December 1913 to December 1935, and after June 1951, and at a site 400 ft downstream January 1936 to May 1951, are contained in reports of U.S. Weather Bureau (revised). Prior to October 1948, published as West Fork White River at Noblesville.

GAGE.--Water-stage recorder. Datum of gage is 738.16 ft above mean sea level.

AVERAGE DISCHARGE.--23 years, 802 cfs (12.69 inches per year).

EXTREMES.--Current year: Maximum discharge, 10,800 cfs Jan. 31 (gage height, 15.26 ft); minimum, 134 cfs Oct. 1; minimum gage height, 4.18 ft Sept. 15.

Period of record: Maximum discharge, 26,800 cfs Apr. 22, 1964 (gage height, 21.31 ft); minimum, 0.9 cfs Sept. 24, 1964 (gage height, 3.45 ft); minimum daily discharge, 44 cfs Sept. 28, 1954.

Maximum stage known, 23.8 ft Mar. 25, 1913, present site and datum, from U.S. Weather Bureau records.

REMARKS.--Records good except those for winter periods, which are fair. Flow slightly regulated by powerplant above station. Records of water temperatures for the current year are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1335: 1949. WRD Ind. 1968: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	139	161	869	1,230	9,180	575	652	618	400	495	355	194
2	144	158	809	856	4,480	540	618	585	395	431	326	208
3	160	164	905	700	2,900	520	580	555	373	391	300	238
4	171	178	815	600	2,610	505	535	525	346	359	279	254
5	157	180	677	530	1,890	485	724	500	342	346	269	248
6	150	172	653	480	1,550	476	1,880	485	334	1,230	260	238
7	159	208	534	450	1,440	476	2,030	476	326	1,100	248	342
8	161	250	421	422	1,430	476	1,370	585	318	910	245	382
9	159	278	361	380	2,310	515	1,100	607	293	808	346	279
10	165	257	328	370	2,620	520	964	736	296	706	2,720	233
11	164	253	314	360	1,870	520	838	1,050	279	535	3,700	214
12	156	235	292	350	1,550	485	712	1,170	279	463	1,630	206
13	149	226	318	340	1,300	458	629	952	310	440	1,010	202
14	150	215	314	330	1,080	440	596	790	404	395	706	196
15	147	225	270	322	946	418	607	682	454	334	545	186
16	147	392	250	330	850	400	607	602	1,020	300	458	196
17	144	790	238	565	766	395	646	555	910	282	445	1,040
18	153	1,010	262	4,080	712	395	2,400	658	618	266	386	2,850
19	168	870	289	6,830	652	400	5,820	1,230	505	251	355	2,140
20	159	699	299	4,420	624	404	5,320	1,610	440	422	322	1,140
21	147	493	308	1,870	607	409	2,920	1,260	391	1,330	293	742
22	150	406	345	1,400	607	400	1,960	946	346	1,040	275	560
23	158	348	540	1,320	624	386	1,510	772	766	682	257	476
24	163	316	756	2,330	635	449	1,250	664	1,460	565	240	440
25	176	290	717	2,700	658	635	1,070	580	1,920	555	230	431
26	187	379	651	1,700	646	844	946	525	2,190	436	225	377
27	168	385	641	1,200	635	826	844	485	1,330	602	220	338
28	153	362	2,960	2,010	607	724	802	440	928	736	214	326
29	152	611	5,500	4,810	-----	700	742	418	694	560	208	300
30	168	1,100	4,380	8,900	-----	718	676	391	560	436	204	286
31	156	-----	2,200	10,600	-----	724	-----	364	-----	391	198	-----
TOTAL	4,880	11,611	28,216	62,785	45,779	16,218	41,348	21,816	19,227	17,797	17,469	15,262
MEAN	157	387	910	2,025	1,635	523	1,378	704	641	574	564	509
MAX	187	1,100	5,500	10,600	9,180	844	5,820	1,610	2,190	1,330	3,700	2,850
MIN	139	158	238	322	607	386	535	364	279	251	198	186
CFSM	.18	.45	1.06	2.36	1.91	.61	1.61	.82	.75	.67	.66	.59
IN.	.21	.50	1.22	2.72	1.98	.70	1.79	.95	.83	.77	.76	.66

CAL YR 1968 TOTAL 285,492 MEAN 780 MAX 9,450 MIN 136 CFSM .91 IN 12.37
WTR YR 1969 TOTAL 302,408 MEAN 829 MAX 10,600 MIN 139 CFSM .97 IN 13.11

PEAK DISCHARGE (BASE, 6,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-19	1700	12.76	7,000	04-19	2130	12.29	6,430
01-31	1400	15.26	10,800				

WABASH RIVER BASIN

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., Hamilton County, on left bank on downstream side of bridge, 1.5 miles east of Arcadia and 10 miles upstream from Morse Dam.

DRAINAGE AREA.--131 sq mi.

PERIOD OF RECORD.--October 1954 to current year.

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

AVERAGE DISCHARGE.--15 years, 113 cfs (11.71 inches per year).

EXTREMES.--Current year: Maximum discharge, 2,020 cfs Jan. 30 (gage height, 9.57 ft); minimum, 1.3 cfs Oct. 1 (gage height, 1.74 ft).

Period of record: 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 in January 1937), from information by local residents.

REMARKS.--Records fair except those for winter periods, which are poor.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	4.1	90	220	1,260	78	74	60	33	29	34	4.7
2	2.1	3.5	116	160	720	68	78	56	35	23	27	5.0
3	2.9	3.9	111	110	515	65	63	52	30	20	19	6.7
4	3.1	3.9	94	90	357	61	61	48	25	18	14	6.2
5	2.2	3.6	75	66	281	56	187	46	25	25	11	6.5
6	2.2	3.6	51	52	248	59	373	44	22	250	9.0	6.0
7	2.2	8.0	41	42	237	60	248	42	24	130	7.8	13
8	1.9	12	30	36	241	55	189	52	23	160	6.5	20
9	1.7	10	28	33	329	62	162	59	21	220	55	11
10	2.5	7.2	23	30	248	63	171	77	18	130	313	7.8
11	3.1	5.0	19	26	208	58	138	190	17	60	154	6.5
12	2.2	4.1	24	24	169	54	113	151	16	45	68	5.7
13	2.4	4.3	30	23	122	52	101	109	15	32	40	5.2
14	2.2	3.9	24	23	102	49	95	91	14	23	26	4.7
15	2.2	4.7	17	23	83	42	99	77	21	20	20	4.3
16	2.2	61	16	26	99	43	92	68	22	18	19	5.5
17	2.5	94	15	250	72	44	91	62	17	16	30	605
18	7.0	84	17	1,200	59	47	558	65	14	15	23	1,190
19	7.0	92	25	760	58	52	673	149	15	13	18	725
20	5.0	55	26	450	59	54	441	143	14	21	14	435
21	3.7	38	20	246	62	52	307	104	12	89	11	297
22	3.5	27	31	216	74	44	232	85	9.6	41	9.3	221
23	3.6	21	153	270	89	43	172	72	111	85	8.4	165
24	3.7	18	122	570	94	72	133	63	91	65	7.5	137
25	3.7	14	105	291	95	141	113	57	171	331	6.5	115
26	3.9	11	79	196	95	151	101	50	138	189	6.2	91
27	4.0	10	165	145	91	133	89	44	86	185	6.2	73
28	4.5	22	918	573	85	119	85	40	59	248	6.0	59
29	5.4	119	700	1,660	-----	105	73	38	44	138	5.7	47
30	5.2	111	450	1,960	-----	81	65	36	34	77	5.5	44
31	4.8	-----	320	1,900	-----	73	-----	33	-----	47	5.2	-----
TOTAL	104.2	862.8	3,935	11,671	6,152	2,136	5,377	2,263	1,176.6	2,763	985.8	4,322.8
MEAN	3.36	28.8	127	376	220	68.9	179	73.0	39.2	89.1	31.8	144
MAX	7.0	119	918	1,960	1,260	151	673	190	171	331	313	1,190
MIN	1.6	3.5	15	23	58	42	61	33	9.6	13	5.2	4.3
CFSM	.03	.22	.97	2.87	1.68	.53	1.37	.56	.30	.68	.24	1.10
IN.	.03	.24	1.12	3.31	1.75	.61	1.53	.64	.33	.78	.28	1.23
CAL YR 1968	TOTAL 35,837.6	MEAN 97.9	MAX 1,960	MIN 1.6	CFSM .75	IN 10.17						
WTR YR 1969	TOTAL 41,749.2	MEAN 114	MAX 1,960	MIN 1.6	CFSM .87	IN 11.85						

PEAK DISCHARGE (BASE, 1,100 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-28	1815	7.71	1,170	09-18	0430	7.91	1,240
01-30	2145	9.57	2,020				

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

LOCATION.--Lat 40°10'32", long 86°02'45", on line between secs. 14 and 23, T. 20 N., R. 4 E., Hamilton County, 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.

PERIOD OF RECORD.--October 1955 to current year.

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

AVERAGE DISCHARGE.--14 years, 37.7 cfs (12.67 inches per year).

EXTREMES.--Current year: Maximum discharge, 905 cfs Jan. 30 (gage height, 5.87 ft); minimum, 0.44 cfs Oct. 7, 8, 11, 12, 13 (gage height, 0.65 ft).
Period of record: Maximum discharge, 3,980 cfs June 28, 1957 (gage height, 8.69 ft); no flow at times during 1957, 1963, 1964, 1966-68.

REMARKS.--Records fair.

REVISIONS.--WRD Ind. 1968: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.63	.84	46	63	260	28	26	13	5.6	14	20	.75
2	.75	.96	68	45	184	25	27	13	5.6	10	15	.94
3	.67	.96	58	32	140	23	22	12	5.4	9.6	10	1.4
4	.59	.92	46	25	102	22	22	11	4.8	8.3	8.1	1.2
5	.51	.90	35	20	78	21	80	11	4.7	21	7.9	1.1
6	.51	.90	25	16	74	22	118	10	5.0	175	5.7	1.4
7	.44	2.0	19	14	76	22	80	9.9	4.5	83	4.8	1.4
8	.44	3.9	14	12	91	21	60	13	3.7	74	4.2	2.2
9	.51	3.3	12	11	138	23	55	14	3.5	107	22	1.4
10	.51	2.4	11	9.4	99	22	65	21	2.7	87	89	1.0
11	.44	1.6	10	9.0	83	21	49	39	2.6	55	38	.75
12	.44	1.4	12	8.6	68	19	40	27	2.0	36	17	.71
13	.44	1.2	14	8.2	53	18	34	20	2.1	23	11	.63
14	.45	1.0	13	8.0	43	17	31	22	2.9	15	7.6	.55
15	.90	1.4	11	8.0	35	15	35	14	4.2	10	6.1	.55
16	1.2	51	10	8.0	31	16	36	13	4.5	7.9	7.6	.67
17	1.7	66	9.9	129	26	16	35	12	3.7	5.9	7.6	219
18	1.7	64	10	581	22	20	202	14	3.2	5.0	6.1	286
19	1.5	56	11	190	22	23	230	15	3.2	4.2	5.0	138
20	1.3	34	13	106	21	24	141	12	2.9	32	4.0	80
21	.80	23	12	77	21	20	103	10	2.1	75	3.3	49
22	.80	17	27	72	25	17	77	9.6	1.9	45	2.5	33
23	.86	14	87	92	29	18	57	8.8	83	33	2.1	24
24	.94	12	52	214	30	41	42	8.3	89	71	1.8	24
25	1.0	9.9	36	101	32	74	34	8.1	160	249	1.6	23
26	1.0	8.6	30	68	33	66	28	7.2	89	108	1.5	18
27	1.1	8.1	103	46	32	54	23	6.5	50	146	1.2	15
28	1.3	17	539	308	31	47	22	6.1	34	129	1.1	13
29	1.3	72	306	717	-----	39	18	6.1	23	74	1.0	10
30	1.1	55	152	830	-----	30	15	5.9	18	45	.88	9.6
31	1.0	-----	99	504	-----	25	-----	5.6	-----	29	.83	-----
TOTAL	26.83	531.28	1,890.9	4,332.2	1,879	849	1,807	398.1	626.3	1,734.9	314.51	958.25
MEAN	.87	17.7	61.0	140	67.1	27.4	60.2	12.8	20.9	56.0	10.1	31.9
MAX	1.7	72	539	830	260	74	230	39	160	248	89	286
MIN	.44	.34	9.9	8.0	21	15	15	5.6	1.9	4.2	.83	.55
CFSM	.02	.44	1.51	3.46	1.66	.68	1.49	.32	.52	1.39	.25	.79
IN.	.02	.49	1.74	3.99	1.73	.78	1.66	.37	.58	1.60	.29	.88

CAL YR 1968 TOTAL 13,294.71 MEAN 36.3 MAX 960 MIN .44 CFSM .90 IN 12.24
WTR YR 1969 TOTAL 15,348.27 MEAN 42.1 MAX 830 MIN .44 CFSM 1.04 IN 14.13

PEAK DISCHARGE (BASE, 500 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
12-28	1830	5.15	645	01-30	1400	5.87	905
01-18	0400	5.69	826				

WABASH RIVER BASIN

3-3501. Hinkle Creek near Cicero, Ind.

LOCATION.--Lat 40°06'05", long 86°05'10", on line between secs. 9 and 16, T. 19 N., R. 4 E., Hamilton County, 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.

PERIOD OF RECORD.--October 1955 to current year.

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

AVERAGE DISCHARGE.--14 years. 18.6 cfs (13.65 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,210 cfs Jan. 17 (gage height, 5.35 ft); minimum, 0.28 cfs Sept. 15, 16; minimum gage height, 0.96 ft Sept. 13-16.

Period of record: 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.--Records fair.

REVISIONS.--WRD Ind. 1968: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

CAY	CCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.66	1.2	7.4	15	115	12	12	10	3.6	4.0	5.4	.94
2	.71	1.0	14	11	77	10	13	9.9	3.5	3.3	4.2	1.3
3	.78	1.2	9.1	8.0	62	10	11	8.1	3.4	3.1	3.4	1.1
4	.72	1.2	6.9	6.0	50	9.7	12	7.6	3.1	2.9	2.9	1.2
5	.72	1.1	6.7	4.8	32	8.6	62	7.4	3.9	3.1	2.5	1.3
6	.75	1.1	5.4	3.9	33	9.4	60	6.9	3.1	45	2.3	1.2
7	.86	2.4	4.3	3.4	32	9.0	37	6.7	2.7	22	2.1	1.2
8	.84	3.3	3.4	3.0	67	9.2	26	8.9	2.6	31	2.1	.99
9	.73	2.1	3.0	2.7	81	10	27	9.2	2.5	40	33	.65
10	.92	1.5	2.8	2.4	49	9.8	32	11	2.4	18	36	.55
11	1.0	1.3	2.9	2.4	41	9.9	22	14	2.3	11	8.8	.46
12	1.0	1.3	3.2	2.3	32	8.8	18	11	2.3	8.0	5.0	.44
13	1.0	1.2	5.5	2.3	25	8.7	17	9.0	2.6	5.7	3.7	.38
14	.94	1.2	5.3	2.3	20	8.0	16	8.5	2.5	4.2	2.9	.35
15	.99	2.1	4.4	2.4	19	7.8	20	7.5	3.9	3.5	2.8	.31
16	.99	15	3.9	2.7	18	8.5	19	6.5	2.9	3.1	3.3	.61
17	1.1	7.8	3.8	248	13	9.7	18	6.6	2.3	2.8	2.7	79
18	2.1	8.8	4.1	268	11	11	186	8.8	2.3	2.5	2.4	35
19	2.1	6.1	5.6	75	11	11	132	8.4	2.7	2.3	2.0	11
20	1.4	3.5	6.5	40	11	12	75	7.3	2.5	20	1.6	5.6
21	1.1	2.6	5.4	30	10	10	50	6.5	2.1	11	1.4	3.6
22	.93	2.3	15	28	12	8.6	35	6.2	2.3	21	1.2	2.7
23	1.1	1.8	30	39	13	9.0	25	5.5	28	7.5	1.1	2.5
24	1.1	1.8	17	108	13	24	19	5.3	38	46	.96	2.8
25	1.2	1.4	9.9	55	14	32	17	5.0	54	64	.89	2.2
26	1.2	1.3	7.8	46	14	26	15	4.4	22	20	.84	1.7
27	1.2	1.2	67	19	13	20	14	4.1	12	74	.83	1.8
28	1.3	5.0	261	226	13	18	14	4.0	7.9	43	.73	1.6
29	1.7	14	83	364	-----	16	12	3.8	5.7	18	.76	1.4
30	1.6	7.2	36	393	-----	13	11	3.4	4.8	10	.78	1.4
31	1.5	-----	22	186	-----	11	-----	3.4	-----	6.5	.81	-----
TOTAL	34.24	103.0	662.3	2,199.6	901	380.7	1,027	223.9	233.9	556.5	139.40	165.28
MEAN	1.10	3.43	21.4	71.0	32.2	12.3	34.2	7.22	7.80	18.0	4.50	5.51
MAX	2.1	15	261	393	115	32	186	14	54	74	36	79
MIN	.66	1.0	2.8	2.3	10	7.8	11	3.4	2.1	2.3	.73	.31
CFSM	.06	.19	1.15	3.84	1.74	.66	1.85	.39	.42	.97	.24	.30
IN.	.07	.21	1.33	4.42	1.81	.77	2.06	.45	.47	1.12	.28	.33

CAL YR 1968 TOTAL 5,908.60 MEAN 16.1 MAX 391 MIN .49 CFSM .87 IN 11.88

WTR YR 1969 TOTAL 6,626.82 MEAN 18.2 MAX 393 MIN .31 CFSM .98 IN 13.32

PEAK DISCHARGE (BASE, 400 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
12-28	0500	3.38	418	01-30	0015	3.89	654
01-17	2330	5.35	1,210				

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., Hamilton County, in intake structure of reservoir on Cicero Creek, 2.5 miles northwest of courthouse in Noblesville, and 4.7 miles above mouth.

DRAINAGE AREA.--214 sq mi.

PERIOD OF RECORD.--December 1955 to current year.

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

EXTREMES.--Current year: Maximum contents, 23,320 acre-ft Jan. 30 (elevation, 811.55 ft); minimum, 19,370 acre-ft Nov. 2, 3 (elevation, 808.60 ft).

Period of record: Maximum contents, 25,310 acre-ft June 28, 1957 (elevation, 812.95 ft); minimum, 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 1968 to September 1969

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	809.86	21,000	-
Oct. 31.....	808.81	19,640	-1,360
Nov. 30.....	810.15	21,380	+1,740
Dec. 31.....	810.45	21,800	+420
Calendar year 1968	-	-	+350
Jan. 31.....	811.54	23,290	+1,490
Feb. 28.....	810.19	21,440	-1,850
Mar. 31.....	810.17	21,410	-30
Apr. 30.....	810.16	21,390	-20
May 31.....	810.06	21,260	-130
June 30.....	810.10	21,310	+50
July 31.....	810.15	21,380	+70
Aug. 31.....	809.95	21,120	-260
Sept. 30.....	810.09	21,300	+180
Water year 1968-69	-	-	+300

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., Hamilton County, on right bank 150 ft downstream from bridge on State Highway 38, 1 mile northwest of Noblesville, 1.5 miles downstream from Hinkle Creek, and 2.5 miles upstream from mouth.

DRAINAGE AREA.--216 sq mi.

PERIOD OF RECORD.--July 1950 to current year.

GAGE.--Water-stage recorder. Datum of gage is 750.00 ft above mean sea level (levels by Indiana Flood Control and Water Resources Commission).

AVERAGE DISCHARGE.--19 years, 182 cfs (11.44 inches per year) (unadjusted).

EXTREMES.--Current year: Maximum discharge, 3,680 cfs Jan. 30 (gage height, 12.75 ft); minimum, 0.81 cfs Nov. 5, 6; minimum gage height, 3.60 ft Oct. 5, 6 and Sept. 12, 13.

Period of record: Maximum discharge, 9,800 cfs June 28, 1957 (gage height, 15.26 ft); minimum, 0.5 cfs Sept. 25, 1954.

REMARKS.--Records good except those for winter periods, which are fair. Flow regulated by Morse Reservoir (see sta 3-3503).

REVISIONS.--WRD Ind. 1968: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	64	147	278	1,960	128	105	100	38	49	68	2.0
2	2.6	2.0	165	200	1,170	113	133	94	46	36	53	2.4
3	11	3.7	176	150	819	106	113	94	31	28	37	2.4
4	2.6	3.7	147	135	684	105	100	97	20	22	28	1.9
5	1.3	1.1	141	110	441	90	197	96	35	36	22	1.7
6	1.1	.88	73	100	376	94	456	93	35	185	18	3.2
7	1.1	2.2	78	88	351	94	418	93	26	266	12	8.1
8	1.1	1.7	54	76	396	103	306	108	35	199	16	22
9	1.4	1.3	42	66	534	126	254	124	23	238	62	17
10	2.8	1.3	42	58	451	94	260	129	12	234	216	4.5
11	1.7	1.3	38	52	361	99	230	176	13	203	192	2.4
12	1.4	1.4	38	48	303	88	185	208	19	140	109	2.2
13	1.4	1.4	71	45	230	88	161	172	33	99	66	2.0
14	1.9	1.4	68	44	186	85	158	145	32	70	44	2.2
15	2.4	2.4	53	44	154	77	167	122	56	51	33	2.4
16	3.2	4.2	23	45	133	74	159	105	24	42	26	3.2
17	3.7	2.6	27	124	134	75	154	100	19	35	24	368
18	7.6	2.6	40	1,220	111	84	662	113	19	29	25	1,260
19	6.2	4.2	50	1,320	109	88	1,120	134	17	22	27	975
20	8.1	2.0	57	655	106	93	822	168	26	77	19	537
21	4.5	1.7	42	403	109	99	543	143	15	109	11	336
22	6.2	1.4	71	313	117	78	421	121	14	99	6.2	230
23	2.2	1.5	165	388	131	75	303	97	116	85	3.0	172
24	3.5	15	188	742	147	122	218	87	161	103	2.4	154
25	74	14	134	615	150	195	183	84	268	348	2.4	109
26	113	15	117	303	143	230	165	69	232	298	4.5	94
27	113	26	234	230	140	206	149	60	159	280	1.7	85
28	109	46	1,490	646	140	185	158	56	114	333	1.2	73
29	109	126	1,580	2,760	-----	188	129	51	77	226	1.2	50
30	111	150	851	3,530	-----	141	108	48	60	134	1.2	47
31	108	-----	522	3,080	-----	113	-----	37	-----	90	1.4	-----
TOTAL	818.6	501.58	6,924	17,868	10,086	3,536	8,537	3,324	1,775	4,166	1,133.2	4,569.6
MEAN	26.4	16.7	223	576	360	114	285	107	59.2	134	36.6	152
MAX	113	150	1,580	3,530	1,960	230	1,120	208	268	348	216	1,260
MIN	1.1	.98	23	44	106	74	100	37	12	22	1.2	1.7

CAL YR 1968 TOTAL 62,931.98

MEAN 172

MAX 3,960

MIN .88

WTR YR 1969 TOTAL 63,238.98

MEAN 173

MAX 3,530

MIN .88

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., Hamilton County, on left bank at downstream side of county road bridge, 1.4 miles upstream from mouth, and 1.4 miles southeast of Noblesville.

DRAINAGE AREA.--50.8 sq mi.

PERIOD OF RECORD.--July 1967 to current year.

GAGE.--Water-stage recorder. Datum of gage is 749.00 ft above mean sea level (State Highway Commission bench mark).

EXTREMES.--Current year: Maximum discharge, 848 cfs Jan. 30 (gage height, 5.87 ft); maximum gage height, 6.91 ft Jan. 18 (backwater from ice); minimum discharge, 6.0 cfs Oct. 2 (gage height, 1.79 ft).

Period of record: Maximum discharge, 1,010 cfs Feb. 2, 1968 (gage height, 6.64 ft); maximum gage height, 6.91 ft Jan. 18, 1969 (backwater from ice); minimum discharge, 3.8 cfs Sept. 1, 1967 (gage height, 1.62 ft).

REMARKS.--Records fair.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.4	8.3	41	76	273	31	32	35	24	18	22	8.7
2	6.2	8.3	66	56	182	29	33	33	27	16	18	8.7
3	6.8	8.7	56	46	167	28	30	32	23	16	16	9.0
4	7.0	9.2	47	37	128	25	28	31	20	14	14	9.2
5	6.6	8.7	34	32	105	23	104	29	23	14	13	10
6	6.6	8.5	25	27	99	24	151	27	22	49	12	11
7	7.2	11	19	24	97	24	105	26	18	75	12	12
8	7.2	16	16	22	149	24	83	36	18	51	11	10
9	6.8	12	14	19	220	29	72	47	17	54	108	9.2
10	7.2	9.6	13	17	148	30	66	47	16	55	176	8.7
11	7.2	8.7	12	15	130	32	53	53	16	56	86	8.5
12	7.0	8.3	13	14	106	29	44	43	16	34	47	8.5
13	7.4	8.7	13	13	83	27	41	37	16	23	27	8.5
14	7.4	8.1	14	12	69	25	39	35	16	16	20	8.3
15	7.4	9.0	12	11	61	23	41	32	27	14	17	8.3
16	7.4	53	12	11	55	22	38	29	32	12	16	8.5
17	7.2	66	12	150	48	22	42	34	21	11	16	132
18	8.1	62	12	550	42	21	339	97	19	11	15	158
19	9.0	43	13	198	38	21	319	102	18	10	14	85
20	8.7	26	16	115	36	21	188	75	18	69	13	47
21	8.7	19	15	90	36	21	141	60	16	56	12	30
22	8.5	16	21	79	35	21	111	51	16	24	11	23
23	8.5	14	73	83	36	21	90	43	30	18	11	19
24	9.0	13	50	228	35	28	77	39	36	20	10	19
25	8.7	12	35	110	35	36	66	37	94	31	9.8	18
26	8.7	10	26	84	35	34	59	32	71	18	5.8	16
27	8.5	9.6	60	67	33	32	51	28	43	157	9.6	14
28	8.3	14	304	199	32	31	47	27	32	128	9.4	14
29	8.3	63	198	598	-----	33	41	26	24	74	9.4	13
30	8.3	51	122	808	-----	34	37	25	20	42	9.2	12
31	8.3	-----	94	543	-----	32	-----	24	-----	27	8.7	-----
TOTAL	238.6	614.7	1,458	4,334	2,513	833	2,568	1,272	789	1,213	782.9	747.1
MEAN	7.70	20.5	47.0	140	89.8	26.9	85.6	41.0	26.3	39.1	25.3	24.9
MAX	9.0	66	304	808	273	36	339	102	94	157	176	158
MIN	6.2	8.1	12	11	32	21	28	24	16	10	8.7	8.3
CFSM	.15	.40	.93	2.75	1.77	.53	1.69	.81	.52	.77	.50	.49
IN.	.17	.45	1.07	3.17	1.84	.61	1.88	.93	.58	.89	.57	.55

CAL YR 1968 TOTAL 17,085.8 MEAN 46.7 MAX 838 MIN 6.0 CFSM .92 IN 12.51
 WTR YR 1969 TOTAL 17,363.3 MEAN 47.6 MAX 808 MIN 6.2 CFSM .94 IN 12.71

PEAK DISCHARGE (BASE, 200 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-28	1700	4.15	339	04-18	1900	4.53	432
01-18	----	----	650	07-27	0715	3.63	226
01-30	0600	5.87	848	08-10	0100	3.72	244
02-09	0200	3.82	266	09-17	2130	3.62	224

3-3510. White River near Nora, Ind.

LOCATION.--Lat 39°54'35", long 86°06'20", in sec. 20, T. 17 N., R. 4 E., Marion County, on downstream side of center pier of bridge on State Highway 100, 2 miles east of Nora, 14 miles upstream from Fall Creek and at mile 253.4.

DRAINAGE AREA.--1,219 sq mi.

PERIOD OF RECORD.--October 1929 to current year. Prior to April 1930 monthly discharge only, published in WSP 1305. Prior to October 1948, published as West Fork White River near Nora.

GAGE.--Water-stage recorder. Datum of gage is 710.94 ft above mean sea level (levels by Corps of Engineers). Oct. 26, 1929, to July 29, 1942, at site 200 ft downstream at same datum. Supplemental water-stage recorder 4.5 miles downstream.

AVERAGE DISCHARGE.--40 years, 1,058 cfs (11.79 inches per year).

EXTREMES.--Current year: Maximum discharge, 13,700 cfs Jan. 31 (gage height, 13.60 ft); minimum, 172 cfs Oct. 22 (gage height, 1.98 ft).

Period of record: Maximum discharge, 32,400 cfs May 19, 1943 (gage height, 18.19 ft); minimum, 40 cfs Sept. 2, 1934; minimum daily, 49 cfs Sept. 17, 1941.

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

REMARKS.--Records fair. Flow slightly regulated by Morse Reservoir. (See sta 3-3503.) Records of water temperatures for the current year are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1335: 1930-31, 1934(m), 1936, 1941, 1943, 1945, 1947-48. WRD Ind. 1968: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	178	317	1,260	2,160	12,900	868	968	834	460	590	468	231
2	181	244	1,180	1,700	8,090	829	931	756	450	507	420	237
3	193	221	1,220	1,300	4,760	764	901	715	444	452	372	265
4	218	221	1,210	1,100	4,000	748	835	675	436	420	340	307
5	211	221	1,020	960	3,110	720	1,070	640	432	386	317	304
6	205	218	868	880	2,470	704	2,320	620	428	1,040	300	297
7	202	230	775	820	2,000	670	3,090	600	420	1,500	287	323
8	202	268	615	760	2,000	665	2,170	645	424	1,640	275	472
9	202	275	492	720	3,000	736	1,650	762	400	1,410	571	379
10	205	275	443	660	3,600	742	1,440	810	382	1,110	2,510	317
11	199	275	409	620	3,000	736	1,230	1,110	372	914	4,390	278
12	196	268	385	580	2,430	698	991	1,440	362	726	2,570	256
13	190	254	425	530	1,990	670	846	1,330	393	630	1,360	246
14	184	240	452	490	1,610	645	786	977	460	548	900	237
15	175	237	405	450	1,350	615	780	804	590	468	700	225
16	175	500	345	430	1,180	590	756	738	949	412	610	237
17	178	1,100	306	1,470	1,080	570	762	690	1,260	376	552	905
18	187	1,200	328	5,840	1,010	560	3,280	840	888	348	507	3,780
19	196	1,100	385	8,070	919	565	6,710	1,200	720	323	468	3,680
20	193	937	417	6,350	877	575	7,100	1,960	625	489	428	2,220
21	181	720	421	3,050	847	585	4,620	1,750	570	1,180	386	1,360
22	172	590	488	2,140	847	585	3,170	1,210	525	1,320	354	970
23	175	470	781	1,900	859	585	2,380	970	750	822	334	768
24	181	400	1,100	3,340	868	610	1,850	922	1,700	675	314	700
25	196	365	940	3,830	901	805	1,520	732	2,320	864	294	640
26	310	365	860	2,150	913	1,050	1,300	650	3,230	822	278	566
27	328	470	1,130	1,490	913	1,170	1,130	585	2,110	780	278	512
28	310	460	4,060	2,020	883	1,070	1,030	548	1,330	720	271	480
29	310	700	6,600	6,980	-----	1,040	977	520	935	860	256	440
30	314	1,280	6,320	10,900	-----	1,010	894	498	710	700	243	400
31	314	-----	3,750	13,300	-----	1,010	-----	490	-----	534	240	-----
TOTAL	6,661	14,421	39,390	86,990	68,407	23,190	57,487	26,921	25,075	23,566	21,593	22,032
MEAN	215	481	1,271	2,806	2,443	748	1,916	868	836	760	697	734
MAX	328	1,280	6,600	13,300	12,900	1,170	7,100	1,960	3,230	1,640	4,350	3,780
MIN	172	218	306	430	847	560	756	490	362	323	240	225
CFSM	.18	.39	1.04	2.30	2.00	.61	1.57	.71	.69	.62	.57	.60
IN.	.20	.44	1.20	2.65	2.09	.71	1.75	.82	.77	.72	.66	.67

CAL YR 1968 TOTAL 391,974 MEAN 1,071 MAX 12,300 MIN 172 CFSM .88 IN 11.96
WTR YR 1969 TOTAL 415,733 MEAN 1,139 MAX 13,300 MIN 172 CFSM .93 IN 12.68

PEAK DISCHARGE (BASE, 7,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-29	2400	9.61	7,010	01-31	2300	13.60	13,700
01-19	0400	10.63	8,280	04-20	0400	9.96	7,430

3-3513.1. Crooked Creek at Indianapolis, Ind.

LOCATION.--Lat 39°49'47", long 86°12'22", in NW¼NW¼SE¼ sec. 16, T. 16 N., R. 3 E., Marion County, on left bank 150 ft downstream from 42nd Street Bridge in Indianapolis.

DRAINAGE AREA.--17.9 sq mi.

PERIOD OF RECORD.--June 1969 to current year.

GAGE.--Water-stage recorder. Datum of gage is 711.00 ft above mean sea level (Indiana State Highway Commission bench mark).

EXTREMES.--June to September: Maximum discharge, 301 cfs July 20 (gage height, 4.35 ft); minimum, 1.4 cfs June 6 (gage height, 2.31 ft).

REMARKS.--Records poor.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

CAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1									3.5	4.5	13	3.1
2									4.0	3.5	10	3.4
3									5.8	3.7	8.2	3.3
4									5.5	3.7	7.4	3.0
5									5.5	4.2	6.0	3.3
6									7.0	75	3.7	3.1
7									6.5	28	3.5	3.4
8									5.6	82	4.3	3.4
9									5.0	49	66	3.0
10									4.3	15	58	2.8
11									3.6	15	15	2.7
12									3.1	11	9.5	2.7
13									4.5	6.0	6.9	2.7
14									6.4	5.2	5.8	2.5
15									9.2	4.5	5.2	2.5
16									7.4	3.9	5.6	5.2
17									6.5	3.7	5.6	91
18									6.5	3.3	5.2	16
19									6.0	3.7	4.8	6.0
20									5.0	99	5.4	3.4
21									4.6	50	5.2	2.6
22									16	20	3.9	2.2
23									28	8.8	3.6	3.5
24									17	7.0	3.6	5.0
25									15	11	3.4	3.0
26									10	11	3.6	2.2
27									10	6.0	3.4	2.5
28									7.4	73	3.3	2.1
29									6.0	20	3.3	2.0
30									5.2	9.7	3.1	2.5
31										19	3.1	
TOTAL									230.1	659.4	288.6	194.1
MEAN									7.67	21.3	9.31	6.47
MAX									28	99	66	91
MIN									3.1	3.3	3.1	2.0
CFSM									.43	1.19	.52	.36
IN.									.48	1.37	.60	.40

PEAK DISCHARGE (BASE, 200 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
07-20	0830	4.35	301	08-09	2230	4.01	204

WABASH RIVER BASIN

3-3514. Sugar Creek near Middletown, Ind.

LOCATION.--Lat 40°02'27", long 85°31'30", In NE¼NW¼SE¼ sec. 5, T. 18 N., R. 9 E., on right bank 90 ft upstream from bridge on Henry County Road 750 N., 1 mile southeast of Middletown.

DRAINAGE AREA.--5.80 sq mi.

PERIOD OF RECORD.--October 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is 950.00 ft above mean sea level.

EXTREMES.--Current year: Maximum discharge, 211 cfs Jan. 29; maximum gage height, 5.22 ft June 13; minimum discharge, 0.07 cfs Oct. 1, 2 (gage height, 2.56 ft).

REMARKS.--Records fair except those for winter periods or periods of no gage-height record, which are poor.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

CAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.07	.22	3.0	5.0	28	2.2	3.6	2.5	2.2	2.2	3.0	.40
2	.08	.22	5.4	3.0	18	2.1	3.2	2.3	2.5	1.9	2.4	.44
3	.11	.30	3.8	2.0	22	2.0	2.7	2.2	2.6	1.6	2.0	.48
4	.10	.27	3.2	1.7	14	1.9	2.8	2.0	2.2	1.4	1.9	.44
5	.10	.24	2.6	1.4	8.5	1.8	20	1.9	1.3	2.0	1.6	.40
6	.11	.22	1.9	1.3	8.5	2.0	17	1.8	.90	24	1.5	.44
7	.11	.39	1.4	1.1	8.5	1.9	9.4	1.9	.73	16	1.4	.53
8	.11	.43	1.1	1.0	39	2.0	7.0	2.5	.63	8.8	1.2	.48
9	.11	.27	.97	.90	37	2.3	6.0	3.1	.63	5.4	45	.40
10	.12	.27	.85	.85	20	2.2	4.9	3.3	.53	6.2	44	.38
11	.11	.24	.85	.97	15	2.0	3.6	3.6	.48	3.9	12	.36
12	.11	.24	.97	.85	11	1.8	3.1	3.1	.68	3.1	5.8	.35
13	.11	.20	1.0	.85	6.4	1.7	3.0	2.6	69	2.2	3.6	.34
14	.11	.20	.70	.75	5.0	1.6	3.0	2.4	14	1.9	2.6	.34
15	.11	.42	.60	.72	4.5	1.4	3.2	2.2	80	1.5	2.2	.34
16	.12	2.8	.60	.80	4.1	1.4	3.0	2.0	28	1.4	2.8	2.0
17	.16	1.4	.60	15	3.2	1.4	3.1	2.4	9.8	1.2	2.2	10
18	.24	3.3	.70	74	3.0	1.4	102	10	6.0	1.1	1.9	15
19	.22	1.7	1.3	42	2.7	1.5	46	7.0	4.3	1.1	1.9	4.5
20	.22	.85	1.8	25	2.4	1.5	25	5.6	2.8	40	1.9	2.0
21	.22	.65	1.2	15	2.6	1.4	16	4.5	2.2	13	1.4	1.2
22	.22	.55	4.1	9.0	2.7	1.3	10	3.6	2.1	5.8	1.2	1.0
23	.24	.33	7.7	10	2.7	1.4	8.5	3.1	27	5.8	1.0	.88
24	.24	.43	3.6	28	2.6	3.3	5.8	2.7	64	11	.84	.80
25	.24	.51	2.4	19	2.6	3.7	4.7	2.4	56	13	.78	.76
26	.22	.43	2.2	12	2.6	3.7	4.1	2.2	21	5.1	.73	.70
27	.24	.36	6.0	7.0	2.4	3.4	3.7	2.0	8.2	41	.68	.66
28	.27	4.0	21	20	2.3	3.2	3.3	1.8	4.3	15	.53	.62
29	.24	5.2	25	91	-----	6.0	3.0	1.7	3.0	8.5	.53	.58
30	.24	2.7	13	123	-----	4.7	2.7	1.6	2.6	4.9	.48	.54
31	.22	-----	8.7	50	-----	3.7	-----	1.8	-----	3.6	.44	-----
TOTAL	5.12	29.34	128.24	563.19	281.3	71.9	333.4	91.8	419.68	253.6	149.51	47.36
MEAN	.17	.98	4.14	18.2	10.0	2.32	11.1	2.96	14.0	8.18	4.82	1.58
MAX	.27	5.2	25	123	39	6.0	102	10	80	41	45	15
MIN	.07	.20	.60	.72	2.3	1.3	2.7	1.6	.48	1.1	.44	.34
CFSM	.03	.17	.71	3.13	1.73	.40	1.92	.51	2.41	1.41	.83	.27
IN.	.03	.19	.82	3.61	1.80	.46	2.14	.59	2.69	1.63	.96	.30

CAL YR 1968 TOTAL
WTR YR 1969 TOTAL 2,374.44
PEAK DISCHARGE (BASE, 120 CFS)

MEAN 6.51
MAX 123
MIN .07
CFSM 1.12
IN 15.23
NOTE.--No gage-height record Dec. 27, 28,
Jan. 15-28, Apr. 25 to June 4,
Sept. 10-30.

DATE	TIME	G. HT.	DISCHARGE	DATE	TIME	G. HT.	DISCHARGE
01-29	2330	5.21	211	06-15	1130	5.19	202
04-18	0600	5.15	204	06-24	1930	5.14	195
06-13	0230	5.22	206	08-09	2000	5.03	181

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., Hamilton County, 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.

PERIOD OF RECORD.--July 1941 to current year.

GAGE.--Water-stage recorder. Datum of gage is 787.43 ft above mean sea level (levels by Indianapolis Water Co.). Prior to June 27, 1942, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--28 years, 162 cfs (13.02 inches per year).

EXTREMES.--Current year: Maximum discharge, 2,620 cfs Jan. 30 (gage height, 7.52 ft); minimum, 32 cfs Oct. 1, 2 (gage height, 1.52 ft).
Period of record: Maximum discharge, 8,750 cfs Apr. 21, 1964 (gage height, 9.88 ft); minimum observed, 5.0 cfs Sept. 23, 24, 1941 (gage height, 1.04 ft).
Maximum stage known, about 12 ft March 1913, (Information by local resident).

REMARKS.--Records good except those for winter periods, which are fair. Records of suspended sediment loads for the current year are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1435: 1949(P). WRD Ind. 1968: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	40	186	255	1,200	126	124	144	78	104	132	46
2	33	38	250	278	220	120	126	136	82	95	114	46
3	71	44	218	190	677	118	114	128	72	86	99	52
4	53	48	181	159	517	114	106	122	69	80	92	55
5	45	44	155	155	125	108	228	116	75	72	83	62
6	42	43	130	138	110	108	439	110	74	157	78	55
7	41	50	110	116	100	108	298	110	66	308	74	61
8	44	77	97	112	92	108	233	157	65	240	72	62
9	42	66	86	108	86	120	198	157	64	193	340	53
10	41	57	77	88	677	116	179	179	62	265	1,040	50
11	41	54	74	93	80	110	153	186	59	255	514	48
12	40	53	72	85	77	101	136	164	58	170	265	45
13	40	50	83	83	74	99	126	138	166	132	183	44
14	38	49	78	80	72	93	126	128	166	106	142	42
15	38	53	69	78	72	90	134	118	328	90	118	41
16	37	278	72	78	208	88	130	108	589	82	104	44
17	37	265	66	400	188	88	124	102	275	75	97	150
18	38	233	68	1,980	172	88	1,040	104	183	69	90	285
19	37	213	77	1,570	164	88	1,570	200	153	65	83	161
20	41	148	90	571	155	88	831	159	124	604	78	110
21	41	114	85	382	146	86	553	136	104	677	72	90
22	40	102	110	310	148	83	427	122	99	343	66	78
23	40	90	243	318	148	82	335	112	260	240	62	72
24	40	86	186	698	146	106	275	106	268	186	59	75
25	42	80	155	448	142	134	238	99	667	218	57	71
26	42	77	122	280	136	136	210	93	457	168	54	65
27	42	72	215	213	134	130	186	85	250	391	53	61
28	40	116	1,150	346	130	122	177	80	177	508	50	61
29	40	275	1,220	1,230	-----	138	159	77	136	288	49	57
30	40	215	595	2,250	-----	153	153	74	114	198	49	54
31	40	-----	421	2,260	-----	132	-----	72	-----	153	48	-----
TOTAL	1,278	3,130	6,741	15,352	6,196	3,381	9,128	3,822	5,340	6,618	4,417	2,196
PEAK	41.2	104	217	495	221	109	304	123	178	213	142	73.2
MAX	71	278	1,220	2,260	1,200	153	1,570	200	667	677	1,040	285
MIN	32	38	66	78	72	82	106	72	58	65	48	41
CFSM	.24	.62	1.29	2.93	1.31	.65	1.80	.73	1.05	1.26	.84	.43
IN.	.28	.69	1.48	3.38	1.36	.74	2.01	.84	1.18	1.46	.97	.48

CAL YR 1968 TOTAL 65,883 MEAN 180 MAX 2,550 MIN 32 CFSM 1.07 IN 14.50
WTR YR 1969 TOTAL 67,599 MEAN 185 MAX 2,260 MIN 32 CFSM 1.10 IN 14.88
PEAK DISCHARGE (BASE, 1,300 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-29	0515	5.96	1,430	01-30	2330	7.52	2,620
01-18	1600	7.10	2,210	04-19	0345	6.56	1,790

WABASH RIVER BASIN

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., Marion County, in intake structure of reservoir on Fall Creek, 2.6 miles northwest of Oaklandon, 17 miles above mouth.

DRAINAGE AREA.--215 sq mi.

PERIOD OF RECORD.--January 1943 to current year.

GAGE.--Water-stage recorder. Datum of gage is 755.00 ft above mean sea level.

EXTREMES.--Current year: Maximum contents, 24,430 acre-ft Jan. 31 (elevation, 786.62 ft); minimum, 19,840 acre-ft Nov. 6 (elevation, 784.25 ft).

Period of record: 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 1968 to September 1969

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	784.94	21,060	-
Oct. 31.....	784.36	20,040	-1,020
Nov. 30.....	785.39	21,920	+1,880
Dec. 31.....	785.58	22,290	+370
Calendar year 1968.....	-	-	+500
Jan. 31.....	786.62	24,430	+2,140
Feb. 28.....	785.25	21,650	-2,780
Mar. 31.....	785.25	21,650	0
Apr. 30.....	785.28	21,710	+60
May 31.....	785.23	21,610	-100
June 30.....	785.26	21,670	+60
July 31.....	785.34	21,820	+150
Aug. 31.....	785.15	21,460	-360
Sept. 30.....	785.15	21,460	0
Water year 1968-69.....	-	-	+400

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

Oct.	Nov.	Dec.	1968 Cal. year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	1969 Water year
114	106	108	129	98	112	121	118	132	145	152	148	140	124

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., Marion County, on left bank 100 ft upstream from Shafter Avenue Bridge in Fort Benjamin Harrison, 600 ft east of sewage disposal plant, and 0.3 mile upstream from mouth.

DRAINAGE AREA.--2.74 sq mi.

PERIOD OF RECORD.--March 1952 to September 1956, October 1957 to September 1969 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 749.10 ft above mean sea level.

AVERAGE DISCHARGE.--16 years, 5.28 cfs (26.17 inches per year).

EXTREMES.--Current year: Maximum discharge, 539 cfs July 22 (gage height, 5.67 ft); minimum daily, 2.0 cfs Oct. 13.

Period of record: Maximum discharge, 2,650 cfs May 28, 1956 (gage height, 9.32 ft); minimum, 0.1 cfs Aug. 1, 2, 1952, Oct. 29, 30, 1953.

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

REVISIONS.--WRD Ind. 1968: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	2.5	12	6.0	14	4.0	4.7	3.3	7.5	5.2	4.8	5.8
2	3.0	2.5	8.2	5.0	11	3.9	5.8	3.2	4.6	5.2	4.7	3.9
3	2.4	4.4	6.9	4.5	11	3.9	4.8	3.2	4.1	5.0	4.6	3.8
4	2.3	2.8	6.1	4.0	7.9	3.9	5.0	3.1	4.0	4.7	4.6	7.2
5	2.3	2.6	6.1	3.7	7.2	3.8	13	3.0	5.7	6.3	4.6	3.8
6	2.3	3.0	6.1	3.4	8.6	3.9	7.4	3.0	4.4	7.4	4.4	3.7
7	2.3	5.3	5.9	3.1	7.4	3.8	6.1	3.0	4.0	20	4.6	3.8
8	2.1	3.1	5.2	3.0	33	5.2	5.6	9.8	4.1	43	5.2	3.7
9	2.2	2.9	5.2	2.8	16	4.8	7.3	5.6	4.2	20	27	3.6
10	2.3	2.6	5.2	2.6	10	4.6	5.6	6.1	3.9	12	9.3	3.6
11	2.1	2.6	5.0	2.5	8.2	4.2	5.2	4.8	4.0	9.3	6.4	3.5
12	2.1	2.7	5.5	2.4	7.0	4.1	5.2	4.6	4.1	7.9	5.6	3.5
13	2.0	2.7	7.4	2.4	6.0	4.0	4.8	3.9	4.8	6.9	5.2	3.4
14	2.1	2.7	5.3	2.3	5.2	4.1	5.9	3.6	4.0	6.6	5.0	3.3
15	2.2	9.0	5.2	2.3	5.0	4.1	6.6	3.2	40	6.4	5.0	3.5
16	2.2	11	5.2	2.3	4.9	4.0	5.3	3.6	6.6	5.9	5.0	4.2
17	2.3	4.8	4.8	63	4.8	3.9	8.9	5.2	5.2	5.4	4.6	22
18	2.9	5.0	6.1	34	4.7	4.0	79	19	5.9	5.6	4.6	5.6
19	2.3	4.0	6.9	11	4.6	3.9	18	7.4	4.8	6.1	4.6	4.7
20	2.3	3.8	6.1	8.6	4.5	3.9	10	5.9	4.6	94	4.2	4.2
21	2.4	3.7	5.4	7.2	4.4	3.9	7.7	5.3	4.2	24	4.1	3.9
22	2.4	3.6	17	6.6	4.4	3.9	6.4	5.0	20	82	4.0	4.1
23	2.4	3.6	10	10	4.4	3.9	5.4	4.8	66	18	3.5	4.6
24	3.0	3.9	6.9	22	4.4	5.9	5.2	4.8	17	12	3.9	5.0
25	2.4	3.5	6.1	9.7	4.2	5.0	4.6	4.8	24	7.9	3.8	3.9
26	2.3	3.3	5.6	6.9	4.1	4.6	4.0	4.7	15	6.9	3.8	3.8
27	2.4	3.3	34	5.9	4.0	4.4	3.8	4.8	8.7	9.4	3.9	3.7
28	2.4	16	41	12	3.9	5.5	3.9	4.6	6.9	6.4	3.8	3.7
29	2.5	8.2	12	25	-----	6.0	3.5	4.6	5.6	5.4	3.7	3.8
30	2.5	6.4	10	68	-----	4.7	3.4	4.4	5.4	5.3	3.6	3.6
31	2.4	-----	7.6	23	-----	4.7	-----	7.5	-----	3.9	3.6	-----
TOTAL	73.2	135.4	280.0	365.2	214.8	134.5	262.1	159.8	303.3	464.1	166.1	140.9
MEAN	2.36	4.51	9.03	11.8	7.67	4.34	8.74	5.15	10.1	15.0	5.36	4.70
MAX	3.0	16	41	68	33	6.0	79	19	66	94	27	22
MIN	2.0	2.5	4.8	2.3	3.9	3.8	3.4	3.0	3.9	3.9	3.6	3.3
CFSM	.86	1.65	3.30	4.30	2.80	1.58	3.19	1.88	3.69	5.46	1.56	1.71
IN.	.99	1.84	3.80	4.96	2.92	1.83	3.56	2.17	4.12	6.30	2.25	1.91

CAL YR 1968 TOTAL 1,991.8 MEAN 5.44 MAX 55 MIN 1.9 CFSM 1.99 IN 27.03
 WTR YR 1969 TOTAL 2,699.4 MEAN 7.40 MAX 94 MIN 2.0 CFSM 2.70 IN 36.64

PEAK DISCHARGE (BASE, 350 CFS).--July 22 (1330) 539 cfs (5.67 ft).

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., Marion County, on left bank at downstream side of Lantern Road bridge at Indianapolis, 0.2 mile 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.

PERIOD OF RECORD.--May 1958 to current year.

GAGE.--Water-stage recorder. Datum of gage is 752.99 ft above mean sea level (levels by Indiana Flood Control and Water Resources Commission).

AVERAGE DISCHARGE.--11 years, 34.0 cfs (10.89 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,040 cfs Jan. 30 (gage height, 7.28 ft); minimum, 2.1 cfs Oct. 16; minimum gage height, 1.70 ft Oct. 4, 7.

Period of record: Maximum discharge, 2,010 cfs Apr. 21, 1964 (gage height, 8.37 ft); minimum, 0.2 cfs Aug. 24, 1962, several days in September and Oct. 3, 1963, Sept. 9, 10, 13, 14, 17, 18, 1966; minimum gage height, 1.48 ft Sept. 13, 14, 1966.

REMARKS.--Records good except those for winter periods, which are fair.

REVISIONS.--WRD Ind. 1968: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	3.3	40	57	365	25	24	26	15	11	15	9.9
2	3.5	3.3	57	43	206	24	25	25	18	9.9	13	10
3	3.8	4.1	48	34	190	23	23	24	17	9.6	8.3	9.9
4	2.9	4.1	40	29	127	22	22	22	15	9.3	7.3	11
5	2.5	3.8	33	25	93	21	105	21	13	9.1	7.0	11
6	2.5	3.8	27	23	82	22	175	20	13	21	9.1	9.6
7	2.5	5.2	23	21	84	22	99	19	12	27	9.1	9.9
8	2.4	7.9	20	19	172	21	67	32	11	71	8.8	10
9	2.4	4.7	17	18	305	24	52	38	9.9	57	104	7.5
10	2.5	4.0	16	17	172	24	46	35	8.0	32	294	9.3
11	2.4	3.7	15	16	134	24	38	33	8.0	24	74	5.2
12	2.3	3.5	15	15	102	22	33	30	11	19	43	7.3
13	2.3	3.3	21	14	66	22	29	26	13	12	34	6.6
14	2.3	3.3	20	13	51	20	29	24	13	14	27	7.0
15	2.2	4.9	17	13	43	19	30	22	26	13	23	5.8
16	2.1	57	16	14	40	19	28	20	21	11	22	8.0
17	2.2	51	15	115	36	19	35	20	17	10	21	36
18	2.2	44	15	534	33	19	448	51	15	9.3	19	50
19	2.4	38	18	365	31	19	382	61	15	8.8	18	29
20	2.4	30	19	128	29	18	196	43	14	58	16	18
21	2.4	24	18	76	27	17	124	35	13	30	15	14
22	2.7	20	30	60	28	16	89	31	19	24	15	12
23	3.0	18	65	73	28	17	61	27	36	20	15	11
24	3.0	16	46	329	27	21	48	25	25	16	14	13
25	3.1	14	32	176	27	25	41	23	35	21	13	12
26	3.0	13	29	76	27	24	39	21	26	15	9.6	11
27	3.1	12	69	47	26	23	35	19	20	50	12	6.0
28	3.1	30	377	196	25	23	34	19	16	50	9.9	5.6
29	3.3	53	263	584	-----	25	30	18	13	29	9.6	6.4
30	3.1	43	124	973	-----	26	28	16	12	21	11	12
31	3.1	-----	89	756	-----	25	-----	15	-----	17	9.9	-----
TOTAL	83.2	525.9	1,634	4,859	2,576	671	2,415	841	499.9	729.0	905.6	374.0
MEAN	2.68	17.5	52.7	157	92.3	21.6	80.5	27.1	16.7	23.5	29.2	12.5
MAX	3.8	57	377	973	365	26	448	61	36	71	294	50
MIN	2.1	3.3	15	13	25	16	22	15	8.0	8.8	7.0	5.2
CFSM	.06	.41	1.24	3.70	2.17	.51	1.90	.64	.39	.55	.69	.29
IN.	.07	.46	1.43	4.26	2.26	.59	2.12	.74	.44	.64	.79	.33

CAL YR 1968 TOTAL 14,415.2 MEAN 39.4 MAX 768 MIN 2.1 CFSM .93 IN 12.64
WTR YR 1969 TOTAL 16,113.6 MEAN 44.1 MAX 973 MIN 2.1 CFSM 1.04 IN 14.13

PEAK DISCHARGE (BASE, 450 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-18	1615	6.52	588	04-18	1645	6.25	495
01-30	1300	7.28	1,040				

3-3525. Fall Creek at Millersville, Ind.

LOCATION.--Lat 39°51'07", long 86°05'15", in NE $\frac{1}{4}$ sec. 9, T. 16 N., R. 4 E., Marion County, on right bank at downstream side of Emerson Way Bridge at Millersville, 8.6 miles upstream from mouth.

DRAINAGE AREA.--298 sq mi.

PERIOD OF RECORD.--October 1929 to current year. 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.--Water-stage recorder. Datum of gage is 722.16 ft above mean sea level. Prior to Oct. 21, 1961, water-stage recorder at site 500 ft downstream at same datum.

AVERAGE DISCHARGE.--40 years, 271 cfs (12.35 inches per year) (unadjusted).

EXTREMES.--Current year: Maximum discharge, 5,230 cfs Jan. 30 (gage height, 10.16 ft); minimum, 54 cfs Oct. 13, 14, 15; minimum gage height, 1.80 ft Sept. 11.

Period of record: Maximum discharge, 12,900 cfs May 28, 1956 (gage height, 13.53 ft); minimum, 7.0 cfs Sept. 28, 1941 (gage height, 0.84 ft).

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

REMARKS.--Records good except those for winter periods, which are fair. Flow regulated by Geist Reservoir (see sta 3-3517).

REVISIONS (WATER YEARS).--WSP 1335: 1930-31, 1933, 1936-38, 1942-43. WSP 1909: 1963. WRD Ind. 1968: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

CAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	79	411	718	2,910	220	223	223	117	166	203	71
2	72	78	495	520	1,580	184	235	203	126	137	166	78
3	80	87	460	394	1,220	178	233	190	106	118	134	84
4	66	80	383	320	985	178	205	184	98	114	117	94
5	65	67	292	280	758	170	404	174	106	107	105	108
6	64	67	271	260	670	172	682	166	107	499	96	88
7	64	83	223	230	654	168	602	154	105	606	88	85
8	63	85	182	210	847	182	481	248	96	793	87	87
9	63	77	162	190	1,580	213	411	283	110	887	283	75
10	65	73	146	170	1,330	180	373	310	65	550	1,370	68
11	63	70	137	160	970	184	325	319	66	499	1,080	64
12	61	63	132	150	779	176	271	292	76	397	626	67
13	56	61	160	140	622	166	240	248	95	286	394	67
14	55	59	158	130	495	152	238	223	149	208	274	67
15	56	71	146	130	422	150	263	198	495	160	213	65
16	64	190	125	143	373	147	253	172	646	134	182	73
17	65	193	123	408	328	144	255	164	509	125	160	292
18	67	301	134	2,290	295	147	1,600	331	349	114	147	415
19	65	322	152	2,740	274	147	2,280	401	255	107	141	334
20	64	277	147	1,480	258	137	1,730	325	205	1,130	132	200
21	64	205	162	788	245	135	1,070	268	156	1,680	122	141
22	65	176	228	594	240	143	797	213	154	1,290	109	117
23	64	146	415	578	240	135	618	176	495	1,070	95	102
24	65	144	425	1,370	238	176	495	164	542	602	87	118
25	65	131	316	1,070	233	190	415	149	770	460	84	107
26	66	120	248	614	228	215	355	141	770	355	80	91
27	78	116	446	450	223	215	307	126	538	439	80	86
28	79	184	1,740	690	220	200	301	116	387	714	73	81
29	79	471	1,910	2,020	-----	243	271	110	258	538	73	73
30	78	464	1,330	4,460	-----	240	245	109	190	369	80	73
31	78	-----	887	4,700	-----	238	-----	99	-----	263	73	-----
TOTAL	2,063	4,540	12,546	28,397	19,217	5,525	16,178	6,479	8,141	14,917	6,954	3,471
MEAN	66.5	151	405	916	686	178	539	209	271	481	224	116
MAX	80	471	1,910	4,700	2,910	243	2,280	401	770	1,680	1,370	415
MIN	55	59	123	130	220	135	205	99	65	107	73	64
CAL YR 1968	TOTAL 115,797		MEAN 316		MAX 4,230		MIN 55					
WTR YR 1969	TOTAL 128,428		MEAN 352		MAX 4,700		MIN 55					

3-3530, White River at Indianapolis, Ind.

LOCATION.--Lat 39°45'05", long 86°10'30", in NW¼ sec. 14, T. 15 N., R. 3 E., Marion County, on downstream side of second pier from right bank of Morris Street Bridge in Indianapolis, 2.5 miles downstream from Fall Creek, and at mile 235.8.

DRAINAGE AREA.--1,635 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 662.26 ft above mean sea level. March 1904 to July 1906, nonrecording gage at railroad bridge 0.8 mile upstream at datum approximately 2.9 ft higher. April 1930 to July 20, 1931, nonrecording gage at Indianapolis sanitation plant 2.5 miles downstream at datum 660 ft lower. July 21, 1931, to Mar. 2, 1932, nonrecording gage at present site at datum 660 ft lower.

AVERAGE DISCHARGE.--40 years (1904-5, 1930-69), 1,348 cfs (11.20 inches per year) (unadjusted).

EXTREMES.--Current year: Maximum discharge, 20,600 cfs Jan. 30 (gage height, 15.00 ft); minimum, 131 cfs Oct. 23 (gage height, 2.53 ft).

Period of record: Maximum discharge, 37,200 cfs May 18, 1943; maximum gage height, 21.57 ft Jan. 16, 1937; minimum discharge, 6.8 cfs Sept. 21, 1941.

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

REMARKS.--Record good except those for winter periods, which are fair. Natural flow affected by regulation of Morse Reservoir (see sta 3-3503) and Geist Reservoir (see sta 3-3517), and by diversion of municipal water supply by the Indianapolis Water Co. (see pg. 114).

REVISIONS (WATER YEARS).--WSP 1335: 1932-33, 1937, 1939-41. WSP 1505: 1938. WRD Ind. 1968: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

CAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	143	283	1,720	2,870	18,000	1,040	1,090	1,110	619	750	727	209
2	159	263	1,610	1,880	12,100	967	1,070	1,030	602	647	540	221
3	238	303	1,550	1,600	6,490	906	1,040	961	543	553	485	237
4	163	211	1,520	1,400	5,020	860	963	908	481	482	440	282
5	182	193	1,270	1,200	4,030	841	1,410	871	437	448	370	349
6	158	211	1,110	1,100	3,290	803	2,480	812	420	2,220	345	301
7	198	373	983	1,050	3,050	819	3,550	779	376	2,020	316	301
8	178	323	830	1,000	3,510	879	2,760	967	353	2,300	357	383
9	189	258	690	920	5,280	959	2,220	1,150	387	2,500	1,200	402
10	207	283	584	870	5,440	917	1,860	1,240	303	1,520	3,050	316
11	193	253	554	823	4,270	885	1,630	1,380	270	1,370	4,930	257
12	198	220	542	781	3,400	854	1,390	1,680	264	1,280	3,520	224
13	198	211	697	711	2,790	811	1,220	1,560	371	915	1,750	203
14	189	198	596	648	2,230	770	1,230	1,310	397	771	1,110	191
15	163	383	530	584	1,850	738	1,290	1,130	1,340	625	824	200
16	156	900	464	596	1,610	704	1,210	995	1,180	460	733	244
17	152	795	389	1,620	1,430	696	1,350	966	1,550	402	637	1,470
18	202	1,300	452	6,110	1,300	696	5,430	1,550	1,180	361	592	3,170
19	174	1,270	512	10,600	1,180	705	9,140	1,540	889	340	530	3,830
20	193	1,100	524	9,050	1,100	714	9,890	2,120	712	3,650	495	2,430
21	193	886	554	4,360	1,060	665	6,440	2,010	622	2,800	440	1,400
22	171	683	872	2,850	1,050	685	4,180	1,500	633	2,600	402	985
23	143	578	1,110	2,600	1,070	643	3,190	1,170	1,330	2,050	361	824
24	163	554	1,350	4,610	1,090	767	2,540	1,000	1,640	1,360	332	784
25	174	494	1,230	4,960	1,100	914	2,070	882	2,590	1,230	316	631
26	215	423	953	3,140	1,120	1,180	1,790	790	3,400	1,140	279	565
27	298	482	1,760	2,040	1,080	1,320	1,580	684	2,810	1,440	264	490
28	308	998	5,460	2,930	1,060	1,240	1,490	633	1,870	2,030	254	475
29	273	1,070	7,850	9,720	-----	1,240	1,350	588	1,210	1,640	241	445
30	278	1,420	7,910	18,900	-----	1,160	1,220	537	924	1,160	221	392
31	278	-----	4,960	20,200	-----	1,140	-----	575	-----	950	209	-----
TOTAL	6,167	16,919	51,136	121,723	96,000	27,518	78,073	34,428	29,703	42,014	26,270	22,211
MEAN	199	564	1,650	3,927	3,429	888	2,602	1,111	990	1,355	847	740
MAX	308	1,420	7,910	20,200	18,000	1,320	9,890	2,120	3,400	3,650	4,930	3,830
MIN	143	193	389	584	1,050	643	963	537	264	340	209	191
CFSM	.12	.34	1.01	2.40	2.10	.54	1.59	.68	.61	.83	.52	.45
IN.	.14	.38	1.16	2.77	2.18	.63	1.78	.78	.68	.96	.60	.51

CAL YR 1968 TOTAL 504,929 MEAN 1,380 MAX 17,000 MIN 143 CFSM .84 IN 11.49
 WTR YR 1969 TOTAL 552,162 MEAN 1,513 MAX 20,200 MIN 143 CFSM .93 IN 12.56

PEAK DISCHARGE (BASE, 8,500 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-29	2230	9.89	8,500	01-30	2315	15.00	20,600
01-19	1830	12.22	13,400	04-20	0315	10.88	10,500

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

LOCATION.--Lat 39°46'33", long 86°03'50", in NW¼ sec. 2, T. 15 N., R. 4 E., Marion County, on right bank 46 ft upstream from Arlington Avenue Bridge in Indianapolis, and 0.5 mile downstream from small left-bank tributary.

DRAINAGE AREA.--7.58 sq mi.

PERIOD OF RECORD.--December 1959 to current year.

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

AVERAGE DISCHARGE.--9 years (1960-69), 6.54 cfs (11.72 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,370 cfs July 20 (gage height, 9.44 ft); minimum, 0.17 cfs Sept. 14, 15 (gage height, 3.02 ft).

Period of record: Maximum discharge, 1,610 cfs Mar. 4, 1963 (gage height, 10.32 ft); no flow at times some years.

Flood in May 1956 reached a stage of 16.0 ft, from information by local resident.

REMARKS.--Records good except those for winter periods or no gage-height record, which are poor.

REVISIONS.--WRD Ind. 1968: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.70	.90	17	3.0	11	.22	1.9	1.1	6.9	1.7	1.7	.37
2	2.7	.90	7.5	1.9	8.4	.28	5.6	.90	2.9	1.4	1.5	.46
3	4.1	5.6	3.6	1.3	10	.43	2.5	.70	1.1	1.3	1.3	.44
4	.80	1.3	2.7	1.0	5.6	.70	3.4	.80	1.0	1.1	1.1	3.3
5	.61	.80	2.2	.98	3.4	.61	17	.61	2.7	3.6	1.3	.90
6	1.3	1.4	1.9	.90	8.9	.70	4.6	.70	.90	86	1.1	.56
7	.90	11	1.6	.82	5.6	.70	2.9	1.7	.61	10	1.0	.47
8	.61	4.1	1.4	.76	54	3.6	2.0	15	.70	32	7.5	.37
9	.61	1.3	1.4	.70	15	4.6	6.9	12	1.5	9.3	128	.34
10	1.6	.90	1.4	.66	6.2	1.7	3.4	9.3	1.0	5.3	14	.31
11	.70	.80	1.4	.62	4.9	1.5	1.9	4.6	1.0	6.0	2.9	.28
12	.70	1.0	1.6	.58	2.9	1.3	1.5	1.9	5.3	6.2	1.6	.35
13	.70	1.0	7.2	.56	1.7	1.1	1.4	1.4	7.2	7.9	1.3	.28
14	.61	1.0	1.7	.54	1.3	1.0	4.9	1.3	1.4	1.6	1.0	.22
15	.61	21	1.3	.52	.90	1.0	8.9	1.1	68	1.5	.94	.22
16	.70	36	1.1	5.3	.80	.90	3.4	1.0	4.6	1.4	1.3	1.7
17	.70	5.3	1.1	141	.80	1.0	7.2	5.3	1.7	1.4	.92	108
18	2.2	14	4.6	66	.70	1.1	148	52	4.3	1.5	1.0	3.8
19	.70	4.3	7.5	7.2	.61	2.0	15	7.2	1.9	1.5	1.1	1.1
20	.61	2.0	2.9	5.3	.61	1.3	5.9	3.6	1.3	420	.90	.70
21	.61	1.5	1.7	2.9	.52	1.6	3.8	2.2	1.0	16	.52	.52
22	.70	1.4	28	3.2	.61	1.5	3.2	1.9	43	52	.52	.43
23	.80	1.1	8.0	33	.70	1.6	2.2	1.5	29	12	.52	4.1
24	1.5	4.9	4.3	42	.70	7.5	1.7	1.3	15	8.9	.52	5.9
25	1.4	1.5	1.9	5.9	.70	5.9	1.5	1.1	14	4.6	.48	.90
26	.70	1.1	3.4	1.9	.52	3.8	1.1	1.0	4.6	2.9	.52	.70
27	.61	1.1	73	1.4	.43	2.7	.90	1.0	34	13	.46	.80
28	.80	34	103	66	.43	2.7	4.6	.90	11	4.5	.40	.61
29	.90	8.0	8.0	195	-----	7.5	1.4	.90	3.4	3.2	.48	.61
30	.80	3.2	6.5	160	-----	2.2	1.1	.70	3.1	2.0	.42	.61
31	.80	-----	4.5	23	-----	1.7	-----	1.7	-----	5.1	.37	-----
TOTAL	31.78	172.40	313.4	773.94	147.93	64.44	269.80	136.41	274.11	719.9	176.67	139.35
MEAN	1.03	5.75	10.1	25.0	5.28	2.08	8.99	4.40	9.14	23.2	5.70	4.65
MAX	4.1	36	103	195	54	7.5	148	52	68	420	128	108
MIN	.61	.80	1.1	.52	.43	.22	.90	.61	.61	1.1	.37	.22
CFSM	.14	.76	1.32	3.29	.70	.27	1.19	.58	1.21	3.06	.75	.61
IN.	.16	.85	1.54	3.80	.73	.32	1.32	.67	1.34	3.53	.87	.68

CAL YR 1968 TOTAL 2,997.28

MEAN 8.19

MAX 272

MIN .43

CFSM 1.08

IN 14.71

WTR YR 1969 TOTAL 3,270.13

MEAN 8.82

MAX 420

MIN .22

CFSM 1.16

IN 15.80

PEAK DISCHARGE (BASE, 450 CFS)

NOTE.--No gage-height record Aug. 15 to Sept. 11.

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-29	2145	6.51	628	07-22	1530	6.51	628
04-18	0400	6.29	572	08-09	1815	8.21	1,050
07-20	0915	9.44	1,370	09-17	1115	7.61	902

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., Marion County, on right bank at downstream side of Brookville Road Bridge in Indianapolis, 2.2 miles downstream from Arlington Avenue.

DRAINAGE AREA.--10.1 sq mi.

PERIOD OF RECORD.--November 1959 to current year.

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

AVERAGE DISCHARGE.--9 years (1960-69), 9.20 cfs (12.37 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,950 cfs July 20 (gage height, 9.07 ft); minimum, 0.15 cfs Oct. 20, 21, 22, 23, 27, 28 (gage height, 2.02 ft).

Period of record: Maximum discharge, 2,010 cfs Mar. 4, 1963 (gage height, 9.22 ft); no flow at times during most years.

REMARKS.--Records fair.

REVISIONS (WATER YEARS).--WSP 1909: 1960. WRD Ind. 1968: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.60	.44	5.2	4.2	18	1.7	4.6	2.0	16	5.5	6.7	1.1
2	1.9	.30	8.8	3.1	12	1.6	9.3	1.5	9.3	4.0	6.1	1.4
3	5.2	4.6	5.2	2.7	20	1.6	7.5	1.1	4.3	3.8	5.8	1.2
4	1.2	1.2	3.8	2.3	11	2.0	6.1	1.3	4.0	3.4	5.5	8.8
5	.93	.70	3.0	2.1	7.0	1.9	20	.80	8.8	7.9	5.5	2.4
6	1.2	1.1	2.4	2.0	13	2.2	12	1.1	4.0	152	5.8	1.6
7	1.6	7.5	2.0	1.9	11	2.2	7.5	2.0	3.6	21	4.0	1.3
8	1.2	4.0	1.9	1.8	90	3.6	5.2	8.4	4.0	49	15	1.1
9	.70	1.3	1.7	1.8	33	10	6.4	15	5.5	20	195	.93
10	1.3	.81	1.6	1.7	13	5.5	8.4	13	3.6	12	30	.81
11	.60	.81	1.6	1.7	9.3	3.8	6.1	6.7	3.8	16	7.5	.70
12	.60	.81	1.6	1.6	6.4	3.6	5.2	2.6	11	14	4.3	.81
13	.52	.81	4.0	1.6	4.2	3.2	4.3	1.7	15	8.4	3.2	.70
14	.52	.81	3.6	1.6	3.5	3.0	4.6	1.6	3.6	4.6	2.6	.60
15	.36	6.4	2.4	1.6	3.0	2.6	11	1.3	132	4.0	2.4	.52
16	.24	66	1.7	4.6	2.6	2.6	9.7	1.2	9.3	4.3	3.8	2.6
17	.30	11	1.4	238	2.2	2.8	8.8	7.9	3.0	4.0	2.4	164
18	1.4	16	2.2	94	2.2	2.8	243	74	4.9	4.0	2.6	12
19	.81	8.8	4.9	14	2.2	3.8	33	18	2.4	4.0	3.0	4.3
20	.19	4.3	4.6	9.3	1.9	3.4	15	12	1.2	646	2.8	3.4
21	.15	2.6	3.4	6.1	1.9	3.2	11	8.4	.93	31	1.4	2.6
22	.19	2.0	7.9	5.5	2.0	3.0	10	6.7	66	80	1.4	2.2
23	.19	1.7	11	63	2.6	3.2	7.9	5.8	49	25	1.4	8.4
24	.36	3.4	6.1	73	2.2	9.7	6.1	5.2	25	22	1.4	13
25	1.4	3.2	3.8	12	2.0	12	4.3	4.6	25	13	1.3	2.4
26	.52	2.2	3.0	4.0	2.0	7.9	4.0	3.8	13	10	1.4	1.9
27	.19	1.7	82	3.8	1.9	5.8	6.4	3.8	77	30	1.3	2.4
28	.30	43	168	106	1.7	4.9	9.3	3.6	21	15	1.1	2.4
29	.60	12	16	293	-----	14	5.2	3.6	8.8	11	1.3	2.2
30	.60	4.3	9.3	233	-----	7.0	2.8	3.4	8.4	7.5	1.2	2.6
31	.44	-----	6.0	44	-----	5.5	-----	6.4	-----	15	1.1	-----
TOTAL	26.31	213.79	380.1	1,235.0	281.8	140.1	494.7	228.50	543.43	1,247.4	328.3	250.37
MFAN	.85	7.13	12.3	39.8	10.1	4.52	16.5	7.37	18.1	40.2	10.6	8.35
MAX	5.2	66	168	293	90	14	243	74	132	646	195	164
MIN	.15	.30	1.4	1.6	1.7	1.6	2.8	.80	.93	3.4	1.1	.52
CFSM	.08	.71	1.21	3.94	1.00	.45	1.63	.73	1.79	3.98	1.05	.83
IN.	.10	.79	1.40	4.55	1.04	.52	1.82	.84	2.00	4.59	1.21	.92

CAL YR 1968 TOTAL 4,684.40 MEAN 12.8 MAX 364 MIN .15 CFSM 1.27 IN 17.25
WTR YR 1969 TOTAL 5,369.80 MEAN 14.7 MAX 646 MIN .15 CFSM 1.46 IN 19.77

PEAK DISCHARGE (BASE, 520 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-28	0115	5.22	571	06-15	0845	5.22	571	07-20	0915	9.07	1,950
01-17	1415	5.05	520	06-22	2315	5.86	739	07-22	1545	5.48	649
01-29	2115	6.10	835	06-27	1945	5.29	592	08-09	1900	7.12	1,190
04-18	0330	5.90	775	07-06	1145	5.59	682	09-17	1215	6.63	1,020

3-3532. Eagle Creek at Zionsville, Ind.

LOCATION.--Lat 39°56'56", long 86°15'22", in NW¹ sec. 1, T. 17 N., R. 2 E., Boone County, 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.

PERIOD OF RECORD.--October 1957 to current year.

GAGE.--Water-stage recorder. Datum of gage is 816.85 ft above mean sea level. Prior to Oct. 9, 1957, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--12 years, 92.5 cfs (12.20 inches per year).

EXTREMES.--Current year: Maximum discharge, 3,410 cfs Jan. 30 (gage height, 9.66 ft); minimum, 0.13 cfs Oct. 2 (gage height, 2.30 ft).

Period of record: 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.--Records fair except those for winter periods, which are poor. Records of suspended sediment loads for the current year are published in Part 2 of this report.

REVISIONS.--WRD Ind. 1968: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.28	1.6	65	150	578	57	60	36	13	15	55	1.9
2	.16	1.6	116	110	370	54	65	33	13	10	42	1.9
3	.34	2.3	89	80	290	51	60	29	14	7.5	33	1.9
4	.31	2.6	72	58	186	50	58	26	12	5.7	24	2.0
5	.22	2.4	56	45	144	47	235	23	13	4.6	17	2.1
6	.25	2.4	42	35	147	47	286	20	13	93	13	2.4
7	.37	5.7	34	30	174	48	174	19	10	111	9.9	2.3
8	.40	10	25	27	478	48	129	24	7.0	890	8.6	2.0
9	.47	9.9	20	25	510	54	123	27	5.7	745	405	1.9
10	.57	7.0	19	23	286	52	171	35	4.6	364	602	1.8
11	.57	5.0	17	21	219	51	121	40	4.0	231	177	1.6
12	.57	4.3	18	20	177	46	91	33	3.2	162	84	1.6
13	.63	3.7	34	19	118	46	80	26	3.7	111	54	1.6
14	.63	3.5	39	18	89	45	78	24	4.3	77	38	1.6
15	.57	3.7	29	18	75	44	131	23	8.6	58	27	1.4
16	.52	48	24	18	69	42	134	19	13	49	27	1.4
17	.43	87	23	405	60	46	109	20	7.5	41	32	302
18	2.1	84	22	1,610	56	50	517	27	4.6	34	24	332
19	2.4	80	28	450	52	55	526	30	4.3	28	18	121
20	2.3	54	33	249	51	56	290	29	4.0	90	13	63
21	2.1	39	29	180	50	54	195	28	3.0	162	8.6	45
22	1.9	32	46	165	52	47	139	28	3.2	174	7.5	33
23	1.6	24	192	231	57	46	98	26	56	144	5.7	25
24	1.4	20	111	616	59	72	77	26	86	155	5.0	34
25	1.6	16	86	272	59	147	66	26	283	342	4.0	33
26	1.4	13	82	180	60	123	59	25	113	162	3.7	24
27	1.6	12	370	140	59	100	52	22	62	405	3.2	18
28	1.6	25	2,030	1,150	58	91	50	20	50	318	2.8	15
29	1.6	121	716	2,010	-----	86	45	18	36	160	2.4	11
30	1.6	75	378	2,620	-----	70	40	16	29	93	2.3	9.9
31	1.6	-----	249	1,100	-----	62	-----	14	-----	69	2.1	-----
TOTAL	32.09	795.7	5,094	12,075	4,583	1,887	4,259	792	883.7	5,310.8	1,750.8	1,095.3
MEAN	1.04	26.5	164	390	164	60.9	142	25.5	29.5	171	56.5	36.5
MAX	2.4	121	2,030	2,620	578	147	526	40	283	890	602	332
MIN	.16	1.6	17	18	50	42	40	14	3.0	4.6	2.1	1.4
CFSM	.01	.26	1.60	3.78	1.59	.59	1.38	.25	.29	1.66	.55	.35
IN.	.01	.29	1.84	4.36	1.65	.68	1.54	.29	.32	1.92	.63	.40

CAL YR 1968 TOTAL 33,591.29 MEAN 91.8 MAX 2,300 MIN .16 CFSM .89 IN 12.13
WTR YR 1969 TOTAL 38,558.39 MEAN 106 MAX 2,620 MIN .16 CFSM 1.03 IN 13.92
PEAK DISCHARGE (BASE, 1,500 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-28	0930	8.78	2,590	01-30	0300	9.66	3,410
01-18	0600	8.45	2,360	07-08	1630	7.46	1,790

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., Marion County, 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.

PERIOD OF RECORD.--November 1938 to current year.

GAGE.--Water-stage recorder. Datum of gage is 699.00 ft above mean sea level. Aug. 8, 1957, to June 30, 1958, temporary site during reconstruction of bridge on Lynhurst Drive, a nonrecording gage on downstream side of 10th Street Bridge. Mar. 10, 1966, to Aug. 16, 1967, during channelization of Eagle Creek, a nonrecording gage on downstream side of Lynhurst Drive Bridge. Prior to Oct. 1, 1967, at datum 7.21 ft higher.

AVERAGE DISCHARGE.--30 years (1939-69) 146 cfs (11.39 inches per year).

EXTREMES.--Current year: Maximum discharge, about 1,700 cfs Jan. 30 (gage height unknown); minimum, 0.35 cfs Oct. 31 (gage height, 1.70 ft).

Period of record: 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 in March 1913 reached a stage of 23.2 ft, from information by local residents.

REMARKS.--Records good except those for winter periods, which are poor. Regulated by Eagle Creek Reservoir, 4.7 miles upstream.

REVISIONS (WATER YEARS).--WSP 953: 1939. WSP 1625: 1958. WRD Ind. 1968: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59	7.0	84	70	300	71	58	79	22	21	184	54
2	52	6.0	82	47	200	70	67	73	27	21	28	54
3	41	7.0	82	33	140	70	67	68	21	25	26	56
4	29	3.8	82	25	100	65	65	64	21	22	25	55
5	27	3.8	81	20	80	64	174	59	22	22	24	42
6	26	3.8	81	16	80	62	356	56	22	112	21	41
7	27	18	81	14	150	60	323	52	21	41	20	37
8	21	8.8	84	13	260	62	289	54	22	38	19	38
9	18	5.7	84	12	280	65	207	59	23	47	97	39
10	13	4.6	77	11	190	64	186	64	21	60	47	40
11	13	4.4	76	10	130	64	215	63	20	244	46	37
12	12	9.6	77	10	80	64	195	64	20	419	44	42
13	12	33	82	123	60	31	173	62	22	387	44	41
14	12	32	70	120	49	25	172	61	21	359	46	42
15	8.8	39	13	36	41	18	169	57	64	185	49	42
16	7.6	58	11	10	40	18	166	52	27	30	55	53
17	10	43	11	78	40	29	209	55	23	27	57	123
18	12	52	9.2	76	40	21	458	72	25	25	56	40
19	10	37	11	41	42	20	660	67	23	24	57	34
20	8.8	6.3	7.6	600	48	56	542	51	22	260	60	34
21	7.0	6.6	8.2	160	59	37	351	36	22	212	59	32
22	6.3	5.4	26	82	68	29	255	35	28	145	50	31
23	5.7	5.2	24	150	73	25	215	35	42	137	41	53
24	6.0	5.4	70	300	76	34	180	33	34	157	41	67
25	5.7	4.6	77	190	91	56	137	34	40	140	51	53
26	5.4	8.5	73	120	101	74	141	30	24	134	56	50
27	5.2	59	118	76	89	75	121	23	35	143	64	50
28	5.2	77	183	600	81	75	115	24	34	215	64	51
29	4.9	71	143	1,000	-----	83	95	23	23	395	60	50
30	1.9	71	146	1,300	-----	74	89	22	22	380	59	86
31	.70	-----	141	540	-----	64	-----	22	-----	360	56	-----
TOTAL	468.70	696.5	2,194.0	5,883	2,988	1,624	6,450	1,549	788	4,787	1,606	1,467
MEAN	15.1	23.2	70.8	190	107	52.4	215	50.0	26.3	154	51.8	48.9
MAX	59	77	183	1,300	300	83	660	79	64	419	184	123
MIN	.70	3.8	7.6	10	40	18	58	22	20	21	19	31

CAL YR 1968 TOTAL 47,022.10 MEAN 128 MAX 3,680 MIN .70
WTR YR 1969 TOTAL 30,500.70 MEAN 83.6 MAX 1,300 MIN .70

PEAK DISCHARGE (BASE, 2,000 CFS).--No peaks above base.

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

LOCATION.--Lat 39°47'15", long 86°13'41", in NW 1/4 sec. 32, T. 16 N., R. 3 E., Marion County, 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).

PERIOD OF RECORD.--October 1959 to current year. Figures of runoff June 1964 to September 1966 have been found to be in error and should not be used.

GAGE.--Water-stage recorder. Datum of gage is 710.82 ft above mean sea level (levels by Indiana Flood Control and Water Resources Commission).

AVERAGE DISCHARGE.--10 years, 16.5 cfs.

EXTREMES.--Current year: Maximum discharge, 1,240 cfs Jan. 29 (gage height, 5.82 ft); minimum, 0.84 cfs Oct. 6, 11; minimum gage height, 0.21 ft Sept. 1.

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

REMARKS.--Records fair.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

CAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	2.6	27	25	171	7.2	9.0	7.6	5.6	4.6	10	1.1
2	3.7	3.1	36	19	72	6.8	14	7.2	4.9	3.7	8.0	1.6
3	2.0	8.8	19	14	64	7.2	8.0	6.8	4.0	3.4	6.8	1.3
4	1.3	3.4	14	10	56	7.2	11	6.4	4.0	3.4	6.4	1.1
5	1.1	2.4	11	7.6	48	6.0	89	5.6	6.4	8.2	5.6	1.1
6	1.3	3.7	8.0	6.4	61	6.4	55	5.6	4.3	97	5.2	1.3
7	1.1	28	6.0	5.8	66	6.0	32	5.2	3.4	45	4.9	3.0
8	1.3	14	5.0	5.2	196	11	17	9.5	4.3	28	5.6	2.2
9	1.3	4.0	4.4	4.7	124	12	33	11	5.6	16	89	1.6
10	1.8	3.1	4.1	4.5	68	9.5	28	11	2.8	11	65	1.3
11	.98	2.6	4.7	4.2	61	8.5	17	7.2	2.4	30	15	1.3
12	1.1	2.6	6.0	3.9	43	7.6	13	6.4	2.2	34	8.5	1.3
13	1.3	2.2	21	3.8	28	7.2	11	5.2	4.0	11	6.0	1.8
14	1.1	2.0	11	3.7	20	6.8	28	5.2	2.6	7.6	5.2	1.1
15	1.3	12	9.0	3.7	16	6.8	46	5.2	86	6.4	4.6	1.1
16	1.4	56	7.4	4.3	13	6.4	28	4.6	16	5.2	6.0	9.2
17	1.8	16	7.2	100	12	6.4	32	8.2	7.2	4.6	4.3	129
18	6.5	19	7.2	232	10	6.8	303	31	7.6	4.3	4.3	22
19	2.6	11	9.0	65	9.5	6.8	105	13	5.6	4.9	3.7	7.2
20	1.8	6.0	8.0	38	8.5	6.8	57	7.6	4.0	291	3.1	4.9
21	1.6	4.6	5.6	32	9.0	6.0	41	5.6	2.8	72	3.1	3.4
22	1.6	4.0	31	30	9.0	4.9	30	5.2	38	33	2.6	2.8
23	1.6	3.4	43	57	9.5	5.6	22	5.2	85	19	2.4	4.0
24	2.4	4.0	21	154	10	15	16	4.6	23	22	2.4	6.8
25	2.2	3.1	19	54	8.5	12	13	4.3	35	19	2.2	3.4
26	1.8	2.8	19	30	8.5	10	11	4.0	14	10	2.4	2.8
27	2.0	2.6	103	23	8.0	9.0	11	4.0	36	39	1.8	3.1
28	1.6	40	429	158	7.6	9.8	12	4.3	22	27	1.8	2.8
29	1.8	35	81	530	-----	17	9.5	4.9	6.8	13	1.4	2.6
30	2.2	15	54	638	-----	9.5	8.5	5.6	5.2	8.5	1.3	3.1
31	2.2	-----	36	159	-----	8.5	-----	4.9	-----	17	1.1	-----
TOTAL	56.88	317.0	1,066.6	2,425.8	1,217.1	256.7	1,110.0	222.1	450.7	898.8	289.7	229.3
MEAN	1.83	10.6	34.4	78.3	43.5	8.28	37.0	7.16	15.0	29.0	9.35	7.64
MAX	6.5	56	429	638	196	17	303	31	86	291	89	129
MIN	.98	2.0	4.1	3.7	7.6	4.9	8.0	4.0	2.2	3.4	1.1	1.1

CAL YR 1968 TOTAL 7,296.44 MEAN 19.9 MAX 516 MIN .84
WTR YR 1969 TOTAL 8,540.68 MEAN 23.4 MAX 638 MIN .98

PEAK DISCHARGE (BASE, 450 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-28	0530	3.87	642	04-18	0830	3.46	545
01-29	2330	5.82	1,240	07-20	1030	4.35	797
02-08	1930	3.18	478				

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

LOCATION.--Lat 39°45'36", long 86°30'47", in ~~Mt. NE 1~~ sec. 10, T. 15 N., R. 1 W., Hendricks County, on upstream side of bridge on U.S. Highway 36, 0.1 mile east of city limits of Danville, 0.5 mile upstream from small left-bank tributary, and 7 miles west of Avon.

DRAINAGE AREA.--28.8 sq mi.

PERIOD OF RECORD.--May 1958 to current year.

GAGE.--Water-stage recorder. Datum of gage is 828.83 ft above mean sea level. Prior to Oct. 23, 1968, nonrecording gage and crest-stage gage at same site and datum.

AVERAGE DISCHARGE.--11 years, 24.4 cfs (11.51 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,320 cfs Jan. 29 (gage height, 7.98 ft); minimum, 0.08 cfs Oct. 6, 9, 25-30; minimum gage height, 0.92 ft Sept. 15, 16.

Period of record: Maximum discharge, 3,330 cfs July 14, 1962 (gage height, 11.32 ft); no flow at times some years.

Flood of June 28, 1957, reached a stage of 16.0 ft, from floodmark (discharge, 6,660 cfs, from contracted-opening measurement).

REMARKS.--Records fair.

REVISIONS.--WRD Ind. 1968: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.10	.16	66	70	144	18	21	15	5.2	9.0	15	.70
2	.30	.11	85	45	95	17	23	15	5.0	7.8	11	.89
3	.20	.70	50	35	83	17	21	14	4.8	7.2	9.0	.34
4	.15	.48	35	24	61	16	22	14	6.0	6.9	7.0	.79
5	.10	.30	26	19	49	15	91	13	5.4	6.3	6.0	.81
6	.08	.44	17	15	61	16	74	12	4.4	28	5.0	.70
7	.09	11	14	13	67	15	53	12	3.9	24	4.5	.74
8	.10	12	11	11	215	16	40	13	3.8	13	4.0	.71
9	.08	4.3	9.5	10	185	18	57	14	3.6	11	141	.64
10	.10	2.5	9.0	9.0	93	15	55	14	3.5	9.0	170	.52
11	.11	1.7	9.5	8.5	73	15	38	13	3.7	9.0	40	.49
12	.12	1.3	11	8.0	57	14	31	11	4.0	46	17	.55
13	.13	1.1	31	7.6	41	13	27	10	3.7	18	9.8	.51
14	.11	1.0	26	7.2	32	13	26	11	5.6	11	6.5	.42
15	.11	2.6	25	7.2	27	13	95	10	27	9.0	5.1	.47
16	.11	71	21	7.4	26	14	60	10	20	7.5	4.8	2.5
17	.12	40	13	220	21	15	45	13	12	6.4	4.2	104
18	.22	66	12	500	19	15	272	15	11	5.5	3.5	47
19	.21	35	17	310	18	15	146	11	9.8	5.0	3.0	14
20	.17	20	17	185	16	15	77	10	8.1	4.5	2.4	8.6
21	.13	14	13	105	17	14	55	9.5	6.9	38	1.9	6.1
22	.11	10	40	60	18	12	39	9.0	7.5	21	1.7	4.0
23	.12	9.4	68	37	19	13	29	8.5	20	40	1.5	4.5
24	.12	7.1	36	190	19	27	24	8.0	21	25	1.3	7.0
25	.18	5.5	36	65	19	31	22	7.0	34	15	1.2	5.2
26	.08	5.2	36	60	19	26	20	6.4	18	120	1.2	4.0
27	.08	4.5	270	53	19	24	18	6.0	23	38	1.0	3.3
28	.08	77	735	327	19	23	19	5.5	27	72	.97	2.9
29	.13	95	206	620	-----	29	16	5.4	13	140	.96	2.3
30	.09	47	111	730	-----	25	15	5.2	10	60	.81	2.3
31	.11	-----	85	269	-----	22	-----	5.4	-----	27	.73	-----
TOTAL	3.94	545.39	2,141.0	4,027.9	1,532	551	1,541	325.9	330.9	840.1	482.07	227.48
MEAN	.13	18.2	69.1	130	54.7	17.8	51.4	10.5	11.0	27.1	15.6	7.58
MAX	.30	95	735	730	215	31	272	15	34	140	170	104
MIN	.08	.11	9.0	7.2	16	12	15	5.2	3.5	4.5	.73	.42
CFSM	.004	.63	2.40	4.51	1.90	.62	1.78	.37	.38	.94	.54	.26
IN.	.005	.70	2.76	5.20	1.98	.71	1.99	.42	.43	1.08	.62	.29

CAL YR 1968 TOTAL 12,780.55 MEAN 34.9 MAX 1,080 MIN .08 CFSM 1.21 IN 16.50
WTR YR 1969 TOTAL 12,548.68 MEAN 34.4 MAX 735 MIN .08 CFSM 1.19 IN 16.20

PEAK DISCHARGE (BASE, 700 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
12-28	0100	7.34	1,130	01-29	2200	7.98	1,320

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., Morgan County, 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.

PERIOD OF RECORD.—August 1957 to current year.

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

AVERAGE DISCHARGE.—12 years, 193 cfs (12.36 inches per year).

EXTREMES.—Current year: discharge, 12,000 cfs July 20 (gage height, 21.51 ft); minimum observed, 8.6 cfs Oct. 1, 5 (gage height, 7.42 ft).

Period of record: Maximum discharge, 18,000 cfs Mar. 4, 1963 (gage height, 22.95 ft); minimum, 1.8 cfs Sept. 3, 1966; minimum gage height, 7.42 ft Oct. 1, 5, 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.—Records fair.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

JAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.2	10	196	296	1,310	128	140	125	42	73	124	42
2	9.2	9.8	335	242	888	119	154	118	43	61	106	42
3	10	14	281	204	929	113	143	109	41	55	92	41
4	9.8	16	213	130	551	110	137	103	39	50	83	40
5	9.2	15	164	115	467	104	578	97	38	49	74	39
6	9.2	21	127	100	488	103	596	94	36	321	68	38
7	10	45	100	95	594	104	350	89	27	325	62	39
8	9.8	60	86	88	1,500	106	268	102	32	174	57	46
9	9.9	43	73	76	1,690	128	283	100	27	125	169	38
10	11	35	67	70	792	116	368	106	28	95	964	35
11	10	27	60	65	581	107	265	109	28	136	255	35
12	10	23	63	60	467	100	214	94	27	220	148	33
13	10	20	127	57	330	97	188	84	31	148	106	32
14	10	18	151	54	265	97	240	79	31	91	89	31
15	9.8	27	110	52	230	95	668	74	234	71	80	32
16	9.8	52	97	56	206	94	491	68	200	61	79	34
17	10	192	110	1,090	196	96	338	69	104	54	80	210
18	24	175	90	3,790	170	100	2,170	119	80	48	76	343
19	19	173	103	942	157	106	1,240	118	76	46	71	134
20	15	122	113	478	148	103	640	91	64	5,200	65	78
21	14	93	99	346	142	97	443	78	54	1,340	57	61
22	12	81	148	283	143	90	333	70	51	533	56	48
23	11	72	398	420	148	88	263	67	103	458	60	43
24	11	69	192	1,230	145	131	218	62	182	804	61	65
25	11	58	146	398	145	184	192	59	345	964	58	57
26	10	48	139	226	142	164	174	55	212	410	56	46
27	10	45	924	192	137	149	160	52	208	422	53	39
28	10	118	4,620	1,620	131	140	163	49	323	530	52	36
29	10	392	1,540	4,390	-----	190	148	47	133	278	48	32
30	9.8	332	770	6,650	-----	182	136	45	90	212	45	30
31	9.8	-----	578	2,380	-----	148	-----	43	-----	160	43	-----
TOTAL	343.4	2,415.8	12,220	26,185	12,981	3,689	11,701	2,575	2,929	13,514	3,437	1,819
MEAN	11.1	80.5	394	845	464	119	390	83.1	97.6	436	111	60.6
MAX	24	392	4,620	6,650	1,690	190	2,170	125	345	5,200	964	343
MIN	9.2	9.8	60	52	131	88	136	43	27	46	43	30
CFSM	.05	.38	1.86	3.98	2.19	.56	1.84	.39	.46	2.06	.52	.29
IN.	.06	.42	2.14	4.59	2.28	.55	2.05	.45	.51	2.37	.60	.32
CAL YR 1968	TOTAL	84,934.2	MEAN	232	MAX	5,540	MIN	8.8	CFSM	1.09	IN	14.90
WTR YR 1969	TOTAL	93,809.2	MEAN	257	MAX	6,650	MIN	9.2	CFSM	1.21	IN	16.46

PEAK DISCHARGE (BASE, 3,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-28	0730	18.59	5,850	02-08	2015	15.81	3,670
01-18	0600	17.82	5,080	04-18	0745	16.02	3,810
01-29	0830	17.37	4,760	07-20	1900	21.51	12,000
01-30	0445	20.56	9,450				

WABASH RIVER BASIN

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., Morgan County, on right bank 0.4 mile downstream from bridge on Blue Bluff Road, 1 mile south of Centerton, 1.1 miles downstream from White Lick Creek, and at mile 202.6.

DRAINAGE AREA.--2,444 sq mi.

PERIOD OF RECORD.--July 1925 to September 1930 (gage height only), October 1930 to March 1932, October 1946 to current year. Monthly discharge only for October and November 1946, published in WSP 1305. Published as West Fork White River at Martinsville prior to March 1932, and as West Fork White River near Centerton October 1946 to September 1948.

GAGE.--Water-stage recorder. Datum of gage is 595.44 ft above mean sea level (Corps of Engineers bench mark), levels by Indianapolis Power and Light Co. See WSP 1725 for history of changes prior to July 1953.

AVERAGE DISCHARGE.--24 years (1930-31, 1946-69), 2,289 cfs (12.72 inches per year).

EXTREMES.--Current year: Maximum discharge, 36,100 cfs Jan. 30 (gage height, 16.01 ft); minimum, 376 cfs Oct. 27; minimum gage height, 0.42 ft Sept. 14, 15.

Period of record: Maximum discharge, 50,500 cfs Apr. 22, 1964 (gage height, 17.57 ft); minimum, 131 cfs Nov. 15, 1930; minimum gage-height, 0.42 ft Sept. 14, 15, 1969.

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.--Records good. Flow slightly regulated by Morse Reservoir (see sta 3-3503) and Geist Reservoir (see sta 3-3517). Records of water temperature for current year are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1335: 1948-49. WSP 1909: 1931(M). WRD Ind. 1968: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	474	514	2,530	5,950	28,070	1,900	1,970	2,030	1,030	1,480	2,340	550
2	498	530	3,250	3,910	23,700	1,800	1,850	1,870	1,130	1,250	1,570	566
3	449	537	2,750	3,320	15,500	1,690	1,900	1,740	1,040	1,130	1,360	606
4	544	600	2,530	2,770	10,570	1,660	1,760	1,620	963	972	1,250	606
5	474	495	2,760	2,120	8,070	1,590	2,030	1,530	927	844	1,130	686
6	446	467	1,860	1,970	6,580	1,550	3,670	1,490	927	2,300	1,040	702
7	445	607	1,670	1,890	6,070	1,570	4,510	1,420	920	4,850	974	622
8	453	798	1,500	1,800	6,720	1,510	4,990	1,460	844	3,190	934	678
9	446	677	1,310	1,750	10,300	1,580	4,150	1,570	795	3,980	1,150	790
10	474	593	1,210	1,610	9,330	1,670	3,790	1,860	804	3,140	4,680	726
11	453	572	1,090	1,490	8,450	1,600	3,250	1,940	764	2,410	5,220	638
12	439	579	1,050	1,380	6,800	1,560	2,810	2,070	705	3,000	5,650	558
13	425	551	1,230	1,310	5,560	1,490	2,390	2,290	684	2,400	3,610	518
14	418	537	1,260	1,230	4,640	1,450	2,220	2,030	717	1,860	2,420	482
15	425	554	1,170	1,170	3,920	1,390	3,140	1,800	1,080	1,630	1,840	461
16	411	1,650	981	1,100	3,420	1,310	3,260	1,620	2,330	1,290	1,590	499
17	411	1,460	936	3,230	3,020	1,270	2,750	1,480	1,920	1,030	1,460	1,170
18	425	1,670	945	11,900	2,740	1,300	9,080	2,130	1,910	918	1,330	3,390
19	495	2,000	1,030	10,200	2,480	1,280	10,500	2,540	1,590	860	1,270	4,520
20	418	1,770	1,070	11,200	2,230	1,280	11,200	2,530	1,290	6,790	1,170	4,000
21	418	1,570	1,030	9,920	2,090	1,290	11,200	3,000	1,170	15,600	1,090	2,630
22	446	1,250	1,350	5,770	2,000	1,260	8,510	2,500	954	6,730	998	1,850
23	411	1,100	2,290	4,860	1,990	1,230	6,000	2,060	1,450	5,480	934	1,530
24	411	1,370	2,070	9,270	1,990	1,270	4,810	1,760	1,830	4,510	854	1,570
25	446	1,100	1,950	8,190	2,010	1,570	3,980	1,580	2,890	4,910	806	1,330
26	425	990	1,670	6,670	2,020	1,760	3,390	1,430	3,970	3,230	790	1,170
27	446	909	2,380	4,460	2,010	2,070	2,990	1,320	4,140	3,140	718	1,050
28	530	1,360	11,300	5,140	1,950	2,040	2,710	1,220	4,180	3,840	694	942
29	558	2,410	10,500	13,170	-----	2,170	2,520	1,140	2,680	3,620	654	958
30	516	2,090	9,980	30,700	-----	2,170	2,330	1,090	1,780	2,950	614	938
31	523	-----	9,570	33,170	-----	1,950	-----	1,020	-----	2,370	566	-----
TOTAL	14,344	31,196	85,602	202,490	193,580	49,190	128,580	55,340	47,300	102,624	50,406	36,626
MEAN	463	1,040	2,761	6,532	6,556	1,587	4,286	1,785	1,577	3,310	1,626	1,221
MAX	649	2,410	11,300	33,100	28,000	2,170	11,200	3,000	4,180	16,600	5,650	4,520
MIN	411	467	936	1,100	1,950	1,230	1,760	1,020	694	844	566	461
CFSM	.19	.43	1.13	2.67	2.68	.65	1.75	.73	.65	1.35	.67	.50
IN.	.22	.47	1.30	3.08	2.79	.75	1.96	.84	.72	1.55	.77	.56
CAL YR 1968	TOTAL 995,575	MEAN 2,420	MAX 28,500	MIN 411	CFSM .99	IN 13.48						
WTR YR 1969	TOTAL 987,278	MEAN 2,705	MAX 33,100	MIN 411	CFSM 1.11	IN 15.02						

PEAK DISCHARGE (BASE, 9,500 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
12-29	0015	10.63	12,400	02-09	0745	9.40	10,700
01-18	1430	10.84	12,800	04-21	0200	10.05	11,600
01-20	1915	10.07	11,600	07-21	0830	13.76	21,800
01-30	2330	16.01	36,100				

3-3545. Beanblossom Creek at Beanblossom, Ind.

LOCATION.—Lat 39°15'45", long 86°14'55", in $\frac{1}{4}$ sec. 31, T. 10 N., R. 3 E., Brown County, 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.

PERIOD OF RECORD.—October 1951 to current year. Prior to October 1965, published as Bean Blossom Creek at Bean Blossom.

GAGE.—Water-stage recorder. Datum of gage is 673.65 ft above mean sea level.

AVERAGE DISCHARGE.—18 years, 15.8 cfs (14.70 inches per year).

EXTREMES.—Current year: Maximum discharge, 2,270 cfs July 22 (gage height, 9.62 ft); minimum, 0.09 cfs Oct. 1, 2, 5, 6.

Period of record: Maximum discharge, 8,140 cfs June 23, 1960 (gage height, 11.78 ft), from curve extended above 2,000 cfs on basis of contracted-opening measurement; no flow for many days in most years.

REMARKS.—Records good.

REVISIONS (WATER YEARS).—WSP 1555: 1952, 1953(M), 1956-57. WSP 1705: 1952(P).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	ALG	SEP
1	.09	.40	5.4	21	4.3	5.0	19	7.5	.86	11	4.1	.60
2	.20	.40	4.2	12	31	4.7	22	6.7	.86	5.3	3.2	3.5
3	.68	.46	27	9.1	26	4.3	21	5.6	.66	3.7	2.5	2.4
4	.16	.49	44	6.7	21	4.1	29	5.0	.55	2.7	2.1	1.9
5	.11	.49	24	5.5	18	3.7	76	4.6	.51	1.8	1.7	1.5
6	.23	.67	16	6.7	22	4.0	39	4.1	.46	141	1.5	1.3
7	.22	.74	12	5.8	20	3.7	77	3.5	.42	40	1.4	1.2
8	.21	.65	9.8	5.3	45	4.7	21	4.5	.38	19	1.2	1.4
9	.21	.56	8.2	4.7	45	6.5	25	6.2	.29	12	2.5	1.1
10	.24	.53	7.5	4.3	30	5.2	24	6.6	.25	45	2.5	.95
11	.17	.48	6.9	4.0	25	5.4	18	5.3	.25	27	1.2	.85
12	.19	.46	6.9	3.8	20	4.6	15	4.4	.25	15	1.1	.74
13	.24	.43	13	3.6	17	4.4	14	3.9	1.5	8.8	.86	.66
14	.36	.44	10	3.5	15	4.3	64	5.1	6.4	5.6	.76	.60
15	.40	5.2	8.1	3.5	12	3.9	97	4.2	41	3.7	.66	.55
16	.41	31	7.0	4.2	11	3.7	46	3.4	8.8	3.0	.86	.66
17	.42	9.1	6.1	199	9.5	3.8	52	3.3	3.8	2.1	.78	1.2
18	.59	10	8.5	371	9.0	3.9	641	10	3.1	1.5	.76	.76
19	.65	9.5	11	60	8.0	3.8	87	11	2.8	1.3	.70	.55
20	.52	6.7	10	33	7.3	3.6	42	8.7	1.8	122	.66	.51
21	.39	5.4	8.9	25	7.0	3.0	30	6.6	1.3	43	.83	.66
22	.36	4.6	52	24	7.3	2.9	24	6.8	9.5	588	.60	.66
23	.34	4.6	40	54	7.6	3.2	19	6.2	23	72	.56	.42
24	.40	34	23	59	6.9	15	16	5.1	13	45	.53	.55
25	.50	15	17	28	6.5	19	14	4.3	52	35	.50	.66
26	.47	10	13	20	6.1	19	12	3.7	19	19	.48	.51
27	.44	8.8	134	12	5.4	17	11	2.8	12	16	.48	.46
28	.40	64	319	209	5.3	16	11	2.1	22	12	.48	.42
29	.40	32	53	669	-----	53	9.2	1.6	8.2	9.1	.48	.42
30	.36	18	29	323	-----	29	8.3	1.3	9.3	6.8	.48	.38
31	.36	-----	24	83	-----	21	-----	1.1	-----	5.2	.50	-----
TOTAL	10.71	274.10	1,047.8	2,272.7	486.9	285.5	1,533.5	155.2	244.24	1,322.6	36.74	28.07
MEAN	.35	9.14	33.9	73.3	17.4	9.21	51.1	5.01	8.14	42.7	1.19	.94
MAX	.68	64	318	669	45	53	641	11	52	588	4.1	3.5
MIN	.09	.40	6.1	3.5	5.3	2.9	9.3	1.1	.25	1.3	.48	.38
CFSM	.02	.63	2.32	5.02	1.19	.63	3.50	.34	.56	2.92	.68	.06
IN.	.03	.70	2.67	5.79	1.24	.73	3.91	.40	.62	3.37	.69	.07
CAL YR 1968	TOTAL 9,115.67		MEAN 22.2		MAX 1,130		MIN .09		CFSM 1.52		IN 20.67	
WTR YR 1969	TOTAL 7,699.06		MEAN 21.1		MAX 669		MIN .09		CFSM 1.44		IN 19.61	

PEAK DISCHARGE (BASE, 700 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-28	0115	6.36	868	04-18	0300	9.53	2,220
01-18	0515	6.12	796	07-06	1315	5.86	720
01-29	2145	8.42	1,690	07-22	1145	9.62	2,270

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., Brown County, 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.

PERIOD OF RECORD.--May 1952 to current year.

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

AVERAGE DISCHARGE.--17 years, 6.64 cfs (12.99 inches per year).

EXTREMES.--Current year: Maximum discharge, 438 cfs Jan. 29 (gage height, 4.60 ft); minimum, 0.02 cfs Oct. 1, 2, Sept. 1. Period of record: 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 at times most years.

REMARKS.--Records good.

REVISIONS (WATER YEARS).--WSP 1555: 1952(M), 1955(M), 1956-57. WRD Ind. 1968: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.04	.09	16	8.0	25	2.1	9.8	2.8	.42	1.9	1.6	.05
2	.07	.09	15	5.6	17	1.7	13	2.5	.42	1.0	1.2	.55
3	.16	.11	7.7	3.9	12	1.6	11	2.2	.32	.65	.96	.42
4	.07	.11	6.5	3.0	9.0	1.5	15	2.1	.24	.42	.70	.38
5	.04	.11	4.5	2.3	7.7	1.3	31	1.8	.22	.28	.55	.28
6	.14	.18	3.3	3.0	10	1.3	22	1.5	.18	38	.46	.22
7	.14	.28	2.6	2.6	9.4	1.3	15	1.2	.16	17	.35	.22
8	.09	.24	2.2	2.2	34	1.7	12	1.8	.11	4.7	.28	.18
9	.11	.18	1.9	2.1	32	2.3	18	3.0	.05	2.6	.89	.14
10	.14	.16	1.7	1.8	20	2.1	18	3.9	.04	15	.60	.11
11	.11	.14	1.5	1.5	15	2.1	12	3.1	.04	7.4	.35	.11
12	.09	.14	1.6	1.3	10	1.9	9.4	2.5	.07	3.3	.28	.11
13	.09	.14	3.1	1.3	6.5	1.8	8.0	2.1	.32	1.7	.24	.11
14	.09	.14	3.0	1.1	5.9	1.8	38	2.1	.22	.89	.22	.11
15	.07	2.5	2.1	1.1	4.9	1.5	58	1.8	1.8	.60	.22	.07
16	.05	9.0	1.9	1.4	4.7	1.4	30	1.5	.60	.42	.35	.11
17	.05	2.2	1.7	78	4.1	1.4	26	1.6	.32	.32	.89	.32
18	.24	2.2	2.1	133	3.7	1.4	148	5.2	.35	.24	.55	.24
19	.18	1.9	3.0	35	3.9	1.5	20	6.2	.32	.18	.46	.14
20	.14	1.7	2.6	20	3.0	1.5	14	4.5	.22	53	.28	.11
21	.11	1.5	2.3	13	2.8	1.5	11	3.5	.14	23	.38	.07
22	.11	1.3	20	10	3.0	1.2	9.4	3.3	.24	94	.28	.05
23	.11	1.4	20	30	2.8	1.2	7.7	2.6	.76	24	.18	.09
24	.11	6.5	9.0	43	2.6	4.9	6.5	2.2	1.0	35	.16	.22
25	.11	3.7	5.4	18	2.5	9.4	5.9	1.7	3.1	29	.14	.16
26	.11	2.8	4.3	10	2.3	10	4.9	1.5	1.4	11	.11	.14
27	.09	2.2	86	7.1	2.1	9.4	4.3	1.1	1.9	14	.09	.14
28	.09	22	121	118	2.2	8.7	4.3	.96	4.3	7.4	.07	.14
29	.09	11	28	238	-----	27	3.7	.70	1.7	4.7	.07	.14
30	.09	5.2	16	143	-----	17	3.1	.60	1.4	3.1	.07	.11
31	.09	-----	13	49	-----	11	-----	.46	-----	2.2	.05	-----
TOTAL	3.22	79.21	409.0	987.3	258.1	134.5	589.0	72.02	22.36	397.00	13.03	5.24
MEAN	.10	2.64	13.2	31.8	9.22	4.34	19.6	2.32	.75	12.8	.42	.17
MAX	.24	22	121	238	34	27	148	6.2	4.3	94	1.6	.55
MIN	.04	.09	1.5	1.1	2.1	1.2	3.1	.46	.04	.18	.05	.05
CFSM	.01	.38	1.90	4.59	1.33	.63	2.83	.33	.11	1.85	.06	.03
IN.	.02	.42	2.19	5.29	1.38	.72	3.16	.39	.12	2.13	.07	.03

CAL YR 1968 TOTAL 3,532.73 MEAN 9.65 MAX 366 MIN 0 CFSM 1.39 IN 18.93
WTR YR 1969 TOTAL 2,969.98 MEAN 8.14 MAX 238 MIN .04 CFSM 1.17 IN 15.92

PEAK DISCHARGE (BASE, 200 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-27	2400	4.35	374	04-18	0130	4.45	399
01-18	0230	3.77	244	07-20	1300	3.62	214
01-29	1900	4.60	438	07-22	0830	4.30	362

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., Monroe County, on left side of dam on Beanblossom Creek, 5 miles downstream from Bear Creek, and 5.5 miles west of Trevlac.

DRAINAGE AREA.--70.9 sq mi.

PERIOD OF RECORD.--April 1953 to March 1958, October 1960 to current year.

GAGE.--Water-stage recorder. Datum of gage is 620.10 ft above mean sea level.

EXTREMES.--Current year: Maximum contents, 18,670 acre-ft Jan. 30 (elevation, 12.32 ft); minimum contents, 10,680 acre-ft Nov. 15 (elevation, 7.34 ft).

Period of record: Maximum contents, 20,470 acre-ft May 24, 1968 (elevation, 13.32 ft); 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 1968 to September 1969

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	8.38	12,080	-
Oct. 31.....	7.58	10,990	-1,090
Nov. 30.....	8.99	12,980	+1,990
Dec. 31.....	10.35	15,240	+2,260
Calendar year 1968.....	-	-	+1,010
Jan. 31.....	10.75	15,920	+680
Feb. 28.....	10.11	14,830	-1,090
Mar. 31.....	10.33	15,200	+370
Apr. 30.....	10.16	14,910	-290
May 31.....	9.95	14,560	-350
June 30.....	10.16	14,910	+350
July 31.....	10.13	14,860	-50
Aug. 31.....	9.37	13,590	-1,270
Sept. 30.....	8.80	12,700	-890
Water year 1968-69.....	-	-	+620

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., Brown County, on downstream side of pier of highway bridge at Dolan, 5.8 miles northeast of Bloomington, and 17.5 miles upstream from mouth.

DRAINAGE AREA.--100 sq mi.

PERIOD OF RECORD.--April 1946 to current year. Prior to October 1965, published as Bean Blossom Creek at Dolan.

GAGE.--Water-stage recorder. Datum of gage is 576.41 ft above mean sea level, unadjusted. Prior to Sept. 28, 1951, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--23 years, 114 cfs (15.48 inches per year).

EXTREMES.--Current year: Maximum discharge, 4,350 cfs Jan. 30 (gage height, 15.86 ft from outside floodmark); 12 cfs Oct. 23 (gage height, 1.54 ft).

Period of record: Maximum discharge, 9,420 cfs June 2, 1947; maximum gage height, 17.9 ft Jan. 5, 1949; no flow at times during 1946-49, 1953.

REMARKS.--Records good. Flow regulated by Lake Lemon 8.1 miles upstream. (See sta 3-3554.)

REVISIONS (WATER YEARS).--WSP 1113: 1947. WSP 1275: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	16	113	270	880	33	162	44	21	51	30	16
2	25	16	130	230	396	29	166	36	20	40	25	16
3	26	15	61	170	262	28	180	32	18	31	23	17
4	25	15	46	130	195	27	167	31	18	28	22	16
5	25	14	38	100	160	25	330	29	18	26	19	16
6	25	15	31	85	162	25	353	27	18	181	18	16
7	25	16	28	65	162	25	260	25	18	304	17	16
8	27	15	25	50	221	25	192	29	18	180	17	18
9	38	15	24	43	481	28	179	30	17	100	17	16
10	38	15	27	37	369	27	180	45	17	171	17	16
11	28	15	28	32	261	26	151	40	17	237	16	16
12	26	15	32	30	193	26	121	35	17	152	16	15
13	26	14	51	27	150	25	97	32	18	96	16	15
14	33	15	35	25	115	24	202	39	17	56	16	15
15	34	19	32	24	95	23	608	39	21	37	16	15
16	30	82	33	23	80	22	565	33	18	29	16	15
17	27	37	30	321	70	22	374	38	18	25	16	16
18	18	36	33	1,740	63	22	1,630	143	18	23	16	16
19	17	34	53	1,650	58	22	1,860	126	18	23	16	15
20	17	27	41	586	53	23	732	83	17	222	16	15
21	18	22	44	312	49	20	337	64	17	599	15	15
22	15	19	154	225	47	20	219	57	18	466	15	15
23	15	19	289	316	45	21	158	47	19	939	15	15
24	19	100	222	960	44	57	119	41	19	405	15	15
25	19	51	148	490	42	59	96	35	54	410	15	15
26	18	30	108	260	40	83	82	32	69	222	15	15
27	18	24	390	178	38	106	71	28	58	144	15	15
28	17	163	1,750	631	40	116	55	25	94	108	15	15
29	16	127	1,560	1,760	-----	241	49	23	79	69	16	15
30	16	47	570	3,490	-----	259	47	22	51	50	16	15
31	16	-----	313	2,290	-----	196	-----	21	-----	38	16	-----
TOTAL	722	1,048	6,439	16,550	4,771	1,685	9,742	1,331	840	5,452	533	466
MEAN	23.3	34.9	208	534	170	54.4	325	42.9	28.0	176	17.2	15.5
MAX	38	163	1,750	3,490	880	259	1,860	143	94	939	30	19
MIN	15	14	24	23	38	20	47	21	17	23	15	15

CAL YR 1968 TOTAL 53,412 MEAN 146 MAX 3,170 MIN 14
WTR YR 1969 TOTAL 49,579 MEAN 136 MAX 3,490 MIN 14

PEAK DISCHARGE (BASE, 1,500 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-28	2400	*13.85	2,060	01-30	1300	15.86	4,350
01-19	0300	13.86	2,060	04-19	0300	14.11	2,160

* Computed from graph based on appearance of recorder chart.

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., Owen County, 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.

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

GAGE.—Water-stage recorder. Datum of gage is 526.04 ft above mean sea level. Prior to Dec. 26, 1940, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.—44 years, 2,981 cfs, (unadjusted) (13.55 inches per year).

EXTREMES.—Current year: Maximum discharge, 41,900 cfs Jan. 31 (gage height, 22.64 ft); minimum, 500 cfs Oct. 27 (gage height, 2.40 ft).

Period of record: Maximum discharge, 59,400 cfs May 15, 1933, Jan. 16, 1937 (gage height, 23.2 ft); minimum, 133 cfs Sept. 25, 30, 1941; minimum gage height, 0.88 ft Sept. 25, 30, Oct. 1, 1941.

Maximum stage known, 28.5 ft Mar. 26, 1913, from floodmarks (discharge, 100,000 cfs, estimated).

REMARKS.—Records good. Natural flow of stream affected by storage reservoirs.

REVISIONS (WATER YEARS).—WSP 823: 1933. WSP 873: 1938. WSP 1335: 1930-31(N), 1933(N), 1937, 1938(N), 1943. WBD Ind. 1968: Drainage area.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	550	610	2,990	11,200	38,600	2,380	2,670	2,760	1,290	2,110	2,610	805
2	555	615	4,200	6,450	29,700	2,300	2,660	2,550	1,320	1,790	2,230	799
3	675	630	3,760	4,520	23,700	2,190	2,720	2,370	1,320	1,560	1,820	816
4	722	650	3,210	3,910	17,600	2,110	2,620	2,200	1,240	1,470	1,610	849
5	615	670	2,960	3,180	11,500	2,060	2,960	2,090	1,190	1,240	1,500	843
6	580	610	2,560	2,800	8,590	2,010	3,970	1,990	1,190	2,520	1,360	871
7	585	610	2,210	2,600	7,450	1,950	4,630	1,900	1,160	5,830	1,270	960
8	590	750	1,980	2,460	7,090	1,940	5,330	1,860	1,110	4,430	1,200	816
9	565	940	1,760	2,320	9,640	2,020	4,980	2,060	1,050	3,620	1,230	849
10	560	755	1,590	2,170	11,500	2,110	4,670	2,230	1,050	3,970	2,160	904
11	580	695	1,470	1,980	10,400	2,030	4,040	2,310	1,030	3,250	4,240	849
12	575	675	1,390	1,830	9,720	1,980	3,540	2,350	960	3,220	5,040	799
13	550	675	1,520	1,710	6,920	1,930	3,140	2,500	950	3,240	4,680	755
14	540	650	1,700	1,620	5,670	1,880	3,040	2,490	1,010	2,440	3,110	728
15	530	736	1,530	1,520	4,760	1,840	4,480	2,270	1,290	2,090	2,340	695
16	530	1,800	1,360	1,450	4,150	1,770	5,060	2,090	2,140	1,810	1,970	670
17	520	2,410	1,280	2,590	3,720	1,720	4,130	1,940	2,070	1,470	1,770	706
18	585	1,970	1,260	10,700	3,440	1,710	8,320	2,890	2,200	1,310	1,610	1,730
19	580	2,270	1,340	15,100	3,210	1,710	13,500	3,600	2,000	1,200	1,500	3,030
20	585	2,250	1,430	14,500	2,980	1,700	14,700	3,090	1,750	2,110	1,410	3,780
21	550	1,950	1,410	14,000	2,790	1,690	14,500	3,190	1,540	9,520	1,320	3,110
22	535	1,690	1,820	11,200	2,680	1,650	13,000	3,150	1,440	14,900	1,230	2,240
23	535	1,450	3,120	7,020	2,630	1,640	8,760	2,720	1,420	16,300	1,150	1,800
24	525	1,950	3,070	11,100	2,580	1,740	6,330	2,330	2,080	11,200	1,090	1,590
25	520	2,070	2,680	12,500	2,550	2,130	5,070	2,080	2,570	7,220	1,030	1,600
26	545	1,580	2,400	10,000	2,530	2,280	4,310	1,900	3,510	5,530	992	1,360
27	515	1,380	2,520	6,870	2,510	2,470	3,780	1,750	4,080	3,910	962	1,240
28	555	1,930	9,290	6,780	2,440	2,600	3,490	1,620	4,190	4,140	920	1,120
29	615	3,410	13,300	14,400	-----	2,870	3,270	1,500	3,680	4,110	893	1,050
30	625	2,940	14,500	26,500	-----	3,110	3,000	1,420	2,520	3,650	860	1,000
31	610	-----	13,200	38,100	-----	2,840	-----	1,340	-----	3,040	827	-----
TOTAL	17,692	41,194	108,810	252,980	240,050	64,370	166,670	70,520	54,364	134,130	55,934	38,264
MEAN	571	1,373	3,510	8,161	8,573	2,076	5,556	2,275	1,812	4,377	1,804	1,275
MAX	722	3,410	14,500	38,100	38,600	3,110	14,700	3,600	4,190	16,300	5,040	3,780
MIN	515	610	1,260	1,450	2,440	1,640	2,620	1,340	956	1,200	827	670
CFSM	.19	.45	1.17	2.73	2.87	.69	1.86	.76	.61	1.45	.60	.43
IN.	.22	.51	1.35	3.15	2.99	.80	2.07	.88	.69	1.67	.70	.48

CAL YR 1968 TOTAL 1,223,635 MEAN 3,343 MAX 40,100 MIN 515 CFSM 1.12 IN 15.23
WTR YR 1969 TOTAL 1,244,978 MEAN 3,411 MAX 38,600 MIN 515 CFSM 1.14 IN 15.50

PEAK DISCHARGE (BASE, 11,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-30	0345	16.33	15,000	02-10	0615	14.64	11,800
01-19	1800	16.77	15,800	04-20	0230	16.24	14,800
01-25	0615	15.27	12,900	07-23	0215	17.35	17,000
01-31	2230	22.64	41,900				

WABASH RIVER BASIN

3-3573.5. Plum Creek near Bainbridge, Ind.

LOCATION.--Lat 39°45'42", long 86°43'46", in SW¼SE¼ sec. 3, T. 15 N., R. 3 W., Putnam County, on right upstream wingwall of bridge on U.S. Highway 36, 0.5 mile west of Groveland, and 4.5 miles east of Bainbridge.

DRAINAGE AREA.--3.00 sq mi.

PERIOD OF RECORD.--July 1969 to current year.

GAGE.--Water-stage recorder. Datum of gage is 828.44 ft above mean sea level (Indiana State Highway Commission benchmark).

EXTREMES.--Current year: Maximum discharge, 270 cfs Sept. 17 (gage height 3.44 ft); minimum, 0.02 cfs Sept. 14 (gage height, 1.14 ft).

Period of record: Maximum discharge, 270 cfs Sept. 17, 1969 (gage height, 3.44 ft), minimum, 0.02 cfs Sept. 14, 1969 (gage height, 1.14 ft).

REMARKS.--Records good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										.29	1.1	.05
2										.26	.79	.08
3										.24	.60	.04
4										.22	.48	.04
5										.22	.38	.05
6										.62	.30	.04
7										1.1	.22	.04
8										.49	.17	.04
9										.36	.16	.04
10										.29	1.0	.03
11										2.3	3.8	.03
12										3.5	2.1	.03
13										.86	1.6	.03
14										.44	1.3	.04
15										.28	1.1	.05
16										.19	7.8	.20
17										.13	3.4	.46
18										.08	1.5	.83
19										.07	.97	3.5
20										3.4	.64	1.9
21										8.5	.45	1.4
22										8.8	.33	1.1
23										7.9	.25	1.3
24										5.1	.19	3.3
25										5.5	.15	1.8
26										2.4	.12	1.3
27										1.9	.07	1.1
28										6.7	.05	.86
29										3.7	.05	.70
30					-----					2.0	.04	.63
31		-----			-----		-----		-----	1.4	.04	-----
TOTAL										116.94	40.15	74.02
MEAN										3.77	1.30	2.47
MAX										3.4	1.0	.46
MIN										.07	.04	.03
CFSM										1.26	.43	.82
IN.										1.45	.50	.92

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

LOCATION. --Lat 39°32'11", long 86°58'35", in NW 1/4 sec. 28, T. 13 N., R. 5 W., Putnam County, on left bank at highway bridge, 1.5 miles southwest of Reelsville, and 3 miles upstream from Mill Creek.

DRAINAGE AREA. --326 sq mi.

PERIOD OF RECORD. --July 1949 to current year. Published as Eel River near Reelsville, October 1952 to September 1956.

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

AVERAGE DISCHARGE. --20 years, 325 cfs (13.54 inches per year).

EXTREMES. --Current year: Maximum discharge, 10,300 cfs Jan. 30 (gage height, 15.85 ft); minimum, 16 cfs Oct. 17 (gage height, 2.35 ft).

Period of record: Maximum discharge, 27,400 cfs 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. --Records good.

REVISIONS (WATER YEARS). --WSP 1335: 1950. WRD Ind. 1968: 1957(M), drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

CAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	20	296	507	2,170	243	261	266	106	136	137	38
2	18	24	462	360	1,470	235	283	247	107	123	118	52
3	18	32	377	300	1,200	228	275	231	103	111	104	44
4	17	34	292	240	912	223	257	220	99	104	94	40
5	17	30	241	210	792	216	822	210	97	99	87	42
6	18	29	195	180	823	214	880	202	94	266	82	38
7	18	41	162	170	851	214	589	193	92	485	77	37
8	18	72	132	155	1,990	216	467	191	90	254	72	36
9	18	86	117	140	2,580	244	775	201	88	185	82	33
10	20	62	116	130	1,250	229	769	218	88	170	550	33
11	20	48	104	130	904	215	550	215	86	145	290	31
12	20	41	104	130	764	206	434	197	83	192	154	31
13	19	36	151	130	599	203	370	181	109	207	109	30
14	19	33	188	130	502	202	441	176	103	150	91	29
15	18	38	149	130	442	196	823	169	531	123	81	28
16	17	214	132	130	391	192	689	159	291	108	74	31
17	17	328	123	1,360	361	193	611	155	179	99	118	735
18	20	389	132	5,550	330	195	3,500	188	146	93	91	732
19	24	368	148	1,560	310	196	1,860	218	144	90	77	270
20	28	244	159	789	290	195	1,090	190	129	648	70	172
21	26	184	136	589	282	187	787	169	115	1,100	65	135
22	24	151	202	511	283	181	621	157	110	321	60	116
23	22	129	368	748	291	177	502	149	113	247	55	108
24	21	114	314	1,790	283	254	424	142	221	211	52	182
25	21	101	258	764	273	338	370	136	386	341	50	154
26	21	89	264	514	267	310	336	130	334	238	48	126
27	20	81	1,040	383	257	284	307	125	228	1,450	46	111
28	20	204	4,700	2,480	252	270	467	120	288	753	44	103
29	20	474	2,390	6,290	---	339	345	115	193	358	42	96
30	20	345	1,070	9,070	---	310	294	110	160	228	40	90
31	20	---	815	4,760	---	268	---	106	---	170	40	---
TOTAL	617	4,041	15,337	40,330	21,119	7,173	20,199	5,486	4,913	9,205	3,100	3,703
MEAN	19.9	135	495	1,301	754	231	673	177	164	297	100	123
MAX	28	474	4,700	9,070	2,580	339	3,500	266	531	1,450	550	735
MIN	17	20	104	130	252	177	257	106	83	90	40	28
CFSM	.06	.41	1.52	3.99	2.31	.71	2.07	.54	.50	.91	.31	.38
IN.	.07	.46	1.75	4.60	2.41	.82	2.30	.63	.56	1.05	.35	.42

CAL YR 1968 TOTAL 132,256 MEAN 361 MAX 12,200 MIN 17 CFSM 1.11 IN 15.09
WTR YR 1969 TOTAL 135,223 MEAN 370 MAX 9,070 MIN 17 CFSM 1.14 IN 15.43

PEAK DISCHARGE (BASE, 2,800 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-28	1115	12.95	5,350	02-08	2200	12.06	4,410
01-18	0715	14.02	6,450	04-18	0900	12.81	5,210
01-30	0715	15.85	10,300	07-27	1315	9.96	2,910

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., Owen County, on right bank (revised) at downstream side of bridge on State Highway 43, 3 miles east of Cataract.

DRAINAGE AREA.--245 sq mi.

PERIOD OF RECORD.--July 1949 to current year.

GAGE.--Water-stage recorder. Datum of gage is 706.40 ft above mean sea level. Prior to Nov. 8, 1949, nonrecording gage, and Nov. 8, 1949, to Sept. 22, 1968, water-stage recorder at site 100 ft upstream at same datum.

AVERAGE DISCHARGE.--20 years, 246 cfs (13.64 inches per year).

EXTREMES.--Current year: Maximum discharge, 7,350 cfs Jan. 30 (gage height, 19.19 ft); minimum, 5.1 cfs Oct. 1, 6, 9; minimum gage height, 3.57 ft Oct. 1.
Period of record: Maximum discharge, 11,400 cfs June 24, 1960 (gage height, 22.58 ft); minimum, 0.1 cfs Sept. 3, 6, 7, 28, 29, 1954.

REMARKS.--Records good.

REVISIONS (WATER YEARS).--WSP 1505: 1956(P). WRD Ind. 1968: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.3	7.4	358	463	3,940	111	129	114	35	84	103	13
2	6.2	8.0	711	250	1,220	104	159	104	39	65	50	25
3	8.3	12	353	180	778	99	170	98	38	54	77	22
4	12	21	255	160	453	97	187	92	35	48	67	18
5	6.5	22	190	135	371	91	670	88	32	40	60	14
6	5.3	18	132	115	468	93	565	84	31	556	54	14
7	5.3	21	104	96	562	95	311	79	29	802	48	14
8	5.3	79	84	86	588	92	235	86	27	313	43	14
9	5.6	54	74	80	2,140	123	470	94	26	190	50	12
10	6.2	36	72	74	880	110	530	100	26	134	155	11
11	6.5	29	67	70	500	98	297	97	25	102	82	11
12	6.5	24	74	68	387	90	218	86	26	211	53	11
13	6.8	21	336	67	263	91	183	75	40	147	42	11
14	7.1	18	288	67	206	86	327	71	35	65	37	10
15	7.4	30	152	69	176	81	970	69	226	63	33	10
16	5.2	531	124	70	160	79	535	63	265	51	36	12
17	16	331	107	1,200	152	80	349	61	109	42	36	57
18	34	320	105	3,400	141	83	2,290	115	81	35	33	185
19	42	243	170	3,160	134	84	2,410	181	80	31	22	49
20	24	153	210	742	123	81	796	118	66	940	28	27
21	14	108	140	401	121	76	455	93	51	2,260	25	20
22	11	89	438	347	126	67	339	82	45	2,650	22	17
23	8.6	75	788	568	139	67	257	77	60	1,340	20	16
24	8.3	121	287	1,720	135	127	204	69	101	458	18	23
25	8.3	107	208	538	130	214	177	63	297	1,190	17	38
26	8.0	77	162	379	127	162	159	58	201	355	16	25
27	7.4	67	657	265	120	147	142	53	141	419	15	19
28	7.4	476	3,290	1,240	115	129	152	48	478	413	14	16
29	7.4	659	3,460	3,750	-----	194	142	45	177	220	14	15
30	7.1	265	1,550	6,720	-----	174	123	42	108	158	13	14
31	6.8	-----	1,070	6,620	-----	133	-----	40	-----	123	13	-----
TOTAL	319.8	4,032.4	16,216	33,100	15,055	3,358	13,951	2,545	2,934	13,673	1,347	743
MEAN	10.3	134	523	1,068	538	108	465	82.1	97.8	441	43.5	24.8
MAX	42	659	3,460	6,720	3,940	214	2,410	181	478	2,650	155	185
MIN	5.3	7.4	67	67	115	67	123	40	25	31	13	10
CFSM	.04	.55	2.14	4.36	2.19	.44	1.90	.34	.40	1.60	.18	.10
IN.	.05	.61	2.46	5.02	2.29	.51	2.12	.39	.45	2.08	.20	.11

CAL YR 1968	TOTAL	116,052.8	MEAN	317	MAX	9,210	MIN	5.3	CFSM	1.29	IN	17.62
WTR YR 1969	TOTAL	107,274.2	MEAN	294	MAX	6,720	MIN	5.3	CFSM	1.20	IN	16.28

PEAK DISCHARGE (BASE, 2,500 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-29	0730	14.46	3,630	04-19	0245	13.08	2,800
01-19	0045	14.66	3,750	07-22	1330	12.93	2,720
01-30	2230	19.19	7,350				

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., Putnam County, in discharge tower of reservoir on Mill Creek, 1.5 miles upstream from Deer Creek, and 5.8 miles south of Manhattan.

DRAINAGE AREA.--293 sq mi.

PERIOD OF RECORD.--July 1953 to current year.

GAGE.--Water-stage recorder. Datum of gage is 581.83 ft above mean sea level (levels by Corps of Engineers).

EXTREMES.--Current year: Maximum contents, 120,300 acre-ft Feb. 11 (elevation, 677.02 ft); minimum, 26,370 acre-ft Dec. 5 (elevation, 635.46 ft).

Period of record: Maximum contents, 129,300 acre-ft May 15, 1961 (elevation, 679.75 ft); minimum, 26,370 acre-ft Dec. 5, 1968 (elevation, 635.46 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 1968 to September 1969

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	-	27,350	-
Oct. 31.....	636.02	27,140	-210
Nov. 30.....	637.05	28,600	+1,460
Dec. 31.....	648.45	47,960	+19,360
Calendar year 1968.....	-	-	+10,310
Jan. 31.....	668.92	95,910	+47,950
Feb. 28.....	649.83	50,690	-45,220
Mar. 31.....	635.98	27,080	-23,610
Apr. 30.....	636.04	27,170	+90
May 31.....	636.12	27,280	+110
June 30.....	636.23	27,440	+160
July 31.....	641.46	35,400	+7,960
Aug. 31.....	636.10	27,250	-8,150
Sept. 30.....	636.26	27,480	+230
Water year 1968-69	-	-	+130

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., Putnam County, on left bank 200 ft downstream from Cagles Mill, 0.8 mile downstream from Cagles Mill Reservoir, 0.8 mile upstream from Deer Creek, and 5.8 miles south of Manhattan.

DRAINAGE AREA.--294 sq mi.

PERIOD OF RECORD.--May to September 1931 (fragmentary), October 1938 to current year. Monthly discharge only for some periods, published in WSP 1305.

GAGE.--Water-stage recorder. Datum of gage 581.83 ft above mean sea level. See WSP 1725 for history of changes prior to May 12, 1941.

AVERAGE DISCHARGE.--31 years (1938-69), 285 cfs (13.16 inches per year).

EXTREMES.--Current year: Maximum discharge, 2,780 cfs Feb. 20 (gage height, 8.18 ft); maximum gage height, 12.86 ft Jan. 30 (backwater from Deer Creek); minimum daily discharge, 3.0 cfs Dec. 7.
Period of record: Maximum discharge, 8,960 cfs Jan. 5, 1950 (gage height, 18.38 ft); no flow Aug. 7, 1953.

REMARKS.--Records fair. Flow regulated by Cagles Mill Reservoir (see sta. 3-3589).

REVISIONS (WATER YEARS).--WSP 1335: 1940-41. WRD Ind. 1968: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.5	5.0	465	104	95	2,510	102	91	21	22	1,580	7.5
2	6.5	5.3	467	915	108	2,430	147	91	28	57	1,270	8.4
3	6.4	5.9	883	1,700	133	2,480	208	92	31	69	461	7.8
4	6.1	5.1	1,060	1,650	133	2,500	208	94	26	28	254	4.0
5	6.1	7.3	251	1,770	43	2,050	320	94	30	28	82	57
6	6.4	8.5	3.4	2,210	57	1,020	357	97	30	49	17	57
7	6.4	23	3.0	2,420	132	360	638	88	30	443	17	42
8	6.4	84	8.7	1,670	820	302	725	99	30	749	17	6.7
9	6.7	106	22	474	775	131	747	100	26	740	21	6.0
10	7.1	105	33	164	139	104	452	100	19	312	28	4.4
11	7.0	67	89	110	648	104	618	101	16	56	75	3.8
12	7.3	10	110	110	1,600	90	408	101	19	67	275	3.4
13	7.0	6.7	226	115	1,870	104	99	101	19	88	125	4.0
14	6.9	6.7	478	86	2,180	104	174	89	19	103	6.3	4.0
15	7.2	8.7	245	44	2,270	104	592	101	86	103	4.6	3.6
16	8.6	80	107	71	2,240	104	723	101	283	52	3.7	5.6
17	9.6	371	105	275	2,210	104	723	88	306	28	9.9	84
18	16	470	210	165	2,380	68	540	83	176	28	19	109
19	22	467	170	107	2,450	59	265	91	107	28	26	94
20	21	464	107	107	2,630	104	115	137	18	97	31	108
21	33	243	184	107	2,700	104	115	180	18	175	21	48
22	59	66	212	96	2,650	105	115	204	18	117	23	17
23	58	90	509	115	2,600	105	267	170	18	123	12	9.8
24	57	104	720	117	2,540	145	1,210	70	79	125	7.2	5.6
25	37	104	509	117	2,480	307	1,750	59	150	524	7.1	9.9
26	6.4	155	162	117	2,600	214	1,790	59	404	868	7.4	10
27	6.6	169	290	117	2,670	210	1,750	59	324	1,080	7.1	10
28	6.7	108	170	117	2,590	211	1,700	30	221	861	7.1	10
29	6.2	300	110	117	-----	210	1,160	22	427	845	7.1	18
30	4.8	440	110	117	-----	323	81	22	180	1,260	7.2	22
31	4.8	-----	105	117	-----	265	-----	21	-----	1,630	7.3	-----
TOTAL	456.1	4,085.2	8,124.1	15,521	43,743	17,031	18,059	2,835	3,159	10,835	4,450.0	820.5
MEAN	14.7	136	262	501	1,562	549	603	91.5	105	350	145	27.4
MAX	59	470	1,060	2,420	2,700	2,510	1,790	204	427	1,630	1,560	109
MIN	4.8	5.0	3.0	44	43	59	81	21	16	22	3.7	3.4
CFSM	.05	.46	.89	1.70	5.31	1.87	2.05	.31	.36	1.19	.45	.09
IN.	.06	.52	1.03	1.96	5.53	2.15	2.29	.36	.40	1.37	.57	.10
CAL YR 1968	TOTAL 131,726.6			MEAN 360	MAX 2,620	MIN 3.0	CFSM 1.22	IN 16.66				
WTR YR 1969	TOTAL 129,198.5			MEAN 354	MAX 2,700	MIN 3.0	CFSM 1.20	IN 16.34				

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., Putnam County, on right bank at downstream side of new bridge on State Highway 243, 0.4 mile southwest of Putnamville, 0.4 mile downstream from small left-bank tributary, and 0.8 mile downstream from Limestone Creek.

DRAINAGE AREA.--59.0 sq mi.

PERIOD OF RECORD.--October 1954 to September 1965, October 1967 to current year.

GAGE.--Water-stage recorder. Datum of gage is 628.00 ft above mean sea level, datum of 1929. Oct. 1, 1954, to July 3, 1957, non-recording gage, July 4, 1957, to May 10, 1965, water-stage recorder (January 1959 to July 1963 nonrecording gage used below 1.7 ft gage height), May 11, to Sept. 30, 1965, water-stage recorder on left upstream side of old bridge, all at datum 2.73 ft higher.

AVERAGE DISCHARGE.--13 years (1954-65, 1967-69), 62.7 cfs (14.43 inches per year).

EXTREMES.--Current year: Maximum discharge, 4,430 cfs Jan. 29 (gage height, 13.48 ft); minimum daily, 0.84 cfs Sept. 14, 15. Period of record: Maximum discharge, 10,700 cfs Mar. 4, 1963 (gage height, 12.95 ft datum then in use); no flow Oct. 1-10, 1954.

REMARKS.--Records fair.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	2.0	68	55	192	27	48	38	8.2	5.9	15	1.0
2	1.5	2.2	80	41	143	24	57	33	8.2	5.4	13	5.9
3	2.7	7.5	57	33	149	23	55	30	7.0	4.9	11	4.5
4	2.0	7.5	46	29	101	23	69	27	6.4	4.5	5.6	3.2
5	1.5	4.2	38	25	91	21	208	25	6.4	4.5	8.2	2.8
6	1.4	4.2	32	22	135	22	130	24	5.9	20	7.0	2.2
7	1.4	18	28	20	125	22	91	22	5.4	99	5.9	1.9
8	1.5	23	25	18	599	26	73	23	4.9	30	4.5	1.9
9	1.7	16	26	17	273	38	181	29	4.5	17	5.6	1.6
10	1.7	10	21	16	149	30	132	32	4.0	14	15	1.4
11	1.8	7.5	20	16	122	27	93	29	4.0	11	8.5	1.2
12	1.8	6.0	22	16	99	23	73	23	3.6	14	5.9	1.0
13	1.8	5.3	49	16	71	23	64	20	4.0	13	4.5	1.0
14	1.7	4.7	40	16	57	22	106	20	4.9	8.2	4.0	.84
15	1.5	16	32	16	51	21	227	17	140	5.9	3.6	.84
16	1.5	92	31	18	46	20	132	15	55	4.9	2.6	1.0
17	1.7	47	43	1,020	42	21	157	14	27	4.0	5.9	55
18	12	63	28	764	38	21	1,230	34	20	3.6	5.4	32
19	6.7	46	38	132	37	22	238	34	20	3.2	4.0	11
20	3.4	34	37	88	32	21	143	22	15	557	3.6	6.4
21	2.4	27	31	73	32	20	112	17	11	140	2.8	4.9
22	2.0	25	70	73	34	19	88	15	10	53	2.5	4.0
23	2.0	21	83	213	37	17	69	14	14	34	2.5	4.0
24	2.2	20	66	357	34	42	57	14	14	55	1.9	14
25	2.4	18	73	130	34	76	50	12	20	59	1.5	12
26	2.2	17	37	140	32	59	44	10	12	32	1.6	7.6
27	2.0	14	527	66	29	50	40	9.6	9.6	270	1.4	5.9
28	2.0	73	1,130	905	29	46	76	8.9	12	81	1.4	4.5
29	2.0	66	208	2,100	-----	78	58	7.6	8.9	44	1.2	4.5
30	2.0	42	138	1,350	-----	57	45	7.6	7.0	26	1.0	4.0
31	2.0	-----	88	340	-----	46	-----	8.2	-----	19	1.0	-----
TOTAL	73.8	739.1	3,212	8,125	2,813	987	4,146	634.9	472.5	1,663.0	166.2	202.88
MEAN	2.38	24.6	104	262	100	31.8	138	20.5	15.8	54.3	5.43	6.76
MAX	12	92	1,130	2,100	595	78	1,230	38	140	557	15	55
MIN	1.3	2.0	20	16	29	17	40	7.6	3.6	3.2	1.0	.84
CFSM	.04	.42	1.76	4.44	1.70	.54	2.34	.35	.27	.92	.09	.11
IN.	.05	.47	2.02	5.12	1.77	.62	2.61	.40	.30	1.06	.11	.13
CAL YR 1968	TOTAL 24,748.8			MEAN 67.6	MAX 1,850	MIN 1.2	CFSM 1.15	IN 15.60				
WTR YR 1969	TOTAL 23,257.78			MEAN 63.7	MAX 2,100	MIN .84	CFSM 1.08	IN 14.66				

PEAK DISCHARGE (BASE, 2,000 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
12-28	0045	11.57	3,140	01-29	2145	13.48	4,430
01-17	1430	10.24	2,370	04-18	0330	12.49	3,690

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., Clay County, 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.

PERIOD OF RECORD.--January 1931 to current year. Prior to October 1934, published as "near Centerpoint."

GAGE.--Water-stage recorder. Datum of gage is 548.02 ft above mean sea level (levels by Corps of Engineers). See WSP 1725 for history of changes prior to Dec. 1, 1949.

AVERAGE DISCHARGE.--38 years, 829 cfs (13.56 inches per year).

EXTREMES.--Current year: Maximum discharge, 17,600 cfs Jan. 30 (gage height, 20.62 ft); minimum daily, 36 cfs Nov. 1.
Period of record: Maximum discharge, 34,000 cfs Jan. 4, 1950 (gage height, 23.53 ft); minimum, 11 cfs Oct. 7, 8, 1954 (gage height, 0.32 ft).
Maximum stage known, about 30.0 ft in 1875, present datum, from information by Corps of Engineers.

REMARKS.--Records good. Flow regulated by Cagles Mill Reservoir (see sta 3-3589).

REVISIONS (WATER YEARS).--WSP 893: 1935, 1937-39. WSP 973: 1937-38, 1939(M). WSP 1335: 1931(M). WRD Ind. 1968" Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	36	895	993	4,480	2,820	530	674	177	233	1,840	88
2	40	37	1,160	1,160	2,370	2,750	569	614	177	203	1,730	110
3	48	45	1,130	2,140	2,050	2,730	674	572	179	230	909	100
4	40	68	1,530	2,010	1,560	2,800	716	533	171	181	590	90
5	38	66	1,080	1,950	1,330	2,640	1,540	503	167	163	378	80
6	40	63	330	2,210	1,360	1,790	1,930	476	161	280	233	72
7	40	74	252	2,580	1,480	842	1,510	470	153	851	203	69
8	39	145	205	2,280	2,340	782	1,520	452	149	1,280	185	69
9	39	225	189	1,030	5,110	650	2,330	464	143	1,060	187	67
10	40	210	201	617	2,420	563	2,320	500	131	1,100	461	60
11	52	181	225	530	1,790	509	1,530	497	123	389	611	56
12	75	104	268	458	2,700	461	1,430	455	117	308	491	54
13	43	78	358	416	2,740	446	761	419	133	345	480	48
14	40	72	716	386	2,820	431	997	398	167	315	240	48
15	39	98	656	330	2,910	416	2,010	389	782	268	190	45
16	37	330	308	338	2,810	401	2,050	370	916	228	170	48
17	38	686	255	2,700	2,740	392	1,860	350	686	167	250	1,190
18	52	944	386	11,000	2,750	392	6,600	440	419	155	230	1,280
19	60	993	449	4,500	2,870	333	5,340	554	383	145	220	539
20	62	821	373	1,900	2,870	383	2,220	512	240	340	210	350
21	72	700	368	1,170	3,000	368	1,550	491	197	2,210	160	270
22	84	620	569	1,020	2,970	358	1,260	476	183	779	145	179
23	92	540	993	1,340	2,960	350	1,130	431	197	527	133	149
24	90	450	1,210	3,570	2,900	542	1,600	328	248	458	124	205
25	88	370	1,000	1,680	2,840	934	2,350	288	839	773	118	235
26	74	280	500	1,050	2,840	839	2,440	273	773	1,320	110	185
27	40	330	1,140	845	2,950	701	2,350	258	815	1,820	104	153
28	43	280	6,030	2,460	2,890	650	2,490	235	506	2,680	100	131
29	42	836	5,460	8,800	-----	770	2,240	199	653	1,570	96	119
30	40	912	1,930	16,000	-----	797	791	189	572	1,490	92	117
31	37	-----	1,580	11,300	-----	788	-----	181	-----	1,930	90	-----
TOTAL	1,604	10,594	31,746	88,763	74,850	29,628	56,638	12,991	10,557	23,798	11,080	6,206
MEAN	51.7	353	1,024	2,863	2,673	956	1,888	419	352	768	357	207
MAX	92	993	6,030	16,000	5,110	2,820	6,600	674	916	2,680	1,840	1,280
MIN	37	36	189	330	1,330	333	530	181	117	145	90	45
CFSM	.06	.43	1.23	3.45	3.22	1.15	2.27	.50	.42	.92	.43	.25
IN.	.07	.47	1.42	3.98	3.35	1.33	2.54	.58	.47	1.07	.50	.28
CAL YR 1968	TOTAL 359,851		MEAN 983		MAX 17,100		MIN 36		CFSM 1.18		IN 16.12	
WTR YR 1969	TOTAL 358,455		MEAN 982		MAX 16,000		MIN 36		CFSM 1.18		IN 16.06	

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., Greene County, 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.

PERIOD OF RECORD.--September 1928 to current year. Prior to October 1948, published as West Fork White River at Newberry.

GAGE.--Water-stage recorder. Datum of gage is 465.59 ft above mean sea level. Prior to Oct. 21, 1928 nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--41 years, 4,519 cfs (unadjusted) (13.09 inches per year).

EXTREMES.--Current year: Maximum discharge, 66,800 cfs Feb. 2 (gage height, 23.40 ft); minimum, 650 cfs Oct. 29 (gage height, 1.15 ft).

Period of record: Maximum discharge, 76,900 cfs May 21, 1943 (gage height, 24.19 ft); minimum, 193 cfs Oct. 1, 1941; minimum gage height, 0.29 ft Sept. 30, Oct. 7, 8, 1954.

Maximum stage since at least 1875, 27.5 ft Mar. 27, 1913, from floodmarks by State Highway Department of Indiana (discharge, 130,000 cfs, estimated).

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

REVISIONS (WATER YEARS).--WSP 873: 1937(N). WRD Ind. 1968: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	780	757	4,620	15,200	58,500	6,080	4,540	5,100	2,060	3,410	5,470	1,370
2	754	754	6,430	13,800	65,600	5,900	4,340	4,360	1,990	2,760	5,050	1,460
3	759	761	6,230	12,000	55,600	5,710	4,600	3,990	1,970	2,410	4,570	1,500
4	843	778	5,480	9,800	40,500	5,500	4,540	3,720	1,530	2,150	3,720	1,380
5	910	800	5,050	8,100	30,600	5,420	5,400	3,480	1,870	2,020	3,070	1,370
6	838	867	4,400	6,400	22,800	5,250	6,760	3,280	1,810	1,550	2,760	1,350
7	779	825	3,380	5,600	16,000	4,610	7,380	3,120	1,890	3,460	2,450	1,370
8	771	801	2,850	4,600	13,100	3,720	7,280	3,050	1,780	6,120	2,260	1,340
9	766	907	2,580	4,000	14,600	3,530	8,310	3,100	1,700	5,550	2,200	1,290
10	765	1,100	2,350	3,600	16,300	3,450	11,100	3,320	1,640	6,550	2,160	1,260
11	744	1,100	2,170	3,200	17,700	3,350	10,100	3,420	1,610	6,550	3,000	1,280
12	754	1,030	2,050	2,950	16,300	3,170	7,350	3,380	1,590	5,810	4,850	1,240
13	759	970	2,200	2,700	14,100	3,050	6,230	3,330	1,670	4,670	5,580	1,190
14	729	907	2,560	2,550	12,000	2,950	6,720	3,710	1,600	4,250	5,270	1,140
15	709	971	2,660	2,400	10,500	2,860	10,100	3,720	1,890	3,550	3,520	1,100
16	689	1,760	2,550	2,300	9,450	2,780	10,200	3,300	3,690	3,130	3,200	1,070
17	686	2,710	2,120	3,800	8,610	2,690	9,270	3,060	3,650	2,750	2,820	1,050
18	799	3,060	2,000	15,000	7,560	2,640	14,000	4,100	3,200	2,450	2,620	1,150
19	802	3,130	2,190	20,600	7,500	2,610	19,600	5,700	3,080	2,240	2,460	2,540
20	789	3,280	2,410	21,700	7,230	2,570	22,500	5,270	2,780	2,590	2,310	3,450
21	791	3,120	2,310	22,600	6,920	2,530	23,800	4,430	2,460	7,520	2,150	3,840
22	738	2,770	2,830	20,500	6,810	2,490	21,900	4,500	2,260	11,900	2,060	3,350
23	709	2,320	5,100	17,500	6,690	2,450	18,400	4,550	2,840	15,400	1,950	2,640
24	726	2,510	4,880	18,700	6,570	2,720	13,600	3,920	2,440	17,000	1,850	2,250
25	726	3,030	4,470	15,200	6,420	4,530	5,710	3,430	2,770	15,400	1,750	2,040
26	709	2,690	3,560	18,000	6,280	4,720	8,780	3,050	3,620	16,200	1,670	2,050
27	727	2,240	3,560	14,500	6,170	4,410	7,570	2,790	4,180	7,810	1,610	1,840
28	694	2,710	5,100	13,300	6,190	4,210	7,420	2,600	4,760	6,510	1,570	1,650
29	677	5,100	5,800	21,600	-----	4,640	7,150	2,440	4,910	7,510	1,510	1,560
30	737	4,790	14,000	36,200	-----	5,120	6,630	2,290	4,240	6,600	1,460	1,460
31	767	-----	15,500	50,500	-----	4,850	-----	2,170	-----	5,810	1,420	-----
TOTAL	23,426	58,548	138,230	412,900	457,400	120,510	305,680	111,680	77,880	189,060	88,930	51,660
MEAN	756	1,952	4,459	13,320	17,760	3,887	10,190	3,603	2,596	6,055	2,865	1,722
MAX	910	5,100	15,500	50,500	65,600	6,080	23,800	5,700	4,910	17,000	5,580	3,840
MIN	677	754	2,000	2,300	6,170	2,450	4,340	2,170	1,590	1,990	1,420	1,050
CFSM	.16	.42	.95	2.84	3.79	.83	2.17	.77	.55	1.30	.61	.37
IN.	.19	.46	1.10	3.28	3.95	.96	2.42	.89	.62	1.50	.71	.41

CAL YR 1968 TOTAL 1,956,308 MEAN 5,345 MAX 64,700 MIN 677 CFSM 1.14 IN 15.52
WTR YR 1969 TOTAL 2,075,904 MEAN 5,687 MAX 65,600 MIN 677 CFSM 1.21 IN 16.47

WABASH RIVER BASIN

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

LOCATION.--Lat 39°44'38", long 85°34'33", in SW $\frac{1}{4}$ sec. 18, T. 15 N., R. 9 E., Rush County, on right bank 300 ft upstream from highway bridge, 0.5 mile northwest of Carthage, and 2.2 miles downstream from Three Mile Creek.

DRAINAGE AREA.--184 sq mi.

PERIOD OF RECORD.--October 1950 to current year. Prior to October 1961, published as Blue River at Carthage, Ind.

GAGE.--Water-stage recorder. Datum of gage is 859.33 ft above mean sea level. Prior to July 19, 1951, nonrecording gage at site 300 ft downstream at same datum.

AVERAGE DISCHARGE.--19 years, 191 cfs (14.10 inches per year).

EXTREMES.--Current year: Maximum discharge, 3,750 cfs Jan. 30 (gage height, 9.14 ft); minimum, 58 cfs Oct. 1, 2 (gage height, 1.50 ft).

Period of record: Maximum discharge, 12,900 cfs Mar. 4, 1963 (gage height, 14.62 ft, from floodmarks), from rating curve extended above 6,200 cfs; minimum, 16 cfs Sept. 18-20, 1955; minimum gage height, 1.19 ft Aug. 9, 1966.

REMARKS.--Records good.

REVISIONS (WATER YEARS).--WRD Ind. 1968: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	64	224	265	903	142	156	164	115	155	144	73
2	62	64	325	229	632	138	160	159	116	139	122	80
3	78	70	251	197	682	136	149	153	110	131	122	78
4	66	69	235	175	482	135	146	148	106	124	116	147
5	63	67	206	173	377	132	248	146	112	115	109	138
6	68	66	167	161	354	133	384	144	106	152	104	99
7	69	84	147	152	359	132	252	141	100	217	99	88
8	66	91	133	147	676	133	206	157	97	262	104	84
9	65	77	122	140	1,180	144	184	181	94	227	251	79
10	69	71	118	130	578	133	173	192	96	452	664	77
11	65	67	113	130	445	130	156	204	98	257	268	75
12	65	68	113	130	356	126	145	176	105	192	180	73
13	64	66	118	120	270	127	139	160	154	154	147	71
14	62	65	110	120	230	125	144	152	121	134	131	67
15	63	81	100	110	208	123	204	145	199	122	121	66
16	65	296	57	126	194	123	220	138	262	114	125	68
17	64	204	97	626	183	122	186	143	168	106	115	180
18	64	169	100	2,970	174	123	1,480	292	146	101	110	169
19	64	149	119	1,270	168	123	1,490	404	136	96	107	112
20	65	127	140	548	162	122	700	270	124	989	105	94
21	62	116	126	386	160	119	489	207	113	1,160	97	87
22	63	113	139	319	160	116	376	182	117	513	92	83
23	63	107	326	330	160	115	298	166	644	313	68	82
24	65	297	211	500	157	150	253	155	400	446	84	88
25	69	224	156	308	155	167	227	147	900	403	83	81
26	65	167	140	229	151	163	207	139	500	244	82	78
27	64	140	185	207	148	152	191	133	300	259	79	76
28	67	289	1,210	289	145	144	189	129	200	325	78	75
29	64	459	1,060	1,390	-----	203	178	124	180	209	77	72
30	63	259	524	3,200	-----	189	171	120	165	173	75	73
31	63	-----	371	1,920	-----	162	-----	115	-----	155	73	-----
TOTAL	2,010	4,186	7,483	16,997	9,849	4,282	9,501	5,286	6,084	8,519	4,162	2,713
MEAN	64.8	140	241	548	352	138	317	171	203	275	134	90.4
MAX	78	459	1,210	3,200	1,180	203	1,490	404	900	1,160	664	180
MIN	60	64	97	110	145	115	139	115	94	56	73	66
CFSM	.35	.76	1.31	2.98	1.91	.75	1.72	.93	1.10	1.49	.73	.49
IN.	.41	.85	1.51	3.44	1.99	.87	1.92	1.07	1.23	1.72	.84	.55

CAL YR 1969 TOTAL 80,355

MEAN 220

MAX 3,280

MIN 58

CFSM 1.19

IN 16.24

WTR YR 1969 TOTAL 81,072

MEAN 222

MAX 3,200

MIN 60

CFSM 1.21

IN 16.39

PEAK DISCHARGE (BASE, 2,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-18	1245	9.08	3,690	04-18	1945	7.20	2,070
01-30	1045	9.14	3,750				

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., Shelby County, on left bank 0.2 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.

PERIOD OF RECORD.--September 1943 to current year. Prior to October 1961, published as Blue River at Shelbyville.

GAGE.--Water-stage recorder. Datum of gage is 737.67 ft above mean sea level. Prior to Oct. 1, 1953, nonrecording gage at bridge 0.2 mile upstream at datum 3.5 ft higher.

AVERAGE DISCHARGE.--26 years, 456 cfs (14.71 inches per year).

EXTREMES.--Current year: Maximum discharge, 8,020 cfs Jan. 31 (gage height, 14.45 ft); minimum, 81 cfs Oct. 2 (gage height, 2.92 ft).

Period of record: Maximum discharge, 15,800 cfs Mar. 5, 1963 (gage height, 17.70 ft); minimum, 23 cfs Oct. 2, 1953. Flood in March 1913 reached a stage of about 20.2 ft, from floodmarks.

REMARKS.--Records good. Records of suspended sediment loads for the current year are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1505: 1944. WSP 1909: 1959(M). WRD Ind. 1968: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	83	84	690	620	4,650	307	319	334	198	314	341	114
2	90	84	927	510	2,150	296	317	317	199	270	307	123
3	93	87	815	469	1,740	287	310	303	193	241	276	130
4	101	90	786	362	1,390	281	293	290	185	222	255	134
5	90	91	683	319	985	272	331	277	181	203	239	245
6	90	91	525	336	849	268	629	270	181	293	225	385
7	94	99	424	301	872	270	562	263	169	567	202	282
8	94	118	360	283	1,070	267	458	275	162	459	187	208
9	91	120	317	288	3,070	283	400	304	155	1,210	214	177
10	91	107	289	251	2,020	275	372	342	150	991	896	157
11	92	100	272	234	1,330	262	335	364	152	900	672	144
12	90	97	266	225	1,020	250	299	345	154	599	405	136
13	89	95	270	221	744	243	279	303	186	426	308	131
14	87	94	261	208	594	239	283	283	205	330	258	125
15	85	114	233	201	522	231	381	267	300	271	231	119
16	86	620	216	212	471	225	551	253	588	238	220	115
17	85	781	215	764	439	222	496	244	519	214	215	146
18	85	533	224	4,770	409	223	1,950	295	361	196	206	447
19	85	461	256	6,000	388	224	4,090	649	300	197	195	397
20	85	362	322	2,660	370	223	2,710	654	260	3,230	186	278
21	85	296	309	1,260	358	218	1,550	503	227	4,910	177	220
22	83	259	387	904	355	211	1,100	403	206	2,780	164	190
23	83	234	937	841	357	208	814	354	559	1,470	154	175
24	86	549	707	1,240	349	232	643	318	822	921	146	178
25	88	828	469	947	341	295	547	294	1,940	1,310	140	178
26	90	542	400	585	334	301	485	270	2,010	850	137	163
27	88	420	500	489	324	291	437	253	962	610	133	152
28	86	591	2,570	570	313	273	408	237	580	763	128	145
29	84	1,420	3,230	2,940	-----	327	383	226	424	555	125	139
30	84	914	1,530	6,490	-----	400	354	216	346	437	122	133
31	84	-----	980	7,710	-----	347	-----	206	-----	373	118	-----
TOTAL	2,727	10,281	20,370	43,210	27,815	8,251	22,086	9,912	12,874	26,350	7,582	5,666
MEAN	88.0	343	657	1,394	993	266	736	320	429	850	245	189
MAX	101	1,420	3,230	7,710	4,650	400	4,090	654	2,010	4,910	896	447
MIN	83	84	215	201	313	208	279	206	150	196	118	114
CFSM	.21	.81	1.56	3.31	2.36	.63	1.75	.76	1.02	2.02	.58	.45
IN.	.24	.91	1.80	3.82	2.46	.73	1.95	.88	1.14	2.33	.67	.50

CAL YR 1968 TOTAL 206,749 MEAN 565 MAX 10,200 MIN 83 CFSM 1.34 IN 18.26
WTR YR 1969 TOTAL 197,124 MEAN 540 MAX 7,710 MIN 83 CFSM 1.28 IN 17.41

PEAK DISCHARGE (BASE, 3,400 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
12-29	0715	10.23	3,580	04-19	1315	10.99	4,190
01-19	1430	13.22	6,260	07-20	1730	12.89	5,890
01-31	0945	14.45	8,020				

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 Hancock County Road 450 West, 0.5 mile south of New Palestine, 3 miles upstream from Little Sugar Creek, and 37.3 miles upstream from mouth.

DRAINAGE AREA.--93.9 sq mi.

PERIOD OF RECORD.--October 1967 to current year.

GAGE.--Water-stage recorder. Datum of gage is 786.00 ft above mean sea level.

EXTREMES.--Current year: Maximum discharge, 1,590 cfs Jan. 31 (gage height, 8.56 ft); minimum, 10 cfs Oct. 1, 2, 16-18; minimum gage height, 2.31 ft Oct. 1, 2.

Period of record: Maximum discharge, 1,740 cfs Feb. 2, 1968 (gage height, 9.34 ft), minimum daily, 4.2 cfs Oct. 5, 1967.

REMARKS.--Records good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	12	171	203	1,180	54	63	64	31	26	72	15
2	12	12	211	181	568	52	63	60	30	64	61	15
3	14	14	157	137	419	50	59	56	31	54	52	16
4	13	14	162	100	337	48	55	53	29	47	48	16
5	13	14	136	90	244	46	82	51	28	43	43	18
6	14	14	107	80	211	45	212	48	27	129	39	17
7	14	17	86	70	209	45	189	46	25	256	35	40
8	13	22	72	60	343	46	135	50	24	374	34	40
9	12	23	62	55	567	50	108	63	22	398	53	32
10	12	23	56	50	535	49	94	89	20	249	360	23
11	12	20	52	45	335	47	79	128	19	310	413	20
12	12	18	50	42	256	44	67	126	18	186	213	17
13	12	17	54	41	186	42	61	92	21	121	120	15
14	12	14	52	40	139	41	61	76	28	88	86	14
15	12	20	44	40	116	38	65	66	68	65	67	12
16	11	128	51	41	102	37	64	58	217	57	57	12
17	11	217	46	254	91	37	66	55	191	49	50	50
18	12	205	42	1,340	82	37	623	113	109	43	45	187
19	12	191	48	1,130	75	37	746	146	81	39	41	134
20	12	138	60	716	70	37	622	114	65	971	38	75
21	12	97	68	284	67	35	347	86	52	1,130	35	54
22	12	78	92	211	66	34	247	72	47	660	30	42
23	12	66	187	219	66	33	188	63	226	728	27	35
24	12	94	183	522	65	38	143	57	351	290	25	33
25	13	85	129	367	62	48	117	52	404	228	23	30
26	13	87	101	208	60	56	101	48	501	156	22	27
27	14	71	145	156	58	57	89	43	386	143	20	24
28	12	113	674	226	56	55	86	40	245	167	19	22
29	12	229	687	781	-----	64	78	37	129	143	18	20
30	12	217	632	1,460	-----	72	70	35	92	101	17	19
31	12	-----	294	1,560	-----	70	-----	33	-----	81	15	-----
TOTAL	382	2,270	4,951	10,709	6,565	1,444	4,980	2,120	3,517	7,480	2,219	1,074
MEAN	12.3	75.7	160	345	234	46.6	166	68.4	117	241	71.6	35.8
MAX	14	229	687	1,560	1,180	72	746	146	501	1,130	413	187
MIN	11	12	42	40	56	33	55	33	18	39	15	12
CFSM	.13	.81	1.70	3.68	2.50	.50	1.77	.73	1.25	2.57	.76	.38
IN.	.15	.90	1.96	4.24	2.60	.57	1.97	.84	1.39	2.96	.88	.43

CAL YR 1968 TOTAL 38,718.8

MEAN 106

MAX 1,530

MIN 8.8

CFSM 1.13

IN 15.33

WTR YR 1969 TOTAL 47,711

MEAN 131

MAX 1,560

MIN 11

CFSM 1.39

IN 18.90

PEAK DISCHARGE (BASE, 950 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
01-18	0630	8.45	1,540	07-21	0600	7.88	1,290
01-31	1000	8.56	1,590				

3-3618.5, Buck Creek at Acton, Ind.

LOCATION.—Lat 39°39'25", long 85°57'27", in SE $\frac{1}{4}$ sec. 15, T. 14 N., R. 5 E., Marion County, on left bank 30 ft downstream from McGregor Road Bridge, 0.5 mile east of Acton, and 4.2 miles upstream from mouth.

DRAINAGE AREA.—78.8 sq mi.

PERIOD OF RECORD.—October 1967 to current year.

GAGE.—Water-stage recorder. Datum of gage is 757.00 ft above mean sea level.

EXTREMES.—Current year: Maximum discharge, 5,300 cfs July 20 (gage height, 14.99 ft); minimum, 2.5 cfs Nov. 6; minimum gage height, 1.66 ft Sept. 15.

Period of record: Maximum discharge, 5,300 cfs July 20, 1969 (gage height, 14.99 ft); minimum daily discharge, 0.60 cfs Oct. 1, 4, 1967; minimum gage height, 1.57 ft Oct. 4, 5, 1967.

REMARKS.—Records good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.3	3.6	136	143	579	28	41	36	15	72	44	7.4
2	3.6	3.6	218	100	311	26	47	33	14	49	37	7.6
3	4.9	3.9	148	77	312	25	44	31	13	39	31	7.7
4	4.9	4.6	113	61	197	25	42	28	12	32	27	9.2
5	3.3	5.5	89	50	142	23	72	27	11	26	24	17
6	3.3	3.0	64	44	145	25	108	25	11	203	22	11
7	3.3	3.9	51	40	164	26	77	23	9.2	314	19	12
8	3.0	6.9	42	34	434	25	63	41	8.0	214	19	12
9	2.7	9.4	35	34	690	34	59	57	6.8	395	117	9.1
10	3.0	7.2	32	28	285	30	56	80	6.4	177	508	7.9
11	2.7	6.2	30	23	213	28	50	87	5.7	255	135	7.4
12	3.0	5.2	30	22	148	25	45	62	5.4	171	73	7.0
13	3.3	4.2	37	19	91	25	40	46	8.4	93	48	6.8
14	3.3	3.6	37	18	67	22	60	40	9.2	61	37	6.6
15	3.3	7.2	29	17	54	20	130	33	78	44	30	6.4
16	3.3	137	27	18	47	19	120	29	114	34	28	6.4
17	3.9	141	26	428	43	20	95	28	58	28	25	65
18	5.2	135	29	1,670	36	20	1,000	172	40	24	22	146
19	5.5	110	43	558	33	21	650	184	34	20	20	55
20	5.8	73	52	235	30	20	350	106	25	3,490	17	31
21	6.5	54	41	157	29	19	220	72	17	2,100	15	21
22	5.5	45	116	131	31	17	158	58	14	576	13	16
23	5.2	38	252	177	32	17	114	47	201	482	12	14
24	4.9	97	127	912	31	26	86	40	163	342	12	19
25	5.2	81	79	265	30	38	72	35	565	210	11	16
26	4.6	58	68	129	29	36	62	30	265	130	10	12
27	4.3	46	215	91	29	33	54	26	131	138	8.9	11
28	4.3	125	1,290	398	28	30	53	23	490	127	8.5	10
29	4.3	274	608	1,370	—	60	45	20	147	87	8.2	9.6
30	3.6	151	263	2,310	—	55	40	18	87	62	7.8	9.1
31	3.6	—	207	1,360	—	43	—	17	—	49	7.5	—
TOTAL	126.6	1,643.0	4,534	10,919	4,255	861	4,053	1,554	2,564.1	10,044	1,396.9	576.2
MEAN	4.08	54.8	146	352	152	27.8	135	50.1	85.5	324	45.1	19.2
MAX	6.5	274	1,290	2,310	690	60	1,000	184	565	3,490	508	146
MIN	2.7	3.0	26	17	28	17	40	17	5.4	20	7.5	6.4
CFSM	.05	.73	1.86	4.47	1.93	.35	1.71	.64	1.08	4.11	.57	.24
IN.	.06	.78	2.14	5.15	2.01	.41	1.91	.73	1.21	4.74	.66	.27

CAL YR 1968 TOTAL 36,116.1 MEAN 98.7 MAX 2,490 MIN 2.7 CFSM 1.25 IN 17.05
WTR YR 1969 TOTAL 42,526.8 MEAN 117 MAX 3,490 MIN 2.7 CFSM 1.48 IN 20.07

PEAK DISCHARGE (BASE, 1,000 CFS)

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
12-28	1530	8.78	1,480	02-08	2400	7.80	1,140
01-18	1015	9.77	1,900	04-18	unknown	8.44	1,360
01-24	0800	8.08	1,230	07-20	1230	14.99	5,300
01-30	0930	10.86	2,530				

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., Johnson County, on left bank on upstream side of highway bridge, 0.5 mile southwest of Amity, 2 miles upstream from mouth, and 5 miles northwest of Edinburg.

DRAINAGE AREA.--107 sq mi.

PERIOD OF RECORD.--October 1942 to current year. Prior to December 1942 monthly discharge only, published in WSP 1305.

GAGE.--Water-stage recorder. Datum of gage is 670.20 ft above mean sea level. Prior to June 30, 1955, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--27 years, 108 cfs (13.71 inches per year).

EXTREMES.--Current year: Maximum discharge, 4,340 cfs July 21 (gage height, 10.43 ft); minimum, 5.1 cfs Oct. 1 (gage height, 0.83 ft).

Period of record: Maximum discharge, 10,700 cfs Jan. 27, 1952 (gage height, 13.4 ft); minimum, 0.4 cfs Sept. 14, 1954.

REMARKS.--Records good.

REVISIONS (WATER YEARS).--WSP 1335: 1944. WSP 1909: 1958. WRD Ind. 1968: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.5	5.9	191	168	621	51	56	51	18	33	67	8.6
2	8.4	5.9	329	134	414	46	61	48	17	29	57	18
3	29	6.3	212	104	367	44	56	43	16	25	49	16
4	16	8.0	189	71	259	43	54	40	15	22	44	19
5	8.9	6.8	145	66	200	41	117	39	14	20	35	27
6	8.0	7.4	102	65	217	42	117	42	14	395	35	19
7	7.7	9.2	83	56	258	43	93	38	12	336	32	15
8	6.8	11	68	51	387	42	81	40	11	121	29	13
9	6.5	10	58	51	742	48	77	46	11	85	33	13
10	6.8	8.9	53	37	364	41	81	43	10	65	40	12
11	6.3	8.0	50	32	267	38	65	40	10	63	33	10
12	6.3	8.0	50	29	200	37	56	35	10	154	27	9.7
13	6.1	7.4	56	29	137	36	53	31	17	79	24	9.5
14	5.9	7.1	52	27	108	33	68	30	15	51	22	8.7
15	5.5	11	42	26	94	31	160	30	155	40	20	8.3
16	5.5	221	42	28	87	31	150	27	131	34	29	8.7
17	5.5	171	39	405	79	31	118	26	69	29	25	12
18	5.7	132	43	2,010	70	32	1,350	44	49	25	28	56
19	6.5	109	55	848	66	33	843	57	42	22	27	34
20	5.5	73	65	321	61	32	421	45	33	778	21	24
21	5.7	55	55	228	59	30	277	37	27	3,450	18	18
22	5.5	46	129	190	61	27	189	34	24	1,250	15	15
23	5.9	39	341	224	61	26	134	32	26	503	14	13
24	6.3	208	164	796	58	43	103	29	27	304	12	16
25	7.1	203	102	351	56	48	88	27	282	333	12	17
26	6.5	127	86	177	55	42	79	25	202	183	12	15
27	6.3	95	166	126	53	39	70	24	90	320	12	13
28	5.9	196	1,220	363	56	37	66	22	64	313	11	11
29	6.1	378	795	1,730	-----	69	59	20	49	151	11	9.7
30	5.5	196	349	3,370	-----	73	54	20	39	102	10	9.4
31	5.9	-----	256	1,700	-----	59	-----	19	-----	79	9.3	-----
TOTAL	230.7	2,367.9	5,587	13,813	5,458	1,268	5,196	1,084	1,499	9,434	817.2	478.6
MEAN	7.44	78.9	180	446	195	40.9	173	35.0	50.0	304	26.4	16.0
MAX	29	378	1,220	3,370	743	73	1,350	57	282	3,450	67	56
MIN	5.5	5.9	39	26	53	26	53	19	10	20	9.3	8.3
CFSM	.07	.74	1.68	4.16	1.82	.38	1.62	.33	.47	2.84	.25	.15
IN.	.08	.82	1.94	4.80	1.90	.44	1.81	.38	.52	3.28	.28	.17

CAL YP 1968 TOTAL 49,011.6 MEAN 134 MAX 6,260 MIN 4.4 CFSM 1.25 IN 17.03
WTP YP 1969 TOTAL 47,233.5 MEAN 129 MAX 3,490 MIN 5.5 CFSM 1.21 IN 16.42

PEAK DISCHARGE (BASE, 1,300 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-28	2145	6.81	1,420	04-18	1930	7.29	1,610
01-18	1915	8.72	2,400	07-21	1115	10.43	4,340
01-30	1230	10.06	3,750				

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., Johnson County, on left bank 50 ft upstream from highway bridge in Camp Atterbury, 1.2 miles upstream from confluence with Blue River, and 1.5 miles northwest of Edinburg.

DRAINAGE AREA.--474 sq mi.

PERIOD OF RECORD.--October 1942 to current year. Prior to February 1943 monthly discharge only, published in WSP 1305.

GAGE.--Water-stage recorder. Datum of gage is 646.23 ft above mean sea level. Prior to Oct. 1, 1952, nonrecording gage on downstream side of old highway bridge, 100 ft downstream at same datum.

AVERAGE DISCHARGE.--27 years, 481 cfs (13.78 inches per year).

EXTREMES.--Current year: Maximum discharge, 19,300 cfs July 21 (gage height, 16.84 ft); minimum, 48 cfs Oct. 2; minimum gage height, 3.79 ft Oct. 1, 2.

Period of record: Maximum discharge, 27,600 cfs May 29, 1956 (gage height, 18.38 ft); minimum, 8.0 cfs Sept. 18, 1954 (gage height, 3.04 ft).

REMARKS.--Records good except those for periods of no gage-height record, which are fair. Records of suspended sediment loads for current year are published in Part 2 of this report.

REVISIONS.--WRD Ind. 1968: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	51	840	1,160	6,170	270	270	311	121	392	350	71
2	58	51	1,130	1,030	3,440	260	274	284	117	325	300	82
3	118	51	1,030	709	2,050	250	274	252	113	247	260	78
4	78	62	884	546	1,630	240	258	245	109	206	240	78
5	67	61	725	470	1,250	230	356	231	108	175	220	87
6	67	54	570	400	1,100	230	467	227	107	615	200	79
7	68	70	455	350	1,210	225	568	214	101	1,220	180	75
8	66	74	375	310	1,290	225	489	217	95	918	190	74
9	64	74	315	270	2,910	230	417	252	91	1,010	350	85
10	64	80	275	250	2,520	230	392	288	87	971	900	75
11	62	30	252	230	1,680	225	342	332	77	1,000	600	68
12	62	74	738	220	1,280	220	286	359	85	1,480	400	64
13	64	57	248	210	943	215	253	318	82	797	300	61
14	61	54	248	190	724	205	272	266	82	503	230	59
15	61	70	225	190	603	200	423	237	265	353	200	56
16	60	355	197	180	534	195	471	213	470	269	190	54
17	60	730	193	674	482	190	408	201	501	217	190	61
18	61	655	201	3,790	427	190	2,510	232	365	181	170	262
19	61	645	221	5,490	388	190	3,920	548	265	156	160	384
20	61	515	280	3,580	355	190	3,020	500	212	1,270	150	241
21	60	385	290	1,670	335	180	1,860	376	177	11,100	140	156
22	59	295	385	1,110	325	170	1,290	298	146	12,800	128	116
23	58	243	1,130	1,040	320	170	970	255	146	3,800	117	99
24	61	490	956	2,250	315	185	754	223	575	1,500	108	97
25	64	818	640	2,340	305	200	615	201	1,160	1,100	102	98
26	62	550	495	1,200	300	220	531	184	2,080	800	99	92
27	61	445	555	807	290	208	466	169	1,360	750	92	82
28	61	510	2,500	1,010	280	204	424	153	1,070	950	88	74
29	61	1,230	3,720	3,500	-----	260	388	143	913	600	84	70
30	51	1,050	2,770	7,840	-----	328	344	134	523	500	80	66
31	61	-----	1,730	9,770	-----	295	-----	127	-----	400	79	-----
TOTAL	1,986	9,929	24,073	52,785	33,456	6,830	23,312	7,999	11,598	46,595	6,877	3,044
MEAN	64.1	331	777	1,703	1,195	220	777	258	387	1,503	222	101
MAX	118	1,200	3,720	9,770	6,170	328	3,920	548	2,080	12,800	900	384
MIN	55	51	193	180	280	170	253	127	77	156	79	54
CFSM	.14	.70	1.64	3.59	2.52	.46	1.64	.54	.87	3.17	.47	.21
IN.	.16	.78	1.89	4.14	2.62	.54	1.93	.63	.91	3.66	.54	.24

CAL YR 1968 TOTAL 225,083
WTR YR 1969 TOTAL 223,444

MEAN 615
MEAN 626

MAX 13,900
MAX 12,800

MIN 55
MIN 54

CFSM 1.30
CFSM 1.32

IN 17.66
IN 17.93

PEAK DISCHARGE (BASE, 4,200 CFS)

NOTE.--No gage-height record Feb. 23 to Mar. 26, July 23 to Aug. 21.

DATE	TIME	G.H.	DISCHARGE	DATE	TIME	G.H.	DISCHARGE
01-19	0615	11.94	5,790	07-21	2015	16.84	19,300
01-31	0545	14.19	10,400				

3-3630. Driftwood River near Edinburg, Ind.

LOCATION.--Lat 39°20'21", long 85°59'11", in SW $\frac{1}{4}$ sec. 4, T. 10 N., R. 5 E., Bartholomew County, on left bank just downstream from highway bridge, 0.8 mile downstream from confluence of Blue River and Sugar Creek, and 1.5 miles southwest of Edinburg.

DRAINAGE AREA.--1,060 sq mi.

PERIOD OF RECORD.--October 1940 to current year. Prior to July 1941 monthly discharge only, published in WSP 1305.

GAGE.--Water-stage recorder. Datum of gage is 636.99 ft above mean sea level. Prior to Oct. 7, 1941, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--29 years, 1,121 cfs (14.36 inches per year).

EXTREMES.--Current year: Maximum discharge, 30,000 cfs July 22 (gage height, 16.27 ft); minimum, 196 cfs Oct. 22-24, 31, Nov. 1-3 (gage height, 2.31 ft).

Period of record: Maximum discharge, 40,500 cfs Mar. 6, 1963 (gage height, 16.97 ft); minimum observed, 36 cfs Sept. 23, 1941.

Flood in March 1913 reached a stage of 20.3 ft.

REMARKS.--Records good.

REVISIONS.--WRD Ind. 1968: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	212	199	1,970	2,500	14,600	786	743	883	425	898	1,100	283
2	214	198	2,400	2,050	8,810	760	733	827	412	797	979	316
3	300	230	2,370	1,700	5,290	735	726	783	403	668	857	302
4	256	208	2,060	1,500	4,320	714	698	744	392	596	766	301
5	245	211	1,830	1,250	3,330	693	786	712	380	535	702	374
6	238	216	1,440	1,080	2,840	679	1,020	691	376	950	650	458
7	238	226	1,160	950	2,940	676	1,370	665	366	1,910	605	519
8	236	237	963	850	2,940	672	1,170	664	347	1,670	561	425
9	230	259	805	780	5,740	683	1,010	717	335	2,010	571	389
10	226	265	740	710	6,410	685	930	763	327	2,440	1,390	345
11	223	255	696	660	4,380	662	843	831	307	2,410	2,220	312
12	224	245	668	610	3,270	640	750	887	313	2,850	1,530	293
13	221	236	670	570	2,510	618	689	815	327	1,630	1,050	277
14	217	230	662	540	1,940	603	699	732	359	1,040	810	265
15	211	254	618	520	1,610	584	860	684	537	829	686	252
16	205	714	564	500	1,430	566	1,070	644	943	696	641	243
17	203	1,590	551	1,190	1,300	556	1,090	611	1,150	611	597	263
18	205	1,450	558	6,620	1,170	551	4,330	645	956	544	570	531
19	202	1,340	587	10,900	1,090	549	7,460	1,020	732	490	549	899
20	201	1,120	684	10,000	1,030	546	7,500	1,250	630	1,890	502	696
21	200	892	732	4,830	977	531	4,980	1,060	546	13,900	466	525
22	200	745	827	2,840	952	516	3,390	865	491	23,200	435	436
23	198	647	1,990	2,450	943	503	2,570	749	473	10,400	407	387
24	201	947	2,110	4,040	922	546	2,000	677	1,350	5,100	385	376
25	209	1,920	1,100	4,470	891	590	1,630	628	2,380	3,920	367	371
26	209	1,430	1,000	3,130	865	636	1,410	587	4,670	3,140	353	356
27	209	1,130	1,160	2,270	837	638	1,240	548	3,600	2,440	341	327
28	205	1,160	4,400	2,000	813	624	1,120	514	2,340	2,640	328	305
29	202	2,620	7,310	6,000	-----	681	1,040	486	1,800	2,140	316	290
30	200	2,640	6,720	12,900	-----	815	951	461	1,130	1,600	305	276
31	200	-----	4,030	17,200	-----	802	-----	442	-----	1,290	298	-----
TOTAL	6,740	23,684	53,375	107,610	84,050	19,840	54,808	22,585	28,792	95,264	21,337	11,342
MEAN	217	789	1,722	3,471	3,002	640	1,827	729	960	3,073	688	378
MAX	300	2,640	7,310	17,200	14,600	815	7,500	1,750	4,670	23,200	2,270	899
MIN	198	138	551	500	813	503	689	442	307	490	298	243
CFSM	.21	.74	1.62	3.27	2.83	.60	1.72	.69	.91	2.90	.65	.36
IN.	.24	.83	1.87	3.78	2.95	.70	1.92	.79	1.01	3.34	.75	.40

CAL YR 1968 TOTAL 516,944 MEAN 1,412 MAX 26,700 MIN 198 CFSM 1.33 IN 18.14
WTR YR 1969 TOTAL 529,427 MEAN 1,450 MAX 23,200 MIN 198 CFSM 1.37 IN 18.57

PEAK DISCHARGE (BASE, 7,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-29	2315	11.53	7,850	02-10	0200	10.97	7,060
01-19	2330	13.40	11,500	04-19	2400	11.72	8,150
01-31	1045	14.97	17,600	07-22	0215	16.27	30,000

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., Shelby County, on right bank 500 ft downstream from highway bridge, 0.8 mile southwest of St. Paul, and 1.5 miles downstream from Mill Creek.

DRAINAGE AREA.--303 sq mi.

PERIOD OF RECORD.--October 1930 to current year. Prior to October 1958, published as Flatrock Creek at St. Paul.

GAGE.--Water-stage recorder. Datum of gage is 764.84 ft above mean sea level (levels by Indiana Flood Control and Water Resources Commission). Prior to Oct. 21, 1938, nonrecording gage at site 500 ft upstream at same datum.

AVERAGE DISCHARGE.--39 years, 313 cfs (14.03 inches per year).

EXTREMES.--Current year: Maximum discharge, 6,110 cfs Jan. 30 (gage height, 6.82 ft); minimum, 21 cfs Oct. 1, 2 (gage height, 0.51 ft).

Period of record: 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.--Records good except those for period of no gage-height record, which are fair. Slight diversion occasionally by quarry above gage.

REVISIONS (WATER YEARS).--WSP 853: 1934-36. WSP 973: 1942. WSP 1335: 1933, 1936. WSP 1725: 1957(M). WRD ind. 1968: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	29	592	576	2,460	179	278	211	176	230	260	53
2	46	28	808	450	1,450	171	272	198	164	192	230	80
3	184	28	704	380	1,040	163	258	183	148	165	280	145
4	53	29	568	320	829	158	241	172	134	148	160	147
5	39	30	800	280	667	152	284	160	125	134	160	206
6	38	30	557	240	606	150	468	153	122	251	150	267
7	36	38	402	220	612	154	502	146	111	516	140	163
8	35	55	315	200	688	151	404	167	101	417	130	127
9	33	52	260	190	1,200	163	345	230	90	441	120	108
10	32	47	224	175	1,300	160	314	241	82	350	350	92
11	31	42	213	160	863	151	274	223	78	550	600	82
12	30	40	206	150	691	143	238	214	220	1,000	350	75
13	30	37	209	140	528	140	219	183	401	700	230	69
14	28	35	200	140	420	138	231	165	339	400	180	63
15	26	44	189	135	360	132	371	153	1,040	250	160	57
16	26	509	180	135	330	128	547	143	1,200	220	150	53
17	24	557	172	1,180	300	127	539	152	1,020	180	140	63
18	24	396	172	4,550	267	126	1,050	683	504	170	120	430
19	24	305	193	3,090	249	127	1,720	3,740	384	150	120	393
20	24	232	260	1,720	233	127	1,790	2,130	304	2,500	154	213
21	24	188	261	758	223	122	1,100	1,300	239	5,000	138	147
22	26	164	400	594	222	116	789	782	215	3,500	114	121
23	24	144	816	588	224	114	626	590	437	2,400	101	106
24	26	350	662	751	218	133	505	472	874	1,300	92	104
25	31	474	465	624	209	167	418	389	1,340	900	86	99
26	32	372	400	456	202	198	366	323	1,420	700	81	89
27	29	280	529	438	193	195	320	268	754	550	76	80
28	25	487	1,950	486	184	182	288	237	463	470	70	75
29	29	840	1,640	2,800	-----	288	257	215	336	400	65	70
30	28	697	1,320	5,660	-----	399	235	199	261	350	60	65
31	28	-----	772	4,320	-----	332	-----	186	-----	300	57	-----
TOTAL	1,092	6,559	16,839	31,906	16,757	5,186	15,249	14,608	13,082	24,874	5,074	3,842
MEAN	35.2	219	543	1,029	598	167	508	471	436	802	164	128
MAX	184	840	1,950	5,660	2,460	399	1,790	3,740	1,420	5,000	600	430
MIN	23	28	172	135	184	114	219	143	78	134	57	53
CFSM	.12	.72	1.79	3.40	1.98	.55	1.68	1.56	1.44	2.65	.54	.42
IN.	.13	.81	2.07	3.92	2.06	.64	1.87	1.79	1.61	3.05	.62	.47

CAL YR 1968 TOTAL 148,964 MEAN 407 MAX 12,100 MIN 23 CFSM 1.34 IN 18.28
WTR YR 1969 TOTAL 155,068 MEAN 425 MAX 5,660 MIN 23 CFSM 1.40 IN 19.03

PEAK DISCHARGE (BASE, 2,500 CFS)

NOTE.--No gage-height record July 11 to Aug. 19.

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-18	0930	6.35	5,360	05-19	0215	6.31	5,300
01-30	0315	6.82	6,110	07-20	Unknown	6.2	5,120

From appearance of recorder chart and peak correlation.

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., Bartholomew County, on left bank at downstream side of U.S. Highway 31 (bypass) bridge, 0.2 mile northwest of Columbus city limits, and 2.6 miles upstream from mouth.

DRAINAGE AREA.--534 sq mi.

PERIOD OF RECORD.--October 1967 to current year.

GAGE.--Water-stage recorder. Datum of gage is 610.14 ft above mean sea level.

EXTREMES.--Current year: Maximum discharge, 12,100 cfs Jan. 30 (gage height, 13.67 ft); minimum, 86 cfs Oct. 22-24, Nov. 5 (gage height, 3.18 ft).

Period of record: Maximum discharge, 20,000 cfs May 25, 1968 (gage height, 15.87 ft, from inside high-water mark); minimum daily, 22 cfs Oct. 5, 1967.

REMARKS.--Records good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	90	88	1,050	1,100	6,500	357	499	413	307	359	451	132
2	89	88	1,350	767	3,630	346	468	388	289	363	412	147
3	193	89	1,360	650	2,510	333	457	368	276	319	379	162
4	215	88	1,450	536	1,990	323	428	350	261	252	351	191
5	145	87	1,610	475	1,650	312	443	334	247	266	323	200
6	126	91	1,170	461	1,450	304	572	320	237	276	258	303
7	118	54	839	433	1,400	302	758	302	229	629	278	322
8	113	100	645	373	1,380	301	669	283	216	658	263	249
9	109	119	529	385	2,100	304	570	307	202	578	257	213
10	105	125	460	339	2,280	305	516	366	192	580	356	188
11	102	119	415	300	1,900	295	470	360	185	568	674	170
12	99	113	389	299	1,480	283	416	330	180	910	457	156
13	98	108	382	285	1,200	271	379	301	328	744	375	146
14	96	104	372	271	962	265	377	269	354	512	317	138
15	94	107	343	264	816	257	464	253	493	402	280	131
16	92	268	294	265	721	250	812	238	1,430	350	270	125
17	91	1,040	292	380	655	246	899	226	1,320	300	253	126
18	90	787	315	5,120	591	243	1,560	256	866	250	244	135
19	89	606	314	7,210	546	242	3,070	2,760	565	220	232	469
20	88	473	378	4,160	511	241	2,920	4,340	463	500	229	372
21	88	376	438	2,060	485	235	2,180	2,500	386	5,460	228	280
22	87	322	449	1,430	472	228	1,510	1,440	343	7,080	225	234
23	86	285	1,180	1,250	468	223	1,150	1,000	365	4,360	204	207
24	87	350	1,250	1,520	459	237	914	774	685	2,200	169	157
25	88	879	855	1,430	443	271	759	637	1,140	1,790	179	189
26	90	751	639	1,000	429	311	651	541	2,120	1,500	171	150
27	91	563	637	824	414	333	580	470	1,570	1,020	163	176
28	92	534	2,290	833	386	329	528	418	843	834	156	164
29	90	1,490	3,390	2,540	-----	362	486	380	589	715	150	153
30	89	1,380	2,360	9,370	-----	586	445	353	464	556	144	145
31	89	-----	1,700	10,300	-----	586	-----	327	-----	503	137	-----
TOTAL	3,219	11,622	29,145	56,630	37,828	9,481	25,950	21,604	17,145	35,194	8,696	6,010
MEAN	104	387	940	1,827	1,351	306	865	697	572	1,135	281	200
MAX	215	1,490	3,390	10,300	6,500	586	3,070	4,340	2,120	7,080	674	469
MIN	86	87	292	264	386	223	377	226	180	220	137	125
CFSM	.19	.73	1.76	3.42	2.53	.57	1.62	1.31	1.07	2.13	.53	.38
IN.	.22	.81	2.03	3.94	2.63	.66	1.81	1.50	1.19	2.45	.61	.42

CAL YR 1968 TOTAL 279,636 MEAN 764 MAX 16,000 MIN 86 CFSM 1.43 IN 19.48
WTR YR 1969 TOTAL 262,524 MEAN 719 MAX 10,300 MIN 86 CFSM 1.35 IN 18.28

PEAK DISCHARGE (BASE, 3,500 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
12-29	0345	9.37	3,860	05-20	0130	10.55	5,380
01-19	0300	12.28	8,820	07-22	0115	12.45	9,190
01-30	2115	13.67	12,100				

3-3640. East Fork White River at Columbus, Ind.

LOCATION.--Lat 39°12'00", long 85°55'32", in NW 1/4 sec. 25, T. 9 N., R. 5 E., Bartholomew County 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.

PERIOD OF RECORD.--October 1947 to current year. Prior to January 1948 monthly discharge only, published in WSP 1305.

GAGE.--Water-stage recorder above concrete control. Datum of gage is 603.12 ft above mean sea level. Prior to Oct. 22, 1952, non-recording gage 600 ft upstream at same datum.

AVERAGE DISCHARGE.--22 years, 1,819 cfs (14.47 inches per year).

EXTREMES.--Current year: Maximum discharge, 32,500 cfs July 22 (gage height, 12.20 ft); minimum, 303 cfs Oct. 2, 19-23 (gage height, 1.37 ft).

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

REMARKS.--Records good.

REVISIONS (WATER YEARS).--WSP 1335: 1948-49. WRD Ind. 1968: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	319	316	3,050	3,760	22,900	1,190	1,280	1,340	828	1,440	1,580	420
2	310	310	3,380	2,560	15,200	1,150	1,230	1,290	791	1,280	1,350	453
3	453	310	3,520	2,340	8,190	1,110	1,230	1,220	758	1,110	1,220	465
4	468	317	3,460	1,700	5,890	1,070	1,230	1,150	728	985	1,090	451
5	391	322	3,340	1,410	4,810	1,040	1,470	1,100	700	869	956	524
6	373	334	2,610	1,470	4,090	1,010	1,610	1,060	681	1,500	927	669
7	380	349	2,020	1,350	3,900	999	2,030	1,020	661	2,600	865	825
8	361	362	1,670	1,200	3,980	1,010	1,860	1,080	627	2,480	815	683
9	347	391	1,420	1,200	6,140	1,040	1,620	1,190	593	2,230	815	602
10	337	414	1,260	1,000	8,130	1,050	1,490	1,260	566	3,070	1,160	533
11	332	401	1,160	941	6,250	1,010	1,370	1,290	545	2,680	2,700	489
12	335	383	1,100	872	4,720	973	1,230	1,300	536	2,680	2,050	455
13	332	367	1,100	904	3,670	938	1,130	1,240	717	2,640	1,460	422
14	326	356	1,060	825	2,890	922	1,270	1,130	777	1,800	1,170	415
15	319	387	1,000	815	2,410	896	1,780	1,050	1,020	1,420	958	400
16	313	704	897	804	2,120	871	1,960	978	2,270	1,180	947	387
17	310	2,200	863	1,460	1,940	856	2,020	933	2,530	1,020	877	398
18	312	2,130	891	5,520	1,780	844	5,920	1,100	2,010	910	811	459
19	307	1,860	936	15,100	1,650	844	9,960	3,810	1,480	827	752	1,280
20	307	1,400	1,050	14,300	1,560	843	10,300	5,520	1,230	1,520	736	1,050
21	306	1,300	1,180	8,510	1,480	820	7,590	3,790	1,050	9,770	711	825
22	309	1,090	1,390	4,300	1,450	803	4,900	2,530	955	26,400	666	682
23	308	965	2,700	3,600	1,440	782	3,770	1,950	967	24,300	612	598
24	313	1,120	3,220	4,550	1,400	918	2,990	1,630	1,760	9,410	567	567
25	320	2,300	2,340	5,540	1,360	1,030	2,440	1,430	3,100	5,470	521	543
26	320	2,170	1,810	3,590	1,320	1,070	2,090	1,270	5,560	4,570	513	539
27	326	1,730	2,180	2,530	1,280	1,080	1,870	1,150	5,150	3,500	454	503
28	323	1,780	5,860	3,030	1,230	1,050	1,700	1,050	3,220	3,310	476	470
29	318	3,260	9,070	7,320	-----	1,300	1,550	975	2,600	2,850	460	443
30	316	3,660	8,940	15,800	-----	1,480	1,420	918	1,790	2,270	442	425
31	316	-----	5,810	26,200	-----	1,480	-----	864	-----	1,850	430	-----
TOTAL	10,407	33,168	80,287	152,501	123,180	31,479	82,310	47,618	46,200	129,001	25,328	17,145
MEAN	336	1,106	2,590	4,919	4,399	1,015	2,744	1,536	1,540	4,161	946	572
MAX	468	3,660	9,070	26,200	22,900	1,480	10,300	5,520	5,560	26,400	2,760	1,280
MIN	306	310	863	804	1,230	782	1,130	864	536	827	430	387
CFSM	.20	.65	1.52	2.88	2.58	.59	1.61	.90	.90	2.44	.55	.33
IN.	.23	.72	1.75	3.32	2.68	.69	1.79	1.04	1.01	2.81	.64	.37

CAL YR 1968 TOTAL 797,739 MEAN 2,180 MAX 44,700 MIN 306 CFSM 1.28 IN 17.38
WTR YR 1969 TOTAL 782,644 MEAN 2,144 MAX 26,400 MIN 306 CFSM 1.26 IN 17.05

PEAK DISCHARGE (BASE, 10,000 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
01-19	1015	7.77	15,400	04-20	0700	5.56	10,500
01-31	1330	10.91	26,600	07-22	1930	12.20	32,500

3-3642. Haw Creek near Clifford, Ind.

LOCATION.--Lat 39°16'04" (revised), long 85°51'22", in NW 1/4 sec. 34, T. 10 N., R. 6 E., Bartholomew County, on left bank 20 ft downstream from bridge on County Road 450 North, 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.

PERIOD OF RECORD.--August 1967 to current year.

GAGE.--Water-stage recorder. Datum of gage is 643.00 ft above mean sea level.

EXTREMES.--Current year: Maximum discharge, 2,060 cfs Jan. 30, May 19 (gage height, 12.57 ft); minimum, 2.5 cfs Oct. 16-18 (gage height, 1.39 ft).

Period of record: Maximum discharge, 2,560 cfs May 24, 1968 (gage height, 13.9 ft, from floodmark); no flow for part or all of each day Sept. 15, 22-30, Oct. 1, 6-15, 17-31, 1967, diversion of stream flow to ground water resulting from irrigation pumpage.

REMARKS.--Records good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	2.8	49	55	198	22	21	22	20	13	24	5.1
2	3.0	2.8	86	51	133	21	22	21	19	12	21	156
3	3.0	2.8	54	39	106	20	19	20	18	11	18	59
4	3.1	2.8	118	31	79	20	19	18	16	11	16	19
5	3.9	3.1	75	27	68	20	27	18	15	9.5	14	14
6	3.7	3.7	46	27	73	20	32	16	15	46	13	12
7	3.1	4.9	33	25	78	20	27	16	14	44	13	9.3
8	3.1	5.3	25	23	103	19	25	28	14	22	12	8.4
9	3.1	4.6	21	24	141	20	22	50	13	17	13	8.4
10	2.9	3.9	19	21	88	19	21	60	13	22	14	6.4
11	2.8	3.5	17	19	75	18	18	39	13	21	12	5.6
12	2.8	3.8	17	18	62	17	16	28	13	67	11	5.1
13	2.8	3.8	18	17	49	16	16	24	24	28	10	4.7
14	2.8	3.6	16	16	42	17	23	22	18	18	9.5	4.7
15	2.8	5.2	17	15	39	16	59	19	45	14	8.4	4.1
16	2.8	25	16	16	36	16	57	16	44	13	18	4.0
17	2.5	17	16	477	33	16	44	19	26	12	17	4.2
18	2.7	13	16	965	31	16	644	184	21	11	12	4.9
19	2.8	11	18	185	29	15	326	1,080	20	14	9.4	4.6
20	2.8	8.7	22	100	27	15	160	207	18	367	10	3.8
21	3.1	7.6	18	80	26	14	112	122	15	255	9.6	3.4
22	3.1	6.7	55	72	26	13	82	87	22	254	7.6	3.4
23	3.1	6.4	94	94	27	13	60	66	75	196	7.2	3.6
24	3.4	27	50	133	25	20	47	54	38	149	7.0	4.0
25	3.5	23	36	72	24	18	40	44	32	177	6.6	4.0
26	3.1	16	29	53	24	20	35	38	30	86	6.3	3.6
27	2.8	14	97	44	23	18	31	32	21	86	6.0	3.6
28	2.8	54	550	192	23	17	29	28	17	71	5.1	3.6
29	3.1	69	145	871	-----	27	26	26	15	46	5.5	3.6
30	2.9	36	77	1,400	-----	27	24	24	14	34	5.7	3.6
31	2.8	-----	61	408	-----	23	-----	21	-----	27	5.3	-----
TOTAL	93.2	391.0	1,911	5,570	1,688	573	2,084	2,449	678	2,153.5	347.2	379.7
MEAN	3.01	13.0	61.6	180	60.3	18.5	69.5	79.0	22.6	69.5	11.2	12.7
MAX	3.9	69	550	1,400	198	27	644	1,080	75	367	24	156
MIN	2.5	2.8	16	15	23	13	16	16	13	9.5	5.1	3.4
CFSM	.06	.27	1.30	3.78	1.27	.39	1.46	1.66	.48	1.46	.24	.27
IN.	.07	.31	1.50	4.36	1.32	.45	1.63	1.92	.53	1.69	.27	.30

CAL YR 1968 TOTAL 22,032.6
WTR YR 1969 TOTAL 18,317.6

MEAN 60.2
MEAN 50.2

MAX 2,140
MAX 1,400

MIN 2.5
MIN 2.5

CFSM 1.27
CFSM 1.06

IN 17.25
IN 14.34

PEAK DISCHARGE (BASE, 600 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-28	0645	8.00	850	04-18	0600	8.84	1,010
01-17	2330	11.37	1,650	05-19	0300	12.57	2,060
01-30	0015	12.57	2,060	07-20	1900	8.50	945

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., Bartholomew County, at downstream side of left abutment of highway bridge, 0.2 mile north of Hartsville, and 5 miles upstream from Duck Creek.

DRAINAGE AREA.--91.4 sq mi.

PERIOD OF RECORD.--February 1948 to current year.

GAGE.--Water-stage recorder. Datum of gage is 677.34 ft above mean sea level. Prior to Sept. 24, 1952, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--21 years, 98.2 cfs (14.59 inches per year).

EXTREMES.--Current year: Maximum discharge, 3,070 cfs Jan. 30 (gage height, 8.08 ft); minimum, 1.0 cfs Oct. 1, 2, Sept. 14-16. Period of record: Maximum discharge, 11,300 cfs Jan. 21, 1959 (gage height, 14.29 ft); no flow at times most years. Flood in 1913 reached a stage of 25.1 ft, from floodmarks.

REMARKS.--Records good.

REVISIONS (WATER YEARS).--WSP 1335: 1950. WSP 1725: 1949(M). WRD Ind. 1968: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	5.6	164	90	364	38	48	39	38	25	37	1.7
2	1.0	5.6	322	80	252	36	51	37	35	23	33	1.8
3	23	6.2	204	70	212	35	50	35	32	21	29	3.5
4	42	6.2	395	60	159	34	48	33	29	19	25	21
5	18	6.2	259	54	129	32	66	31	26	17	22	15
6	14	6.8	156	48	131	32	102	29	24	48	20	9.1
7	11	11	113	44	153	33	86	28	23	147	18	6.0
8	9.0	11	87	40	202	33	70	53	20	69	16	4.6
9	9.0	11	71	38	336	34	61	237	19	62	19	3.4
10	9.8	15	62	35	193	32	57	153	17	48	44	2.7
11	8.2	11	57	32	154	30	48	104	16	42	43	2.2
12	6.8	9.0	55	31	127	28	41	73	44	67	24	1.9
13	6.2	7.3	53	30	94	27	38	57	185	47	18	1.4
14	6.2	6.1	56	29	77	26	48	49	100	30	14	1.2
15	6.2	11	45	28	67	25	134	43	250	72	13	1.2
16	6.2	172	39	28	66	24	143	38	245	18	15	1.2
17	6.2	188	40	688	59	24	104	45	112	15	14	1.9
18	6.2	115	47	2,130	53	25	372	480	75	13	15	3.1
19	6.2	93	59	368	49	25	344	2,370	62	12	12	2.8
20	5.6	65	90	184	46	25	208	518	50	667	12	4.9
21	5.1	50	74	136	45	24	154	252	40	560	9.4	4.0
22	4.6	43	156	118	45	23	121	175	59	234	7.0	3.1
23	4.6	38	359	151	47	22	95	132	219	306	6.1	2.6
24	5.1	126	173	239	45	31	76	105	115	202	4.8	3.9
25	5.6	151	116	139	44	41	66	85	79	450	4.4	4.6
26	5.6	95	100	93	42	41	59	70	75	179	4.0	4.6
27	5.6	73	181	84	40	38	53	58	51	115	3.7	4.5
28	5.6	169	1,110	202	39	35	52	50	39	95	3.0	4.6
29	5.6	312	410	1,280	-----	62	47	45	37	69	2.6	4.2
30	5.6	165	209	2,490	-----	74	43	41	27	53	2.3	3.8
31	5.6	-----	155	748	-----	54	-----	38	-----	43	2.0	-----
TOTAL	260.4	1,984.3	5,422	9,787	3,269	1,043	2,885	5,453	2,137	3,718	491.7	178.2
MEAN	8.40	66.1	175	316	117	33.6	96.2	176	71.2	120	15.9	5.94
MAX	42	312	1,110	2,490	364	74	372	2,320	250	667	44	35
MIN	1.0	5.6	39	28	38	22	38	29	16	12	2.0	1.2
CFSM	.09	.72	1.91	3.45	1.28	.37	1.05	1.92	.78	1.31	.17	.06
IN.	.11	.81	2.21	3.98	1.33	.42	1.17	2.22	.87	1.51	.20	.07

CAL YR 1968 TOTAL 47,045.4 MEAN 129 MAX 4,450 MIN 1.0 CFSM 1.41 IN 19.14
WTR YR 1969 TOTAL 36,628.3 MEAN 100 MAX 2,490 MIN 1.0 CFSM 1.10 IN 14.90

PEAK DISCHARGE (BASE, 1,300 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-28	1215	5.31	1,440	05-18	2200	7.96	2,990
01-18	0815	7.83	2,910	07-20	2015	5.73	1,670
01-30	0715	8.08	3,070				

3-3650, Sand Creek near Browsersville, Ind.

LOCATION.--Lat 39°05'03", long 85°39'32", in NW¼ sec. 5, T. 7 N., R. 8 E., Jennings County, on left bank at downstream side of county highway bridge, 2.5 miles west of Browsersville, 5.7 miles upstream from Wyaloosing Creek, and 16 miles upstream from mouth.

DRAINAGE AREA.--155 sq mi.

PERIOD OF RECORD.--February 1948 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 630 ft (by barometer). Prior to Oct. 6, 1952, nonrecording gage at site 1.7 miles upstream at datum approximately 8 ft higher.

AVERAGE DISCHARGE.--21 years, 167 cfs (14.63 inches per year).

EXTREMES.--Current year: Maximum discharge, 7,400 cfs Jan. 30 (gage height, 14.29 ft); minimum, 2.6 cfs Oct. 6, 14, Sept 30; minimum gage height, 0.68 ft Oct. 6.

Period of record: 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 at times most years.

REMARKS.--Records good. Records for suspended sediment loads for current year are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1335: 1949. WRD Ind. 1968: Drainage area. Revised figures of discharge, in cubic feet per second, for the water year 1968, superseding those published in WRD Ind. 1968, are given herewith:

Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge	Date	Discharge
1968		1968-Con.		1968-Con.		1968-Con.		1968-Con.	
Sept. 4	6.6	Sept. 9	7.0	Sept. 14	9.7	Sept. 19	5.8	Sept. 25	5.3
5	8.0	10	6.6	15	7.0	20	5.6	26	5.0
6	8.0	11	8.5	16	5.8	21	5.3	27	4.5
7	9.7	12	9.1	17	5.6	22	6.6	28	5.6
8	9.1	13	11	18	5.8	23	7.5	29	9.7
						24	6.2	30	6.6

Month	Cfs-days	Maximum	Minimum	Mean	Per square mile	Runoff in inches
September 1968	209.0	11	4.5	6.97	0.04	0.05
WTR YR 1968	70,838.88	11,100	.11	194	1.25	17.00

3-3650. Sand Creek near Brewersville, Ind.--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	CCT	NOV	DEC	JAN	FFB	MAR	APR	MAY	JUN	JUL	ALG	SEP
1	5.0	9.0	145	165	632	53	80	68	33	22	44	3.4
2	4.5	8.4	358	140	405	50	86	59	52	20	48	3.5
3	4.3	8.0	275	110	342	46	111	51	45	20	25	26
4	3.6	7.3	911	90	250	43	96	45	39	17	25	48
5	3.3	7.1	449	80	197	40	342	40	28	15	22	31
6	3.0	7.7	228	75	255	36	415	39	24	14	21	17
7	3.0	9.0	149	68	395	37	222	35	24	43	20	10
8	2.9	10	115	62	422	38	159	40	22	133	17	6.7
9	3.0	19	90	58	1,280	39	125	219	19	57	20	5.4
10	3.1	20	75	50	395	42	118	219	16	48	76	4.3
11	5.0	14	66	42	280	35	106	257	14	78	34	3.7
12	5.2	10	60	37	222	32	86	148	14	383	23	3.5
13	3.6	7.5	77	36	161	30	73	103	177	161	19	3.3
14	3.0	6.7	92	35	123	30	209	87	218	71	15	3.2
15	4.6	6.6	72	34	109	28	824	77	182	37	12	3.1
16	7.1	39	50	34	99	27	382	65	354	26	12	3.1
17	6.7	149	60	690	93	26	235	55	153	21	16	3.3
18	5.6	81	68	3,330	86	25	1,090	341	95	18	24	3.3
19	5.0	56	114	778	81	26	1,080	1,180	70	15	26	3.1
20	4.4	44	163	345	74	26	443	513	58	558	17	3.2
21	3.8	32	108	260	71	23	285	264	42	1,170	13	3.1
22	3.6	22	340	225	69	20	218	177	34	454	11	3.0
23	6.1	14	726	340	73	20	175	139	415	616	9.0	3.3
24	8.8	25	275	560	73	28	137	113	257	326	6.8	5.5
25	9.9	123	145	275	69	84	114	96	159	642	5.7	5.2
26	9.5	92	132	151	65	81	100	82	98	359	4.5	3.9
27	8.5	71	560	135	61	72	88	72	67	201	4.3	3.3
28	8.1	114	2,060	820	56	63	84	62	45	144	4.1	3.0
29	8.8	482	827	3,050	-----	96	90	53	32	59	3.8	2.9
30	10	157	355	5,600	-----	149	77	47	25	72	3.6	2.7
31	10	-----	282	1,520	-----	94	-----	40	-----	59	3.5	-----
TOTAL	173.0	1,690.8	10,427	19,195	6,438	1,439	7,650	4,786	2,811	5,939	589.3	224.0
MEAN	5.58	56.4	336	619	230	46.4	255	154	93.7	192	19.0	7.47
MAX	10	482	3,060	5,600	1,280	149	1,090	1,180	415	1,170	76	48
MIN	2.9	6.2	50	34	56	20	73	35	14	14	3.5	2.7
CFSM	.04	.36	2.17	3.99	1.48	.30	1.65	1.00	.60	1.24	.12	.05
IN.	.04	.41	2.50	4.61	1.54	.35	1.84	1.15	.67	1.42	.14	.05

CAL YR 1968 TOTAL 71,952.8 MEAN 197 MAX 11,100 MIN 2.9 CFSM 1.27 IN 17.26
WTR YR 1969 TOTAL 61,362.1 MEAN 168 MAX 5,600 MIN 2.7 CFSM 1.08 IN 14.72

PEAK DISCHARGE (BASE, 2,900 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-28	0900	10.58	4,010	01-30	0200	14.29	7,400
01-18	0215	10.90	4,230	07-20	2215	9.33	3,150

3-3655. East Fork White River at Seymour, Ind.

LOCATION.--Lat 38°58'57", long 85°53'57", in NW¼ sec. 7, T. 6 N., R. 6 E., Jackson County, 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.

PERIOD OF RECORD.--October 1927 to current year. Yearly maximum discharge only for water years 1924-27, published in WSP 1305. Daily gage heights from May 1923 to September 1927 are available in the district office.

GAGE.--Water-stage recorder. Datum of gage is 550.67 ft above mean sea level. Oct. 1, 1927, to July 2, 1931, nonrecording gage 1,700 ft upstream at datum 7.61 ft higher. July 3, 1931, to July 16, 1934, nonrecording gage at site 100 ft downstream at present datum.

AVERAGE DISCHARGE.--42 years, 2,377 cfs (13.79 inches per year).

EXTREMES.--Current year: Maximum discharge, 39,200 cfs July 23 (gage height, 17.95 ft); minimum, 370 cfs Nov. 3-5 (gage height, 1.12 ft).

Period of record: Maximum discharge, 78,500 cfs Jan. 5, 1949 (gage height, 19.67 ft); minimum, 84 cfs Sept. 15, 1941.

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

REMARKS.--Records good. Some regulation of low flow by Seymour Water Co. at dam 500 ft upstream from station. Records of water temperatures and suspended sediment loads for the current year are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 743: 1928-29, 1931-32. WSP 783: 1934. WSP 873: 1938. WSP 1335: 1928(M), 1929-30, 1932-33(M), 1937(M), 1942. WSP 1435: 1949. WSP 1705: 1958. WRD Ind. 1968: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	458	387	3,750	6,500	29,500	1,540	1,660	1,950	1,340	1,900	2,340	742
2	451	335	4,000	4,290	24,400	1,480	1,580	1,820	1,270	1,610	2,080	764
3	444	378	4,560	3,540	16,000	1,410	1,590	1,710	1,190	1,440	1,890	929
4	462	374	4,740	2,900	10,200	1,360	1,550	1,610	1,130	1,250	1,710	902
5	542	380	5,420	2,300	7,710	1,310	1,820	1,540	1,090	1,190	1,570	848
6	528	385	4,120	2,100	6,170	1,260	2,470	1,480	1,040	1,150	1,470	862
7	500	408	3,100	2,050	5,550	1,230	2,490	1,430	1,010	2,480	1,390	1,030
8	490	403	2,510	1,820	5,690	1,220	2,520	1,430	976	2,970	1,320	1,020
9	472	412	2,110	1,720	8,290	1,230	2,220	2,030	928	2,500	1,260	913
10	458	437	1,820	1,560	10,100	1,240	2,010	2,230	896	2,790	1,280	854
11	444	450	1,660	1,390	10,300	1,220	1,850	2,190	865	3,010	2,140	800
12	429	450	1,530	1,280	7,820	1,170	1,670	2,000	839	3,380	2,580	760
13	434	439	1,490	1,240	5,810	1,130	1,520	1,810	1,190	3,870	2,070	727
14	426	429	1,480	1,200	4,350	1,090	1,520	1,670	1,670	2,560	1,660	700
15	423	444	1,430	1,140	3,570	1,060	3,040	1,550	1,370	1,920	1,440	677
16	412	522	1,290	1,110	3,090	1,030	3,430	1,440	2,400	1,560	1,330	655
17	402	1,250	1,220	1,340	2,780	1,000	2,990	1,380	2,920	1,360	1,250	648
18	398	2,260	1,230	10,400	2,540	989	5,210	1,560	2,690	1,230	1,220	654
19	393	2,010	1,280	20,300	2,370	985	12,400	5,500	2,070	1,130	1,160	906
20	391	1,770	1,420	18,500	2,230	994	13,500	10,900	1,680	1,120	1,140	1,280
21	386	1,480	1,560	15,700	2,100	972	12,200	8,500	1,450	5,350	1,050	1,120
22	390	1,240	1,620	9,470	2,010	942	8,970	4,930	1,300	10,900	1,060	968
23	384	1,080	3,310	5,530	1,940	921	6,040	3,420	1,510	28,000	1,000	875
24	386	1,030	4,180	5,900	1,880	977	4,570	2,730	2,080	32,400	959	833
25	394	1,640	3,420	7,200	1,810	1,190	3,690	2,310	2,690	15,800	921	790
26	389	2,490	2,540	7,100	1,740	1,280	3,130	2,020	3,950	9,330	890	774
27	389	2,090	2,430	4,200	1,670	1,290	2,760	1,790	5,460	6,180	861	758
28	391	1,810	7,750	3,600	1,600	1,260	2,510	1,610	4,570	4,720	832	723
29	392	3,020	12,300	8,890	-----	1,320	2,300	1,480	3,170	4,150	807	691
30	387	4,180	11,500	26,200	-----	1,700	2,120	1,390	2,440	3,410	785	668
31	386	-----	11,400	35,000	-----	1,800	-----	1,310	-----	2,770	761	-----
TOTAL	13,251	34,043	111,170	215,470	183,620	37,600	115,330	78,720	57,184	163,540	42,366	24,875
MEAN	427	1,135	3,586	6,951	6,558	1,213	3,844	2,539	1,906	5,275	1,367	829
MAX	542	4,180	12,300	35,000	25,500	1,800	13,500	10,900	5,460	32,400	2,580	1,280
MIN	384	374	1,220	1,110	1,600	921	1,520	1,310	839	1,120	761	648
CFSM	.18	.48	1.53	2.57	2.80	.52	1.64	1.08	.81	2.25	.58	.35
IN.	.21	.54	1.77	3.42	2.92	.60	1.83	1.25	.91	2.60	.67	.40

CAL YR 1968 TOTAL 1,127,774 MEAN 3,081 MAX 55,200 MIN 374 CFSM 1.32 IN 17.92
WTR YF 1969 TOTAL 1,077,169 MEAN 2,951 MAX 35,000 MIN 374 CFSM 1.26 IN 17.11

PEAK DISCHARGE (BASE, 12,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-29	0645	13.59	12,600	04-19	2000	14.21	14,400
01-19	1600	15.83	21,000	07-23	2245	17.95	39,200
01-31	0300	17.86	37,800				

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., Jennings County, 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.

PERIOD OF RECORD.--June 1955 to current year.

GAGE.--Water-stage recorder. Datum of gage is 677.47 ft above mean sea level (unadjusted). Prior to June 10, 1955, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--14 years, 90.1 cfs (15.85 inches per year).

EXTREMES.--Current year: Maximum discharge, 4,640 cfs Jan. 30 (gage height, 11.05 ft); no flow for part of Sept. 1.
Period of record: 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 most years.

REMARKS.--Records good.

REVISIONS.--WRD Ind. 1968: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	JCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.75	.41	78	56	250	16	44	30	6.5	6.2	8.3	.01
2	.63	.41	302	46	137	15	44	26	6.0	5.0	6.9	.07
3	.62	.46	122	36	100	14	70	22	5.5	4.0	5.2	.24
4	.56	.51	1,220	29	78	13	59	20	4.7	2.9	3.9	3.9
5	.51	.51	286	25	59	11	377	17	4.3	2.0	2.9	1.4
6	.51	.68	86	23	66	11	265	15	3.5	1.4	2.0	.54
7	.51	.90	53	20	195	10	112	13	2.9	1.0	1.4	.42
8	.51	.90	43	19	161	10	71	16	3.5	.68	1.0	.32
9	.46	.90	36	17	624	11	53	39	8.5	.68	1.7	.11
10	.46	.90	32	15	159	11	53	90	5.5	2.9	2.0	.04
11	.41	.98	29	14	96	11	53	64	3.5	20	2.5	.04
12	.41	1.1	31	13	76	10	40	40	2.9	991	15	.02
13	.41	1.1	31	12	54	9.5	33	28	165	143	6.8	.01
14	.37	1.1	32	11	41	9.0	586	52	121	50	3.6	.07
15	.37	1.4	32	11	35	8.5	1,390	77	133	25	2.0	.11
16	.33	7.6	26	11	31	8.5	253	45	182	16	1.2	.07
17	.33	43	20	260	28	8.0	119	31	52	10	20	.24
18	.37	26	30	2,140	27	8.0	582	328	28	7.3	27	.68
19	.37	19	112	469	25	7.5	468	594	20	5.5	13	.83
20	.37	15	146	153	23	8.0	169	182	15	312	7.7	.54
21	.33	12	63	126	21	6.5	92	82	11	912	6.6	.54
22	.33	10	322	119	21	6.0	70	50	9.2	1,490	5.0	.32
23	.30	9.6	698	167	22	6.0	58	38	9.3	1,210	2.9	.24
24	.37	11	115	306	22	28	44	31	9.4	257	1.7	.24
25	.46	23	60	123	22	165	37	26	9.1	148	1.0	.17
26	.46	24	47	56	20	95	32	21	69	71	.54	.07
27	.46	19	360	44	19	77	28	18	39	42	.32	.04
28	.46	417	2,030	1,050	17	60	35	14	19	28	.17	.04
29	.41	490	387	2,570	-----	78	54	11	10	20	.11	.02
30	.41	86	128	3,790	-----	101	39	9.5	7.0	14	.04	.01
31	.41	-----	83	842	-----	58	-----	8.0	-----	10	.02	-----
TOTAL	13.71	1,224.46	7,040	12,572	2,429	890.5	5,330	2,037.5	965.3	5,808.56	152.50	11.35
MEAN	.44	40.8	227	406	86.8	28.7	178	65.7	32.2	187	4.92	.38
MAX	.75	490	2,030	3,790	624	165	1,390	594	182	1,490	27	3.9
MIN	.30	.41	20	11	17	6.0	29	8.0	2.9	.68	.02	.01
CFSM	.006	.53	2.94	5.25	1.12	.37	2.30	.85	.42	2.43	.06	.005
IN.	.007	.59	3.39	6.06	1.17	.43	2.57	.99	.47	2.80	.07	.005

CAL YR 1968 TOTAL 47,787.31 MEAN 131 MAX 8,420 MIN .30 CFSM 1.69 IN 23.02
WTK YR 1969 TOTAL 38,474.88 MEAN 105 MAX 3,790 MIN .01 CFSM 1.37 IN 18.53

PEAK DISCHARGE (BASE, 2,300 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-28	0830	8.08	2,750	04-14	2400	8.37	2,920
01-18	0030	8.10	2,760	07-22	1915	10.03	3,970
01-30	0400	11.05	4,640				

3-3662. Harberts Creek near Madison, Ind.

LOCATION.--Lat 38°46'55", long 85°29'08", in SW 1/4 sec. 14, T. 4 N., R. 9 E., Jefferson County, attached to left downstream wing-wall of bridge on County Road 533 West, 0.2 mile west of Smyrna, 3.7 miles upstream from Big Creek, and 4 miles northwest of Madison.

DRAINAGE AREA.--9.31 sq mi.

PERIOD OF RECORD.--August 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is 725.75 ft above mean sea level.

EXTREMES.--Current year: Maximum discharge, 564 cfs Jan. 28 (gage height, 6.04 ft); no flow Oct. 1-5, Aug. 26 to Sept. 1, Sept. 6-30.

Period of record: Maximum discharge, 564 cfs Jan. 28, 1969 (gage height, 6.04 ft); no flow at times each year.

REMARKS.--Records good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	JCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.12	16	5.3	23	2.1	4.6	2.0	.74	1.5	.21	0
2	0	.11	19	4.3	14	1.9	5.5	1.8	1.8	.87	.17	1.3
3	0	.13	12	3.5	11	1.8	6.0	1.6	1.0	.63	.11	.15
4	0	.13	95	3.0	7.6	1.7	8.7	1.6	.63	.48	.08	.05
5	0	.11	15	2.5	6.6	1.6	63	1.5	.63	.34	.07	.02
6	.85	.78	6.8	2.1	23	1.7	22	1.5	.48	.27	.08	0
7	.62	1.8	4.8	1.9	23	1.7	10	1.4	.43	.30	.07	0
8	.27	.90	3.4	1.7	101	1.7	7.6	5.5	.30	.30	.05	0
9	.12	.40	2.9	1.5	73	2.2	7.0	7.0	2.6	.30	1.8	0
10	.63	.24	2.4	1.4	19	1.9	8.7	3.8	.48	1.4	2.4	0
11	.39	.18	2.3	1.2	13	1.7	6.4	2.9	.30	.68	.34	0
12	.23	.18	2.1	1.1	8.8	1.6	5.0	2.4	9.5	.43	.15	0
13	.16	.16	2.4	1.0	6.4	1.5	4.5	2.0	26	.21	.07	0
14	.10	.20	2.1	.90	5.2	1.4	190	17	4.2	.13	.06	0
15	.07	.22	1.6	.90	4.4	1.4	77	6.4	7.2	.11	.02	0
16	.06	3.9	1.3	1.3	3.7	1.3	23	3.3	4.7	.10	.06	0
17	.07	1.1	1.5	103	3.5	1.3	13	3.1	1.8	.07	.17	0
18	.07	.63	15	140	3.4	1.4	133	39	1.4	.07	5.3	0
19	.21	.59	21	30	3.3	1.4	67	35	1.2	.68	.95	0
20	.25	.40	9.6	15	3.0	1.3	19	13	.87	1.3	.58	0
21	.16	.36	5.1	14	2.7	1.2	11	5.4	1.0	1.2	.27	0
22	.12	.31	90	15	2.8	1.2	7.4	3.7	1.0	42	.19	0
23	.11	.27	33	25	3.4	1.3	5.6	2.9	2.1	15	.08	0
24	.15	1.2	9.9	24	3.4	35	4.3	2.3	1.1	3.2	.05	0
25	.62	.98	6.1	8.5	3.0	26	3.4	1.8	127	5.1	.03	0
26	.45	.51	4.7	5.4	2.8	13	2.8	1.5	14	1.4	0	0
27	.30	1.4	45	4.3	2.5	10	2.3	1.1	4.0	.74	0	0
28	.17	61	176	162	2.3	6.7	4.3	.94	2.1	.53	0	0
29	.13	13	23	194	-----	8.1	2.8	1.2	1.3	.38	0	0
30	.11	4.8	11	298	-----	6.3	2.3	1.0	.95	.27	0	0
31	.11	-----	8.1	51	-----	4.8	-----	.87	-----	.24	0	-----
TOTAL	6.53	96.01	648.0	1,122.80	377.8	146.2	727.2	174.51	220.81	80.23	13.36	1.52
MEAN	.21	3.20	20.9	36.2	13.5	4.72	24.2	5.63	7.36	2.59	.43	.051
MAX	.85	61	176	298	101	35	190	39	127	42	5.3	1.3
MIN	0	.11	1.3	.90	2.3	1.2	2.3	.87	.30	.07	0	0
CFSM	.02	.34	2.25	3.89	1.45	.51	2.60	.60	.79	.28	.05	.005
IN.	.03	.38	2.59	4.49	1.51	.58	2.90	.70	.88	.32	.05	.006

CAL YR 1968 TOTAL MEAN MAX MIN CFSM IN
 WTR YR 1969 TOTAL 3,614.97 MEAN 9.90 MAX 298 MIN 0 CFSM 1.06 IN 14.44

PEAK DISCHARGE (BASE, 200 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
12-22	1700	4.75	206	02-08	2115	5.72	452
12-28	0430	5.63	424	04-14	1800	5.87	504
01-17	2015	5.09	280	04-18	0445	4.79	214
01-28	1630	6.04	564	06-25	1200	6.01	554
01-30	0645	5.97	540				

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., Jefferson County, 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.

PERIOD OF RECORD.—November 1947 to current year.

GAGE.—Water-stage recorder. Datum of gage is 541.17 ft above mean sea level. Prior to June 22, 1955, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.—21 years (1948-69), 338 cfs (15.67 inches per year).

EXTREMES.—Current year: Maximum discharge, 14,200 cfs Jan. 30 (gage height, 22.35 ft); minimum, 1.3 cfs Sept. 26, 27; minimum gage height, 0.39 ft Sept. 26.

Period of record: 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 most years.

REMARKS.—Records good. Records of suspended sediment loads for the current year are published in Part 2 of this report.

REVISIONS (WATER YEARS).—WSP 1335: 1948. WRD Ind. 1968: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.3	5.1	244	272	1,120	86	163	126	49	43	32	3.0
2	4.4	5.3	507	186	658	80	153	107	43	39	28	2.8
3	4.2	5.5	507	164	497	75	188	93	39	34	23	2.6
4	3.7	5.5	1,940	111	379	71	220	81	35	28	20	2.6
5	3.4	5.8	1,290	107	305	66	734	71	31	23	17	2.4
6	3.6	6.7	479	96	323	64	850	64	28	19	15	2.4
7	3.6	9.3	272	96	650	64	471	59	27	17	13	3.1
8	4.0	9.7	175	77	673	62	310	170	24	15	11	2.6
9	4.9	11	133	72	2,240	67	235	443	39	14	11	2.9
10	5.8	9.8	111	62	861	67	231	320	31	18	16	2.7
11	5.3	8.2	97	50	508	64	229	267	30	20	16	2.4
12	4.7	7.4	98	44	396	60	180	180	25	329	18	2.1
13	4.0	7.2	89	40	302	57	144	127	293	479	14	2.0
14	3.9	6.5	87	38	229	54	1,180	163	479	129	17	1.9
15	3.9	6.7	80	37	186	51	4,610	367	340	70	14	1.7
16	3.4	13	60	42	160	49	1,140	231	433	47	16	1.6
17	3.4	15	52	529	145	48	570	144	236	34	14	1.6
18	3.7	65	93	5,460	136	47	1,370	237	123	26	18	1.5
19	3.8	53	343	2,260	131	47	1,990	1,470	88	22	30	1.7
20	3.8	29	553	749	122	46	905	780	66	23	37	1.8
21	4.2	20	338	529	113	42	472	376	55	774	32	1.8
22	4.2	16	624	437	108	39	354	233	47	1,100	24	1.8
23	4.2	14	1,950	575	113	37	276	167	55	3,380	18	1.8
24	4.5	15	668	989	117	174	220	134	59	603	14	1.9
25	4.9	15	344	560	112	600	177	114	323	522	12	1.7
26	5.0	19	235	297	107	461	150	96	438	262	9.0	1.5
27	4.9	42	326	203	97	308	129	81	160	134	7.2	1.4
28	4.9	164	4,470	1,740	90	242	150	67	104	91	5.7	1.5
29	4.9	1,260	1,900	6,870	-----	207	170	58	68	68	4.9	1.4
30	5.2	456	608	12,300	-----	276	166	51	49	53	4.2	1.5
31	5.1	-----	396	3,190	-----	222	-----	46	-----	40	3.5	-----
TOTAL	133.8	2,305.7	19,106	38,121	10,868	3,833	18,037	6,973	3,822	9,456	514.4	61.7
MEAN	4.32	76.9	616	1,230	388	124	601	225	127	273	16.6	2.06
MAX	5.8	1,260	4,470	12,300	2,240	600	4,610	1,470	479	3,380	37	3.1
MIN	3.4	5.1	52	37	90	37	129	46	24	14	3.5	1.4
CFSM	.01	.26	2.10	4.20	1.32	.42	2.05	.77	.43	.93	.06	.007
IN.	.02	.29	2.43	4.84	1.38	.49	2.29	.89	.49	1.07	.07	.008

CAL YR 1968 TOTAL 143,488.7 MEAN 392 MAX 16,300 MIN 3.4 CFSM 1.34 IN 18.21
 WTR YR 1969 TOTAL 112,231.6 MEAN 307 MAX 12,300 MIN 1.4 CFSM 1.05 IN 14.25

PEAK DISCHARGE (BASE, 7,500 CFS).—Jan. 30 (1245) 14,200 cfs (22.35 ft).

3-3670. Muscatatuck River near Austin, Ind.

LOCATION.--Lat 38°46'13", long 85°49'21", in SW¼ sec. 23, T. 4 N., R. 6 E., Scott County, 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.

PERIOD OF RECORD.--August 1932 to current year (high-water records only since October 1943).

AVERAGE DISCHARGE.--10 years (1932-35, 1936-43), 387 cfs (14.64 inches per year).

GAGE.--Water-stage recorder. Datum of gage is 513.96 ft above mean sea level. Prior to June 22, 1934, nonrecording gage at same site and datum. Nov. 8 to Dec. 30, 1939, nonrecording gage approximately 0.5 mile upstream at different datum. Aug. 1, 1940, to Sept. 30, 1943, auxiliary gage (for low flows) at Slate-Ford Bridge 2.2 miles upstream at different datum.

EXTREMES.--Current year: Maximum discharge, 14,700 cfs Jan. 31 (gage height, 24.07 ft).
Period of record: Maximum discharge, 53,900 cfs Jan. 22, 1959 (gage height, 29.20 ft).

REMARKS.--Records poor. Daily discharge not computed when gage height is below 13.0 ft.

REVISIONS (WATER YEARS).--WSP 1385: 1933(M). WSP 1505: 1956. WRD Ind. 1968: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1					4,810							
2					1,570							
3					742							
4			885									
5			1,570									
6			660									
7												
8												
9					1,650							
10					1,560							
11					690							
12												
13												
14												
15							2,700					
16							3,670					
17							1,330					
18				2,100			1,560					
19				5,220			2,250	1,060				
20				2,720			1,670	1,100				
21				883			703					
22												
23			1,410									
24			998	757						1,570		
25												
26												
27												
28			1,610	665								
29		710	3,800	3,550								
30			2,020	10,900	-----							
31		-----	709	11,500	-----		-----		-----			-----

PEAK DISCHARGE (BASE, 5,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-19	1330	20.85	5,890	04-16	0315	20.39	5,110
01-21	0215	24.07	14,700				

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., Jennings County, 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.

PERIOD OF RECORD.--May 1955 to current year.

GAGE.--Water-stage recorder. Datum of gage is 717.17 ft above mean sea level (levels by Indiana Flood Control and Water Resources Commission).

AVERAGE DISCHARGE.--14 years, 12.5 cfs (14.89 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,650 cfs Jan. 29 (gage height, 8.38 ft); no flow for many days.

Period of record: 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 most years.

REMARKS.--Records good. Records of suspended sediment loads for the current year are published in Part 2 of this report.

REVISIONS.--WRD Ind. 1968: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.34	35	6.9	31	2.6	6.9	3.2	1.1	1.4	1.3	0
2	0	.34	25	5.6	24	2.4	8.4	3.0	1.2	.79	2.2	0
3	0	.34	27	5.0	20	2.2	8.0	2.6	1.1	.46	.96	0
4	0	.04	85	3.9	12	2.2	19	2.4	.79	.34	.72	0
5	0	.34	18	3.2	10	2.1	62	2.2	.72	.17	.46	0
6	0	.12	8.4	2.6	28	2.1	28	2.1	.65	.12	.34	0
7	0	.40	5.9	2.3	24	2.1	13	1.9	.46	1.3	.22	0
8	0	.46	3.9	2.0	44	2.1	8.8	3.4	.34	.72	.17	0
9	0	.34	3.0	1.8	37	2.4	7.3	6.7	.22	.40	1.1	0
10	0	.22	2.6	1.6	15	2.2	6.9	6.7	.28	1.2	6.2	0
11	0	.17	2.4	1.4	12	2.1	5.6	5.6	.28	37	1.4	0
12	0	.22	2.6	1.3	9.3	2.1	4.7	3.9	.92	32	.87	0
13	0	.17	4.7	1.2	6.2	1.9	4.4	3.0	91	3.4	.65	0
14	0	.12	4.4	1.1	5.0	1.9	131	4.4	15	1.9	.46	0
15	0	.40	2.4	1.1	4.4	1.9	60	4.7	70	1.3	.34	0
16	0	5.6	1.6	1.0	4.4	1.9	20	3.2	9.3	1.1	4.8	0
17	.04	1.8	1.9	171	4.2	1.8	12	2.8	3.9	.87	1.2	0
18	.08	.96	7.6	156	4.2	1.8	72	176	2.4	.72	1.2	0
19	.12	.79	24	31	3.7	1.8	62	59	2.1	.72	1.9	0
20	.12	.58	12	17	3.4	1.8	20	19	1.5	4.9	.96	0
21	.08	.46	6.7	16	3.2	1.6	11	8.8	1.2	3.2	.72	0
22	.04	.40	71	18	3.4	1.5	9.3	5.9	1.3	18	.52	0
23	.04	.40	30	42	3.7	1.6	6.9	4.7	2.2	7.3	.40	0
24	.04	3.3	12	35	3.7	11	5.6	3.9	1.4	2.8	.28	0
25	.12	2.1	7.6	11	3.4	14	4.7	3.0	2.1	2.2	.17	0
26	.08	1.1	5.6	6.9	3.2	8.8	4.2	2.4	1.4	1.6	.12	0
27	.04	1.1	115	5.9	2.8	7.6	3.7	1.9	.96	2.8	0	0
28	.08	31	214	237	2.8	4.4	5.9	1.6	.72	1.9	0	0
29	.08	14	28	590	-----	22	4.4	1.3	.52	1.3	0	0
30	.08	6.2	16	362	-----	10	3.4	1.1	.34	1.2	0	0
31	.04	-----	11	62	-----	6.9	-----	1.1	-----	.96	0	-----
TOTAL	1.08	72.31	794.3	1,802.8	328.0	130.8	619.1	351.5	215.40	134.07	29.66	0
MEAN	.035	2.41	25.6	58.2	11.7	4.22	20.6	11.3	7.18	4.32	.96	0
MAX	.12	31	214	590	44	22	131	176	91	37	6.2	0
MIN	0	.34	1.6	1.0	2.8	1.5	3.4	1.1	.22	.12	0	0
CFSM	.003	.21	2.25	5.10	1.03	.37	1.81	.99	.63	.38	.08	0
IN.	.004	.24	2.59	5.88	1.07	.43	2.02	1.15	.70	.44	.10	0

CAL YR 1968 TOTAL 5,701.49 MEAN 15.6 MAX 1,010 MIN 0 CFSM 1.37 IN 18.60
 WTR YR 1969 TOTAL 4,479.02 MEAN 12.3 MAX 590 MIN 0 CFSM 1.08 IN 14.61

PEAK DISCHARGE (BASE, 950 CFS).--Jan. 29 (1730) 1,650 cfs (8.38 ft).

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., Jennings County, at dam at Muscatatuck State School, 1.5 miles northwest of Butlerville.

DRAINAGE AREA.--14.3 sq mi.

PERIOD OF RECORD.--November 1953 to current year.

GAGE.--Water-stage recorder. Datum of gage is 680.00 ft above mean sea level.

EXTREMES.--Current year: Maximum contents, 2,722 acre-ft Jan. 29 (elevation, 38.29 ft); minimum contents, 1,394 acre-ft Sept. 30 (elevation, 30.95 ft).

Period of record: 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 1968 to September 1969

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	34.05	1,909	-
Oct. 31.....	33.28	1,773	-136
Nov. 30.....	34.30	1,954	+181
Dec. 31.....	35.40	2,152	+198
Calendar year 1968.....	-	-	+36
Jan. 31.....	35.47	2,165	+13
Feb. 28.....	35.15	2,107	-58
Mar. 31.....	35.30	2,134	+27
Apr. 30.....	35.20	2,116	-18
May 31.....	35.07	2,093	-23
June 30.....	34.69	2,024	-69
July 31.....	35.02	2,084	+60
Aug. 31.....	34.05	1,909	-175
Sept. 30.....	30.95	1,394	-515
Water year 1968-69.....	-	-	-515

3-3690, Vernon Fork near Butlerville, Ind.

LOCATION.--Lat 39°02'55", long 85°32'40", in SE $\frac{1}{4}$ sec. 17, T. 7 N., R. 9 E., Jennings County, on left bank 0.3 mile downstream from Muscatatuck State School dam, 1.2 miles downstream from Brush Creek, and 2 miles northwest of Butlerville.

DRAINAGE AREA.--85.9 sq mi.

PERIOD OF RECORD.--February 1942 to current year. Prior to October 1960, published as North Fork of Vernon Fork near Butlerville.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 669.40 ft above mean sea level. Prior to Aug. 19, 1942, non-recording gage at same site and datum.

AVERAGE DISCHARGE.--27 years, 92.5 cfs (14.62 inches per year).

EXTREMES.--Current year: Maximum discharge, 6,310 cfs Jan. 29 (gage height, 13.83 ft); minimum, 0.16 cfs Sept. 1, 3 (gage height, 1.16 ft).

Period of record: 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 most years.

REMARKS.--Records good. Water supply for the Muscatatuck State School is diverted and the sewage effluent returned above station. Flow regulated by Brush Creek Reservoir. (See sta 3-3684.)

REVISIONS.--WRD Ind. 1968: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.44	.57	109	55	300	22	53	30	8.5	6.2	7.8	.22
2	.42	.56	207	42	191	21	60	27	9.1	3.9	10	.30
3	.44	.57	97	29	148	38	84	24	8.8	3.0	5.0	.30
4	.47	.65	651	23	92	42	73	20	7.8	2.5	3.7	5.7
5	.44	.67	160	20	74	15	389	19	6.5	2.2	2.9	4.0
6	.50	.94	87	18	125	15	334	17	5.5	2.2	2.7	2.4
7	.50	1.6	51	16	240	15	166	15	4.7	4.5	2.1	1.5
8	.56	1.6	37	17	381	15	109	19	4.3	7.5	1.8	1.2
9	.50	1.6	28	15	650	16	80	35	3.8	11	4.2	.66
10	.67	1.6	23	13	196	16	69	46	3.6	11	24	.50
11	.67	1.7	21	11	144	20	56	60	3.4	14	9.6	12
12	.63	2.0	24	10	108	20	43	39	4.3	188	5.5	22
13	11	1.8	31	9.3	68	12	36	28	115	49	3.7	1.9
14	1.4	1.6	40	8.6	50	12	391	28	75	21	2.7	1.2
15	1.2	2.8	29	8.6	43	12	701	26	159	12	2.1	1.1
16	23	24	21	9.6	39	11	232	21	125	8.5	3.6	.99
17	21	38	19	572	35	11	138	18	39	5.9	8.9	1.4
18	1.3	13	29	1,890	33	11	593	542	47	4.6	6.1	1.3
19	.72	8.2	115	334	31	11	510	618	47	3.9	8.7	1.0
20	.58	6.3	130	174	29	11	239	220	11	228	6.4	.90
21	.54	5.1	41	130	27	10	163	121	8.6	206	4.7	1.0
22	.55	4.3	344	118	27	9.1	133	71	8.2	75	3.3	15
23	.57	3.9	337	206	29	10	94	52	75	174	2.3	31
24	.61	8.5	114	316	29	26	69	38	38	57	1.5	24
25	.61	20	57	127	27	70	54	31	20	75	1.4	15
26	.54	14	44	62	26	54	45	25	17	38	.93	16
27	.47	10	606	49	24	52	38	20	12	25	32	16
28	.55	108	1,950	1,080	22	44	43	16	7.8	27	28	17
29	.59	189	313	2,950	-----	121	41	13	5.5	14	1.0	17
30	.58	50	153	3,480	-----	106	34	11	4.3	11	.48	17
31	.56	-----	101	739	-----	63	-----	10	-----	8.0	.22	-----
TOTAL	72.61	522.56	5,969	12,532.1	3,188	911.1	5,070	2,260	884.7	1,298.9	197.33	229.57
MEAN	2.34	17.4	193	404	114	29.4	169	72.9	29.5	41.9	6.37	7.65
MAX	23	189	1,950	3,480	650	121	701	618	159	228	32	31
MIN	.42	.56	19	8.6	22	9.1	34	10	3.4	2.2	.22	.22
CFSM	.03	.20	2.24	4.71	1.33	.34	1.97	.85	.34	.49	.07	.09
IN.	.03	.23	2.58	5.43	1.38	.39	2.20	.98	.38	.56	.09	.10

CAL YR 1968 TOTAL 40,665.11 MEAN 111 MAX 8,330 MIN .42 CFSM 1.29 IN 17.61
WTR YR 1969 TOTAL 33,135.87 MEAN 90.8 MAX 3,480 MIN .22 CFSM 1.06 IN 14.35

PEAK DISCHARGE (BASE, 4,000 CFS).--Jan. 29 (2300) 6,310 cfs (13.83 ft).

WABASH RIVER BASIN

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., Jennings County, 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.

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for some periods, published in WSP 1305.

GAGE.--Water-stage recorder. Datum of gage is 587.30 ft above mean sea level, supplementary adjustment of 1944 (levels by Indiana Flood Control and Water Resources Commission). Prior to Jan. 14, 1940, and June 23 to Nov. 13, 1967, nonrecording gage, and Jan. 14, 1940, to June 22, 1967, water-stage recorder at site on right bank at same datum.

AVERAGE DISCHARGE.--30 years, 216 cfs (14.81 inches per year).

EXTREMES.--Current year: Maximum discharge, 13,100 cfs Jan. 30 (gage height, 17.73 ft); minimum, 0.52 cfs Sept. 23, 24 (gage height, 0.09 ft).

Period of record: Maximum discharge, 56,800 cfs Jan. 21, 1959 from rating curve extended above 24,000 cfs on basis of slope-area measurement of peak flow (gage height, 32.83 ft from high-water mark). No flow at times in 1940, 1943-44.

REMARKS.--Records good. Diversion above station for municipal water supply of North Vernon and Vernon. Part of this diversion returned above gage as sewage effluent by North Vernon Sewage Treatment Plant.

REVISIONS (WATER YEARS).--WSP 1335: 1940, 1953. WSP 1909: 1952-53. WRD Ind. 1968: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	3.5	138	144	665	46	122	65	28	14	23	2.3
2	1.8	5.9	567	105	399	43	129	56	27	18	28	11
3	1.4	4.3	280	87	295	40	166	50	24	14	24	11
4	1.5	3.4	1,510	69	233	77	145	44	21	11	15	6.9
5	1.6	3.0	504	61	178	40	845	39	19	8.9	12	6.1
6	3.1	3.8	198	49	209	33	804	35	17	7.3	11	4.4
7	4.2	5.8	118	46	511	33	336	32	16	6.6	9.7	8.8
8	3.2	6.4	87	42	393	33	226	38	13	13	8.1	7.9
9	2.6	5.6	66	42	1,390	35	176	60	12	11	8.3	6.0
10	3.2	5.0	53	36	399	35	158	120	10	38	26	4.5
11	2.9	4.2	49	29	270	33	139	107	9.7	63	39	3.3
12	2.9	4.3	44	24	220	36	112	95	9.7	423	24	2.7
13	2.6	4.8	51	22	161	35	94	62	169	218	14	19
14	2.2	5.0	63	21	121	27	627	73	237	99	11	9.6
15	1.6	5.6	61	20	105	26	2,060	90	337	46	8.6	4.5
16	1.8	17	42	20	92	25	530	66	453	26	7.7	2.9
17	1.7	44	35	607	84	24	287	51	152	20	6.2	2.4
18	2.3	50	47	3,950	78	25	1,110	998	88	15	17	2.3
19	4.2	28	144	885	74	25	1,170	1,850	118	12	18	2.2
20	5.6	20	284	350	68	24	481	527	59	13	13	1.6
21	3.7	16	125	259	62	23	273	243	30	467	15	1.4
22	2.3	14	358	236	61	21	209	167	25	890	12	1.2
23	1.6	12	1,100	355	63	19	163	130	31	666	8.9	.61
24	2.5	19	264	683	65	45	130	107	122	344	6.4	28
25	3.5	25	142	281	63	201	106	87	108	371	5.0	25
26	4.0	34	110	140	57	161	91	72	78	173	4.5	14
27	3.6	32	676	113	53	140	77	59	43	93	3.6	14
28	2.9	116	4,160	1,890	48	119	85	50	27	72	33	14
29	2.4	448	853	5,510	-----	194	105	41	19	63	27	14
30	2.2	151	313	8,380	-----	253	79	34	14	42	7.6	14
31	3.0	-----	215	1,840	-----	152	-----	30	-----	30	3.8	-----
TOTAL	88.2	1,096.6	12,657	26,296	6,417	2,023	11,035	5,478	2,316.4	4,287.8	450.4	245.61
MEAN	2.85	36.6	408	848	229	65.3	368	177	77.2	138	14.5	8.19
MAX	9.2	448	4,160	8,380	1,390	253	2,060	1,850	453	890	39	28
MIN	1.1	3.0	35	20	48	19	77	30	9.7	6.6	3.6	.61
CFSM	.01	.18	2.06	4.28	1.16	.33	1.86	.89	.39	.70	.07	.04
IN.	.02	.21	2.38	4.94	1.21	.38	2.07	1.03	.44	.81	.08	.05

CAL YR 1968 TOTAL 98,704.2 MEAN 270 MAX 22,700 MIN 1.1 CFSM 1.36 IN 18.54
 WTR YR 1969 TOTAL 72,391.01 MEAN 198 MAX 8,380 MIN .61 CFSM 1.00 IN 13.60

PEAK DISCHARGE (BASE, 6,000 CFS).--Jan. 30 (0200) 13,100 cfs (17.73 ft).

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., Lawrence County, 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.

PERIOD OF RECORD.--May 1939 to current year (high-water records only October 1943 to September 1957).

GAGE.--Water-stage recorder. Datum of gage is 473.59 ft above mean sea level. Prior to Feb. 6, 1940, nonrecording gage, and Feb. 6, 1940, to Sept. 24, 1957, water-stage recorder, at site 9.7 miles downstream at datum 4.39 ft lower (now used as an auxiliary gage).

AVERAGE DISCHARGE.--16 years (1939-43, 1957-69), 3,590 cfs (12.63 inches per year).

EXTREMES.--Current year: Maximum discharge, 53,200 cfs Feb. 2; maximum gage height, 30.89 ft Feb. 2; minimum discharge, 506 cfs Nov. 2-6; minimum gage height, 3.09 ft Nov. 6.

Period of record: Maximum discharge, 75,700 cfs Mar. 12, 1964; maximum gage height, 35.97 ft May 11, 1961; minimum daily discharge, 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.--Records good.

REVISIONS.--WRD Ind. 1968: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	635	520	4,750	12,700	42,100	2,870	3,030	3,540	2,130	3,670	4,300	832
2	620	510	5,180	12,800	52,000	2,770	2,990	3,260	2,010	2,990	3,670	827
3	609	506	5,110	11,800	45,900	2,680	2,820	2,990	1,970	2,510	3,180	827
4	601	506	6,140	8,980	37,500	2,590	2,780	2,770	1,830	2,210	2,840	904
5	613	506	6,930	6,080	29,100	2,490	3,710	2,580	1,720	1,980	2,580	986
6	715	515	7,430	4,660	22,300	2,420	4,610	2,430	1,620	1,800	2,380	932
7	717	533	7,610	3,800	17,900	2,370	5,440	2,300	1,540	1,660	2,180	888
8	697	538	6,370	3,350	13,900	2,300	5,570	2,210	1,480	1,940	1,960	910
9	677	551	4,500	3,100	11,800	2,270	4,920	2,210	1,410	2,750	1,840	998
10	675	560	3,470	2,800	11,000	2,250	4,210	2,620	1,350	2,990	1,760	964
11	665	578	2,930	2,500	11,500	2,230	3,710	3,170	1,290	2,980	1,670	898
12	646	596	2,600	2,300	12,400	2,130	3,360	3,240	1,250	3,350	1,790	849
13	632	615	2,400	2,100	12,300	2,030	3,050	3,110	2,140	3,480	2,480	805
14	617	610	2,270	1,900	10,600	1,950	3,060	2,880	2,950	4,150	2,550	775
15	605	615	2,190	1,800	8,180	1,880	5,210	2,740	3,640	4,130	2,240	745
16	592	645	2,120	1,800	6,340	1,830	7,260	2,760	4,270	3,190	1,890	720
17	574	685	2,010	2,890	5,340	1,770	8,190	2,680	4,370	2,540	1,710	695
18	562	810	1,910	7,760	4,760	1,720	10,800	2,750	4,500	2,140	1,580	680
19	550	1,480	1,900	10,200	4,380	1,690	12,100	6,280	3,970	1,890	1,490	670
20	546	1,890	2,090	11,700	4,100	1,660	12,200	8,210	3,340	1,820	1,420	675
21	535	1,930	2,490	18,000	3,850	1,630	15,800	9,300	2,750	2,120	1,430	915
22	534	1,830	2,950	22,700	3,640	1,600	17,700	11,100	2,420	3,060	1,400	1,090
23	529	1,660	4,000	22,400	3,480	1,560	16,600	11,700	2,300	6,670	1,290	1,010
24	532	1,550	5,300	18,200	3,380	1,600	13,600	9,560	2,280	8,710	1,200	932
25	529	1,460	6,550	13,700	3,310	2,050	9,960	6,080	2,640	10,600	1,120	860
26	532	1,500	6,500	11,300	3,210	2,760	7,020	4,310	3,010	15,900	1,060	810
27	537	2,050	5,470	10,500	3,090	3,020	5,380	3,560	3,790	19,100	1,010	775
28	534	2,490	7,880	9,490	2,970	2,870	4,600	3,080	4,760	17,200	959	760
29	533	2,730	9,140	10,500	-----	2,680	4,120	2,730	5,130	12,500	926	745
30	534	3,370	9,790	14,400	-----	2,650	3,810	2,470	4,530	7,650	893	725
31	531	-----	11,500	19,400	-----	2,810	-----	2,270	-----	5,300	860	-----
TOTAL	18,408	34,339	151,480	285,610	390,330	69,130	207,610	130,890	82,390	162,980	57,658	25,202
MEAN	594	1,145	4,886	9,213	13,940	2,230	6,920	4,222	2,746	5,257	1,860	840
MAX	717	3,370	11,500	22,700	52,000	3,020	17,700	11,700	5,130	19,100	4,300	1,090
MIN	529	506	1,900	1,800	2,970	1,560	2,780	2,210	1,250	1,660	860	670
CFSM	.15	.30	1.27	2.39	3.61	.58	1.79	1.09	.71	1.36	.48	.22
IN.	.18	.33	1.46	2.75	3.76	.67	2.00	1.26	.79	1.57	.56	.24

CAL YR 1968 TOTAL 1,756,022 MEAN 4,798 MAX 69,000 MIN 506 CFSM 1.24 IN 16.91
WTR YR 1969 TOTAL 1,616,027 MEAN 4,427 MAX 52,000 MIN 506 CFSM 1.15 IN 15.57

PEAK DISCHARGE (BASE, 13,000 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
01-22	1800	a22.58	23,300	04-22	1600	c19.83	17,900
02-02	1000	b30.89	53,200	07-27	0800	d20.74	19,400

a At 0500 Jan. 23
b At 1500 Feb. 2

c At 1915 Apr. 22
d At 1945 July 27

WABASH RIVER BASIN

3-3716. South Fork Salt Creek at Kurtz, Ind.

LOCATION.--Lat 38°57'46", long 86°12'12", in SW¼ sec. 9, T. 6 N., R. 3 E., Jackson County, on right bank at downstream side of county road bridge, at north edge of Kurtz, 0.8 mile upstream from right-bank tributary, and 6.1 miles upstream from Little Salt Creek.

DRAINAGE AREA.--38.2 sq mi.

PERIOD OF RECORD.--October 1960 to current year.

GAGE.--Water-stage recorder. Datum of gage is 568.00 ft above mean sea level (unadjusted).

AVERAGE DISCHARGE.--9 years, 40.7 cfs (14.47 inches per year).

EXTREMES.--Current year: Maximum discharge, 3,000 cfs Jan. 29 (gage height, 11.28 ft); no flow for many days.
Period of record: Maximum discharge, 6,400 cfs May 24, 1968 (gage height, 13.84 ft); no flow at times most years.
Flood in January 1959 reached a stage of approximately 15 ft, from floodmarks.

REMARKS.--Records good.

REVISIONS (WATER YEARS).--WSP 1909: 1961-62. WRD Ind. 1968: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	119	30	127	13	40	12	8.1	5.0	6.2	.09
2	0	0	69	22	78	12	45	11	8.9	3.7	5.7	.11
3	0	0	39	20	58	11	43	9.7	7.7	2.7	4.6	12
4	0	0	140	13	41	10	56	8.7	6.1	1.9	3.5	3.0
5	0	0	43	10	37	9.4	228	8.1	5.2	1.2	2.8	6.4
6	0	0	26	12	95	9.6	112	7.4	5.2	.94	2.2	4.2
7	0	0	20	10	89	9.2	65	7.3	8.1	.94	1.6	1.7
8	0	0	15	9.0	240	9.2	47	125	3.9	.71	1.2	.94
9	0	0	12	8.0	212	10	42	86	2.7	.64	2.0	.52
10	0	0	12	7.0	96	9.0	40	56	2.0	8.1	9.3	.34
11	0	0	11	6.0	68	8.5	32	45	1.7	5.5	4.0	.26
12	0	0	12	5.7	49	7.5	27	30	1.9	82	2.0	.20
13	0	0	14	5.3	36	7.4	24	22	91	9.6	1.1	.13
14	0	0	13	5.0	28	7.2	456	130	20	4.2	.78	.08
15	0	0	10	5.0	24	6.8	429	68	76	2.6	.64	.06
16	0	2.9	8.8	5.0	23	6.5	174	39	25	1.6	8.9	.04
17	0	16	6.4	994	21	6.6	125	35	10	1.1	5.8	.02
18	0	10	9.1	1,200	21	6.6	1,460	535	6.6	.78	3.2	0
19	0	8.3	24	200	20	6.6	460	723	6.4	.58	4.2	0
20	0	6.8	20	101	18	6.2	136	132	4.2	59	2.2	0
21	0	5.7	13	73	17	5.4	78	76	3.0	66	1.9	0
22	0	4.8	214	64	18	5.3	53	55	12	738	2.3	0
23	0	4.4	89	168	20	5.5	40	44	58	235	1.2	0
24	0	25	35	130	18	52	31	36	16	171	.78	0
25	0	19	24	51	17	71	26	28	51	172	.52	0
26	0	11	16	43	15	47	21	23	21	67	.42	0
27	0	9.8	385	25	14	39	18	18	15	49	.30	0
28	0	138	688	505	14	32	19	15	56	31	.23	0
29	0	43	121	1,570	-----	98	16	12	11	17	.17	0
30	0	22	64	1,100	-----	58	14	10	6.2	10	.15	0
31	0	-----	44	258	-----	41	-----	8.9	-----	7.6	.13	-----
TOTAL	0	326.7	2,316.3	6,655.0	1,514	626.5	4,357	2,416.1	549.9	1,756.39	80.02	30.09
MEAN	0	10.9	74.7	215	54.1	20.2	145	77.9	18.3	56.7	2.58	1.00
MAX	0	138	688	1,570	240	98	1,460	723	91	738	9.3	12
MIN	0	0	6.4	5.0	14	5.3	14	7.3	1.7	.58	.13	0
CFSM	0	.29	1.96	5.62	1.42	.53	3.80	2.04	.48	1.48	.07	.03
IN.	0	.32	2.26	6.48	1.47	.61	4.24	2.35	.54	1.71	.08	.03

CAL YR 1968 TOTAL 19,615.92 MEAN 53.6 MAX 2,390 MIN 0 CFSM 1.40 IN 19.10
WTR YR 1969 TOTAL 20,628.00 MEAN 56.5 MAX 1,570 MIN 0 CFSM 1.48 IN 20.08

PEAK DISCHARGE (BASE, 1,500 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-28	0315	8.55	1,650	04-18	0515	10.62	2,570
01-17	2030	10.65	2,590	05-19	0100	8.64	1,690
01-29	1915	11.28	3,000	07-22	1615	10.24	2,370

3-3716.5. North Fork Salt Creek at Nashville, Ind.

LOCATION (revised).--Lat 39°12'06", long 86°14'51", in SW $\frac{1}{4}$ sec. 19, T. 9 N., R. 3 E., Brown County, on right bank 90 ft downstream from bridge on State Highway 46, 800 ft downstream from Greasy Creek, and 0.4 mile south of center of Nashville.

DRAINAGE AREA.--76.1 sq mi.

PERIOD OF RECORD.--July 1962 to current year.

GAGE.--Water-stage recorder. Datum of gage is 579.58 ft above mean sea level. Prior to Sept. 16, 1964, nonrecording gage at site 90 ft upstream at same datum.

AVERAGE DISCHARGE.--7 years, 73.2 cfs (13.06 inches per year).

EXTREMES.--Current year: Maximum discharge, 4,950 cfs Jan. 30 (gage height, 13.75 ft); minimum, 0.22 cfs Nov. 3; minimum gage height, 1.71 ft Aug. 29, 30.

Period of record: Maximum discharge, 7,500 cfs Mar. 4, 1963; maximum gage height, 16.00 ft May 24, 1968; no flow at times most years.

REMARKS.--Records good.

REVISIONS.--WRD Ind. 1968: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	.30	108	90	299	19	120	39	9.2	20	19	3.6
2	.88	.30	151	68	195	18	135	35	8.7	14	15	99
3	.86	.30	86	53	146	17	133	30	7.1	11	13	21
4	.60	.30	148	39	108	17	130	26	6.1	8.9	11	13
5	.74	.30	95	29	95	15	479	23	5.5	7.1	9.1	13
6	.75	.79	54	28	102	15	293	19	5.1	620	7.8	11
7	.77	.98	39	25	98	14	192	17	4.6	225	6.9	8.5
8	.78	1.1	30	23	134	14	134	40	4.0	101	6.0	11
9	.87	.94	23	21	216	16	112	73	3.4	62	7.4	8.9
10	.84	1.0	21	17	159	15	99	85	3.0	112	8.9	7.0
11	.72	1.1	19	15	136	14	79	68	2.9	105	7.0	5.8
12	.70	1.2	19	12	108	12	65	46	2.9	73	5.4	5.1
13	.50	1.1	23	11	82	12	57	35	5.0	46	4.7	4.6
14	.53	1.1	23	9.5	65	12	269	58	5.3	32	4.5	4.2
15	.58	5.6	20	8.0	56	11	672	52	19	23	4.2	3.8
16	.40	20	19	8.0	50	10	332	38	25	18	5.4	3.6
17	.40	9.8	17	548	45	9.8	242	32	9.6	14	8.0	4.6
18	.50	6.6	21	2,180	41	9.8	3,240	79	7.3	12	6.4	4.5
19	.51	6.1	26	415	36	11	842	216	6.7	9.7	5.3	4.3
20	.50	5.1	30	231	32	11	306	120	5.8	126	4.6	3.8
21	.50	4.2	27	166	30	9.0	200	74	4.7	145	4.3	3.4
22	.60	3.5	151	139	29	7.8	147	67	6.1	1,480	4.2	3.3
23	.51	3.3	219	164	29	7.8	115	63	25	454	3.8	3.5
24	.50	30	110	221	26	77	94	54	27	166	3.4	5.5
25	.40	31	72	132	26	164	80	44	241	147	3.2	5.1
26	.40	19	55	104	24	144	69	36	96	91	3.2	4.3
27	.50	14	500	76	22	129	59	28	49	78	3.1	3.8
28	.40	128	1,370	820	21	112	57	22	38	56	3.0	4.5
29	.40	108	327	2,060	-----	386	50	17	27	40	3.0	3.3
30	.40	53	177	2,380	-----	214	45	14	20	30	3.0	3.3
31	.30	-----	131	592	-----	140	-----	11	-----	24	3.0	-----
TOTAL	18.34	458.01	4,111	10,684.5	2,412	1,663.2	8,837	1,561	680.0	4,350.7	196.8	280.3
MEAN	.59	15.3	133	345	86.1	53.7	295	50.4	22.7	140	6.35	9.34
MAX	1.0	128	1,370	2,380	299	386	3,240	216	241	1,480	19	99
MIN	.30	.30	17	8.0	21	7.8	45	11	2.9	7.1	3.0	3.3
CFSM	.008	.20	1.74	4.53	1.13	.71	3.87	.66	.30	1.84	.08	.12
IN.	.009	.22	2.01	5.22	1.18	.81	4.32	.76	.33	2.13	.10	.14

CAL YR 1968 TOTAL 35,218.35 MEAN 96.2 MAX 4,570 MIN .30 CFSM 1.26 IN 17.21
WTR YR 1969 TOTAL 35,252.85 MEAN 96.6 MAX 3,240 MIN .30 CFSM 1.27 IN 17.23

PEAK DISCHARGE (BASE, 1,200 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-28	0445	10.81	2,590	04-18	0530	12.95	4,200
01-18	0800	11.92	3,340	07-06	1545	9.94	2,140
01-30	0015	13.75	4,950	07-22	1845	12.01	3,410

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., Brown County, on right bank 15 ft downstream from bridge on State Highway 46, 100 ft upstream from Schooner Creek, 0.7 mile northeast of Belmont, 6.5 miles upstream from Brummett Creek, and 20 miles upstream from mouth. Records include flow of Schooner Creek.

DRAINAGE AREA.--120 sq mi, includes that of Schooner Creek.

PERIOD OF RECORD.--April 1946 to current year.

GAGE.--Water-stage recorder. Datum of gage is 543.62 ft above mean sea level (levels by Indiana Flood Control and Water Resources Commission). Prior to Oct. 9, 1951, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--23 years, 132 cfs (14.94 inches per year).

EXTREMES.--Current year: Maximum discharge, 7,060 cfs Jan. 30 (gage height, 20.24 ft); minimum, 0.45 cfs Oct. 31, Nov. 1, 3, 4; minimum gage height, 2.71 ft Oct. 1, 5, 6, 17.

Period of record: Maximum discharge, 13,300 cfs June 23, 1960 (gage height, 23.10 ft); no flow at times most years. Flood in March 1913 reached a stage of 25.7 ft, from information by local residents.

REMARKS.--Records good.

REVISIONS (WATER YEARS).--WSP 1275: Drainage area. WSP 1335: 1948, 1950-51. WSP 1705: 1946-47(M), 1949-50(M), 1952(M), 1959.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	UCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	.52	164	140	717	33	190	48	16	24	26	5.1
2	1.6	.52	311	127	450	31	232	43	15	20	21	89
3	1.6	.52	159	97	270	30	261	39	14	16	17	34
4	1.5	.52	223	68	200	28	218	34	12	13	14	18
5	1.2	.52	177	58	170	26	938	31	11	11	12	13
6	1.4	.60	105	52	170	26	696	28	10	406	11	12
7	1.4	1.2	75	47	175	23	363	24	9.6	600	9.1	11
8	1.2	1.6	55	41	210	23	227	26	9.0	162	8.2	12
9	1.4	1.8	42	35	400	26	178	81	8.9	98	9.0	11
10	1.5	1.6	37	31	300	25	162	114	7.5	209	11	9.2
11	1.2	1.4	33	27	230	23	124	118	6.9	349	10	7.7
12	1.4	1.4	31	24	190	21	100	79	6.5	499	8.9	6.8
13	1.4	1.2	41	21	150	20	86	55	8.6	117	7.4	6.1
14	1.4	1.2	44	19	120	19	395	148	9.4	70	6.6	5.6
15	1.2	3.2	42	18	100	18	1,180	125	43	50	6.2	5.1
16	.60	23	32	18	85	17	789	79	44	39	6.2	4.9
17	.52	37	29	417	77	17	417	59	23	32	6.3	5.8
18	.75	22	33	3,630	68	17	3,260	140	16	28	9.0	6.0
19	1.2	17	44	1,710	51	18	2,900	389	14	24	8.4	5.7
20	1.0	13	53	444	41	20	738	232	13	58	6.9	5.2
21	1.4	11	48	261	40	19	371	128	11	263	6.6	5.0
22	1.4	9.6	192	235	45	15	240	108	12	776	6.0	4.8
23	1.4	8.4	428	275	50	14	172	102	40	1,530	5.5	4.7
24	1.4	41	191	473	48	49	132	81	45	305	5.3	7.8
25	1.4	76	120	238	45	333	109	64	250	210	5.2	8.3
26	1.5	45	100	163	42	299	93	50	165	130	5.0	7.4
27	1.5	34	463	141	38	263	79	39	76	97	4.8	7.0
28	1.0	163	2,300	1,010	36	213	75	31	79	84	4.4	6.7
29	1.4	280	1,070	2,260	-----	707	65	25	46	56	4.3	6.4
30	.60	111	313	5,420	-----	508	55	21	29	41	4.5	6.7
31	.52	-----	220	1,610	-----	254	-----	18	-----	32	4.5	-----
TOTAL	38.39	908.80	7,175	19,110	4,518	3,135	14,845	2,559	1,050.4	6,349	270.3	338.0
MEAN	1.24	30.3	231	616	161	101	495	82.5	35.0	205	8.72	11.3
MAX	1.6	280	2,300	5,420	717	707	3,260	389	250	1,530	26	89
MIN	.52	.25	29	18	36	14	55	19	6.5	11	4.3	4.7
CFSM	.01	.25	1.93	5.14	1.34	.84	4.12	.69	.29	1.71	.07	.09
IN.	.01	.28	2.22	5.92	1.40	.97	4.60	.79	.33	1.97	.08	.10

CAL YR 1968 TOTAL 64,147.79 MEAN 175 MAX 9,470 MIN .52 CFSM 1.46 IN 19.88

WTR YR 1969 TOTAL 60,296.89 MEAN 165 MAX 5,420 MIN .52 CFSM 1.38 IN 18.69

PEAK DISCHARGE (BASE, 2,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-28	1530	17.50	2,600	04-18	1815	19.21	4,900
01-18	1645	19.17	4,820	07-23	0500	16.65	2,130
01-30	1045	20.24	7,060				

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., Monroe County, 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.

PERIOD OF RECORD.--April 1966 to current year.

GAGE.--Water-stage recorder. Datum of gage is 500.00 ft above mean sea level (levels by Corps of Engineers).

EXTREMES.--Current year: Maximum contents, 318,200 acre-ft Feb. 10 (elevation, 548.62 ft); minimum, 166,800 acre-ft Nov. 15 (elevation, 536.53 ft).

Period of record: Maximum contents, 318,200 acre-ft Feb. 10, 1969 (elevation, 548.62 ft); minimum, 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 446,000 acre-ft (revised). 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 1968 to September 1969

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	537.36	175,400	-
Oct. 31.....	536.76	169,200	-6,200
Nov. 30.....	537.43	176,200	+7,000
Dec. 31.....	540.34	208,400	+32,200
Calendar year 1968.....	-	-	+4,700
Jan. 31.....	547.66	304,000	+95,600
Feb. 28.....	542.91	239,600	-64,400
Mar. 31.....	538.56	188,300	-51,300
Apr. 30.....	541.90	227,000	+38,700
May 31.....	538.03	182,600	-44,400
June 30.....	538.20	184,400	+1,800
July 31.....	540.15	206,200	+21,800
Aug. 31.....	537.65	178,500	-27,700
Sept. 30.....	537.48	176,700	-1,800
Water year 1968-69	-	-	+1,300

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., Monroe County, 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.

PERIOD OF RECORD.--May 1955 to current year.

GAGE.--Water-stage recorder. Datum of gage is 480.00 ft above mean sea level (levels by Corps of Engineers). Prior to Oct. 1, 1960, nonrecording gage at site 3,500 ft upstream at datum 2.41 ft higher.

AVERAGE DISCHARGE.--14 years, 472 cfs (14.84 inches per year).

EXTREMES.--Current year: Maximum discharge, 2,840 cfs Feb. 21 (gage height, 19.55 ft); maximum gage height, 24.33 ft Jan. 30; minimum daily discharge, 46 cfs Aug. 11-15.
Period of record: Maximum discharge, 22,000 cfs June 25, 1960 (gage height, 32.76 ft, from graph based on gage readings at site and datum then in use); maximum gage height at present site and datum, 35.35 ft May 9, 1961; no flow Sept. 29 to Dec. 2, 1964.

REMARKS.--Records good. Flow regulated by Monroe Reservoir. (See sta 3-3724.) Records of water temperature for the current year are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1705: 1959. WSP 1725: 1956(M). WRD Ind. 1968: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	51	51	200	220	2,690	1,270	1,780	47	560	1,870	47
2	50	51	51	200	220	2,670	1,500	1,770	47	330	2,030	47
3	50	51	51	778	220	2,720	1,500	1,760	47	112	2,020	47
4	50	51	51	1,490	200	2,810	1,230	1,750	47	50	2,000	47
5	50	51	51	1,550	210	2,800	930	1,740	47	50	1,990	47
6	50	51	80	1,690	220	2,780	1,250	1,730	47	50	1,540	48
7	51	51	103	1,830	220	2,760	1,400	1,720	47	227	369	49
8	51	51	125	1,810	415	2,740	1,400	1,750	47	485	48	49
9	51	51	191	1,800	190	2,730	1,250	1,780	47	550	48	48
10	51	51	233	1,700	920	2,620	1,050	1,790	47	550	47	48
11	51	51	251	1,470	1,970	2,000	650	1,790	47	550	46	48
12	51	51	207	1,010	2,040	1,080	360	1,780	47	550	46	48
13	51	51	103	368	2,170	397	360	1,770	47	685	46	48
14	51	51	103	264	2,390	98	640	1,690	47	730	46	48
15	51	51	103	126	2,570	83	1,020	1,690	47	730	46	49
16	51	51	103	60	2,550	65	1,320	1,670	47	730	47	48
17	51	51	103	320	2,520	65	465	1,660	47	730	47	49
18	51	51	103	250	2,590	65	180	870	47	730	47	48
19	51	51	103	190	2,680	65	180	1,240	47	730	47	48
20	51	51	163	180	2,770	66	180	1,680	47	730	47	48
21	51	51	316	190	2,840	67	180	1,680	47	730	47	48
22	51	51	320	210	2,830	67	180	1,670	47	600	47	48
23	51	51	380	210	2,820	67	180	1,660	47	200	47	48
24	51	51	770	210	2,800	65	180	850	47	200	47	48
25	51	51	880	210	2,780	90	818	180	142	200	47	48
26	51	51	880	210	2,750	165	1,550	177	414	200	47	48
27	51	55	880	210	2,730	190	1,530	172	560	200	47	48
28	51	51	350	210	2,710	283	1,610	100	560	200	47	48
29	51	51	430	210	-----	596	1,800	47	560	200	47	48
30	51	51	330	210	-----	710	1,790	47	560	722	47	49
31	51	-----	210	210	-----	930	-----	47	-----	1,610	47	-----
TOTAL	1,575	1,534	8,075	19,566	49,545	34,534	27,953	40,030	3,924	14,921	12,944	1,435
MEAN	50.8	51.1	260	631	1,769	1,114	932	1,291	131	481	418	47.8
MAX	51	55	880	1,830	2,840	2,810	1,800	1,790	560	1,610	2,030	48
MIN	50	51	51	60	190	65	180	47	47	50	46	47
CAL YR 1968	TOTAL 215,449			MEAN 589	MAX 2,930	MIN 38						
WTR YR 1969	TOTAL 216,036			MEAN 592	MAX 2,840	MIN 46						

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., Monroe County, 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.

PERIOD OF RECORD.--September 1960 to current year.

GAGE.--Water-stage recorder. Datum of gage is 517.00 ft above mean sea level.

AVERAGE DISCHARGE.--9 years, 71.9 cfs (17.69 inches per year).

EXTREMES.--Current year: Maximum discharge, 4,790 cfs July 22 (gage height, 11.54 ft); minimum, 9.4 cfs Nov. 13 (gage height, 3.34 ft).

Period of record: 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 in June 1960 reached a stage of 16.47 ft, from floodmarks (discharge, 10,200 cfs on basis of contracted-opening measurement).

REMARKS.--Records good. Flow regulated by effluent from the sewage treatment plant of the city of Bloomington and possibly by pumpage from several rock quarries.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	15	265	128	396	40	81	56	28	46	35	10
2	18	15	216	106	285	37	104	53	28	36	33	117
3	23	14	134	92	212	36	96	49	24	31	29	31
4	16	14	136	75	166	35	106	46	22	27	26	68
5	15	15	105	71	144	33	284	45	21	23	25	30
6	20	19	84	69	150	34	191	44	27	59	25	24
7	18	21	71	60	132	34	143	43	21	45	24	21
8	16	18	59	56	212	35	114	54	20	33	25	18
9	17	16	52	53	263	37	121	53	18	31	43	17
10	21	15	48	48	195	32	105	58	17	183	30	17
11	18	15	45	46	169	31	86	47	20	117	21	17
12	17	15	44	42	138	30	75	40	20	284	19	17
13	16	14	81	39	112	28	68	38	58	89	18	16
14	16	15	61	35	97	29	254	102	39	57	17	16
15	17	53	51	34	89	27	379	60	158	45	18	14
16	16	183	47	42	82	26	246	49	62	39	52	16
17	16	61	45	732	77	27	205	44	39	34	33	22
18	28	64	60	1,420	71	27	1,540	85	37	30	22	18
19	21	49	72	377	66	27	549	83	33	28	21	16
20	17	40	65	217	61	28	285	64	28	636	18	15
21	16	35	56	162	60	27	201	53	28	245	20	15
22	16	32	211	141	57	26	159	70	67	1,420	19	13
23	16	30	205	338	56	26	127	47	95	470	16	15
24	16	124	125	475	51	71	105	40	50	208	14	22
25	17	71	93	218	48	76	92	39	45	132	12	17
26	15	52	79	143	45	66	82	39	36	93	12	15
27	14	46	430	114	43	61	73	36	54	80	12	16
28	15	334	1,220	723	42	57	72	34	498	60	12	15
29	15	176	353	2,110	-----	157	64	33	93	50	12	13
30	14	98	208	1,640	-----	103	59	31	61	43	12	14
31	14	-----	177	656	-----	81	-----	29	-----	37	11	-----
TOTAL	530	1,674	4,898	10,462	3,519	1,384	6,066	1,564	1,747	4,711	686	675
MEAN	17.1	55.8	158	337	126	44.6	202	50.5	58.2	152	22.1	22.5
MAX	28	334	1,220	2,110	396	157	1,540	102	498	1,420	52	117
MIN	14	14	44	34	42	26	59	29	17	23	11	10
CFSM	.31	1.01	2.86	6.11	2.28	.81	3.66	.91	1.05	2.75	.40	.41
IN.	.36	1.13	3.30	7.05	2.37	.93	4.09	1.05	1.18	3.17	.46	.45

CAL YR 1968 TOTAL 36,418 MEAN 99.5 MAX 3,430 MIN 14 CFSM 1.80 IN 24.54
WTR YR 1969 TOTAL 37,916 MEAN 104 MAX 2,110 MIN 10 CFSM 1.88 IN 25.55

PEAK DISCHARGE (BASE, 1,200 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-28	0245	9.24	2,790	04-18	0300	9.85	3,280
01-17	2300	8.64	2,310	06-28	0200	8.25	2,000
01-23	2215	7.81	1,660	07-12	0030	8.35	2,080
01-29	2200	11.44	4,690	07-22	1500	11.54	4,790

3-3730. Salt Creek near Peerless, Ind.

LOCATION (revised).--Lat 38°56'36", long 86°30'36", in NW 1/4 sec. 22, T. 6 N., R. 1 W., Lawrence County, on downstream side near center of county road bridge, 3,200 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.

PERIOD OF RECORD.--February 1939 to September 1950, February 1957 to current year.

GAGE.--Nonrecording gage and concrete control. Datum of gage is 476.02 ft above mean sea level. Feb. 1-10, 1939, nonrecording gage, Feb. 11, 1939, to Sept. 30, 1950, water-stage recorder, and Feb. 15, 1957, to Oct. 16, 1968, nonrecording gage at site 200 ft downstream at same datum.

AVERAGE DISCHARGE.--23 years, 653 cfs (15.48 inches per year).

EXTREMES.--Current year: Maximum discharge, 5,880 cfs Jan. 30 (gage height, 24.6 ft); minimum, 60 cfs Oct. 16; minimum gage height, 2.38 ft Sept. 2.

Period of record: 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 in January 1937 reached a stage of 34.3 ft (information by Corps of Engineers).

REMARKS.--Records 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 3-3724.)

REVISIONS.--WRD Ind. 1968: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	63	70	464	580	2,900	2,920	1,530	1,970	91	704	1,740	65	
2	64	70	360	480	1,500	2,840	1,760	1,920	90	496	2,100	64	
3	74	56	574	902	1,000	2,840	1,820	1,920	82	239	2,100	69	
4	69	56	708	1,510	880	2,910	1,570	1,910	79	218	2,070	203	
5	70	70	558	1,700	760	2,910	1,510	1,900	79	83	2,060	109	
6	71	59	346	1,860	780	2,900	1,770	1,880	78	88	1,690	98	
7	66	59	313	2,050	730	2,880	1,900	1,860	79	127	690	81	
8	65	70	278	2,050	700	2,890	1,830	1,870	80	442	188	82	
9	63	72	236	1,880	1,380	2,920	1,580	1,920	78	613	95	82	
10	67	56	324	1,660	1,040	2,830	1,370	1,910	76	990	96	81	
11	72	67	328	1,620	924	2,530	1,200	1,900	78	1,500	92	80	
12	71	67	324	771	1,740	1,790	611	1,900	71	1,330	83	76	
13	66	66	227	530	2,520	674	557	1,890	126	1,140	80	73	
14	64	69	219	391	2,680	174	820	1,980	156	1,010	76	76	
15	62	82	214	244	2,800	132	2,000	1,910	234	933	68	86	
16	64	364	194	192	2,770	108	2,350	1,870	339	911	70	74	
17	67	216	189	762	2,690	107	2,080	1,850	148	889	89	71	
18	72	184	203	4,410	2,710	108	2,470	1,520	103	876	87	74	
19	87	143	286	2,350	2,820	108	1,300	1,320	92	902	82	73	
20	71	115	349	850	2,900	102	700	2,070	92	1,170	84	72	
21	69	120	412	600	2,820	98	520	2,070	90	1,640	70	72	
22	70	117	731	550	2,780	94	460	2,090	121	2,350	78	71	
23	69	120	1,260	800	2,980	90	410	2,000	286	4,190	79	72	
24	72	315	1,370	950	2,930	141	370	1,740	220	1,600	75	74	
25	70	222	1,220	700	2,930	222	1,020	1,140	220	1,020	71	74	
26	70	234	999	600	2,900	336	1,500	592	208	840	68	74	
27	70	138	1,860	500	2,900	549	1,690	307	602	650	67	72	
28	69	284	3,880	1,190	2,920	955	1,470	294	2,530	550	66	74	
29	66	838	2,660	2,690	-----	1,130	1,610	129	1,280	470	65	74	
30	66	525	1,850	5,090	-----	1,260	2,000	97	717	410	66	75	
31	67	-----	919	4,870	-----	1,400	-----	93	-----	1,030	66	-----	
TOTAL	2,126	4,994	23,855	45,332	59,384	40,948	41,778	47,822	8,525	29,416	14,411	2,421	
MEAN	68.6	156	770	1,462	2,121	1,321	1,393	1,543	284	949	465	80.7	
MAX	87	838	3,880	5,090	2,980	2,920	2,470	2,090	2,530	4,190	2,100	203	
MIN	62	56	189	192	700	90	370	93	71	88	65	64	
CFSM	.12	.29	1.34	2.55	3.70	2.31	2.43	2.69	.50	1.66	.81	.14	
IN.	.14	.32	1.55	2.94	3.85	2.66	2.71	3.10	.55	1.91	.94	.16	
CAL YR 1968	TOTAL 322,307			MEAN 881		MAX 4,770		MIN 44		CFSM 1.54		IN 20.92	
WTR YR 1969	TOTAL 321,012			MEAN 879		MAX 5,090		MIN 62		CFSM 1.53		IN 20.83	

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., Lawrence County, on left bank at downstream side of bridge on State Highway 54, 0.2 mile downstream from Popcorn Creek, and 4 miles northwest of Springville.

DRAINAGE AREA.--60.7 sq mi.

PERIOD OF RECORD.--September 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is 580.00 ft above mean sea level (unadjusted).

AVERAGE DISCHARGE.--8 years, 54.3 cfs (12.15 inches per year).

EXTREMES.--Current year: Maximum discharge, 4,630 cfs Jan. 29 (gage height, 10.99 ft); minimum, 1.1 cfs Sept. 22 (gage height, 1.26 ft).

Period of record: Maximum discharge, 6,450 cfs Mar. 9, 1964 (gage height, 12.95 ft); no flow at times some years. Flood in Spring 1950 or 1951 reached a stage of 18.4 ft, from information by local resident.

REMARKS.--Records good.

REVISIONS.--WRD Ind. 1968: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	2.4	440	79	185	17	67	23	8.7	24	11	1.3
2	2.1	2.3	220	55	121	16	86	21	9.5	17	11	37
3	2.4	2.3	128	49	98	15	86	19	7.2	14	9.1	8.0
4	2.1	2.6	177	36	72	14	83	17	6.4	11	7.7	5.3
5	2.0	2.6	93	30	66	13	282	16	5.8	9.4	6.8	4.2
6	2.4	2.9	57	31	88	13	151	14	5.3	9.6	6.0	4.5
7	2.4	3.9	45	28	88	13	98	14	6.1	13	5.3	13
8	2.4	4.1	36	26	190	13	74	27	5.3	11	5.0	5.1
9	2.1	3.7	29	25	192	15	74	37	4.1	12	7.3	3.2
10	2.6	3.3	27	21	110	14	87	40	3.7	239	7.1	2.4
11	2.6	2.9	24	19	92	13	62	29	3.5	77	5.0	2.1
12	2.7	2.7	23	17	68	11	48	21	3.5	45	4.0	2.0
13	2.6	2.4	64	16	50	11	41	18	13	26	3.5	1.9
14	2.6	2.3	52	15	42	10	403	116	10	16	3.2	1.7
15	2.4	56	34	15	36	9.7	358	65	41	12	3.0	1.5
16	2.6	215	28	18	33	9.5	186	40	27	12	3.7	1.5
17	3.1	56	25	979	32	9.4	180	32	11	9.6	3.5	1.7
18	6.4	52	57	1,510	30	9.5	1,640	210	8.7	8.0	3.3	1.8
19	6.9	41	90	244	27	9.5	368	158	8.3	6.8	2.9	1.8
20	5.0	32	60	142	25	8.8	170	84	6.4	420	2.7	1.6
21	3.9	27	39	108	23	8.2	112	53	5.0	488	2.8	1.5
22	3.3	23	309	102	23	7.8	83	45	16	1,270	2.8	1.3
23	3.1	25	192	327	24	8.1	66	41	63	294	2.6	1.4
24	2.9	229	91	360	23	76	53	32	27	102	2.2	3.5
25	3.1	80	58	120	21	133	45	26	19	61	2.0	2.9
26	3.1	50	43	75	20	84	40	20	14	40	1.9	2.3
27	2.9	40	602	57	18	70	34	16	205	30	1.7	1.9
28	2.7	622	1,130	822	17	58	33	13	656	23	1.6	1.9
29	2.4	188	222	2,250	-----	224	29	11	78	19	1.5	1.9
30	2.4	90	129	1,610	-----	111	26	9.5	40	15	1.4	1.8
31	2.3	-----	143	359	-----	74	-----	9.5	-----	12	1.3	-----
TOTAL	91.6	1,866.4	4,667	9,545	1,814	1,098.5	5,065	1,277.0	1,317.5	3,346.4	132.9	122.0
MEAN	2.95	62.2	151	308	64.8	35.4	169	41.2	43.9	108	4.29	4.07
MAX	6.9	622	1,130	2,250	192	224	1,640	210	656	1,270	11	37
MIN	2.0	2.3	23	15	17	7.8	26	9.5	3.5	6.8	1.3	1.3
CFSM	.05	1.02	2.48	5.07	1.07	.58	2.78	.68	.72	1.78	.07	.07
IN.	.06	1.14	2.86	5.85	1.11	.67	3.10	.78	.81	2.05	.08	.07

CAL YR 1968 TOTAL 30,329.0 MEAN 82.9 MAX 3,190 MIN 1.3 CFSM 1.37 IN 18.58
WTR YR 1969 TOTAL 30,343.3 MEAN 83.1 MAX 2,250 MIN 1.3 CFSM 1.37 IN 18.59

PEAK DISCHARGE (BASE, 1,400 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
11-28	1130	6.38	1,570	04-18	0300	8.84	3,000
12-28	0115	7.78	2,370	06-27	2345	9.95	3,800
01-18	0415	8.05	2,530	07-22	1245	9.02	3,110
01-29	2045	10.99	4,630				

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., Martin County, in first pier from left bank of bridge on U.S. Highway 50 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.

PERIOD OF RECORD.--June 1903 to July 1906, October 1908 to September 1916, June 1923 to current year. 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. See WSP 1725 for history of changes prior to Oct. 26, 1932.

AVERAGE DISCHARGE.--55 years (1903-5, 1909-16, 1923-69), 5,325 cfs (14.68 inches per year).

EXTREMES.--Current year: Maximum discharge, 47,300 cfs Feb. 5 (gage height, 26.42 ft); minimum, 559 cfs Oct. 31 (gage height, 2.43 ft).

Period of record: Maximum discharge, 160,000 cfs Mar. 28, 1913 (gage height, 42.2 ft), from rating curve extended above 100,000 cfs; minimum, 44 cfs Oct. 6, 1935, as a result of filling Williams Reservoir.

REMARKS.--Records good. Flow partially regulated by Monroe Reservoir. (See sta 3-3724.)

REVISIONS (WATER YEARS).--WSP 353: 1912. WSP 1335: 1903-6. WRD Ind. 1968: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	754	599	5,310	14,500	32,900	5,870	4,890	5,920	2,760	5,260	6,830	1,100
2	745	632	7,920	15,100	35,200	5,740	5,130	5,600	2,600	4,450	6,160	1,100
3	727	640	7,440	14,800	41,900	5,620	5,220	5,310	2,440	3,690	5,690	1,200
4	709	640	7,730	13,400	46,200	5,520	5,110	5,020	2,330	3,000	5,240	1,210
5	700	632	8,760	10,100	46,800	5,500	5,670	4,780	2,200	2,600	4,910	1,320
6	718	640	8,690	8,080	43,700	5,380	7,400	4,600	2,100	2,350	4,640	1,390
7	781	658	8,800	7,020	34,100	5,310	7,990	4,450	1,990	2,090	4,090	1,290
8	810	658	8,410	6,520	28,100	5,220	8,430	4,350	1,830	2,290	3,020	1,240
9	800	658	6,710	6,000	20,400	5,150	8,080	4,350	1,660	3,310	2,440	1,200
10	790	666	5,020	5,900	16,200	5,110	7,150	4,500	1,600	3,990	2,310	1,330
11	763	666	4,180	5,190	14,900	4,970	6,290	4,930	1,540	4,540	2,170	1,310
12	772	666	3,730	4,490	15,800	4,430	5,350	5,260	1,520	4,470	2,020	1,210
13	754	666	3,440	3,970	16,400	3,630	4,580	5,260	1,710	4,840	2,280	1,110
14	745	692	3,190	3,270	15,600	2,910	4,730	5,190	2,930	4,750	2,870	1,060
15	727	727	3,040	2,890	13,400	2,420	8,520	5,220	3,780	5,280	2,890	1,010
16	718	912	2,850	2,620	11,100	2,280	11,100	5,110	4,750	5,040	2,600	967
17	709	1,490	2,740	3,730	9,400	2,170	11,600	4,930	4,950	4,280	2,350	945
18	718	1,280	2,590	14,200	8,410	2,100	14,100	4,930	4,910	3,710	2,130	912
19	718	1,290	2,620	20,600	7,880	2,040	20,900	6,950	4,820	3,350	2,010	890
20	692	2,070	2,810	17,500	7,480	2,010	19,900	10,300	4,300	3,020	1,880	870
21	666	2,420	3,080	16,400	7,220	1,940	17,400	11,300	3,650	4,320	1,850	880
22	640	2,370	3,900	19,400	7,040	1,910	18,200	11,700	3,100	4,930	1,850	1,120
23	599	2,190	6,390	22,100	6,830	1,860	19,000	14,200	2,950	11,400	1,790	1,380
24	632	2,190	7,150	23,300	6,660	2,020	17,900	13,900	3,250	13,400	1,680	1,360
25	640	2,910	7,990	21,100	6,490	2,550	14,830	9,940	3,080	11,500	1,540	1,210
26	640	2,380	8,670	16,100	6,390	3,400	11,100	6,260	3,540	13,300	1,460	1,100
27	632	2,260	8,410	13,300	6,210	3,950	8,670	4,820	4,030	17,000	1,400	1,050
28	624	3,310	13,600	13,500	6,030	4,070	7,350	4,160	5,790	20,200	1,320	1,000
29	599	5,790	16,700	17,800	-----	4,090	6,620	3,650	7,700	17,700	1,240	967
30	599	4,910	14,000	26,300	-----	4,560	6,310	3,270	6,390	12,500	1,200	945
31	567	-----	13,300	32,100	-----	4,710	-----	2,970	-----	7,920	1,160	-----
TOTAL	21,688	47,612	209,170	401,280	518,740	118,440	299,490	193,130	100,200	210,480	85,020	33,676
MEAN	700	1,587	6,747	12,940	18,530	3,821	9,983	6,230	3,340	6,790	2,743	1,123
MAX	810	5,790	16,700	32,100	46,800	5,870	20,900	14,200	7,700	20,200	6,830	1,390
MIN	567	599	2,590	2,620	6,030	1,860	4,580	2,970	1,520	2,090	1,160	870
CFSM	.14	.32	1.37	2.63	3.76	.78	2.03	1.26	.68	1.38	.56	.23
IN.	.16	.36	1.58	3.03	3.92	.89	2.26	1.46	.76	1.59	.64	.25

CAL YR 1968 TOTAL 2,329,228.00 MEAN 6,364 MAX 58,200 MIN 567 CFSM 1.29 IN 17.58
WTR YR 1969 TOTAL 2,238,926 MEAN 6,134 MAX 46,800 MIN 567 CFSM 1.25 IN 16.90

PEAK DISCHARGE (BASE, 20,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-19	1300	14.30	21,000	04-19	2000	14.68	21,500
01-24	1600	15.94	23,400	07-28	1700	12.84	20,300
02-05	0700	26.42	47,300				

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., Orange County, on left bank 20 ft downstream from bridge on U.S. Highway 150, 1.7 miles northwest of West Baden Springs, and 3.8 miles downstream from Lick Creek.

DRAINAGE AREA.--287 sq mi.

PERIOD OF RECORD.--December 1964 to current year. 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 (levels by Indiana Department of Natural Resources).

EXTREMES.--Current year: Maximum discharge, 5,210 cfs Jan. 30 (gage height, 23.61 ft); minimum, 15 cfs Oct. 5, 6; minimum gage height, 2.84 ft Sept. 30.

Period of record: Maximum discharge, 5,210 cfs Jan. 30, 1969 (gage height, 23.61 ft); minimum, 3.4 cfs July 20, 1965 (gage height, 2.47 ft) due to unusual regulation.

Flood in March 1964 reached a stage of 28.1 ft, from floodmarks.

REMARKS.--Record fair.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	21	484	916	3,440	202	341	250	134	74	93	29
2	17	21	858	607	2,340	203	326	210	124	76	83	500
3	17	22	644	487	1,740	202	303	180	115	71	75	325
4	16	22	1,150	407	1,320	193	302	155	106	64	67	277
5	16	22	1,040	348	982	180	929	135	97	58	61	234
6	18	24	661	308	840	175	1,050	120	92	55	56	142
7	19	30	439	269	830	171	782	110	85	55	52	101
8	19	31	327	232	789	163	587	130	78	71	51	79
9	20	31	253	217	942	161	496	160	85	252	85	61
10	20	28	207	193	925	154	490	150	90	332	151	52
11	19	25	178	167	803	149	437	140	72	393	90	44
12	19	25	158	144	692	140	370	130	234	253	63	41
13	19	23	152	131	569	135	325	120	375	168	52	38
14	17	23	148	118	486	128	643	150	463	127	47	36
15	18	24	130	111	437	122	1,420	183	530	101	44	33
16	18	36	112	108	408	118	1,450	164	348	85	62	31
17	20	50	101	784	380	115	1,160	143	219	74	92	30
18	23	47	138	3,100	348	112	2,130	593	163	65	64	28
19	23	47	273	3,460	321	110	3,480	1,940	139	59	65	27
20	23	41	294	2,500	298	107	2,810	1,500	117	55	68	25
21	21	37	255	1,700	277	104	1,920	1,000	137	67	65	25
22	21	34	499	1,180	264	97	1,390	760	230	279	80	25
23	22	33	1,060	884	261	97	924	550	206	1,020	62	24
24	23	66	877	940	252	227	683	425	160	796	52	23
25	23	83	548	812	238	548	561	350	145	445	46	22
26	22	66	409	630	224	528	493	280	130	304	41	21
27	21	81	855	527	213	456	434	240	108	230	38	20
28	21	617	2,280	990	204	388	391	210	93	190	34	19
29	21	921	2,700	2,090	-----	430	359	188	83	154	31	19
30	21	490	2,050	4,430	-----	442	290	164	76	126	30	18
31	21	-----	1,480	4,700	-----	381	-----	147	-----	105	28	-----
TOTAL	614	3,021	20,760	33,490	20,823	6,738	27,276	10,977	5,034	6,204	1,928	2,349
MEAN	19.8	101	670	1,080	744	217	909	354	168	200	62.2	78.3
MAX	23	921	2,700	4,700	3,440	548	3,480	1,940	530	1,020	151	500
MIN	16	21	101	108	204	97	290	110	72	55	28	18
CFSM	.07	.35	2.33	3.76	2.59	.76	3.17	1.23	.58	.70	.22	.27
IN.	.08	.39	2.69	4.34	2.70	.87	3.53	1.42	.65	.80	.25	.30

CAL YR 1968 TOTAL 131,236 MEAN 359 MAX 2,840 MIN 16 CFSM 1.25 IN 17.01
WTR YR 1969 TOTAL 139,214 MEAN 381 MAX 4,700 MIN 16 CFSM 1.33 IN 18.04

PEAK DISCHARGE (BASE, 2,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-29	0200	20.70	2,800	04-19	1200	21.77	3,560
01-18	2400	22.05	3,780	05-19	2030	19.32	2,090
01-30	2100	23.61	5,210				

3-3740, White River at Petersburg, Ind.

LOCATION.--Lat 38°30'39", long 87°17'22", in SW $\frac{1}{4}$ sec. 15, T. 1 N., R. 8 W., Pike County, 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 sq mi.

PERIOD OF RECORD.--October 1927 to current year. Monthly discharge only for October 1927, 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. See WSP 1725 for history of changes prior to Apr. 1, 1941.

AVERAGE DISCHARGE.--42 years, 11,280 cfs (13.77 inches per year).

EXTREMES.--Current year: Maximum discharge, 94,800 cfs Feb. 4 (gage height, 24.84 ft); minimum, 1,600 cfs Oct. 31 (gage height, 1.72 ft).

Period of record: 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).

Flood in March 1913, reached a stage of 29.5 ft (present site and datum), from floodmarks by Corps of Engineers (discharge, 235,000 cfs, estimated).

REMARKS.--Records good. Natural flow of stream affected by reservoirs. Records of water temperatures for the current year are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1305: 1930(M). WRD Ind. 1968: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,110	1,650	12,000	30,700	70,200	13,600	11,300	14,500	6,640	11,700	16,100	3,200
2	2,050	1,660	14,000	32,500	83,800	13,400	11,100	13,100	6,240	10,100	13,900	3,680
3	2,030	1,710	15,400	33,500	91,600	13,100	11,100	11,700	5,900	8,600	12,700	3,860
4	1,950	1,740	16,800	33,700	94,600	12,800	11,400	10,700	5,650	7,320	11,800	3,940
5	1,910	1,700	16,400	25,400	92,400	12,500	14,400	10,100	5,480	6,310	10,600	3,820
6	1,990	1,720	15,900	19,600	86,000	12,300	14,900	9,430	5,260	5,950	9,480	3,620
7	2,020	1,800	15,000	15,800	76,000	12,100	16,100	9,040	5,050	5,950	8,650	3,550
8	1,980	1,820	13,700	13,900	65,200	11,600	16,800	9,310	4,900	6,060	7,680	3,400
9	2,020	1,790	12,400	13,200	57,700	10,800	17,000	9,090	4,750	9,530	6,650	3,240
10	2,030	1,800	10,400	12,200	48,000	10,200	17,400	9,050	4,560	12,400	6,380	3,100
11	1,980	1,900	8,530	11,000	40,400	9,940	17,800	9,310	4,410	13,500	5,580	3,080
12	1,950	2,000	7,320	9,610	35,800	9,650	17,700	9,700	4,300	13,700	5,610	3,080
13	1,920	1,990	6,720	8,870	34,800	9,040	15,700	9,900	4,500	12,700	6,940	3,010
14	1,910	1,920	6,470	7,930	34,400	8,170	14,400	10,000	4,600	11,100	7,790	2,880
15	1,880	1,950	6,380	7,160	32,300	7,400	15,700	10,300	5,680	10,300	8,400	2,770
16	1,820	2,180	6,270	6,640	27,900	6,840	19,800	10,400	6,430	9,770	7,700	2,680
17	1,810	2,800	6,060	8,320	23,700	6,570	22,700	9,920	8,400	9,080	6,530	2,600
18	1,950	3,930	5,700	23,500	20,600	6,350	26,900	10,800	9,260	7,930	6,000	2,510
19	1,950	4,460	5,520	31,600	18,500	6,190	31,600	14,100	9,140	6,940	5,560	2,450
20	1,920	4,460	5,710	35,800	17,100	6,100	35,600	16,200	8,810	6,210	5,740	3,000
21	1,860	5,020	6,030	38,800	16,300	5,940	39,500	18,500	8,220	5,990	5,190	4,180
22	1,820	5,410	6,840	40,800	15,800	5,790	41,600	19,000	7,360	10,800	5,260	4,720
23	1,760	5,230	10,400	43,400	15,400	5,710	43,200	19,400	7,250	17,800	4,640	4,840
24	1,710	5,100	12,900	46,800	15,000	6,210	43,600	20,300	7,450	22,600	4,440	4,580
25	1,680	5,410	13,600	46,900	14,600	7,370	41,200	19,300	7,300	26,400	4,220	4,210
26	1,680	6,110	13,700	45,200	14,300	8,930	34,900	15,600	6,730	26,600	4,020	3,880
27	1,690	5,790	14,600	41,200	14,000	10,100	26,200	11,900	7,270	27,100	3,850	3,730
28	1,690	5,820	22,100	37,700	13,700	10,200	21,300	9,880	8,350	26,800	3,720	3,520
29	1,690	8,690	26,400	41,600	-----	10,700	18,100	8,670	10,500	26,100	3,580	3,300
30	1,640	11,600	29,000	51,700	-----	10,900	16,200	7,860	12,500	24,800	3,440	3,150
31	1,620	-----	30,000	60,800	-----	11,300	-----	7,180	-----	20,800	3,320	-----
TOTAL	58,020	109,160	392,250	875,830	1,170,111	291,800	685,200	374,240	202,890	420,940	214,970	103,580
MEAN	1,872	3,639	12,650	28,250	41,790	9,413	22,840	12,070	6,763	13,580	6,935	3,453
MAX	2,110	11,600	30,000	60,800	94,600	13,600	43,600	20,300	12,500	27,100	16,100	4,840
MIN	1,620	1,650	5,520	6,640	13,700	5,710	11,100	7,180	4,300	5,950	3,320	2,450
CFSM	.17	.33	1.14	2.54	3.76	.85	2.05	1.09	.61	1.22	.62	.31
IN.	.19	.36	1.31	2.93	3.91	.98	2.29	1.25	.68	1.41	.77	.35

CAL YR 1968 TOTAL 4,735,720 MEAN 13,080 MAX 96,000 MIN 1,620 CFSM 1.18 IN 16.00
WTR YR 1969 TOTAL 4,898,980 MEAN 13,420 MAX 94,600 MIN 1,620 CFSM 1.21 IN 16.38

3-3744.55. Patoka River near Hardinsburg, Ind.

LOCATION.--Lat 38°26'41", long 86°23'14", in SE¼ sec. 10, T. 1 S., R. 1 E., Orange County, on downstream edge of center pier on county road bridge, 0.2 mile upstream from left-bank tributary, 0.7 mile northeast of Valeene, and 6.0 miles southwest of Hardinsburg.

DRAINAGE AREA.--12.8 sq mi.

PERIOD OF RECORD.--October 1968 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 606.89 ft above sea level.

EXTREMES.--Current year: Maximum discharge, 1,400 cfs May 18 (gage height, 7.20 ft); minimum, 0.38 cfs Sept. 27-30 (gage height, 1.04 ft).

REMARKS.--Records good above 10 cfs, fair 10 cfs to 1.0 cfs, and poor below.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.74	.61	44	21	78	5.7	23	12	3.8	1.9	1.6	.73
2	.72	.55	42	15	48	6.1	24	11	7.2	1.6	1.9	29
3	.71	.67	64	12	33	6.1	23	9.3	4.8	1.5	1.5	4.6
4	.70	.67	112	10	25	5.7	20	7.9	3.5	1.4	1.4	19
5	.68	.67	38	8.8	21	5.3	29	6.8	3.0	1.3	1.3	6.9
6	.67	.67	19	7.8	25	5.3	27	5.8	2.7	1.3	1.2	3.7
7	.66	.61	13	7.0	25	5.3	21	5.1	2.4	1.3	1.1	2.7
8	.65	.55	9.5	6.1	40	5.3	18	33	2.6	8.8	2.5	2.1
9	.64	.55	6.9	5.6	58	5.7	19	35	6.1	6.2	29	1.6
10	.62	.49	6.1	5.1	43	5.7	26	27	2.5	58	17	1.3
11	.61	.49	5.3	4.7	32	5.3	21	18	2.1	22	5.0	1.2
12	.67	.49	5.0	4.4	25	5.0	17	13	1.8	12	3.0	1.1
13	.67	.49	6.1	4.1	18	4.7	21	10	4.2	6.8	2.2	.97
14	.61	.55	6.9	3.9	15	4.4	145	26	84	4.3	1.7	.89
15	.49	.55	5.3	3.7	14	4.1	120	24	124	3.0	1.5	.85
16	.49	.87	4.7	3.7	12	3.8	64	15	50	2.5	1.4	.78
17	.49	.96	4.1	160	11	3.8	81	16	20	2.1	1.4	.76
18	.61	1.2	12	300	9.5	3.5	353	574	12	1.7	1.2	.75
19	.61	1.1	35	92	9.5	3.5	160	430	8.9	1.5	1.3	.66
20	.61	1.2	22	52	9.1	3.2	73	110	6.2	2.0	1.3	.63
21	.55	1.3	15	40	7.7	3.0	47	52	4.7	2.0	1.2	.62
22	.55	1.3	110	33	7.7	2.8	34	34	6.1	11	1.3	.58
23	.61	1.5	72	36	8.1	3.0	25	23	12	18	1.1	.55
24	.61	2.6	33	33	8.6	111	19	18	8.0	6.9	.93	.54
25	.67	2.4	21	21	8.1	80	15	14	5.8	4.5	.85	.49
26	.61	1.6	17	16	6.9	52	13	11	4.2	3.3	.79	.48
27	.61	2.8	142	13	6.5	45	12	8.5	3.3	2.8	.73	.48
28	.61	102	348	224	6.1	34	20	9.5	2.7	2.4	.70	.48
29	.61	36	88	441	-----	43	18	5.7	2.4	2.0	.69	.41
30	.55	17	47	534	-----	33	14	4.8	2.1	1.6	.71	.43
31	.55	-----	31	158	-----	25	-----	4.2	-----	1.4	.80	-----
TOTAL	19.18	182.44	1,384.9	2,275.9	610.8	529.3	1,502	1,573.6	403.1	197.1	88.50	85.28
MEAN	.62	6.08	44.7	73.4	21.8	17.1	50.1	50.8	13.4	6.36	2.85	2.84
MAX	.74	102	348	534	78	111	353	574	124	58	29	29
MIN	.49	.49	4.1	3.7	6.1	2.8	12	4.2	1.8	1.3	.65	.41
CFSM	.05	.48	3.49	5.74	1.70	1.33	3.91	3.97	1.05	.50	.22	.22
IN.	.06	.53	4.02	6.61	1.77	1.54	4.36	4.57	1.17	.57	.26	.25

CAL YR 1968 TOTAL MEAN MAX MIN CFSM IN
WTR YR 1969 TOTAL 8,852.10 MEAN 24.3 MAX 574 MIN .41 CFSM 1.89 IN 25.72

PEAK DISCHARGE (BASE, 250 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-28	0145	4.91	703	04-18	0130	4.55	612
01-18	0800	4.00	475	05-18	1400	7.20	1,400
01-28	1200	4.63	628	06-15	1045	3.24	288
01-29	1630	6.04	1,040	08-09	1945	3.14	268

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., Dubois County, 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.

PERIOD OF RECORD.--June 1961 to current year.

GAGE.--Water-stage recorder. Datum of gage is 477.00 ft above mean sea level (levels by Indiana Flood Control and Water Resources Commission). Prior to Oct. 1, 1961, nonrecording gage on downstream side of bridge, 200 ft downstream at same datum.

AVERAGE DISCHARGE.--8 years, 186 cfs (14.77 inches per year).

EXTREMES.--Current year: Maximum discharge, 4,840 cfs Jan. 30 (gage height, 15.71 ft); minimum, 0.85 cfs Oct. 2, 4, 5 (gage height, 2.18 ft).

Period of record: Maximum discharge, 14,700 cfs Mar. 10, 1964 (gage height, 20.02 ft); no flow Oct. 30, 1964.

Flood in March 1913 reached a stage of 19.1 ft (discharge about 12,300 cfs) according to information by local resident.

REMARKS.--Records poor prior to Dec. 1, good thereafter.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	3.3	493	278	3,030	82	239	121	33	19	26	12
2	1.0	2.5	842	174	1,860	90	236	104	30	18	25	594
3	1.2	2.5	611	120	943	94	265	90	31	16	21	260
4	.95	2.3	1,010	95	335	86	242	77	32	13	17	485
5	1.3	2.5	957	83	229	81	391	66	31	12	16	190
6	1.5	3.1	523	72	231	79	366	58	24	10	14	126
7	1.7	5.0	213	64	291	77	270	52	21	36	11	164
8	2.5	8.1	152	57	296	73	208	52	19	25	13	96
9	2.1	11	117	52	532	75	213	108	18	49	44	60
10	1.9	8.7	96	48	532	73	387	152	19	923	142	42
11	2.3	8.1	86	45	359	70	332	126	21	1,530	117	33
12	2.5	6.9	79	42	257	66	239	102	22	1,640	57	26
13	2.1	5.4	86	40	198	62	188	79	20	690	31	23
14	2.1	6.9	96	38	157	58	500	58	46	154	22	19
15	1.9	3.5	88	38	135	55	1,070	203	171	94	18	17
16	1.5	4.0	77	44	124	52	1,120	188	327	63	15	15
17	1.3	1.9	68	555	117	51	797	128	195	46	68	13
18	1.7	3.1	98	2,060	110	49	1,610	586	88	36	63	12
19	1.5	4.7	257	2,080	106	49	2,860	2,070	57	28	132	14
20	1.3	5.8	312	1,850	100	49	2,600	2,680	42	38	249	9.1
21	1.5	5.4	208	1,310	94	45	1,880	2,510	33	154	145	8.1
22	2.7	4.7	634	672	90	42	891	1,370	32	409	229	7.1
23	2.9	4.3	988	621	100	41	325	426	138	986	130	6.1
24	3.3	14	738	812	102	244	218	174	110	422	79	7.1
25	3.7	18	301	512	58	839	174	135	90	611	52	6.6
26	3.7	29	190	273	92	793	150	106	62	188	38	5.7
27	4.0	66	715	193	84	586	126	86	42	104	28	5.3
28	4.3	570	1,620	777	81	432	133	70	31	79	22	4.9
29	4.0	941	1,620	1,940	-----	452	166	55	23	57	15	4.5
30	5.4	687	1,430	3,870	-----	444	150	46	20	42	16	3.8
31	3.7	-----	960	4,220	-----	314	-----	39	-----	31	15	-----
TOTAL	72.45	2,438.7	15,665	23,075	10,683	5,603	18,346	12,159	1,828	8,923	1,875	2,269.3
MEAN	2.34	81.3	505	744	382	181	612	352	60.9	288	60.6	75.6
MAX	5.4	941	1,620	4,220	3,030	839	2,860	2,680	327	1,520	245	594
MIN	.85	1.9	68	38	81	41	126	39	18	10	11	3.8
CFSM	.01	.48	2.96	4.35	2.23	1.06	3.58	2.29	.36	1.68	.35	.44
IN.	.02	.53	3.41	5.02	2.32	1.22	3.99	2.64	.40	1.94	.41	.49

CAL YR 1968 TOTAL 80,893.25 MEAN 221 MAX 1,820 MIN .85 CFSM 1.29 IN 17.55
WTR YR 1969 TOTAL 102,941.45 MEAN 282 MAX 4,220 MIN .85 CFSM 1.65 IN 22.35

PEAK DISCHARGE (BASE, 1,200 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-28	1915	12.79	1,780	04-19	0730	14.36	2,940
01-18	2015	13.66	2,310	05-20	1815	14.41	3,010
01-30	1830	15.71	4,840	07-11	0830	13.20	1,990

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., Dubois County, in intake tower of reservoir on Beaver Creek, 2.5 miles above mouth, and 5.2 miles east of Jasper.

PERIOD OF RECORD.--October 1955 to current year.

GAGE.--Water-stage recorder. Datum of gage is 471.00 ft above mean sea level.

EXTREMES.--Current year: Maximum contents 2,894 acre-ft July 10 (elevation, 29.62 ft); minimum contents, 1,554 acre-ft Jan. 16 (elevation, 22.38 ft).

Period of record: 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 1968 to September 1969

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	28.26	2,620	-
Oct. 31.....	27.53	2,477	-143
Nov. 30.....	27.69	2,508	+31
Dec. 31.....	24.23	1,850	-658
Calendar year 1968.....	-	-	-791
Jan. 31.....	28.95	2,758	+908
Feb. 28.....	28.35	2,638	-120
Mar. 31.....	28.52	2,671	+33
Apr. 30.....	28.40	2,647	-24
May 31.....	28.27	2,622	-25
June 30.....	28.28	2,624	+2
July 31.....	28.31	2,630	+6
Aug. 31.....	28.24	2,616	-14
Sept. 30.....	28.13	2,594	-22
Water year 1968-69	-	-	-26

3-3755. Patoka River at Jasper, Ind.

LOCATION.--Lat 38°24'49", long 86°52'36", in SE $\frac{1}{4}$ sec. 20, T. 1 S., R. 4 W., Dubois County, 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.

PERIOD OF RECORD.--November 1947 to current year.

GAGE.--Water-stage recorder. Datum of gage is 446.19 ft above mean sea level. Prior to Sept. 18, 1956, nonrecording 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.--21 years, (1948-69), 348 cfs (18.35 inches per year).

EXTREMES.--Current year: Maximum discharge, 4,660 cfs Feb. 1 (gage height, 11.88 ft observed at supplementary gage); maximum gage height at base gage, 16.60 ft Feb. 1; minimum discharge, 2.8 cfs Nov. 5, 6 (gage height, 3.39 ft).
Period of record: 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.
Flood in March 1913 reached a stage of 15.9 ft (at former site), from floodmark furnished by local residents (discharge, 16,000 cfs).

REMARKS.--Records good. Flow partially regulated by Beaver Creek Reservoir. (See sta 3-3752.)

REVISIONS (WATER YEARS).--WSP 1275: Drainage area. WSP 1909: 1958.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.1	26	949	2,170	4,550	197	406	241	101	31	71	25
2	6.2	5.1	971	2,050	4,480	199	360	222	81	27	47	279
3	5.0	4.1	1,010	1,450	3,730	204	358	208	62	25	40	745
4	4.1	3.4	1,090	600	3,100	204	363	199	52	23	34	542
5	3.4	3.0	1,110	200	2,440	200	566	190	47	20	28	575
6	3.4	3.0	1,140	170	832	195	721	182	47	17	23	278
7	3.4	3.3	879	130	527	193	536	167	40	15	20	232
8	3.4	3.8	390	120	455	191	405	156	33	27	19	240
9	3.9	5.5	259	125	527	190	334	180	27	122	35	196
10	5.0	11	226	130	615	188	412	211	25	713	245	154
11	6.2	12	212	100	563	186	482	234	22	1,180	236	105
12	5.7	13	217	80	437	183	413	221	23	1,320	201	77
13	5.3	11	217	70	343	177	327	203	64	1,460	143	60
14	5.1	24	220	62	280	171	391	198	58	1,510	66	42
15	4.8	57	221	62	254	160	868	218	139	982	38	35
16	4.5	60	214	70	239	150	1,080	271	257	296	73	29
17	4.1	42	205	350	230	139	1,190	262	312	192	62	23
18	4.5	33	207	1,300	224	133	1,330	366	247	141	128	19
19	3.9	30	273	1,650	219	130	1,430	1,080	189	90	184	17
20	3.6	35	402	2,100	215	126	1,740	1,310	128	81	271	14
21	3.4	37	399	2,550	209	120	2,620	1,540	81	187	281	13
22	3.6	37	536	2,500	206	105	3,100	2,080	84	268	292	12
23	3.9	34	942	2,320	208	96	2,860	2,780	200	694	285	10
24	3.6	45	1,050	1,980	211	191	2,210	2,640	228	865	225	10
25	4.1	86	991	1,240	210	519	704	1,980	211	692	187	10
26	4.5	87	540	841	206	863	346	393	192	538	137	9.7
27	4.5	93	658	425	200	886	260	231	152	268	92	9.0
28	6.4	438	1,300	680	196	688	241	202	90	209	60	8.6
29	6.0	996	1,440	1,240	-----	588	244	187	52	186	40	9.0
30	13	982	1,510	1,880	-----	603	254	165	36	150	32	8.3
31	44	-----	2,020	3,310	-----	512	-----	126	-----	105	27	-----
TOTAL	189.6	3,220.2	21,798	31,955	25,906	8,687	26,551	18,643	3,280	12,434	3,622	3,786.6
MEAN	6.12	107	703	1,031	925	280	885	601	109	401	117	126
MAX	44	996	2,020	3,310	4,550	886	3,100	2,780	312	1,510	292	745
MIN	3.4	3.0	205	62	196	96	241	126	22	15	19	8.3
CFSM	0.2	0.42	2.74	4.01	3.60	1.09	3.44	2.34	0.47	1.56	0.46	0.49
IN.	0.02	0.47	3.16	4.67	3.75	1.26	3.94	2.70	0.47	1.75	0.53	0.55
CAL YR 1968	TOTAL 121,677.3	MEAN 332	MAX 2,710	MIN 3.0	CFSM 1.29	IN 17.56						
WTR YR 1969	TOTAL 160,072.4	MEAN 439	MAX 4,550	MIN 3.0	CFSM 1.71	IN 23.21						

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., Pike County, on right bank at upstream side of bridge on State Highway 56, 2.2 miles west of intersection of State Highways 56 and 257, 2.5 miles southeast of Otwell, and 6.2 miles east of junction of State Highways 56 and 61.

DRAINAGE AREA.--21.4 sq mi.

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 448.00 ft above mean sea level.

AVERAGE DISCHARGE.--5 years, 18.4 cfs (11.68 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,060 cfs Jan. 29 (gage height, 11.37 ft); no flow for many days.

Period of record: 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.

Flood in March 1964 reached a stage of 12.58 ft.

REMARKS.--Records fair except those below 1 cfs and those for winter periods, which are poor.

DISCHARGE, IN CURIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	CCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.04	140	11	47	9.3	16	2.6	2.9	1.4	4.2	6.5
2	0	.04	54	8.0	36	12	18	2.2	3.8	2.2	3.5	24
3	0	.04	50	6.0	32	9.2	16	1.9	3.5	1.5	5.8	3.7
4	0	.05	134	4.6	22	7.0	36	1.8	2.8	2.2	6.7	12
5	0	.09	24	3.7	21	5.1	88	1.3	2.4	1.1	3.5	3.9
6	0	.24	13	3.0	48	5.6	27	.90	2.0	22	1.7	4.7
7	0	.35	9.1	2.4	44	5.2	14	.61	1.7	62	2.5	7.0
8	0	.84	6.6	1.9	62	5.6	11	2.6	1.7	29	8.4	2.5
9	0	.59	5.2	1.7	54	6.7	28	3.3	3.2	27	23	.59
10	0	.37	4.9	1.6	26	4.2	32	2.8	2.4	545	19	1.8
11	0	.26	4.8	1.4	22	3.0	14	2.5	4.2	59	6.0	3.2
12	0	.22	5.1	1.3	16	2.3	7.3	2.2	14	61	5.6	.75
13	0	.18	9.3	1.3	11	2.2	6.0	1.9	15	20	5.4	.10
14	0	.14	8.8	1.2	8.6	2.2	128	11	5.3	8.2	2.8	0
15	0	.21	5.0	1.2	8.2	1.9	50	7.1	7.0	5.3	4.7	0
16	0	1.5	4.1	2.1	8.1	1.8	22	4.5	5.0	4.2	11	.84
17	0	1.9	3.7	583	8.5	1.8	42	5.4	3.4	3.7	6.9	3.2
18	2.1	1.5	6.1	737	8.6	1.8	310	461	3.7	2.9	4.3	.70
19	1.5	1.6	12	60	8.1	1.8	64	135	3.2	2.6	4.2	.93
20	.78	1.2	11	35	6.8	1.7	27	33	5.8	2.6	3.1	3.1
21	.52	.82	7.2	38	6.8	1.9	16	17	11	4.9	12	.84
22	.31	.59	116	51	8.2	1.7	12	12	22	209	15	.08
23	.20	.55	52	132	11	2.3	7.2	9.5	54	61	2.3	0
24	.15	3.6	16	60	9.4	117	5.9	8.4	15	49	2.6	0
25	.14	2.6	9.1	17	7.9	56	5.1	7.0	12	69	3.9	.92
26	.13	1.6	7.5	9.0	7.2	38	4.3	5.5	8.4	13	1.8	2.8
27	.12	3.5	332	6.1	5.9	32	3.5	4.5	5.6	8.6	.64	.85
28	.08	85	614	482	6.1	19	4.0	3.8	3.7	6.8	.40	.17
29	.06	28	42	594	-----	68	3.4	3.3	2.6	5.5	.14	.01
30	.05	10	23	856	-----	24	3.1	2.9	1.2	4.6	.98	.02
31	.04	-----	20	94	-----	15	-----	2.6	-----	4.5	3.0	-----
TOTAL	6.18	147.62	1,749.5	3,806.5	560.4	465.3	1,020.8	760.11	228.5	1,298.8	175.06	85.20
MEAN	.20	4.92	56.4	123	20.0	15.0	34.0	24.5	7.62	41.9	5.65	2.84
MAX	2.1	85	614	856	62	117	310	461	54	545	23	24
MIN	0	.04	3.7	1.2	5.9	1.7	3.1	.61	1.2	1.1	.14	0
CFSM	.009	.23	2.64	5.74	.94	.70	1.59	1.15	.36	1.96	.26	.13
IN.	.01	.26	3.04	6.62	.97	.81	1.77	1.32	.40	2.26	.30	.15

CAL YR 1968 TOTAL 7,439.69 MEAN 20.3 MAX 682 MIN 0 CFSM .95 IN 12.93
WTR YR 1969 TOTAL 10,303.97 MEAN 28.2 MAX 856 MIN 0 CFSM 1.32 IN 17.91

PEAK DISCHARGE (BASE, 350 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
12-28	0230	11.16	952	05-18	1400	11.04	898
01-17	1630	11.32	1,030	07-10	1345	10.89	836
01-29	2145	11.37	1,060	07-22	1600	10.20	590
04-18	0300	10.26	611				

3-3763. Patoka River at Winslow, Ind.

LOCATION.--Lat 38°22'48", long 87°13'00", in SW 1/4 sec. 32, T. 1 S., R. 7 W., Pike County, on right bank at abandoned bridge abutment, 65 ft upstream from bridge on State Highway 61, 100 ft downstream from dam of Winslow Water Company, and 41.3 miles above mouth.

DRAINAGE AREA.--603 sq mi.

PERIOD OF RECORD.--October 1963 to current year. Discharge measurements and gage readings June 1961 to Sept. 1963, obtained by Indiana Flood Control and Water Resources Commission are available in the district office.

GAGE.--Water-stage recorder. Datum of gage is 400.00 ft above mean sea level (levels by Indiana Flood Control and Water Resources Commission). Prior to Nov. 21, 1963, nonrecording gage on downstream side of bridge 65 ft downstream at same datum.

AVERAGE DISCHARGE.--6 years, 623 cfs (14.03 inches per year).

EXTREMES.--Current year: Maximum daily discharge, 7,300 cfs Feb. 2 (gage height, unknown); minimum, 6.2 cfs Oct. 9; minimum gage height, 6.10 ft Oct. 8, 9.

Period of record: Maximum discharge, 15,500 cfs Mar. 13, 1964 (gage height, 28.84 ft); minimum daily, 0.5 cfs Aug. 5, 1964.

Flood in January 1937 reached a stage of 28.9 ft, from floodmarks, information from Indiana Flood Control and Water Resources Commission.

REMARKS.--Records poor. An average of 0.13 cfs is diverted for municipal water supply 100 ft above gage.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	12	1,180	3,100	6,800	285	900	1,510	929	67	715	56
2	18	12	1,360	3,700	7,300	304	740	1,260	619	48	455	447
3	15	16	1,360	3,700	7,000	370	660	938	351	37	292	925
4	12	40	1,510	3,200	6,500	387	640	632	196	40	190	1,090
5	10	51	1,530	2,600	5,600	356	700	411	114	36	116	1,150
6	7.8	51	1,520	2,100	5,000	320	950	251	78	46	82	1,200
7	7.2	50	1,530	1,900	4,400	293	1,300	205	59	119	56	1,320
8	6.6	42	1,540	1,610	3,900	275	1,100	161	43	265	38	1,270
9	7.2	36	1,540	1,460	3,300	267	870	164	31	700	41	1,140
10	12	42	1,520	1,130	2,800	255	680	170	26	1,600	166	902
11	12	56	1,460	757	2,400	237	620	156	22	2,200	327	606
12	10	56	1,300	493	2,000	213	800	161	18	2,600	327	367
13	8.4	51	1,070	415	1,700	198	860	152	56	2,900	265	224
14	8.4	50	798	302	1,400	184	600	258	235	2,900	194	150
15	9.3	56	576	243	1,200	173	770	339	220	2,700	124	113
16	9.2	77	433	224	1,060	164	1,300	335	241	2,200	93	81
17	8.5	103	350	723	928	156	1,700	298	285	1,500	82	60
18	24	142	318	2,240	698	149	2,000	675	470	1,000	207	49
19	24	154	378	3,500	552	144	2,300	1,470	360	1,200	227	40
20	31	153	502	4,100	470	139	2,500	2,000	267	1,500	506	36
21	48	139	584	4,400	416	128	2,850	2,300	177	1,700	482	32
22	40	118	822	4,600	381	119	3,200	2,700	131	1,750	1,190	28
23	29	106	1,220	4,200	374	114	3,400	3,000	396	1,750	1,130	24
24	19	114	1,700	3,500	363	419	3,400	3,200	614	1,700	1,060	26
25	14	119	1,850	2,300	352	918	3,400	3,200	578	1,650	1,050	26
26	11	157	1,900	1,510	336	1,030	3,100	2,900	437	1,560	966	23
27	9.5	195	2,050	1,650	315	1,070	2,700	2,500	307	1,510	725	22
28	8.4	449	2,200	2,040	295	1,150	2,300	2,200	206	1,470	428	21
29	7.9	910	2,400	2,540	-----	1,200	2,090	1,900	143	1,400	231	19
30	7.3	1,000	2,600	3,900	-----	1,200	1,770	1,550	100	1,270	128	18
31	9.2	-----	2,800	5,000	-----	1,050	-----	1,220	-----	1,030	80	-----
TOTAL	464.9	4,557	41,901	73,137	67,840	13,267	50,200	38,256	7,709	40,448	12,189	11,465
MEAN	15.0	152	1,352	2,359	2,423	428	1,673	1,235	257	1,305	393	382
MAX	48	1,000	2,800	5,000	7,300	1,200	3,400	3,200	929	2,900	1,150	1,320
MIN	6.6	12	318	224	295	114	600	156	19	36	38	18
CFSM	.02	.25	2.24	3.91	4.02	.71	2.78	2.05	.43	2.16	.65	.63
IN.	.03	.28	2.58	4.51	4.18	.82	3.10	2.36	.48	2.49	.75	.71

CAL YR 1968 TOTAL 236,196.7

MEAN 645

MAX 2,810

MIN 5.5

CFSM 1.07

IN 14.57

WTR YR 1969 TOTAL 361,473.9

MEAN 990

MAX 7,300

MIN 6.6

CFSM 1.64

IN 22.25

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., Pike County, on right bank at downstream side of bridge on State Highway 61, 0.5 mile north of Enos Corner, and 3.1 miles north of Spurgeon.

DRAINAGE AREA.--43.0 sq mi.

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 420.88 ft above mean sea level.

AVERAGE DISCHARGE.--5 years, 38.4 cfs (12.13 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,280 cfs Aug. 21 (gage height, 12.02 ft); minimum, 3.8 cfs Oct. 5 (gage height 1.21 ft).

Period of record: 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, Oct. 5, 1968.

Flood in March 1964 reached a stage of 13.09 ft, from floodmarks.

REMARKS.--Records good. Some slight regulation by coal-washing operation and strip mining above gage.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.9	5.2	192	48	173	47	47	24	18	23	24	17
2	6.4	6.8	78	40	138	59	47	22	18	17	20	197
3	7.4	8.6	95	33	108	57	42	21	15	16	15	45
4	4.5	8.6	154	29	89	45	40	20	14	31	14	132
5	4.2	6.2	51	25	82	38	48	20	14	16	13	45
6	8.1	12	32	23	99	38	37	18	15	40	12	34
7	7.2	13	25	21	81	35	33	16	15	33	12	30
8	6.2	8.6	19	20	94	39	35	33	15	26	12	25
9	5.7	7.3	21	18	82	37	60	27	32	25	65	21
10	8.5	7.4	16	17	66	30	59	22	18	515	34	19
11	6.5	8.0	15	16	62	28	43	20	16	216	17	18
12	6.5	8.0	16	15	54	26	36	18	26	90	13	16
13	6.0	5.9	23	15	48	26	38	20	116	55	12	16
14	6.1	5.9	14	15	44	24	264	104	32	39	12	17
15	5.9	12	30	18	43	23	121	44	45	29	11	18
16	5.5	20	15	21	45	22	70	32	27	71	12	15
17	6.6	12	27	477	44	21	93	35	19	47	14	15
18	37	20	35	505	42	21	285	387	20	27	13	14
19	5.6	11	39	160	39	20	91	202	19	22	157	13
20	7.4	8.2	23	105	36	19	61	86	14	35	46	13
21	6.3	7.1	19	90	35	17	52	57	13	50	437	14
22	6.1	7.5	246	97	39	17	43	44	68	57	193	13
23	5.9	7.4	91	158	43	23	37	37	156	41	67	13
24	6.0	20	47	122	38	287	34	34	65	68	47	15
25	5.5	11	37	64	35	131	31	31	40	54	38	12
26	5.4	8.8	30	52	34	84	30	27	25	29	21	12
27	6.0	42	380	47	32	61	28	23	20	41	27	11
28	5.3	214	446	456	36	50	32	22	17	28	23	11
29	4.9	58	110	553	-----	102	27	20	29	19	20	11
30	4.6	33	72	793	-----	55	26	19	18	16	15	10
31	4.7	-----	56	257	-----	44	-----	19	-----	15	17	-----
TOTAL	220.9	603.5	2,454	4,350	1,761	1,526	1,890	1,504	959	1,791	1,447	842
MEAN	7.13	20.1	79.2	140	62.9	49.2	63.0	48.5	32.0	57.8	46.7	28.1
MAX	37	214	446	793	173	287	285	387	156	515	437	197
MIN	4.2	5.2	14	15	32	17	26	16	13	15	11	10
CFSM	.17	.47	1.84	3.26	1.46	1.14	1.47	1.13	.74	1.34	1.06	.65
IN.	.19	.52	2.12	3.76	1.52	1.32	1.63	1.30	.83	1.55	1.25	.73

CAL YR 1968 TOTAL 14,994.3 MEAN 41.0 MAX 521 MIN 4.2 CFSM .95 IN 12.97
 WTR YR 1969 TOTAL 19,348.4 MEAN 53.0 MAX 793 MIN 4.2 CFSM 1.23 IN 16.73

PEAK DISCHARGE (BASE, 500 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
11-28	1100	5.87	514	01-29	1830	10.17	1,040
12-28	0130	9.64	973	04-18	0200	6.31	569
01-17	1630	9.63	972	05-18	1230	9.11	905
01-28	1215	10.68	1,110	07-10	0730	10.55	1,090
				08-19	1145	6.85	634
				08-21	1830	12.02	1,280
				09-02	0415	6.95	638

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., Gibson County, on left bank 75 ft upstream from dam of Princeton Water and Lighting Co., 0.1 mile downstream from bridge on State Highway 65, 0.5 mile downstream from Indian Creek, and 2 miles northeast of Princeton.

DRAINAGE AREA.--815 sq mi.

PERIOD OF RECORD.--August 1934 to current year. Published as "at Patoka" August 1934 to September 1940. Records published for both sites October 1939 to September 1940 (monthly discharge only at present site, for October, November 1939, published in WSP 1305).

GAGE.--Water-stage recorder and concrete control. Datum of gage is 394.14 ft above mean sea level (levels by Indiana Flood Control and Water Resources Commission). See WSP 1725 for history of changes prior to Jan. 21, 1941.

AVERAGE DISCHARGE.--35 years, 969 cfs (16.15 inches per year).

EXTREMES.--Current year: Maximum discharge, 7,690 cfs Feb. 4 (gage height, 18.14 ft); minimum, 17 cfs Oct. 31, Nov. 1-4 (gage height, 0.86 ft).

Period of record: Maximum discharge, 18,700 cfs Jan. 26, 1937 (gage height, 26.80 ft, site and datum then in use); no flow Aug. 29 to Sept. 12, 1936.

REMARKS.--Records good.

REVISIONS (WATER YEARS).--WSP 1275: 1952, drainage area. WSP 1335: 1935-36, 1938-39, 1940(M), 1949-50. WSP 1385: 1951-52.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	CCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	17	1,140	2,100	7,400	483	1,250	1,780	1,390	200	1,880	169
2	39	17	1,260	2,150	7,570	524	1,250	1,800	1,360	162	1,670	548
3	33	17	1,290	2,180	7,480	596	1,240	1,760	1,290	130	1,440	992
4	30	19	1,410	2,220	7,650	612	1,240	1,620	1,150	172	1,250	1,170
5	27	25	1,500	2,250	7,610	568	1,280	1,460	718	144	819	1,190
6	24	36	1,580	2,240	7,410	523	1,230	1,290	393	115	367	1,220
7	23	40	1,650	2,180	7,090	473	1,190	1,020	260	523	172	1,240
8	24	43	1,690	2,130	6,690	433	1,160	617	158	497	118	1,270
9	24	41	1,720	2,080	6,170	421	1,180	458	124	700	109	1,290
10	23	34	1,730	2,030	5,740	388	1,180	343	112	1,170	276	1,310
11	24	31	1,740	1,880	5,200	357	1,160	289	95	1,280	339	1,300
12	26	35	1,750	1,590	4,630	325	1,140	256	84	1,320	468	1,240
13	27	38	1,760	1,380	4,260	298	1,130	256	179	1,380	421	1,060
14	26	38	1,720	1,150	3,910	280	1,250	418	294	1,450	294	614
15	25	35	1,610	671	3,430	260	1,250	560	574	1,510	216	264
16	24	39	1,390	436	3,110	248	1,260	529	453	1,560	158	179
17	21	68	1,040	988	2,750	240	1,290	495	384	1,600	121	137
18	43	78	680	1,550	2,410	232	1,420	1,050	379	1,640	151	109
19	85	111	554	1,580	2,080	224	1,490	1,290	402	1,670	264	95
20	50	116	564	1,800	1,620	216	1,550	1,350	393	1,720	619	82
21	39	112	611	2,050	1,380	200	1,620	1,420	312	1,780	1,020	77
22	47	105	833	2,250	1,200	190	1,670	1,470	294	1,950	1,260	72
23	48	93	1,150	2,450	1,000	186	1,680	1,490	1,130	2,110	1,240	65
24	43	94	1,210	2,660	761	765	1,700	1,500	1,190	2,140	1,260	60
25	38	107	1,270	2,780	671	1,100	1,700	1,490	1,240	2,200	1,280	63
26	33	105	1,300	2,920	605	1,130	1,690	1,470	1,170	2,200	1,290	60
27	29	118	1,400	3,070	532	1,150	1,680	1,450	1,010	2,200	1,280	56
28	25	457	1,690	3,580	485	1,170	1,600	1,430	680	2,180	1,250	53
29	22	866	1,800	4,530	-----	1,230	1,690	1,410	785	2,140	1,110	51
30	20	941	1,900	6,300	-----	1,230	1,740	1,400	468	2,070	637	49
31	18	-----	2,000	7,000	-----	1,240	-----	1,400	-----	1,990	252	-----
TOTAL	1,008	3,876	42,942	74,175	110,844	17,292	41,910	34,571	18,471	41,903	22,971	16,085
MEAN	32.5	129	1,385	2,353	3,959	558	1,397	1,115	616	1,352	741	536
MAX	85	941	2,000	7,000	7,650	1,240	1,740	1,800	1,390	2,200	1,880	1,310
MIN	18	17	554	436	485	186	1,130	256	84	115	109	49
CFSM	.04	.16	1.70	2.54	4.86	.68	1.71	1.37	.76	1.66	.91	.66
IN.	.05	.18	1.96	3.38	5.06	.79	1.91	1.58	.84	1.91	1.05	.73
CAL YR 1968	TOTAL	323,869	MEAN	885	MAX	3,530	MIN	17	CFSM	1.09	IN	14.78
WTR YR 1969	TOTAL	426,048	MEAN	1,167	MAX	7,650	MIN	17	CFSM	1.43	IN	19.44

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., Wabash County, on right bank on downstream side of Southern Railway bridge at Mount Carmel, 0.1 mile downstream from Patoka River, and at mile 94.5.

DRAINAGE AREA.--28,600 sq mi, approximately.

PERIOD OF RECORD.--January 1908 to September 1913 (gage heights only), October 1927 to current year. Gage-height records collected in this vicinity November 1874 to December 1878, are contained in files of Louisville office of the Corps of Engineers and since June 1884 are contained in reports of U.S. Weather Bureau.

GAGE.--Water-stage recorder. Datum of gage is 371.46 ft above mean sea level. See WSP 1725 for history of changes prior to Sept. 30, 1949.

AVERAGE DISCHARGE.--42 years, 26,270 cfs (12.47 inches per year).

EXTREMES.--Current year: Maximum discharge, 197,000 cfs Feb. 5, 6 (gage height, 28.62 ft); minimum, 5,200 cfs Nov. 6, 10 (gage height, 1.07 ft).

Period of record: Maximum discharge, 305,000 cfs May 25, 1943, maximum gage height, 28.62 ft Feb. 5, 6, 1969; minimum discharge, 1,620 cfs Sept. 27, 28, 30, 1941.

1874-78, 1884-1969: Maximum discharge, 428,000 cfs (from rating curve extended above 310,000 cfs) Mar. 30, 1913, (gage height, 31.0 ft, present site and datum).

REMARKS.--Records good. Natural flow of stream affected by storage reservoirs and power development.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6,720	5,450	21,900	58,400	123,000	30,000	35,400	42,500	19,000	29,000	36,800	6,910
2	6,600	5,450	26,300	58,600	144,000	29,400	33,700	38,600	17,900	25,900	30,800	6,870
3	6,300	5,370	29,400	58,100	148,000	28,500	31,600	35,100	16,800	21,700	27,400	7,710
4	6,150	5,500	31,700	56,200	186,000	27,400	30,200	32,300	16,600	18,800	25,200	8,210
5	6,060	5,350	32,600	52,900	195,000	26,600	31,900	29,900	16,300	16,500	22,100	8,360
6	6,010	5,250	31,300	48,100	195,000	25,700	35,400	27,900	15,300	15,100	15,400	8,480
7	6,070	5,440	29,700	39,900	189,000	25,000	38,500	25,900	14,400	15,100	17,400	8,320
8	5,980	5,500	27,900	34,200	179,000	24,400	41,800	24,300	13,600	16,000	15,800	8,090
9	5,980	5,380	25,900	30,900	165,000	23,800	44,700	23,100	13,200	26,000	14,400	8,200
10	6,160	5,250	23,700	28,400	150,000	23,100	49,000	22,500	13,000	35,200	13,300	8,000
11	6,290	5,460	21,200	26,900	135,000	22,300	52,500	22,500	12,600	42,500	12,800	7,710
12	6,280	5,780	19,000	25,000	120,000	21,800	54,100	23,600	12,200	44,400	13,400	7,540
13	6,310	6,010	17,500	22,400	108,000	21,400	53,700	25,500	12,000	42,900	14,600	7,320
14	6,530	6,040	16,500	20,600	99,100	20,300	52,200	28,700	14,400	37,500	15,900	6,900
15	6,610	6,040	15,900	18,700	93,100	19,000	51,500	32,100	14,800	32,800	15,900	6,470
16	6,590	6,360	15,500	17,100	86,800	17,700	52,400	32,600	21,200	30,100	15,300	6,340
17	6,540	6,380	14,800	17,900	78,800	16,900	54,200	31,100	25,500	27,600	14,200	6,200
18	6,530	7,440	14,100	32,600	68,600	16,300	59,500	29,500	28,200	24,400	12,900	6,280
19	6,640	10,600	13,400	49,800	59,500	15,800	66,700	31,600	28,500	21,400	11,600	8,720
20	6,730	13,400	12,900	57,600	51,700	15,500	74,100	35,400	27,500	19,200	11,000	12,900
21	6,620	15,200	13,000	62,400	45,200	15,200	79,400	36,600	24,900	18,900	12,000	14,400
22	6,420	16,400	14,100	65,500	40,400	14,900	82,300	37,200	22,200	20,000	15,500	14,600
23	6,030	17,100	17,500	67,100	37,100	14,800	84,100	38,700	22,700	28,400	13,500	14,600
24	5,710	16,700	20,500	72,300	34,900	16,000	85,100	41,500	26,900	34,300	11,300	15,000
25	5,590	15,500	22,400	78,700	33,400	20,700	84,700	41,700	26,400	40,400	10,200	15,200
26	5,570	14,800	23,100	81,900	32,200	24,700	81,700	38,900	26,200	43,100	9,610	14,800
27	5,590	14,600	24,800	82,200	31,300	26,900	73,400	33,400	29,700	41,800	9,240	13,700
28	5,590	14,700	32,500	80,600	30,500	29,800	61,700	27,900	30,700	41,900	8,750	12,400
29	5,520	16,300	43,100	82,600	-----	33,000	52,700	24,300	30,600	44,400	8,360	11,400
30	5,460	18,400	49,800	93,400	-----	35,400	46,800	22,100	29,900	43,900	7,760	10,600
31	5,450	-----	55,000	108,000	-----	36,000	-----	20,300	-----	41,500	7,250	-----
TOTAL	190,630	287,150	757,000	1,629,000	2,879,600	718,300	1,675,000	957,300	623,200	940,700	473,750	292,230
MFAN	6,149	9,572	24,420	52,550	102,800	23,170	55,830	30,880	20,770	30,350	15,280	9,741
MAX	6,730	18,400	55,000	108,000	195,000	36,000	85,100	42,500	30,700	44,400	26,800	15,200
MIN	5,450	5,250	12,900	17,100	30,500	14,800	30,200	20,300	12,000	15,100	7,250	6,200
CFSM	.22	.33	.85	1.84	3.60	.81	1.95	1.08	.73	1.06	.53	.34
IN.	.25	.37	.98	2.12	3.74	.93	2.18	1.24	.81	1.22	.62	.38
CAL YR 1968	TOTAL 11,455,050	MEAN 31,300	MAX 154,800	MIN 5,250	CFSM 1.09	IN 14.90						
WTR YR 1969	TOTAL 11,423,860	MEAN 31,300	MAX 195,000	MIN 5,250	CFSM 1.09	IN 14.86						

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., Posey County, 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.

PERIOD OF RECORD.--July 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is 370.00 ft above mean sea level.

EXTREMES.--Current year: Maximum discharge, 3,790 cfs Jan. 30 (gage height, 18.69 ft); no flow many days.
Period of record: Maximum discharge, 3,790 cfs Jan. 30, 1969 (gage height, 18.69 ft); no flow at times each year.

REMARKS.--Records poor.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	CCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	161	65	251	37	88	17	12	58	7.2	.22
2	0	0	128	45	147	59	85	15	11	32	6.2	543
3	0	0	45	32	110	58	67	14	9.3	25	4.8	70
4	0	.02	245	23	78	40	63	12	7.5	494	3.4	199
5	0	.20	53	19	73	30	64	12	6.8	57	2.7	25
6	0	.17	21	20	93	31	50	11	6.4	434	2.1	7.3
7	0	.89	13	16	92	27	43	10	5.8	1,070	1.7	49
8	0	.63	8.0	16	109	26	40	27	4.8	246	1.2	11
9	0	.79	5.9	16	110	26	88	25	4.2	730	1.2	3.8
10	0	.41	4.7	9.0	70	19	121	11	4.6	119	2.7	2.1
11	0	.21	4.3	7.0	63	17	68	8.8	4.6	503	4.6	1.2
12	0	.13	4.6	4.5	49	16	51	7.5	4.8	227	2.2	.94
13	0	.09	6.2	4.0	35	15	51	7.0	213	73	1.5	.69
14	0	.03	4.8	4.0	30	14	1,380	256	30	42	1.1	.48
15	0	.05	3.5	4.0	30	13	285	76	127	24	.61	.35
16	0	.83	2.4	10	30	13	140	24	28	17	.65	.30
17	0	.56	2.3	1,340	28	14	169	22	11	11	.61	.30
18	0	.23	3.6	2,370	28	13	828	1,630	11	8.5	1.1	.22
19	0	.55	11	337	35	13	234	2,760	9.5	6.6	62	.09
20	0	.24	11	140	35	12	112	358	5.8	155	62	.04
21	.17	.15	6.4	139	34	9.4	85	139	3.8	1,740	7.0	.04
22	.24	.13	185	145	36	8.6	66	89	338	641	45	0
23	.09	.10	183	262	43	14	47	63	2,540	228	5.2	.09
24	.06	1.4	34	236	37	851	36	50	330	64	1.8	.58
25	.02	1.2	18	73	32	310	31	41	110	205	.61	.58
26	0	1.1	13	45	29	145	28	31	48	54	.35	.15
27	0	6.6	563	38	26	102	24	25	28	75	.22	.09
28	0	182	2,680	1,470	27	84	24	21	19	62	.09	.04
29	0	83	483	2,280	-----	297	19	18	306	22	C	.09
30	0	10	125	3,620	-----	120	18	16	44	15	C	.05
31	0	-----	121	1,860	-----	81	-----	14	-----	12	C	-----
TOTAL	0.58	291.81	5,553.7	14,649.5	1,760	2,515.0	4,405	6,110.3	4,283.9	7,970.1	280.22	1,316.62
MEAN	.019	9.73	179	473	62.9	81.1	147	197	143	257	5.04	43.9
MAX	.24	182	2,680	3,620	251	851	1,380	2,760	2,540	1,740	62	943
MIN	0	0	2.3	4.0	26	8.6	18	7.0	3.8	6.6	0	0
CFSM	.0001	.09	1.72	4.54	.60	.78	1.41	1.90	1.37	2.47	.09	.42
IN.	.0002	.10	1.99	5.24	.63	.90	1.58	2.19	1.53	2.85	.10	.47

CAL YR 1968 TOTAL 26,935.17 MEAN 73.6 MAX 2,680 MIN C CFSM .71 IN 5.63
WTR YR 1969 TOTAL 49,136.93 MEAN 135 MAX 3,620 MIN 0 CFSM 1.29 IN 17.57

PEAK DISCHARGE (BASE, 2,400 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-28	0645	17.88	2,990	06-23	1015	17.62	3,180
01-18	0615	17.71	2,840	07-07	0015	16.63	2,440
01-30	0930	18.69	3,790	07-21	2015	16.81	2,570
05-19	0015	18.12	3,580				

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., Lake County, on left bank at city limits of Munster, 0.2 mile downstream from U.S. Highway 6, and 0.4 mile upstream from mouth.

DRAINAGE AREA.--69.2 sq mi.

PERIOD OF RECORD.--September 1942 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 591.27 ft above mean sea level (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.--27 years, 56.8 cfs (11.15 inches per year).

EXTREMES.--Current year: Maximum discharge, about 720 cfs Jan. 30; maximum gage height, 3.33 ft Jan. 30; minimum discharge, 2.6 cfs Aug. 31 (gage height, 0.50 ft).

Period of record: 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.--Records good.

REVISIONS.--WSP 1337: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.2	6.2	72	52	195	25	74	32	250	54	490	5.5
2	7.0	6.2	68	43	105	25	165	24	200	32	250	6.2
3	4.8	6.2	74	37	73	25	152	20	86	23	131	7.0
4	5.5	6.2	66	31	60	25	146	17	56	29	77	7.8
5	5.5	7.0	50	26	50	25	285	18	56	24	54	8.7
6	6.2	8.7	36	23	48	27	192	16	44	19	42	10
7	6.2	12	30	20	42	27	122	20	66	174	32	7.0
8	6.2	7.0	24	17	42	27	90	195	230	114	25	7.0
9	7.0	6.2	22	15	37	24	150	245	290	84	27	7.0
10	7.0	4.8	19	14	33	24	252	379	140	119	22	7.0
11	5.5	4.8	18	13	30	22	160	442	81	64	19	6.2
12	5.5	4.2	22	12	27	18	103	240	50	42	16	6.2
13	6.2	5.5	29	12	24	18	79	159	37	28	12	6.2
14	6.2	5.5	23	11	22	18	74	103	30	22	10	6.2
15	7.8	50	21	10	19	17	117	72	27	17	10	7.0
16	10	33	17	20	18	18	128	56	23	15	9.6	8.7
17	14	24	16	80	18	18	220	50	19	31	8.7	8.7
18	4.2	25	18	278	18	18	255	68	50	85	7.8	8.7
19	3.1	22	44	260	19	24	230	62	33	234	6.2	8.7
20	4.2	17	43	134	18	32	152	49	23	114	6.2	8.7
21	5.5	16	34	192	18	32	103	43	18	60	5.5	7.8
22	7.0	12	54	318	22	30	79	43	37	40	5.5	7.0
23	6.2	12	90	340	23	30	60	40	44	30	5.5	9.6
24	7.8	12	50	310	23	176	50	34	34	40	5.5	12
25	6.2	10	44	137	25	515	44	30	28	32	5.5	7.8
26	4.8	9.6	30	180	25	410	42	28	22	57	6.2	6.2
27	4.2	8.7	70	110	25	240	40	24	18	328	5.5	12
28	5.5	100	335	180	25	225	43	22	17	245	6.2	5.5
29	5.5	202	340	593	-----	188	40	21	25	114	6.2	3.6
30	6.2	108	172	690	-----	114	34	37	45	94	5.5	4.2
31	6.2	-----	72	440	-----	81	-----	52	-----	403	4.8	-----
TOTAL	193.4	751.8	2,003	4,598	1,084	2,498	3,681	2,641	2,079	2,767	1,317.4	224.2
MEAN	6.24	25.1	64.6	148	38.7	80.6	123	85.2	69.3	89.3	42.5	7.47
MAX	14	202	340	690	195	515	285	442	290	403	490	12
MIN	3.1	4.2	16	10	18	17	34	16	17	15	4.8	3.6
CFSM	.09	.36	.93	2.14	.56	1.16	1.77	1.23	1.00	1.29	.61	.11
IN.	.10	.40	1.08	2.47	.58	1.34	1.98	1.42	1.12	1.49	.71	.12

CAL YR 1968 TOTAL 20,661.9 MEAN 56.5 MAX 1,200 MIN 3.1 CFSM .82 IN 11.10
 WTR YR 1969 TOTAL 23,837.8 MEAN 65.3 MAX 690 MIN 3.1 CFSM .94 IN 12.81

PEAK DISCHARGE (BASE, 800 CFS).--No peak above base.

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., Lake County, on left bank 200 ft upstream from Hohman Street Bridge at north city limits of Munster, 0.4 mile upstream from Indiana-Illinois State line, and 4.6 miles upstream from mouth of Thorn Creek.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--June 1958 to current year.

GAGE.--Water-stage recorder. Datum of gage is 580.72 ft above sea level.

AVERAGE DISCHARGE.--11 years, 62.7 cfs.

EXTREMES.--Current year: Maximum discharge, 471 cfs Jan. 30 (gage height, 9.94 ft); minimum, 4.8 cfs Oct. 20 (gage height, 3.01 ft).

Period of record: 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), result of unusual regulation.

REMARKS.--Records good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.9	5.8	105	70	261	24	106	32	186	53	409	7.7
2	7.3	5.8	93	52	178	24	172	29	222	35	257	8.3
3	7.1	5.8	94	42	143	24	178	26	107	25	155	8.5
4	6.3	5.4	88	34	130	24	165	22	63	29	97	9.9
5	6.1	5.6	75	29	92	24	254	26	58	24	66	12
6	5.8	6.9	55	25	65	24	226	24	50	20	47	27
7	6.3	17	47	22	53	24	159	24	63	168	33	13
8	6.0	9.2	38	19	48	24	122	176	192	141	24	8.3
9	6.9	6.9	30	17	42	22	172	242	282	104	24	7.7
10	9.2	6.0	37	16	37	20	237	309	173	112	21	7.3
11	6.3	6.0	32	14	33	20	195	367	102	76	17	7.3
12	6.0	6.0	26	13	30	18	136	291	66	49	14	6.9
13	6.0	5.6	34	12	27	17	100	211	47	35	12	6.5
14	6.3	6.9	26	12	24	17	91	157	37	27	11	7.5
15	6.3	98	26	11	23	16	126	119	32	22	11	9.4
16	6.3	51	20	50	21	18	142	90	28	18	9.9	10
17	9.1	30	34	100	20	17	213	76	23	114	8.8	9.9
18	10	31	89	194	18	20	282	126	53	159	8.5	9.2
19	5.4	24	112	183	18	25	245	96	39	212	8.1	9.4
20	5.1	19	68	152	18	29	191	73	27	130	7.7	9.4
21	5.4	16	42	163	20	32	136	60	21	69	6.7	9.4
22	6.0	14	64	228	22	31	101	58	55	45	6.1	10
23	6.3	12	111	270	24	31	79	52	58	33	5.6	17
24	6.0	12	70	275	24	139	66	44	41	42	5.6	16
25	7.1	12	53	170	26	376	53	38	33	34	6.3	12
26	5.8	13	40	200	26	360	45	32	27	56	6.5	13
27	5.8	21	90	150	25	276	41	27	24	259	7.1	30
28	5.8	127	253	220	25	251	47	24	19	256	7.9	16
29	6.1	219	292	332	-----	218	44	21	24	146	9.4	11
30	5.8	151	206	454	-----	159	37	105	50	136	8.3	9.9
31	5.8	-----	148	385	-----	121	-----	60	-----	318	7.3	-----
TOTAL	200.6	948.9	2,498	3,914	1,473	2,425	4,161	3,037	2,202	2,947	1,317.8	339.5
MEAN	6.47	31.6	80.6	126	52.6	78.2	139	98.0	73.4	95.1	42.5	11.3
MAX	10	219	292	454	261	376	282	367	282	318	409	30
MIN	5.1	5.4	20	11	18	16	37	21	19	18	5.6	6.5
CAL YR 1968	TOTAL 22,554.4		MEAN 61.7		MAX 943		MIN 5.1	CFSM		IN		
WTR YR 1969	TOTAL 25,453.8		MEAN 69.8		MAX 454		MIN 5.1	CFSM		IN		

4-0905. Thorn Creek at Thornton, Ill.

LOCATION.--Lat 41°34'05", long 87°36'30", near center of N½ sec. 34, T. 36 N., R. 14 E., Cook County, on right bank at downstream side of bridge on Margaret Street in Thornton, 1 mile downstream from North Creek, and at mile 4.25.

DRAINAGE AREA.--104 sq mi.

PERIOD OF RECORD.--May 1948 to current year.

GAGE.--Water-stage recorder. Datum of gage is 586.43 ft above mean sea level. Prior to Dec. 18, 1948, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--21 years, 92.0 cfs (12.01 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,090 cfs July 31 (gage height, 9.77 ft); minimum daily, 20 cfs Nov. 24.
Period of record: 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, 1957, reached a stage of 14.34 ft, from floodmark (discharge, 4,200 cfs).

REMARKS.--Records good. Some diurnal fluctuation caused by pumping operations above station. Figures of discharge include about 16 cfs pumped from ground-water sources for municipal supply and an undetermined amount of ground-water pumpage for industrial use.

REVISIONS.--WSP 1707: Drainage area.

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	26	35	117	100	225	48	120	59	450	116	487	24
2	26	35	115	67	148	48	237	57	260	69	168	30
3	24	34	115	57	114	50	230	53	170	53	107	32
4	31	33	103	47	84	50	256	50	130	66	82	34
5	25	34	87	40	79	47	458	52	110	46	66	53
6	21	45	66	44	73	46	276	52	89	37	56	90
7	21	73	57	38	68	46	181	53	142	164	53	46
8	23	39	51	34	65	46	160	215	409	137	50	30
9	23	27	46	31	53	44	303	160	546	119	70	32
10	31	24	47	31	52	46	275	313	269	93	48	30
11	24	21	46	30	50	47	181	441	140	73	44	32
12	25	23	48	28	46	44	133	249	110	59	41	32
13	25	21	56	34	45	41	107	154	89	48	38	29
14	26	22	48	32	44	41	110	118	75	42	37	23
15	28	171	42	56	43	36	206	98	68	41	36	24
16	27	53	43	95	41	36	172	87	57	40	37	29
17	28	38	45	142	39	37	508	86	56	97	33	28
18	32	44	44	386	40	46	531	169	86	297	32	26
19	29	37	110	271	41	53	327	125	66	275	34	26
20	28	29	78	174	41	66	205	98	54	172	36	23
21	32	25	65	237	42	69	152	82	46	105	36	21
22	33	25	121	374	44	62	129	91	54	75	33	25
23	31	21	159	433	52	62	106	77	79	59	28	32
24	28	20	92	455	48	235	91	69	56	52	25	30
25	28	23	66	360	48	717	82	60	52	47	28	29
26	27	25	55	280	48	553	73	56	53	120	30	28
27	28	25	165	165	52	318	65	54	53	547	32	50
28	30	258	490	300	50	316	90	54	42	314	32	33
29	31	316	464	558		263	70	53	37	153	32	28
30	34	173	216	938	-----	171	63	54	153	267	26	26
31	36	-----	123	467	-----	131	-----	84	-----	1010	24	-----
TOTAL	861	1,749	3,380	5,304	1,775	3,815	5,897	3,423	4,001	4,793	1,881	975
MEAN	27.8	58.3	109	203	63.4	123	197	110	133	155	60.7	32.5
MAX	36	316	490	938	225	717	531	441	546	1,010	487	90
MIN	21	20	42	28	39	36	63	50	37	37	24	21
CFSM	.27	.56	1.05	1.96	.61	1.18	1.89	1.06	1.28	1.49	.58	.31
IN.	.31	.63	1.21	2.25	.63	1.36	2.11	1.22	1.43	1.71	.67	.35

CAL YR 1968 TOTAL 36,059 MEAN 98.5 MAX 2,460 MIN 20 CFSM .95 IN 12.89
WTR YR 1969 TOTAL 38,854 MEAN 106 MAX 1,010 MIN 20 CFSM 1.02 IN 13.89

PEAK DISCHARGE (BASE, 900 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-30	1145	9.43	1,020	07-31	1430	9.77	1,090

STREAMS TRIBUTARY TO LAKE MICHIGAN

4-0910, Little Calumet River at South Holland, Ill.

LOCATION.--Lat 41°36'05", long 87°34'38", in SW¼SW¼ sec. 13, T. 36 N., R. 14 E., Cook County, 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.

PERIOD OF RECORD.--October 1947 to current year.

GAGE.--Water-stage recorder. Datum of gage is 575.00 ft above mean sea level (Illinois Division of Waterways bench mark). Prior to Oct. 27, 1947, nonrecording gage at same site and datum. Auxiliary water-stage recorder at Dixmoor, 6.1 miles downstream; prior to Nov. 17, 1947, nonrecording gage at same site read twice daily.

AVERAGE DISCHARGE.--22 years, 161 cfs.

EXTREMES.--Current year: Maximum discharge, 1,340 cfs Jan. 30 (gage height, 13.15 ft); minimum daily, 32 cfs Oct. 7.
Period of record: Maximum discharge, 4,440 cfs July 14, 1957 (gage height, 20.11 ft); minimum daily, 7.9 cfs Oct. 6, 1950.
Flood of Apr. 6, 1947, reached a stage of 19.24 ft, from floodmarks (discharge, 4,760 cfs).

REMARKS.--Records good except those for winter periods, which are poor. Flow from about 330 sq mi of upper Little Calumet River basin above a point in Gary, Ind., is diverted to Lake Michigan by Burns ditch. Calumet Sag Channel, 8 miles below station, diverts the entire low flow to the Mississippi River basin.

REVISIONS (WATER YEARS).--WSP 1507: 1950, 1953.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46	53	235	334	575	72	291	115	560	176	1,020	35
2	45	52	205	233	407	71	418	110	670	108	528	42
3	45	50	253	176	313	67	441	103	297	85	303	45
4	42	49	340	129	221	70	423	95	191	97	198	56
5	40	50	263	100	189	66	647	96	170	79	147	86
6	33	52	165	81	156	66	540	101	154	73	115	117
7	32	102	121	72	135	65	388	95	192	291	99	92
8	37	86	89	62	122	67	388	342	578	286	87	44
9	39	40	69	55	108	68	442	396	861	228	101	41
10	57	36	67	54	100	62	525	584	513	189	86	39
11	41	35	90	53	90	65	425	803	266	157	69	40
12	40	38	96	54	83	64	326	595	178	116	68	40
13	40	35	109	57	77	61	271	414	131	92	59	39
14	39	39	101	60	72	59	257	311	111	77	55	36
15	42	437	81	64	68	59	351	220	99	71	51	34
16	40	298	77	92	64	53	352	170	89	64	52	41
17	40	117	74	216	62	52	629	155	85	194	47	41
18	49	78	62	652	62	66	874	280	129	367	45	39
19	44	60	222	546	62	79	659	215	109	499	48	40
20	41	50	260	388	64	101	501	176	87	342	49	37
21	42	44	192	452	66	126	385	148	75	190	49	36
22	49	40	250	645	71	97	298	149	126	128	44	37
23	47	36	466	755	81	93	251	136	145	100	40	59
24	46	34	209	813	73	398	222	125	106	92	37	51
25	43	36	165	616	75	1,040	171	112	91	93	37	45
26	45	39	123	517	75	957	140	105	87	150	40	38
27	44	40	256	313	77	643	131	101	86	749	42	81
28	41	426	801	404	75	578	148	97	73	627	44	66
29	44	757	880	919		521	137	92	82	338	46	39
30	47	373	587	1,230	-----	403	124	145	186	381	42	37
31	49	-----	370	955	-----	318	-----	159	-----	1,080	38	-----
TOTAL	1,329	3,582	7,278	11,157	3,623	6,507	11,145	6,745	6,527	7,519	3,686	1,473
MEAN	42.9	119	235	360	129	210	372	218	218	243	119	49.1
MAX	57	757	880	1,290	575	1,040	874	803	861	1,080	1,020	117
MIN	32	34	62	53	62	52	124	92	73	64	37	34
CAL YR 1968	TOTAL	61,465	MEAN	168	MAX	2,900	MIN	28				
WTR YR 1969	TOTAL	70,571	MEAN	193	MAX	1,290	MIN	32				

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., Lake County, 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.

PERIOD OF RECORD.--April 1947 to current year.

GAGE.--Water-stage recorder. Datum of gage is 588.17 ft above mean sea level (levels by Indiana Flood Control and Water Resources Commission). Prior to July 29, 1952, nonrecording gage, and July 30, 1952, to July 20, 1955, water-stage recorder at site 400 ft upstream at datum 11.80 ft higher.

AVERAGE DISCHARGE.--22 years, 96.0 cfs (10.43 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,050 cfs Jan. 30 (gage height, 9.83 ft); minimum, 8.0 cfs Sept. 1 (gage height, 3.67 ft).

Period of record: Maximum discharge, 3,880 cfs Oct. 11, 1954 (gage height, 19.48 ft, present datum, site then in use); minimum, 2.0 cfs (regulated) Oct. 8, 1956; minimum gage height, 3.35 ft Sept. 21, 1956.

REMARKS.--Records good. Flow can be regulated by Lake George Dam.

REVISIONS (WATER YEARS).--WSP 1337: 1953, drainage area. WSP 1507: 1956.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	20	220	197	584	52	207	91	69	79	87	8.7
2	20	16	174	143	405	55	232	82	78	82	77	9.4
3	19	16	173	102	188	62	237	71	61	60	67	11
4	18	17	176	77	142	61	256	65	50	59	57	12
5	17	16	153	67	164	63	352	61	57	55	49	15
6	18	18	116	59	144	64	409	60	58	89	43	14
7	19	24	93	50	121	70	324	56	64	100	38	13
8	19	28	75	45	108	63	238	121	120	185	32	12
9	22	26	62	40	98	65	218	277	210	184	32	16
10	21	22	59	37	90	64	283	549	110	142	31	17
11	20	21	53	33	82	60	307	816	69	114	29	14
12	21	18	57	31	72	56	251	741	51	91	25	15
13	21	18	67	29	62	57	194	546	45	70	23	12
14	20	18	52	28	59	54	165	388	39	56	20	13
15	19	75	49	29	54	51	164	287	36	46	19	11
16	17	121	45	32	52	51	172	210	34	40	18	11
17	18	109	39	49	50	53	232	128	33	34	18	11
18	17	99	43	206	47	53	488	141	48	40	18	12
19	16	92	75	331	47	55	575	132	61	74	16	12
20	16	76	113	330	46	73	519	114	48	90	15	12
21	16	63	104	299	47	63	386	96	39	88	14	12
22	18	51	110	336	49	67	274	88	40	76	14	12
23	15	50	165	432	51	68	131	80	59	64	13	14
24	20	45	151	473	51	120	133	71	60	54	12	14
25	32	41	120	358	52	437	135	62	52	47	12	14
26	35	40	102	223	54	638	121	56	45	47	12	14
27	32	36	117	170	53	540	110	51	37	78	12	15
28	21	77	329	186	51	507	107	45	28	122	11	12
29	18	249	518	466	-----	467	109	39	27	110	11	12
30	17	283	455	906	-----	366	102	39	42	89	10	9.8
31	17	-----	328	830	-----	261	-----	43	-----	83	9.8	-----
TOTAL	621	1,785	4,393	6,594	3,023	4,716	7,431	5,606	1,770	2,568	444.8	379.9
MEAN	20.0	59.5	142	213	108	152	248	181	59.0	83.5	27.3	12.7
MAX	35	283	518	906	584	638	575	816	210	185	87	17
MIN	15	16	39	28	46	51	102	39	27	34	9.8	8.7
CFSM	.16	.48	1.13	1.70	.86	1.22	1.98	1.45	.47	.67	.22	.10
IN.	.18	.53	1.31	1.96	.90	1.40	2.21	1.67	.53	.77	.25	.11

CAL YR 1968 TOTAL 38,573 MEAN 105 MAX 1,850 MIN 10 CFSM .84 IN 11.48
WTR YR 1969 TOTAL 39,751.7 MEAN 109 MAX 906 MIN 8.7 CFSM .87 IN 11.83

PEAK DISCHARGE (BASE, 700 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
01-30	1430	9.83	1,050	05-11	1345	8.92	834

STREAMS TRIBUTARY TO LAKE MICHIGAN

4-0932. Little Calumet River at Gary, Ind.

LOCATION.--Lat 41°34'19", long 87°19'13", in SE¼ sec. 15, T. 36 N., R. 8 W., Lake County, on right bank at upstream side of bridge on Pennsylvania Railroad at Gary, 1.3 miles downstream from bridge on State Highway 53, and 1.5 miles upstream from confluence with Deep River.

DRAINAGE AREA. --Indeterminate.

PERIOD OF RECORD.--June 1958 to September 1967, October 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is 580.00 ft above mean sea level.

AVERAGE DISCHARGE.--10 years, 16.4 cfs.

EXTREMES.--Current year: Maximum discharge, 98 cfs Feb. 3 (gage height, 8.78 ft); no flow Sept. 15, 18-23, 26.
Period of record: Maximum discharge, 196 cfs May 1, 1959 (gage height, 9.63 ft); no flow at times during most years.
Flood in October 1954 reached a stage of 13.09 ft, from floodmark.

REMARKS.--Records poor prior to Apr. 15, and good thereafter. During times of flood on Deep River, reverse flow may occur at the gage.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.4	.80	40	15	78	9.2	31	13	22	13	22	.24
2	8.0	.80	39	9.0	78	8.1	34	12	22	9.8	24	.24
3	7.7	.80	39	5.4	94	7.0	37	11	22	8.8	27	.17
4	7.4	.80	37	4.0	82	11	38	9.4	19	9.1	25	.17
5	7.0	.80	35	2.5	46	5.2	40	9.8	18	8.8	21	.65
6	6.4	.80	30	2.0	34	4.6	37	9.1	16	7.7	18	.52
7	6.6	3.0	21	1.7	22	9.2	36	9.1	19	21	15	.32
8	4.5	11	27	1.4	10	8.5	30	26	30	27	13	.24
9	2.0	4.0	21	1.2	6.0	8.5	32	32	34	29	13	.24
10	2.2	1.5	18	1.1	4.0	7.0	36	41	29	28	11	.24
11	2.5	.80	12	1.0	2.8	1.5	30	51	25	24	9.8	.24
12	1.6	.80	12	.90	2.0	1.0	28	55	22	19	8.0	.17
13	1.0	.80	19	.90	1.6	.75	26	56	20	16	7.7	.12
14	.90	.90	13	.80	1.2	.75	24	50	18	14	6.8	.07
15	2.0	35	13	.70	1.0	1.1	26	42	16	12	6.5	0
16	4.0	24	8.5	7.3	.84	2.4	26	32	15	10	5.6	.04
17	2.9	23	9.2	6.2	.76	4.9	31	26	13	10	5.3	.04
18	1.5	26	11	22	.70	4.9	38	26	15	13	4.7	0
19	.90	24	22	35	.70	4.6	41	26	16	13	4.1	0
20	.80	15	20	38	.70	6.6	39	25	18	14	2.8	0
21	.80	20	18	40	.80	7.7	36	24	13	13	2.8	0
22	.80	18	18	41	.89	5.7	32	23	15	11	2.2	0
23	1.0	18	22	33	5.7	4.9	28	22	17	9.8	2.0	0
24	.80	17	24	50	12	29	25	21	21	9.8	1.8	.04
25	.80	16	20	42	5.7	58	22	20	18	9.4	1.6	.01
26	.80	17	20	46	5.4	61	19	19	16	12	1.4	0
27	.80	16	22	41	7.0	61	17	18	14	33	1.6	.17
28	.80	30	39	40	3.6	57	19	16	9.0	27	.93	.17
29	.80	42	42	30	-----	56	17	12	12	24	.65	.07
30	.80	41	30	58	-----	51	15	9.1	17	23	.42	.01
31	.90	-----	20	68	-----	32	-----	11	-----	24	.42	-----
TOTAL	86.30	409.60	721.7	645.10	507.38	530.10	890	756.5	561.0	503.2	266.12	4.18
MEAN	2.78	13.7	23.3	20.8	18.1	17.1	29.7	24.4	18.7	16.2	8.58	.14
MAX	8.0	42	42	68	94	61	41	56	34	33	27	.65
MIN	.80	.80	8.5	.70	.70	.75	15	9.1	9.0	7.7	.42	0
CAL YR 1968	TOTAL		MEAN		MAX		MIN	CFSM		IN		
WTR YR 1969	TOTAL	5,381.18	MEAN	16.1	MAX	94	MIN	0	CFSM	IN		

4-0935, Burns ditch at Gary, Ind.

LOCATION.--Lat 41°34'30", long 87°17'20", in N½ sec. 13, T. 36 N., R. 8 W., Lake County, 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.

PERIOD OF RECORD.--October 1943 to current year (October 1950 to September 1955, high-water records only).

GAGE.--Water-stage recorder. Datum of gage is 577.04 ft above mean sea level. Prior to July 28, 1955, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--21 years (1943-50, 1955-69), 135 cfs (11.46 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,010 cfs Jan. 31 (gage height, 9.28 ft); minimum daily, 9.0 cfs Sept. 1.

Period of record: Maximum discharge, 3,430 cfs Oct. 11, 1954; maximum gage height, 16.44 ft Mar. 16, 1944, from graph based on gage readings; minimum discharge determined, 1.8 cfs, Oct. 14, 1946.

REMARKS.--Records good except those for period of backwater from Lake Michigan, 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.

REVISIONS (WATER YEARS).--WSP 1034: 1944. WSP 1337: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	30	323	576	779	78	284	124	120	105	90	9.0
2	36	30	264	369	570	77	314	110	118	110	80	10
3	37	29	245	240	363	77	322	104	110	105	70	11
4	32	27	248	177	250	76	338	98	90	120	60	12
5	26	27	232	125	221	74	420	95	100	135	50	15
6	27	36	170	105	196	74	490	92	105	160	47	14
7	28	59	142	101	162	74	436	85	110	175	39	13
8	28	42	129	82	150	74	336	182	190	195	34	12
9	30	39	101	78	136	72	302	304	240	210	32	16
10	34	34	91	68	123	71	349	573	230	150	31	16
11	29	38	84	64	115	65	387	825	180	120	28	14
12	29	60	87	59	105	62	346	877	140	100	26	14
13	29	29	99	55	95	61	272	728	120	90	24	12
14	30	26	93	53	91	60	229	561	110	80	22	12
15	28	132	84	52	85	56	224	426	95	65	15	11
16	26	176	76	65	81	55	224	314	80	60	18	11
17	26	171	66	108	76	58	308	217	60	70	18	11
18	26	158	67	311	71	60	595	232	75	85	18	12
19	24	142	108	472	70	61	661	200	100	96	16	12
20	23	112	162	523	70	71	637	180	87	105	15	12
21	23	92	150	503	72	76	516	165	95	100	14	12
22	26	78	155	479	76	71	396	155	105	54	14	12
23	27	71	225	481	76	72	269	130	115	84	13	13
24	68	66	277	460	77	159	174	110	105	75	12	14
25	73	61	229	420	78	463	174	125	95	65	12	14
26	51	58	162	380	80	712	160	105	90	85	12	14
27	47	56	159	327	80	677	149	86	65	120	12	14
28	63	135	385	321	79	623	162	75	75	190	11	12
29	38	334	550	534	-----	599	154	70	90	145	11	11
30	30	376	533	828	-----	498	137	75	100	110	10	10
31	29	-----	436	964	-----	374	-----	90	-----	85	10	-----
TOTAL	1,061	2,724	6,132	9,380	4,427	5,680	9,765	7,513	3,395	3,489	868	375.0
MEAN	34.2	90.8	198	303	158	183	326	242	113	113	28.0	12.5
MAX	73	376	550	964	779	712	661	877	240	210	50	16
MIN	23	26	66	52	70	55	137	70	60	60	10	9.0
CFSM	.21	.57	1.24	1.89	.99	1.15	2.03	1.51	.71	.70	.18	.08
IN.	.25	.63	1.43	2.18	1.03	1.32	2.27	1.75	.79	.81	.20	.09

CAL YR 1968 TOTAL 56,036 MEAN 153 MAX 1,920 MIN 23 CFSM .96 IN 13.02
WTR YR 1969 TOTAL 54,809.0 MEAN 150 MAX 964 MIN 9.0 CFSM .94 IN 12.74

NOTE.--Stage-discharge relation affected by backwater from Lake Michigan May 16 to Sept. 30.

STREAMS TRIBUTARY TO LAKE MICHIGAN

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., Porter County, on right bank at downstream end of county road bridge, 200 ft upstream from bridge on U.S. Highway 20, 0.8 mile northwest of Porter, and 4.5 miles upstream from Salt Creek.

DRAINAGE AREA.--62.9 sq mi.

PERIOD OF RECORD.--May 1945 to current year.

GAGE.--Water-stage recorder. Datum of gage is 603.48 ft above mean sea level. Prior to June 26, 1952, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--24 years, 69.4 cfs (14.98 inches per year).

EXTREMES.--Current year: Maximum discharge, 616 cfs Dec. 29 (gage height, 7.24 ft); minimum, 25 cfs Aug. 26-31, Sept. 1, 16, 23; minimum gage height 2.70 ft Aug. 30
Period of record: Maximum discharge, 3,110 cfs Oct. 10, 1954 (gage height, 11.66 ft); minimum, 15 cfs Dec. 6, 1958, result of freezeup; minimum gage height, 2.14 ft Aug. 22, 1949.

REMARKS.--Records good.

REVISIONS (WATER YEARS).--WSP 1084: 1945. WSP 1337: 1946-47, drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	40	102	90	247	51	83	61	90	46	46	26
2	29	39	86	70	159	50	123	56	205	39	42	27
3	30	38	97	57	113	55	170	53	145	49	38	28
4	28	38	93	48	87	53	133	50	78	45	35	28
5	29	38	77	46	76	51	193	49	69	39	33	28
6	29	38	65	47	70	51	213	50	62	39	33	28
7	30	44	57	47	66	49	137	47	69	48	22	28
8	29	48	53	46	66	46	101	103	118	52	31	27
9	30	44	51	44	64	46	106	154	274	46	32	33
10	33	41	50	43	61	45	213	190	232	41	34	33
11	32	39	48	43	59	44	188	307	115	46	31	29
12	31	43	54	42	57	41	117	260	75	117	30	28
13	31	54	64	43	53	41	89	149	60	81	30	27
14	32	52	57	44	51	41	81	101	53	51	29	28
15	32	100	53	47	48	40	87	82	51	42	29	27
16	33	176	53	50	47	40	88	72	47	38	29	26
17	34	130	49	68	47	42	103	66	45	36	29	28
18	38	104	51	131	47	45	214	64	52	57	29	27
19	38	106	88	165	47	48	250	65	50	51	28	27
20	37	83	171	122	47	51	203	62	44	56	27	28
21	36	69	136	130	48	54	123	59	41	45	27	27
22	36	64	102	175	50	50	92	58	41	40	27	27
23	37	60	139	233	51	49	79	58	49	36	27	27
24	38	56	134	253	52	86	71	55	46	51	26	32
25	64	53	94	196	54	244	66	52	45	69	26	29
26	88	51	81	136	53	352	62	51	41	60	26	28
27	60	49	86	89	52	218	58	49	38	144	26	29
28	49	72	294	89	52	176	72	47	35	166	26	30
29	47	162	539	208	-----	175	78	44	35	87	26	28
30	42	161	312	454	-----	130	67	43	44	60	26	28
31	40	-----	161	454	-----	92	-----	44	-----	52	26	-----
TOTAL	1,170	2,092	3,497	3,710	1,924	2,556	3,660	2,601	2,349	1,828	936	846
MEAN	37.7	69.7	113	120	68.7	82.5	122	83.9	78.3	59.0	30.2	28.2
MAX	88	176	539	454	247	352	250	307	274	166	46	33
MIN	28	38	48	42	47	40	58	43	35	36	26	26
CFSM	.60	1.11	1.79	1.90	1.09	1.31	1.94	1.33	1.24	.94	.48	.45
IN.	.69	1.24	2.07	2.19	1.14	1.51	2.16	1.54	1.39	1.08	.55	.50

CAL YR 1968 TOTAL 26,788
WTR YR 1969 TOTAL 27,165

MEAN 73.2
MEAN 74.4

MAX 1,190
MAX 539

MIN 25
MIN 26

CFSM 1.16
CFSM 1.18

IN 15.84
IN 16.06

PEAK DISCHARGE (BASE, 700 CFS).--No peak above base.

4-0945, Salt Creek near McCool, Ind.

LOCATION.--Lat 41°35'48", long 84°08'40", in SE¼ sec. 6, T. 36 N., R. 6 W., Porter County, on left bank on downstream side of highway bridge, 50 ft downstream from New York Central Railroad bridge, 1.2 miles north of McCool, and 1.5 miles upstream from Little Calumet River.

DRAINAGE AREA.--78.7 sq mi.

PERIOD OF RECORD.--May 1945 to current year.

GAGE.--Water-stage recorder. Datum of gage is 594.10 ft above mean sea level (levels by Indiana Flood Control and Water Resources Commission). Prior to July 25, 1955, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--24 years, 68.6 cfs (11.84 inches per year).

EXTREMES.--Current year: Maximum discharge, 578 cfs Jan. 30 (gage height, 6.69 ft); minimum, 24 cfs Aug. 25, 27-31, Sept. 1, 2; minimum gage height, 2.09 ft Sept. 1.
Period of record: Maximum discharge, 3,180 cfs Oct. 11, 1954 (gage height, 14.12 ft); minimum, 6.3 cfs Aug. 24, 1955; minimum gage height, 2.09 ft Sept. 1, 1969.

REMARKS.--Records good.

REVISIONS (WATER YEARS).--WSP 1337: 1946-48(M), 1950(M), drainage area. WSP 1911: 1958.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	CCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	39	118	82	253	51	87	65	97	60	25	24
2	34	39	99	63	141	50	155	59	129	45	32	25
3	36	38	127	54	105	49	170	55	79	52	30	25
4	33	38	108	47	62	49	134	52	60	46	29	25
5	33	38	86	45	79	48	231	50	64	47	30	27
6	32	39	68	47	71	48	221	52	66	41	29	28
7	33	46	59	47	66	49	138	49	64	60	28	26
8	33	52	53	46	66	49	103	124	119	88	29	25
9	33	46	49	46	63	49	125	199	208	63	29	34
10	37	43	48	41	62	48	233	234	128	51	31	40
11	36	42	47	44	60	46	235	352	79	45	28	29
12	34	43	50	43	57	44	146	307	61	43	28	27
13	34	49	58	43	53	44	101	157	50	39	28	26
14	33	47	55	44	50	43	88	105	45	36	27	26
15	33	144	49	45	48	43	96	83	44	35	27	26
16	33	167	49	49	46	43	96	71	42	34	27	26
17	33	120	49	66	46	44	120	63	40	33	27	27
18	36	112	48	180	46	47	273	62	46	36	27	27
19	36	99	115	232	47	51	259	63	46	38	26	26
20	35	76	173	138	47	53	201	59	41	40	26	26
21	34	64	114	151	48	55	128	55	37	36	26	26
22	34	59	104	200	49	52	98	55	38	34	25	26
23	35	55	181	226	50	51	85	54	45	24	25	27
24	37	53	124	223	50	104	77	50	43	36	25	28
25	60	49	81	100	52	297	70	48	41	35	25	27
26	76	48	73	83	53	350	66	46	38	48	25	27
27	54	49	106	73	52	218	60	44	36	107	25	28
28	46	96	332	87	51	192	76	43	34	64	25	30
29	43	253	478	251	-----	221	79	41	35	49	25	27
30	41	207	298	496	-----	158	68	40	53	41	25	27
31	40	-----	127	450	-----	102	-----	38	-----	37	24	-----
TOTAL	1,180	2,250	3,526	3,742	1,893	2,748	4,019	2,775	1,908	1,453	848	818
MEAN	38.1	75.0	114	121	67.6	88.6	134	89.5	63.6	46.9	27.4	27.3
MAX	76	253	478	496	253	350	273	352	208	107	35	40
MIN	32	38	47	41	46	43	60	38	34	33	24	24
CFSM	.48	.55	1.45	1.53	.86	1.13	1.70	1.14	.81	.60	.25	.35
IN.	.56	1.06	1.67	1.77	.89	1.30	1.90	1.31	.90	.69	.40	.39

CAL YR 1968 TOTAL 29,616 MEAN 80.9 MAX 1,620 MIN 29 CFSM 1.03 IN 14.00
WTR YR 1969 TOTAL 27,160 MEAN 74.4 MAX 496 MIN 24 CFSM .95 IN 12.83

PEAK DISCHARGE (BASE, 600 CFS).--No peak above base.

STREAMS TRIBUTARY TO LAKE MICHIGAN

4-0953, Trail Creek at Michigan City, Ind.

LOCATION.--Lat 41°43'00", long 86°51'35", in SW¼NE¼ sec. 27, T. 38 N., R. 4 W., LaPorte County, on left downstream wingwall of bridge on Springland Avenue in Michigan City, 0.7 mile north of U.S. Highway 35, and 2.0 miles upstream from mouth.

DRAINAGE AREA.--54.1 sq mi.

PERIOD OF RECORD.--June 1969 to current year.

GAGE.--Water-stage recorder. Datum of gage is 584.02 ft above mean sea level.

EXTREMES.--Maximum discharge during period, 381 cfs June 9 (gage height, 5.63 ft); minimum, 25 cfs Aug. 31 (gage height, 2.24 ft).

REMARKS.--Records good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1									115	52	54	26
2									200	47	46	27
3									160	55	41	28
4									140	61	39	28
5									110	51	38	28
6									114	49	28	30
7									92	57	40	30
8									247	53	36	28
9									307	50	25	35
10									135	48	25	33
11									90	50	33	29
12									73	57	32	28
13									63	46	32	28
14									60	43	32	26
15									59	41	31	26
16									56	39	21	28
17									54	43	32	30
18									65	57	32	28
19									58	53	30	27
20									54	54	20	27
21									50	46	28	26
22									52	42	28	26
23									63	40	28	28
24									58	40	28	31
25									56	38	28	29
26									52	43	28	28
27									48	61	27	33
28									45	58	26	30
29					-----				45	55	26	28
30					-----				56	46	26	28
31		-----			-----		-----		-----	61	26	-----
TOTAL									2,777	1,536	1,018	857
MEAN									92.6	49.5	32.8	28.6
MAX									307	61	56	35
MIN									45	38	26	26
CFSM									1.71	.92	.61	.53
IN.									1.91	1.06	.70	.59

4-0985, Fawn River near White Pigeon, Mich.

LOCATION.--Lat 41°46'56", long 85°35'00" (revised), in SW $\frac{1}{4}$ sec. 10, T. 8 S., R. 11 W., St. Joseph County, on right bank 0.2 mile downstream from bridge on county highway, 3.1 miles east of White Pigeon, and 3.5 miles upstream from Sherman Mill Creek.

DRAINAGE AREA.--192 sq mi.

PERIOD OF RECORD.--July 1903 to July 1904 (gage height and discharge measurements only), October 1957 to current year.

GAGE.--Water-stage recorder. Datum of gage is 805.4 ft above mean sea level.

AVERAGE DISCHARGE.--12 years, 152 cfs (10.75 inches per year).

EXTREMES.--Current year: Maximum daily discharge, 600 cfs Jan. 30; minimum, 78 cfs Sept. 22; minimum gage height, 2.29 ft Sept. 22, 23.

Period of record: Maximum daily discharge, 600 cfs Jan. 30, 1969; minimum, 26 cfs Aug. 5, 1964; minimum gage height, 1.72 ft Jan. 10, Sept. 10, 1964.

A daily mean discharge of 750 cfs occurred Mar. 15, 1904.

REMARKS.--Records good except those for winter periods and those of no gage-height record, which are fair. Small diurnal fluctuation caused by powerplants above station.

REVISIONS.--See Michigan WRD 1969 for summary of revisions.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	136	128	335	403	460	240	238	394	217	185	326	96
2	126	124	330	359	420	240	253	395	223	191	307	95
3	133	123	320	310	390	240	259	390	226	184	275	99
4	137	115	300	300	370	230	262	379	230	184	252	98
5	125	120	290	290	350	230	270	365	241	179	238	96
6	125	123	280	280	350	234	286	354	242	178	228	107
7	124	129	270	275	340	219	297	352	256	191	219	119
8	128	132	260	270	330	214	294	362	265	202	210	113
9	129	123	250	265	325	213	293	351	268	199	202	110
10	131	126	240	260	320	214	293	349	266	196	194	107
11	131	130	240	260	310	202	290	360	263	190	186	104
12	124	127	250	260	305	199	285	367	258	181	187	103
13	117	137	260	260	300	195	281	367	256	178	178	92
14	114	123	250	260	300	196	277	366	260	177	177	94
15	119	150	230	264	290	190	274	357	260	166	180	88
16	118	200	220	260	285	193	269	342	242	162	181	89
17	123	230	211	271	280	199	270	330	227	154	179	85
18	133	250	216	303	275	180	283	321	221	159	179	98
19	135	265	219	323	270	185	320	321	220	171	181	107
20	129	265	223	340	265	195	361	315	221	178	178	97
21	115	250	219	343	260	201	388	306	210	170	170	113
22	131	240	220	334	260	186	419	302	193	166	162	100
23	130	230	221	330	260	186	421	301	204	169	153	96
24	126	220	206	330	260	197	394	296	198	214	147	103
25	126	210	190	330	260	211	381	293	205	202	143	93
26	123	200	190	330	260	222	382	283	205	232	137	94
27	138	220	200	350	250	234	381	271	189	276	131	99
28	127	260	210	400	250	244	386	256	186	272	128	110
29	122	290	230	500	-----	245	389	245	186	305	125	106
30	126	320	270	600	-----	242	393	233	191	325	118	115
31	124	-----	321	540	-----	241	-----	208	-----	336	110	-----
TOTAL	3,930	5,564	7,671	10,200	8,595	6,617	9,589	10,131	6,829	6,272	5,781	3,026
MEAN	127	185	247	329	307	213	320	327	228	202	186	101
MAX	138	320	335	600	460	245	421	395	268	336	326	119
MIN	114	115	190	260	250	180	238	208	186	154	110	85
CFSM	.66	.97	1.29	1.71	1.60	1.11	1.66	1.70	1.19	1.05	.97	.53
IN.	.76	1.08	1.49	1.98	1.66	1.28	1.86	1.96	1.32	1.21	1.12	.59

CAL YR 1969 TOTAL 77,238 MEAN 211 MAX 495 MIN 104 CFSM 1.10 IN 14.96
WTR YR 1969 TOTAL 84,205 MEAN 231 MAX 600 MIN 85 CFSM 1.20 IN 16.31

NOTE.--No gage-height record Jan. 1 to Mar. 4.

4-0990. St. Joseph River at Mottville, Mich.

LOCATION.--Lat 41°48'03", long 85°45'22" (revised), in SW¼ sec. 6, T. 8 S., R. 12 W., Michigan meridian, St. Joseph County, on right bank 500 ft upstream from bridge on U.S. Highway 112 at Mottville, 0.4 mile downstream from Michigan Power Co. hydro-electric plant, 4 miles upstream from Pigeon River, and at mile 96.

DRAINAGE AREA.--1,866 sq mi.

PERIOD OF RECORD.--October 1923 to current year. Monthly discharge only for some periods, published in WSP 1307.

GAGE.--Water-stage recorder. Datum of gage is 755.3 ft above mean sea level (Michigan Power Co. bench mark). Prior to Oct. 1, 1951, at site 0.4 mile upstream at datum 4.2 ft higher.

AVERAGE DISCHARGE.--46 years, 1,495 cfs (10.88 inches per year).

EXTREMES.--Current year: Maximum discharge, 6,500 cfs Feb. 1 (gage height, 8.00 ft); minimum, 195 cfs July 24 (gage height, 1.33 ft); minimum daily, 500 cfs Sept. 28.

Period of record: Maximum discharge, 10,700 cfs Apr. 27, 1950 (gage height, 6.56 ft, site and datum then in use); minimum daily, 39 cfs Oct. 19, 1963.

REMARKS.--Records good. Flow regulated by powerplants above station.

REVISIONS.--See Michigan WRD 1969 for summary of revisions.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,410	1,080	2,150	2,400	5,250	2,290	2,480	3,010	2,010	2,010	2,060	842
2	1,330	633	2,350	2,350	5,320	2,150	2,640	3,150	2,360	1,780	2,060	1,110
3	1,230	776	2,500	2,300	5,260	2,220	2,640	2,930	2,490	1,840	2,080	938
4	1,230	1,120	2,530	2,500	5,220	2,230	2,750	2,950	2,620	1,660	2,110	777
5	689	916	2,550	2,500	4,910	2,130	3,490	2,920	2,950	1,660	2,040	795
6	720	972	2,510	2,500	4,450	2,200	3,470	2,790	3,140	1,790	1,950	552
7	1,410	981	2,460	2,400	4,270	1,930	3,470	2,720	3,010	2,200	1,850	799
8	1,460	1,090	2,390	2,500	4,090	2,030	3,520	2,670	2,940	2,070	1,740	1,340
9	1,250	677	2,330	2,500	3,790	1,780	3,650	2,780	3,280	2,100	1,230	1,050
10	1,110	810	2,190	2,500	3,640	2,290	3,560	2,970	3,390	2,110	1,160	1,090
11	1,250	1,240	2,140	2,400	3,280	2,110	3,380	3,120	3,720	2,370	1,450	1,030
12	740	1,240	1,970	2,300	3,340	1,830	3,230	3,170	3,630	2,040	1,220	1,270
13	708	1,160	1,890	2,400	3,030	1,850	3,070	3,320	3,610	1,920	1,520	802
14	1,140	1,030	2,050	2,400	2,890	1,880	2,930	3,390	3,450	1,980	1,190	526
15	1,260	1,210	1,790	2,400	2,810	1,730	2,760	3,330	3,220	1,770	1,190	1,040
16	1,170	1,060	1,310	2,350	2,710	1,770	2,680	3,110	2,990	1,730	842	822
17	1,160	1,430	1,870	2,300	2,450	1,700	2,700	2,890	2,710	1,820	1,120	873
18	1,350	1,500	1,880	2,500	2,550	1,640	3,190	2,880	2,780	1,750	1,500	932
19	857	1,730	1,900	2,670	2,560	1,930	3,050	2,850	2,630	1,600	1,220	1,010
20	712	1,840	1,990	2,760	2,600	1,820	3,330	2,770	2,460	1,250	1,190	762
21	1,270	1,850	1,860	3,060	2,500	1,790	3,660	2,660	2,420	1,810	1,150	756
22	1,130	2,000	2,010	3,120	2,310	1,680	3,820	2,700	2,250	1,800	1,320	965
23	1,150	1,860	2,060	3,340	2,230	1,640	3,840	2,680	2,290	1,820	1,040	894
24	1,140	1,970	1,960	3,560	2,400	1,970	3,820	2,560	2,250	1,700	778	920
25	1,100	1,930	1,650	3,000	2,360	2,240	3,710	2,640	2,330	1,950	1,330	939
26	568	1,970	2,120	2,500	2,310	2,220	3,590	2,490	2,240	1,790	1,020	994
27	716	1,810	1,870	2,800	2,320	2,410	3,390	2,260	2,030	1,890	988	626
28	1,300	1,640	2,150	3,200	2,230	2,420	3,360	2,230	2,160	2,040	969	500
29	1,220	2,160	2,500	3,650	-----	2,610	3,340	2,250	1,660	2,110	1,050	973
30	1,160	2,210	2,590	4,240	-----	2,710	3,250	1,970	2,050	2,160	584	1,400
31	1,150	-----	2,500	4,820	-----	2,510	-----	2,090	-----	2,130	578	-----
TOTAL	34,190	41,965	66,510	86,220	93,100	63,710	97,820	86,250	81,070	58,650	41,589	27,327
MEAN	1,103	1,399	2,145	2,781	3,325	2,055	3,261	2,782	2,702	1,892	1,342	911
MAX	1,460	2,210	2,590	4,920	5,320	2,710	3,840	3,390	3,720	2,370	2,110	1,400
MIN	568	677	1,650	2,300	2,230	1,640	2,480	1,970	1,660	1,250	578	500
CFSM	.59	.75	1.15	1.49	1.78	1.10	1.75	1.49	1.45	1.01	.72	.49
IN.	.63	.84	1.33	1.72	1.86	1.27	1.95	1.72	1.62	1.17	.83	.54

CAL YR 1968 TOTAL 687,046 MEAN 1,877 MAX 2,590 MIN 568 CFSM 1.01 IN 13.69
WTR YR 1969 TOTAL 778,401 MEAN 2,133 MAX 5,320 MIN 500 CFSM 1.14 IN 15.51

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., Steuben County, 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.

PERIOD OF RECORD.--October 1945 to current year. Prior to October 1947, published as "near Flint."

GAGE.--Water-stage recorder. Datum of gage is 940.00 ft above mean sea level. Prior to October 1947, nonrecording gage at site 1.5 miles downstream at different datum. October 1947 to Aug. 3, 1953, nonrecording gage at site 600 ft downstream at same datum.

AVERAGE DISCHARGE.--24 years, 73.4 cfs (9.77 inches per year).

EXTREMES.--Current year: Maximum discharge, 422 cfs Feb. 3 (gage height, 14.45 ft); minimum, 12 cfs Oct. 20-23; minimum gage height, 8.19 ft Sept. 15, 16.

Period of record: 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.--Records good.

REVISIONS (WATER YEARS).--WSP 1144: 1948. WSP 1337: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	16	66	231	340	87	108	223	74	52	70	20
2	22	16	74	210	406	82	108	215	74	52	70	20
3	20	16	78	190	417	82	114	199	74	48	66	20
4	18	16	78	170	380	82	114	191	78	48	62	19
5	18	16	78	160	350	82	126	175	78	48	59	19
6	17	16	78	150	310	78	140	161	82	48	59	19
7	16	17	78	140	300	78	154	154	82	48	57	20
8	16	18	74	130	290	74	161	147	87	48	52	19
9	15	18	70	125	275	74	168	140	92	48	48	19
10	15	18	66	120	260	74	175	140	92	48	45	18
11	15	18	66	115	250	70	168	147	92	48	45	18
12	14	18	62	110	235	70	168	168	92	45	42	18
13	14	18	62	103	220	66	154	183	87	45	40	18
14	14	19	62	98	205	66	147	191	82	45	38	17
15	14	22	62	94	190	62	140	191	82	43	36	17
16	14	23	62	92	175	62	133	183	78	43	35	17
17	14	28	62	100	165	62	133	168	74	42	35	19
18	13	32	59	115	150	62	140	161	74	40	34	19
19	13	36	59	145	140	62	161	154	70	40	32	19
20	12	45	59	155	130	62	207	147	66	40	30	19
21	12	48	59	150	120	62	239	140	66	40	30	19
22	12	52	62	150	110	62	264	133	62	40	29	19
23	12	52	62	160	105	62	273	126	62	40	29	19
24	13	56	62	170	96	62	273	114	62	48	28	18
25	14	56	62	180	94	66	264	108	62	52	26	18
26	14	52	65	185	92	70	255	102	59	56	24	18
27	14	52	66	185	87	82	239	97	59	62	24	19
28	15	52	78	190	87	92	231	92	59	66	23	18
29	15	56	114	210	-----	97	231	82	56	70	22	18
30	15	62	168	260	-----	102	231	78	56	70	22	18
31	15	-----	215	300	-----	108	-----	74	-----	70	22	-----
TOTAL	467	964	2,369	4,893	5,979	2,302	5,419	4,584	2,213	1,533	1,229	558
MEAN	15.1	32.1	76.4	158	214	74.3	181	148	73.8	49.5	39.6	18.6
MAX	22	62	215	300	417	108	273	223	92	70	70	20
MIN	12	16	59	92	87	62	108	74	56	40	22	17
CFSM	.15	.32	.75	1.55	2.09	.73	1.77	1.45	.72	.48	.39	.18
IN.	.17	.35	.86	1.78	2.18	.84	1.98	1.67	.81	.56	.45	.20
CAL YR 1968	TOTAL 29,758		MEAN 81.3		MAX 394		MIN 12		CFSM .80		IN 10.85	
WTR YR 1969	TOTAL 32,510		MEAN 89.1		MAX 417		MIN 12		CFSM .87		IN 11.85	

4-0996.10. Pretty Lake Inlet near Stroh, Ind.

LOCATION.--Lat 41°34'45", long 85°14'59", in NW¼ sec. 15, T. 36 N., R. 11 E., Lagrange County, on left bank 400 ft upstream from mouth and 2.6 miles west of Stroh.

DRAINAGE AREA.--1.96 sq mi.

PERIOD OF RECORD.--June 1963 to current year.

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.

AVERAGE DISCHARGE.--6 years, 0.42 cfs (2.91 inches per year).

EXTREMES.--Current year: Maximum discharge, 15 cfs Jan. 30 (gage height, 7.54 ft); minimum, 0.13 cfs Sept. 26, 27; minimum gage height, 6.33 ft Aug. 30, 31, Sept. 1.

Period of record: Maximum discharge, 21 cfs Dec. 25, 1965; no flow for many days in most years.

REMARKS.--Records good.

REVISIONS.--WSP 1911: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.22	.22	.78	.98	3.9	.62	.72	1.2	.80	.54	.58	.19
2	.23	.22	.72	.84	3.3	.58	1.4	1.2	1.1	.48	.48	.20
3	.23	.20	.67	.72	3.0	.58	1.0	1.1	1.0	.45	.40	.20
4	.22	.20	.62	.62	2.7	.58	1.1	1.0	.92	.48	.37	.20
5	.22	.20	.62	.56	2.4	.58	1.6	.95	.88	.48	.37	.23
6	.22	.23	.45	.52	2.2	.58	1.2	.95	.80	.48	.35	.25
7	.25	.35	.42	.49	2.0	.58	.95	.95	.72	.95	.33	.35
8	.23	.35	.42	.48	1.9	.58	.95	1.8	.66	.62	.33	.29
9	.27	.33	.40	.47	1.7	.58	.95	1.6	.82	.54	.40	.23
10	.35	.33	.35	.47	1.5	.58	.95	2.1	.76	.51	.40	.22
11	.29	.31	.35	.47	1.2	.58	.83	2.1	.67	.42	.35	.20
12	.29	.31	.45	.48	1.2	.58	.78	1.6	.64	.42	.33	.19
13	.27	.29	.83	.49	1.2	.54	.78	1.3	.63	.40	.31	.17
14	.25	.29	.62	.51	1.0	.51	.78	1.2	.62	.40	.31	.17
15	.25	.89	.45	.54	1.0	.51	.89	1.1	.66	.40	.31	.17
16	.23	1.2	.40	.62	.95	.51	.89	.95	.60	.40	.33	.16
17	.25	1.2	.35	.63	.89	.51	1.0	.95	.54	.42	.31	.35
18	.25	1.3	.35	2.4	.83	.58	3.9	1.5	.50	.42	.29	.27
19	.27	.89	.54	1.6	.78	.62	4.8	1.3	.51	.45	.29	.20
20	.27	.72	.54	1.4	.72	.72	2.1	1.2	.48	.51	.27	.17
21	.22	.67	.48	1.3	.67	.72	1.7	1.1	.48	.48	.27	.17
22	.23	.62	.78	1.3	.67	.67	1.6	1.0	.54	.42	.25	.16
23	.23	.54	.83	1.6	.67	.67	1.4	1.0	1.0	.40	.23	.17
24	.23	.45	.67	2.2	.67	1.2	1.2	.95	.67	.67	.23	.17
25	.23	.42	.62	2.0	.67	1.8	1.1	.89	.58	.51	.25	.16
26	.23	.40	.58	1.9	.62	1.2	1.0	.89	.54	.48	.25	.15
27	.22	.37	1.2	1.7	.62	1.2	1.1	.83	.51	.95	.25	.17
28	.23	1.7	5.6	1.7	.62	1.2	2.9	.83	.48	.67	.22	.16
29	.23	1.6	2.1	6.2	-----	1.0	1.8	.78	.48	.58	.22	.15
30	.23	.95	1.5	11	-----	.83	1.4	.72	.58	.48	.22	.17
31	.25	-----	1.2	5.0	-----	.78	-----	.62	-----	.42	.20	-----
TOTAL	7.59	17.75	25.89	51.19	39.58	22.77	42.77	35.66	20.17	15.83	9.70	6.04
MEAN	.24	.59	.84	1.65	1.41	.73	1.43	1.15	.67	.51	.31	.20
MAX	.35	1.7	5.6	11	3.9	1.8	4.8	2.1	1.1	.95	.58	.35
MIN	.22	.20	.35	.47	.62	.51	.72	.62	.48	.40	.20	.15
CFSM	.12	.30	.43	.84	.72	.37	.73	.59	.34	.26	.16	.10
IN.	.14	.34	.49	.97	.75	.43	.81	.68	.38	.30	.18	.11
CAL YR 1968	TOTAL 219.37		MEAN .60		MAX 5.6		MIN .17		CFSM .31		IN 4.16	
WTR YR 1969	TOTAL 294.94		MEAN .81		MAX 11		MIN .15		CFSM .41		IN 5.60	

STREAMS TRIBUTARY TO LAKE MICHIGAN

199

4-0997.5. Pigeon River near Scott, Ind.

LOCATION.--Lat 41°44'56", long 85°34'35", in SW $\frac{1}{4}$ 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 northwest of Scott.

DRAINAGE AREA.--373 sq mi.

PERIOD OF RECORD.--June 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is 815.00 ft above mean sea level.

EXTREMES.--Current year: Maximum discharge, 1,450 cfs Feb. 1 (gage height, 6.34 ft); minimum, 138 cfs Sept. 15, 16 (gage height, 2.58 ft).

Period of record: Maximum discharge, 1,450 cfs Feb. 1, 1969 (gage height, 6.34 ft); minimum, 138 cfs Sept. 15, 16, 1969 (gage height, 2.58 ft).

REMARKS.--Records good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	209	180	601	750	1,390	409	426	902	418	284	302	143
2	205	178	521	696	1,300	401	503	833	475	271	297	141
3	206	178	499	676	1,240	391	564	777	475	262	285	143
4	203	175	486	640	1,260	350	559	734	432	263	273	143
5	196	175	464	600	1,260	362	587	703	481	270	273	157
6	194	178	436	570	1,270	367	642	690	520	265	262	168
7	203	196	413	540	1,250	364	618	656	481	268	247	178
8	205	215	397	530	1,200	360	578	660	472	307	238	184
9	157	213	382	520	1,100	345	574	682	503	294	231	175
10	201	210	363	500	1,050	346	587	704	494	273	227	162
11	205	208	352	490	1,000	340	582	745	447	263	222	155
12	199	203	354	470	920	327	563	763	417	256	210	152
13	197	198	383	470	860	324	544	717	396	247	205	147
14	195	194	407	460	800	318	526	670	384	239	204	145
15	193	230	385	450	770	315	523	653	382	230	200	141
16	187	306	374	450	700	310	528	643	378	223	159	138
17	187	369	344	468	640	312	532	633	359	221	212	151
18	187	437	327	555	600	317	663	648	344	227	204	160
19	202	455	341	701	570	323	941	688	336	229	201	159
20	175	427	373	686	530	326	1,090	723	355	234	178	160
21	164	382	362	630	510	328	1,040	674	321	233	178	150
22	171	360	367	678	490	325	936	631	308	224	174	155
23	175	353	410	731	480	317	903	599	332	217	171	148
24	178	343	423	820	470	335	887	573	336	280	166	152
25	187	332	410	875	450	419	869	546	327	397	163	154
26	203	323	391	776	439	466	847	518	315	339	160	151
27	198	315	421	766	429	452	825	492	299	388	156	150
28	189	363	604	826	421	443	848	484	296	423	154	158
29	189	533	872	971	-----	457	947	410	283	403	152	156
30	184	665	992	1,210	-----	449	977	410	285	353	149	153
31	180	-----	940	1,400	-----	428	-----	399	-----	317	145	-----
TOTAL	5,964	8,894	14,394	20,905	23,399	11,326	21,209	19,960	11,651	8,700	6,438	4,629
MEAN	192	296	464	674	836	365	707	644	388	281	208	154
MAX	209	665	992	1,400	1,390	466	1,090	902	520	423	302	184
MIN	164	175	327	450	421	310	426	399	283	217	145	138
CFSM	.52	.79	1.24	1.81	2.24	.98	1.90	1.73	1.04	.75	.56	.41
IN.	.59	.89	1.44	2.08	2.33	1.13	2.11	1.99	1.16	.87	.64	.46

CAL YR 1968	TOTAL	MEAN	MAX	MIN	CFSM	IN
WTR YR 1969	TOTAL 157,469	MEAN 431	MAX 1,400	MIN 138	CFSM 1.16	IN 15.70

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., Lagrange County, 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.

PERIOD OF RECORD.--October 1950 to current year.

GAGE.--Nonrecording gage read twice daily. Datum of gage is 880.00 ft above mean sea level.

AVERAGE DISCHARGE.--19 years, 108 cfs (11.03 inches per year).

EXTREMES.--Current year: Maximum discharge, 476 cfs Feb. 1 (gage height, 8.65 ft); minimum, 16 cfs Sept. 4, 6 (gage height, 4.76 ft).

Period of record: 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.--Records good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	30	124	230	471	129	135	230	107	73	104	18
2	35	30	122	230	463	126	142	220	110	67	101	18
3	36	28	121	230	463	123	144	210	107	69	95	17
4	33	27	119	224	439	122	149	200	101	65	89	16
5	31	27	118	211	439	118	166	191	105	69	83	17
6	33	28	112	206	416	116	176	182	105	67	77	20
7	35	32	106	194	409	114	180	174	104	89	70	24
8	33	35	101	183	379	113	179	171	106	107	65	34
9	31	35	96	172	364	111	175	169	110	105	63	33
10	35	36	92	172	334	107	173	169	109	101	62	30
11	34	36	90	161	319	103	166	168	104	95	58	26
12	33	37	88	161	293	101	160	204	101	91	55	25
13	32	36	89	150	280	100	152	204	97	83	52	25
14	31	37	93	150	254	98	144	192	95	78	48	24
15	30	43	91	134	242	96	143	190	95	73	46	22
16	30	39	89	134	230	95	140	186	91	71	44	22
17	28	70	87	129	213	95	135	181	88	80	43	33
18	30	78	83	172	205	95	163	191	94	80	42	37
19	32	52	85	206	183	96	213	183	81	81	40	36
20	30	39	85	218	172	97	242	191	79	81	38	35
21	29	90	86	206	161	97	250	176	77	84	36	33
22	27	37	87	206	161	95	250	173	74	79	33	31
23	27	84	88	206	150	93	250	166	77	75	32	31
24	26	31	89	218	142	96	247	158	77	75	28	33
25	29	78	91	206	141	113	240	150	77	72	28	32
26	28	76	94	206	138	129	230	143	75	71	26	29
27	27	74	104	194	135	139	222	134	73	90	24	30
28	29	32	161	230	133	142	232	127	71	97	21	31
29	32	105	218	280	-----	143	240	120	66	105	19	31
30	34	122	242	394	-----	141	237	115	72	106	18	30
31	31	-----	242	455	-----	139	-----	109	-----	102	18	-----
TOTAL	970	1,754	3,493	6,468	7,735	3,482	5,675	5,357	2,719	2,580	1,558	823
MEAN	31.3	58.5	113	209	276	112	189	173	90.6	83.2	50.3	27.4
MAX	37	122	242	455	471	143	250	230	110	107	104	37
MIN	27	27	83	129	133	93	135	109	68	65	38	16
CFSM	.24	.44	.85	1.57	2.08	.84	1.42	1.30	.68	.63	.18	.21
IN.	.27	.49	.98	1.81	2.16	.97	1.59	1.50	.76	.72	.44	.23
CAL YR 1968	TOTAL 42,273		MEAN 116		MAX 354		MIN 26		CFSM .87	IN 11.82		
WTR YR 1969	TOTAL 42,614		MEAN 117		MAX 471		MIN 16		CFSM .88	IN 11.92		

STREAMS TRIBUTARY TO LAKE MICHIGAN

201

4-1002.52, Forker Creek near Burr Oak, Ind.

LOCATION.--Lat 41°19'58", long 85°25'25", in SE¼NE¼ sec. 12, T. 33 N., R. 9 E., Noble County, on right bank 300 ft downstream from bridge on State Highway 9, 400 ft downstream from Miller Lake outlet, 0.8 mile northwest of Burr Oak, and 4.5 miles south of Albion.

DRAINAGE AREA.--19.2 sq mi.

PERIOD OF RECORD.--June 1969 to current year.

GAGE.--Water-stage recorder. Datum of gage is 889.00 ft above mean sea level (Indiana State Highway Commission bench mark).

EXTREMES.--Maximum discharge during period, 66 cfs July 3 (gage height, 2.55 ft); minimum, 0.36 cfs Sept. 9-13 (gage height, 1.53 ft).

REMARKS.--Records fair. Occasional regulation at Miller Lake outlet.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1									8.5	12	6.3	.43
2									8.5	11	5.6	.47
3									8.5	42	5.6	.50
4									8.5	57	5.2	.47
5									8.8	49	4.4	.50
6									8.5	39	3.8	.50
7									8.5	44	3.2	.50
8									8.5	49	3.1	.43
9									8.5	46	3.1	.36
10									8.5	42	3.1	.36
11									8.5	33	2.4	.36
12									8.5	26	2.2	.36
13									8.5	20	2.0	.36
14									8.8	16	2.0	.43
15									8.8	12	2.0	.43
16									8.5	10	2.2	.43
17									8.8	8.8	2.0	2.2
18									8.8	7.5	1.6	1.4
19									8.8	7.5	1.5	1.2
20									8.8	9.2	1.2	1.0
21									8.5	9.2	.89	.89
22								21	8.5	7.5	.78	.68
23								18	8.5	6.3	.72	.72
24								16	8.5	5.6	.72	.78
25								14	8.8	4.9	.63	.78
26								12	8.5	4.4	.50	.72
27								10	9.6	5.8	.47	.78
28								9.2	11	5.6	.47	.83
29					-----			8.5	11	5.6	.43	.72
30					-----			8.5	12	5.8	.43	.78
31		-----			-----		-----	8.5	-----	5.8	.40	-----
TOTAL									267.0	607.5	69.34	20.37
MEAN									8.90	19.6	2.24	.68
MAX									12	57	6.3	2.2
MIN									8.5	4.4	.40	.36
CFSM									.46	1.02	.12	.04
IN.									.52	1.18	.13	.04

STREAMS TRIBUTARY TO LAKE MICHIGAN

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., Elkhart County, on right bank 20 ft downstream from River Avenue Bridge at Goshen and 0.5 mile upstream from Rock Run.

DRAINAGE AREA.--580 sq. mi.

PERIOD OF RECORD.--April 1931 to current year.

GAGE.--Water-stage recorder. Datum of gage is 769.43 ft above mean sea level. Prior to Nov. 20, 1931, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--38 years, 499 cfs (11.68 inches per year).

EXTREMES.--Current year: Maximum discharge, 3,300 cfs Jan. 30 (gage height, 7.85 ft); minimum, 141 cfs Aug. 31 (gage height, 2.03 ft).

Period of record: Maximum discharge, 5,440 cfs Apr. 4, 1950 (gage height, 10.15 ft); maximum gage height, 10.33 ft July 10, 1951; minimum discharge, 6.6 cfs Aug. 11, 1964 (gage height, 1.38 ft).

REMARKS.--Records excellent. The flow is regulated by three powerplants upstream from station. Records of suspended sediment loads for the current year are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1337: 1939(M), drainage area. WSP 1557: 1954.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	208	235	762	973	2,580	563	628	1,070	486	290	476	147
2	202	231	660	820	2,220	540	683	1,000	550	276	467	149
3	202	228	624	759	2,150	525	782	946	501	290	438	167
4	194	234	599	710	1,880	513	755	897	464	304	415	157
5	190	230	560	670	1,920	497	892	847	506	304	399	164
6	188	231	524	650	1,820	487	1,020	811	541	309	373	153
7	198	255	477	630	1,740	477	905	790	480	553	340	187
8	201	270	459	615	1,640	466	841	812	473	990	322	203
9	193	274	445	600	1,530	459	830	858	510	881	316	211
10	204	241	428	590	1,390	447	856	882	496	665	315	194
11	209	238	413	570	1,370	434	836	1,100	460	602	303	183
12	199	238	414	550	1,270	401	782	1,190	428	570	292	177
13	202	236	425	540	1,170	413	743	1,010	403	522	280	173
14	196	226	433	530	1,020	404	728	922	392	485	267	168
15	194	282	373	520	969	393	725	870	394	450	256	159
16	185	339	320	510	930	386	716	836	382	400	244	170
17	182	406	382	520	922	386	718	811	363	402	270	199
18	240	495	404	940	857	390	1,300	819	338	453	281	212
19	249	554	435	1,390	805	398	2,180	875	323	416	251	210
20	231	516	480	1,120	765	405	2,140	845	313	350	236	195
21	228	468	466	1,020	734	389	1,670	788	302	378	228	191
22	222	443	465	1,080	718	390	1,370	746	305	364	221	191
23	218	426	547	1,190	700	394	1,250	710	336	356	215	185
24	224	410	568	1,310	674	433	1,180	677	337	344	208	198
25	224	393	485	1,040	664	667	1,130	657	327	323	190	206
26	223	378	470	836	638	881	1,080	631	312	344	197	183
27	224	370	587	870	615	775	1,030	610	299	653	185	183
28	229	481	1,460	981	603	729	1,100	595	275	791	173	179
29	234	951	2,200	1,770	-----	747	1,200	553	264	642	180	193
30	229	1,060	1,870	3,040	-----	700	1,150	510	297	568	183	193
31	231	-----	1,740	3,050	-----	646	-----	482	-----	497	145	-----
TOTAL	6,553	11,339	20,075	30,394	34,294	15,735	31,220	25,150	11,857	14,822	8,626	5,520
MEAN	211	378	648	980	1,225	508	1,041	811	395	478	278	184
MAX	249	1,060	2,200	3,050	2,580	881	2,180	1,190	550	950	476	212
MIN	182	226	320	510	603	386	628	482	264	276	145	147
CFSM	.36	.65	1.12	1.69	2.11	.88	1.79	1.40	.68	.82	.48	.32
IN.	.42	.73	1.29	1.95	2.20	1.01	2.00	1.61	.76	.95	.55	.35

CAL YR 1968 TOTAL 234,609 MEAN 641 MAX 3,520 MIN 182 CFSM 1.11 IN 15.04
WTP YR 1969 TOTAL 215,585 MEAN 591 MAX 3,050 MIN 145 CFSM 1.02 IN 13.82

PEAK DISCHARGE (BASE, 1,800 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-29	1600	6.17	2,270	04-19	1500	6.30	2,330
01-30	1900	7.85	3,300				

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., Elkhart County, on left bank 200 ft downstream from mouth of Elkhart River, 200 ft upstream from Main Street Bridge in Elkhart, 2,000 ft downstream from Christiana Creek, and 0.5 mile downstream from Elkhart Hydroelectric Plant.

DRAINAGE AREA.--3,339 sq mi.

PERIOD OF RECORD.--August 1947 to current year. Gage heights at site 0.8 mile downstream at different datum for September 1924 to March 1926 are available in the district office.

GAGE.--Water-stage recorder. Datum of gage is 700.00 ft above mean sea level.

AVERAGE DISCHARGE.--22 years, 3,020 cfs (12.29 inches per year).

EXTREMES.--Current year: Maximum discharge, 12,200 cfs Jan. 30 (gage height, 24.47 ft); minimum daily, 1,170 cfs Sept. 14.
Period of record: Maximum discharge, 18,400 cfs Apr. 5, 1950 (gage height, 27.82 ft); minimum daily, 336 cfs Aug. 5, 1964.

REMARKS.--Records good. The flow is regulated by Elkhart Hydroelectric Plant and by a hydroelectric plant on Elkhart River at Goshen.

REVISIONS.--WSP 1337: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

JAY	UCT	NOV	DEC	JAN	FEB	MAK	APR	MAY	JUN	JUL	AUG	SEP
1	2,360	2,130	4,510	5,400	11,300	4,730	5,030	6,570	4,030	3,690	3,730	1,470
2	2,280	1,550	4,490	5,100	10,600	4,530	5,350	6,490	4,390	3,220	3,610	1,740
3	2,300	1,740	4,610	5,000	10,600	4,400	5,590	6,200	4,740	3,180	3,580	1,670
4	2,200	2,230	4,530	4,900	10,000	4,550	5,620	6,030	4,700	3,090	3,570	1,460
5	1,350	1,620	4,540	4,970	9,460	4,330	6,420	5,870	5,230	3,060	3,420	1,450
6	1,660	1,830	4,440	4,900	9,170	4,390	7,000	5,730	5,490	3,040	3,270	1,300
7	2,460	1,960	4,280	4,800	8,490	4,130	6,640	5,540	5,430	3,590	3,080	1,370
8	2,420	2,020	4,160	4,800	8,540	4,220	6,680	5,730	5,260	4,260	2,950	2,070
9	2,280	1,730	3,960	4,800	8,100	3,810	6,730	5,850	5,560	4,080	2,450	1,980
10	2,200	1,860	3,770	4,800	7,470	4,270	6,760	5,950	5,720	3,850	2,340	1,870
11	2,040	2,100	3,740	4,900	7,290	4,290	6,530	6,570	5,950	4,230	2,360	1,850
12	1,780	2,130	3,480	4,700	6,980	3,890	6,320	6,590	5,890	3,960	2,310	1,860
13	1,710	2,320	3,510	4,700	6,530	3,820	6,070	6,490	5,780	3,510	2,220	1,790
14	1,490	1,980	3,670	4,700	6,120	3,850	5,800	6,460	5,690	3,470	2,300	1,170
15	2,030	2,220	3,320	4,700	5,810	3,820	5,610	6,390	5,420	3,270	2,070	1,620
16	2,130	2,410	2,950	4,700	5,750	3,640	5,500	6,060	5,140	2,790	1,650	1,550
17	2,040	2,820	3,320	4,700	5,490	3,680	5,400	5,750	4,670	2,990	1,930	1,620
18	2,290	3,310	3,350	4,900	5,380	3,330	6,520	5,700	4,540	3,170	2,410	1,690
19	1,970	3,400	3,430	5,200	5,350	3,760	7,970	5,750	4,390	3,210	2,220	1,770
20	1,750	3,750	3,560	5,500	5,350	3,760	8,330	5,700	4,130	2,700	2,150	1,550
21	2,210	3,550	3,690	6,150	5,180	3,700	8,110	5,410	4,010	2,830	1,960	1,510
22	2,060	3,590	3,640	6,600	5,010	3,520	8,050	5,370	3,840	3,010	1,940	1,660
23	2,040	3,550	3,840	6,950	4,840	3,460	7,730	5,390	3,910	2,930	1,870	1,620
24	2,170	3,660	3,550	7,380	4,850	3,920	7,560	5,100	3,940	3,210	1,770	1,670
25	2,080	3,370	3,720	6,160	4,780	4,630	7,360	5,170	3,970	3,620	1,810	1,720
26	1,540	3,280	3,410	6,130	4,720	5,030	7,120	4,990	3,890	3,240	2,060	1,760
27	1,610	3,320	3,850	6,180	4,720	5,060	6,860	4,570	3,470	4,040	1,830	1,480
28	2,190	3,430	5,560	6,790	4,560	5,130	6,770	4,460	3,760	4,270	1,780	1,250
29	2,130	4,430	6,730	8,210	-----	5,250	6,910	4,380	3,240	4,210	1,710	1,470
30	2,020	4,990	7,040	10,800	-----	5,400	6,870	4,210	3,370	4,130	1,440	1,900
31	2,060	-----	6,460	11,600	-----	5,130	-----	4,020	-----	3,920	1,230	-----
TOTAL	63,410	82,330	129,110	181,050	192,390	131,420	179,110	174,490	139,540	107,750	73,020	48,890
MEAN	2,045	2,744	4,165	5,840	6,971	4,239	6,637	5,629	4,651	3,476	2,355	1,630
MAX	2,460	4,990	7,040	11,600	11,300	5,400	8,330	6,590	5,950	4,270	3,730	2,070
MIN	1,490	1,550	2,950	4,700	4,560	3,330	5,030	4,020	3,240	2,700	1,230	1,170
CFSM	.61	.82	1.25	1.75	2.06	1.27	1.99	1.69	1.39	1.04	.71	.49
IN.	.71	.92	1.44	2.02	2.14	1.46	2.22	1.94	1.55	1.20	.81	.54
CAL YR 1968	TOTAL 1,377,280	MEAN 3,763	MAX 12,100	MIN 1,490	CFSM 1.13	IN 15.34						
WTR YR 1969	TOTAL 1,522,510	MEAN 4,171	MAX 11,600	MIN 1,170	CFSM 1.25	IN 16.96						

STREAMS TRIBUTARY TO LAKE MICHIGAN

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., Berrien County, 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.

PERIOD OF RECORD.--October 1930 to current year. Monthly discharge only for some periods, published in WSP 1307.

GAGE.--Water-stage recorder. Datum of gage is 635.02 ft above mean sea level. Oct. 1, 1930, to Feb. 11, 1931, non-recording gage on Main Street Bridge, and Feb. 12 to June 30, 1931, non-recording gage 50 ft upstream from present site (gage heights referred to mean sea level). Since Oct. 1, 1943, auxiliary gage is headwater gage at hydroelectric plant at Buchanan Dam, 8 miles downstream.

AVERAGE DISCHARGE.--39 years, 3,094 cfs (11.46 inches per year).

EXTREMES.--Current year: Maximum daily discharge, 11,000 cfs Jan. 31, Feb. 1; minimum daily, 1,330 cfs Sept. 29.
Period of record: Maximum discharge, 20,200 cfs Apr. 5, 1950 (gage height, 13.10 ft); minimum daily, 420 cfs Aug. 30, 1931.

REMARKS.--Records good except those for periods of no gage-height record, which are fair. Flow regulated by powerplants above station.

COOPERATION.--Gage-height record at auxiliary gage furnished by Indiana and Michigan Electric Co.

REVISIONS.--See Michigan WRD 1969 for summary of revisions.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,060	2,520	5,100	5,500	11,000	3,770	4,800	6,110	3,900	3,360	3,650	1,540
2	2,570	2,430	4,900	5,000	10,800	4,110	5,330	6,100	3,990	2,990	3,380	1,590
3	2,520	2,280	4,680	4,900	10,500	3,750	5,440	5,950	4,100	3,030	3,400	1,920
4	2,540	2,200	4,760	4,900	10,100	4,020	5,630	5,390	4,300	2,910	3,320	1,800
5	2,410	3,120	4,550	4,900	9,500	4,070	6,190	5,520	4,500	2,580	3,200	1,710
6	2,010	1,650	4,500	4,900	8,900	3,090	7,120	5,240	4,980	2,830	3,000	1,890
7	2,270	2,140	4,400	4,800	8,210	3,810	6,490	4,990	4,750	3,290	2,910	1,560
8	2,750	2,620	4,300	4,800	8,270	3,700	6,240	5,300	4,990	3,860	3,000	1,880
9	2,490	2,540	4,100	4,900	8,130	3,500	6,840	5,570	4,850	3,810	2,880	2,060
10	2,550	2,260	4,050	4,780	7,660	3,530	6,930	5,550	5,060	3,900	1,990	2,030
11	2,380	2,260	3,900	4,850	7,310	3,620	6,630	6,510	5,260	3,450	2,260	1,790
12	2,270	2,810	3,650	4,800	6,750	3,650	5,910	6,430	5,600	3,780	2,600	2,100
13	1,960	2,400	3,840	4,750	6,730	3,240	5,940	6,230	4,710	3,280	2,060	2,270
14	2,140	2,390	3,730	4,750	6,110	3,260	5,530	6,050	4,860	3,160	2,400	1,660
15	1,890	2,850	3,770	4,750	5,620	3,480	5,530	5,940	4,860	3,280	2,230	1,490
16	2,560	3,180	2,710	4,700	5,430	2,970	5,220	5,630	4,470	2,900	2,120	1,700
17	2,490	3,230	3,740	4,750	5,250	3,480	5,300	5,230	4,560	3,180	1,950	1,710
18	3,240	4,000	3,900	4,900	4,980	2,550	6,210	5,030	4,270	2,920	2,220	1,950
19	3,670	3,820	4,050	5,200	5,070	3,520	8,130	5,450	4,070	3,400	2,460	1,790
20	3,070	4,300	4,200	5,500	5,050	3,730	8,850	5,120	3,850	2,850	1,580	2,140
21	3,010	3,840	3,830	6,000	4,870	3,510	8,140	4,890	3,860	2,850	2,120	1,610
22	3,120	3,920	3,550	6,300	4,690	3,580	7,860	4,990	3,490	2,940	2,030	1,720
23	2,540	4,000	3,550	6,600	4,230	3,320	7,550	4,540	3,130	2,600	2,460	1,620
24	2,520	3,860	3,550	7,000	4,670	3,600	7,350	4,630	3,030	3,060	1,460	1,500
25	2,520	3,760	3,550	6,000	5,010	4,620	7,010	4,440	4,020	3,440	1,930	1,620
26	2,480	3,560	3,590	6,000	4,440	5,660	6,960	4,850	3,240	3,520	1,950	1,910
27	1,970	3,820	4,240	6,100	4,410	4,980	6,520	4,110	3,520	4,520	1,870	2,220
28	2,390	3,730	6,150	6,600	4,260	4,870	6,640	4,170	2,910	4,760	1,890	1,840
29	3,130	5,050	7,440	8,200	-----	5,160	6,330	3,850	2,930	4,020	2,140	1,330
30	2,540	5,490	6,700	10,000	-----	5,160	6,760	3,840	2,870	4,060	1,640	1,930
31	1,720	-----	6,000	11,000	-----	4,970	-----	3,540	-----	3,630	1,490	-----
TOTAL	77,780	96,090	134,980	178,030	187,950	120,280	195,380	161,290	124,930	104,160	73,590	53,880
MEAN	2,509	3,203	4,354	5,743	6,713	3,880	6,513	5,203	4,164	3,360	2,374	1,796
MAX	3,670	5,480	7,440	11,000	11,000	5,660	8,850	6,510	5,600	4,760	3,650	2,270
MIN	1,720	1,650	2,710	4,700	4,230	2,550	4,800	3,540	2,870	2,580	1,460	1,330
CFSM	.68	.87	1.19	1.57	1.83	1.06	1.78	1.42	1.14	.92	.65	.49
IN.	.79	.97	1.37	1.81	1.91	1.22	1.98	1.64	1.27	1.06	.75	.55
CAL YR 1968	TOTAL	1,446,750	MEAN	3,953	MAX	13,600	MIN	1,400	CFSM	1.08	IN	14.68
WTR YR 1969	TOTAL	1,508,340	MEAN	4,132	MAX	11,000	MIN	1,330	CFSM	1.13	IN	15.30

4-1780. St. Joseph River near Newville, Ind.

LOCATION.--Lat 41°23'08", long 84°48'06", in SW¼ sec. 18, T. 5 N., R. 1 E., Defiance County, Ohio, on left bank at bridge on Ohio State Highway 249, 3.5 miles northeast of Newville and 6.5 miles northwest of Hicksville, Ohio.

DRAINAGE AREA.--609 sq mi.

PERIOD OF RECORD.--October 1946 to current year. Monthly discharge only for some periods, published in WSP 1307.

GAGE.--Water-stage recorder. Datum of gage is 795.40 ft above mean sea level. Prior to Oct. 22, 1947, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--23 years, 502 cfs (11.19 inches per year).

EXTREMES.--Current year: Maximum discharge, 5,850 cfs Feb. 1 (gage height, 15.54 ft); minimum, 45 cfs Sept. 6, 16 (gage height, 2.28 ft).

Period of record: Maximum discharge, 9,710 cfs Apr. 6, 1950 (gage height, 17.05 ft); minimum, 14 cfs Sept. 9, 10, 14-16, 1964; minimum gage height, 1.45 ft Sept. 30, 1953.

REMARKS.--Records good. Records of chemical analyses for current year at site 0.5 mile downstream (4-1781, St. Joseph River at Indiana-Ohio State Line) are published in Part 2 of this report.

REVISIONS.--WSP 1912: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	Aug	SEP
1	108	82	1,400	2,600	5,740	344	785	984	237	152	329	47
2	100	78	1,340	2,100	5,580	339	738	975	241	142	272	46
3	95	76	1,220	1,700	4,590	338	978	858	246	132	223	47
4	91	75	1,010	1,450	3,600	339	1,110	712	264	130	196	47
5	87	75	806	1,200	2,800	332	1,550	592	285	161	169	47
6	82	76	666	1,000	2,260	321	1,940	510	304	395	150	48
7	80	81	546	900	1,780	310	2,000	452	347	700	131	60
8	80	88	446	800	1,420	300	1,960	429	363	829	116	62
9	81	104	372	680	1,130	290	1,840	441	356	721	107	61
10	83	112	349	550	921	285	1,520	542	370	605	103	68
11	80	111	312	450	787	275	1,140	1,110	414	423	109	63
12	81	106	314	380	676	260	838	1,450	405	327	114	57
13	85	100	366	360	620	250	678	1,550	371	268	97	52
14	86	95	488	330	550	245	582	1,560	350	232	87	49
15	81	116	472	320	489	235	520	1,420	373	209	80	47
16	78	225	426	310	482	230	479	1,070	345	181	76	46
17	76	530	399	330	433	230	456	748	300	153	74	59
18	73	864	360	1,450	395	240	920	690	261	143	84	69
19	71	1,050	330	1,900	373	260	2,100	1,010	235	218	104	78
20	71	979	320	1,800	359	290	2,420	1,060	264	326	108	76
21	71	832	320	1,600	357	315	2,560	1,010	215	328	92	69
22	72	657	320	1,500	350	320	2,600	858	193	408	78	61
23	71	519	434	1,600	348	300	2,420	668	229	300	69	56
24	69	431	549	2,200	352	420	2,050	546	229	243	66	53
25	73	374	551	2,200	364	850	1,640	468	231	455	62	51
26	73	327	500	2,000	369	1,250	1,250	411	227	603	59	52
27	73	288	646	1,300	363	1,390	945	368	205	510	56	53
28	74	414	2,140	1,600	353	1,390	775	330	199	539	53	55
29	78	1,160	2,940	3,700	-----	1,320	752	303	203	627	51	55
30	87	1,390	3,250	4,500	-----	1,170	876	278	175	549	50	56
31	86	-----	3,100	4,800	-----	990	-----	249	-----	423	48	-----
TOTAL	2,496	11,415	26,692	47,610	37,841	15,428	40,422	23,652	8,437	11,432	2,423	1,690
MEAN	80.5	381	861	1,536	1,351	498	1,347	763	281	369	110	56.3
MAX	108	1,390	3,250	4,800	5,740	1,390	2,600	1,560	414	829	326	78
MIN	69	75	312	310	348	230	456	249	175	130	48	46
CFSM	.13	.62	1.41	2.52	2.22	.82	2.21	1.25	.46	.61	.18	.09
IN.	.15	.70	1.63	2.91	2.31	.94	2.47	1.44	.52	.70	.21	.10

CAL YR 1966 TOTAL 209,472
WTR YR 1969 TOTAL 230,538

MEAN 572
MEAN 632

MAX 5,210
MAX 5,740

MIN 66
MIN 46

CFSM .94
CFSM 1.04

IN 12.75
IN 14.08

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., Allen County, on left bank 500 ft upstream from highway bridge, 0.4 mile south of Cedarville, 0.5 mile upstream from mouth of Cedar Creek, and 2,700 ft downstream from Cedarville Dam.

DRAINAGE AREA.--762 sq mi.

PERIOD OF RECORD.--January 1931 to May 1932, October 1955 to current year.

GAGE.--Water-stage recorder. Datum of gage is 757.94 ft above mean sea level. Jan. 1, 1931, to May 31, 1932 nonrecording gage on downstream side of highway bridge 500 ft downstream from present site at datum approximately 20 ft lower.

AVERAGE DISCHARGE.--14 years (1955-69), 591 cfs (10.53 inches per year).

EXTREMES.--Current year: Maximum daily discharge, 6,620 cfs Feb. 2; maximum gage height, 16.64 ft Jan. 31; minimum daily discharge, 60 cfs Aug. 28.

Period of record: Maximum discharge, 10,100 cfs May 1, 1956 (gage height, 18.07 ft, from floodmarks); minimum daily, 1.6 cfs May 22, 27, 1958.

REMARKS.--Records good. Flow regulated by Cedarville Reservoir. Cedar Creek used as factor during periods of high flows.

REVISIONS (WATER YEARS).--WSP 1912: 1956, drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	161	107	1,800	3,200	6,180	410	1,000	1,020	305	265	370	72
2	155	108	1,600	2,600	6,620	365	990	1,050	390	265	320	73
3	246	107	1,420	2,470	6,200	510	1,120	950	277	286	265	71
4	129	103	1,220	1,700	5,200	460	1,250	900	350	371	255	68
5	63	100	1,030	1,400	4,300	380	2,080	750	350	341	204	66
6	106	105	830	1,200	3,740	380	2,570	670	370	282	185	81
7	132	111	750	1,100	2,700	380	2,600	600	370	820	178	106
8	125	105	580	950	1,860	380	2,450	630	420	1,810	161	101
9	121	108	460	850	1,500	380	2,320	730	445	980	148	92
10	123	162	374	700	1,160	380	2,130	710	430	790	126	68
11	122	135	361	600	1,060	355	1,620	1,360	370	6,100	120	71
12	109	144	386	500	900	306	970	1,650	510	470	130	82
13	108	140	400	450	680	195	920	1,750	510	340	138	97
14	115	138	510	420	670	380	720	1,850	600	320	132	85
15	117	263	585	400	600	369	680	1,810	710	231	124	65
16	114	425	410	400	470	234	630	1,560	600	240	118	71
17	110	660	370	600	570	274	590	1,000	410	254	116	213
18	107	1,120	410	2,450	570	290	1,280	950	360	209	105	91
19	102	1,230	430	2,990	500	310	3,000	1,650	320	162	116	85
20	97	1,170	445	2,690	450	350	3,300	1,350	500	370	130	63
21	94	970	430	2,380	460	380	3,450	1,130	445	329	130	79
22	94	830	455	2,250	440	380	3,410	1,080	260	370	123	102
23	93	650	505	2,490	410	350	3,320	850	410	420	95	95
24	94	560	555	3,330	440	500	3,040	730	530	274	56	93
25	98	470	485	3,300	480	1,150	2,320	610	390	266	74	86
26	96	388	475	3,020	460	1,700	1,450	510	279	550	75	81
27	95	406	710	2,000	440	1,850	1,240	460	351	670	118	85
28	95	630	3,930	3,100	440	1,800	1,120	380	294	580	60	87
29	97	1,700	4,100	4,780	-----	1,650	870	290	299	600	69	85
30	99	1,800	4,070	5,540	-----	1,500	850	300	338	630	72	85
31	103	-----	3,800	5,970	-----	1,250	-----	350	-----	540	72	-----
TOTAL	3,520	14,945	33,886	65,830	49,500	19,598	53,290	29,630	12,193	20,085	4,425	2,599
MEAN	114	498	1,093	2,124	1,768	632	1,776	956	406	648	143	86.6
MAX	246	1,800	4,100	5,970	6,620	1,850	3,450	1,850	710	6,100	370	213
MIN	63	100	361	400	410	195	590	290	260	162	60	63
CFSM	.15	.65	1.43	2.79	2.32	.83	2.33	1.25	.53	.85	.15	.11
IN.	.17	.73	1.65	3.21	2.42	.96	2.60	1.45	.60	.98	.22	.13
CAL YR 1968	TOTAL 296,226		MEAN 809		MAX 6,880	MIN 63		CFSM 1.06	IN 14.46			
WTR YR 1969	TOTAL 309,501		MEAN 848		MAX 6,620	MIN 60		CFSM 1.11	IN 15.11			

4-1795. Cedar Creek at Auburn, Ind.

LOCATION.--Lat 41°21'57", long 85°03'08", in NE sec. 32, T. 34 N., R. 13 E., Dekalb County, 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.

PERIOD OF RECORD.--July 1943 to current year.

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, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--26 years, 68.6 cfs (10.67 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,010 cfs Jan. 30 (gage height, 8.66 ft); minimum, 3.5 cfs Sept. 1 (gage height, 0.93 ft).

Period of record: Maximum discharge, 1,520 cfs Apr. 5, 1950 (gage height, 9.90 ft); minimum, 0.5 cfs Nov. 12, 1953; minimum gage height, 0.57 ft Oct. 4, 1964.

REMARKS.--Records good.

REVISIONS (WATER YEARS).--WSP 1337: 1944-45(M), 1947-49, 1950(M). WSP 1912: 1961, drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	6.8	100	297	654	42	71	83	41	56	21	3.5
2	12	6.6	83	236	463	40	120	74	104	44	18	4.2
3	12	6.3	75	164	368	39	137	65	77	38	16	4.4
4	11	6.6	67	125	278	39	116	59	60	37	15	4.4
5	10	6.8	59	108	218	38	332	56	58	36	14	4.4
6	10	7.3	51	82	174	37	278	59	55	31	13	7.7
7	10	8.2	43	69	138	37	190	57	45	65	12	15
8	10	8.0	37	61	117	36	139	103	43	69	11	12
9	10	7.3	34	57	100	34	114	139	58	51	11	8.9
10	10	7.0	30	49	89	34	100	173	52	41	11	7.9
11	9.2	7.3	29	44	83	31	83	423	45	35	10	6.9
12	8.8	7.5	30	40	75	30	73	288	42	30	9.7	6.3
13	8.5	7.3	63	39	67	29	65	201	40	26	9.3	6.0
14	8.5	7.3	72	36	59	27	62	144	41	23	8.9	4.9
15	8.2	15	53	34	55	26	61	110	44	21	8.9	4.9
16	8.0	28	51	34	51	25	59	89	41	19	7.6	6.0
17	7.8	51	39	52	49	26	58	75	36	17	7.6	16
18	7.5	95	34	428	47	27	136	102	33	17	7.6	12
19	7.5	87	43	342	47	31	490	159	34	16	7.6	9.3
20	7.0	62	51	226	43	35	380	117	32	16	6.9	7.6
21	6.6	48	41	187	44	44	267	90	26	16	6.6	6.6
22	5.8	41	45	199	44	38	195	76	26	16	6.3	6.3
23	5.8	35	87	278	43	36	144	67	48	15	5.6	6.3
24	5.8	31	77	374	45	57	113	60	46	15	5.4	6.3
25	6.1	28	67	230	47	210	94	55	40	15	5.4	6.3
26	6.1	26	59	154	46	216	81	50	35	16	5.2	6.0
27	6.1	23	150	107	44	159	73	44	34	36	5.2	6.6
28	6.3	74	708	211	43	147	95	41	97	37	5.2	6.6
29	6.6	224	874	722	-----	122	109	37	75	35	5.2	6.3
30	6.6	137	598	965	-----	95	99	34	68	28	4.4	6.3
31	6.6	-----	408	940	-----	77	-----	31	-----	23	4.0	-----
TOTAL	256.4	1,105.3	4,158	6,890	3,531	1,864	4,334	3,161	1,476	940	284.6	215.9
MEAN	8.27	36.8	134	222	126	60.1	144	102	49.2	30.3	9.18	7.20
MAX	12	224	874	965	654	216	490	423	104	69	21	16
MIN	5.8	6.3	29	34	43	25	58	31	26	15	4.0	3.5
CFSM	.09	.42	1.54	2.55	1.44	.69	1.65	1.17	.56	.35	.11	.08
IN.	.11	.47	1.77	2.94	1.50	.79	1.85	1.35	.63	.40	.12	.09

CAL YR 1968 TOTAL 31,661.7 MEAN 86.5 MAX 1,050 MIN 5.8 CFSM .99 IN 13.49
WTR YR 1969 TOTAL 28,216.2 MEAN 77.3 MAX 965 MIN 3.5 CFSM .89 IN 12.02

PEAK DISCHARGE (BASE, 700 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-29	1100	8.25	902	01-30	2300	8.66	1,010

STREAMS TRIBUTARY TO LAKE ERIE

4-1800, Cedar Creek near Cedarville, Ind.

LOCATION.--Lat 41°13'08", long 85°04'35", in NW 1/4 sec. 19, T. 32 N., R. 13 E., Allen County, on left bank at downstream side of bridge on State Highway 427, 3 miles northwest of Cedarville, 5.8 miles upstream from mouth, and 10 miles south of Auburn.

DRAINAGE AREA.--270 sq mi.

PERIOD OF RECORD.--October 1946 to current year.

GAGE.--Water-stage recorder. Datum of gage is 780.09 ft above mean sea level. Prior to Nov. 4, 1947, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--23 years, 234 cfs (11.77 inches per year).

EXTREMES.--Current year: Maximum discharge, 3,850 cfs Jan. 30 (gage height, 10.25 ft); minimum, 27 cfs Aug. 31, Sept. 1, 2 (gage height, 1.34 ft).

Period of record: 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.--Records good.

REVISIONS (WATER YEARS).--WSP 1912: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	37	269	696	2,650	132	238	268	128	166	72	27
2	42	36	219	530	1,650	126	314	232	246	127	68	28
3	42	36	191	400	1,080	125	437	209	234	181	61	31
4	40	34	173	350	753	124	361	187	183	302	56	31
5	39	35	155	250	606	119	680	172	182	282	54	31
6	39	37	132	220	496	117	876	208	182	181	50	32
7	40	42	113	190	415	117	566	197	153	344	48	45
8	40	46	102	175	358	114	427	316	142	497	47	56
9	37	43	89	160	314	113	353	493	172	255	46	40
10	41	42	87	150	272	109	319	536	158	208	48	35
11	39	39	80	140	258	101	274	1,320	136	163	43	32
12	38	40	82	130	231	95	235	1,020	124	135	43	30
13	37	39	101	120	207	95	211	626	143	114	42	30
14	35	39	152	110	188	93	195	457	183	98	41	30
15	37	60	130	105	175	88	193	361	218	89	39	30
16	36	118	115	100	165	87	194	294	189	81	35	34
17	36	169	98	110	156	88	185	247	146	74	37	56
18	36	234	89	1,120	148	94	417	314	124	71	36	60
19	37	250	96	1,250	140	100	1,390	524	114	73	36	41
20	36	179	126	642	135	109	1,510	400	140	83	35	35
21	34	137	111	489	135	123	841	308	112	85	34	33
22	36	114	106	458	135	121	582	255	99	72	33	32
23	37	99	193	581	135	115	450	225	184	66	32	32
24	37	89	207	859	139	155	365	202	213	62	31	32
25	37	79	190	595	148	619	308	180	164	61	30	32
26	38	74	180	430	142	741	264	162	137	59	31	32
27	36	72	250	365	139	547	231	151	115	141	31	33
28	34	114	1,570	546	135	499	293	142	199	133	30	36
29	37	471	2,520	2,320	-----	439	375	133	204	106	30	31
30	37	388	2,150	3,610	-----	347	318	124	176	88	30	32
31	36	-----	1,260	3,610	-----	270	-----	117	-----	77	25	-----
TOTAL	1,168	3,192	11,336	20,811	11,505	6,122	13,402	10,380	4,900	4,514	1,282	1,059
MEAN	37.7	106	366	671	411	197	447	335	163	146	41.4	35.3
MAX	42	471	2,520	3,610	2,650	741	1,510	1,320	246	497	72	60
MIN	34	34	80	100	135	87	185	117	99	59	29	27
CFSM	.14	.39	1.35	2.49	1.52	.73	1.65	1.24	.60	.54	.15	.13
IN.	.16	.44	1.56	2.87	1.58	.84	1.85	1.43	.67	.62	.18	.15

CAL YR 1968 TOTAL 98,619 MEAN 269 MAX 3,730 MIN 34 CFSM 1.00 IN 13.58
WTR YR 1969 TOTAL 89,671 MEAN 246 MAX 3,610 MIN 27 CFSM .91 IN 12.35

PEAK DISCHARGE (BASE, 2,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-29	1415	8.13	2,640	01-30	2230	10.25	3,850

4-1815. St. Marys River at Decatur, Ind.

LOCATION.--Lat 40°50'55", long 84°56'16", in SW $\frac{1}{4}$ sec. 27, T. 28 N., R. 14 E., Adams County, on right bank 10 ft downstream from bridge on U.S. Highway 27, 0.5 mile upstream from Holthouse ditch, and 1.3 miles north of Decatur.

DRAINAGE AREA.--621 sq mi.

PERIOD OF RECORD.--October 1946 to current year. Monthly discharge only for some periods, published in WSP 1307. Gage-height records collected at site 0.5 mile upstream January 1932 to November 1954, and at present site thereafter are contained in reports of U.S. Weather Bureau.

GAGE.--Water-stage recorder. Datum of gage is 760.44 ft above mean sea level. Prior to July 27, 1948, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--23 years, 480 cfs (10.50 inches per year).

EXTREMES.--Current year: Maximum discharge, 4,790 cfs Jan. 31 (gage height, 20.46 ft); minimum, 13 cfs Oct. 22 (gage height, 1.98 ft).

Period of record: Maximum discharge, 11,300 cfs Feb. 10, 11, 1959; maximum gage height, 24.22 ft Feb. 10, 1959 (ice jam); minimum discharge, 4.7 cfs Oct. 19, 1960; minimum gage height, 1.73 ft Sept. 12, 1955.

REMARKS.--Records good. Flow regulated by Grand Lake Reservoir. Slight diversion from or into Wabash River basin and into Miami and Erie Canal.

REVISIONS (WATER YEARS).--WSP 1174: 1948. WSP 1337: 1947. WSP 1627: 1950. WSP 1912: 1955, drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	24	427	1,300	4,590	230	479	168	117	250	34	16
2	28	24	574	1,100	4,240	203	439	150	121	151	32	17
3	29	22	636	900	3,620	187	375	138	154	178	30	18
4	31	21	572	750	3,000	173	319	126	156	342	29	17
5	26	22	504	600	2,100	159	1,660	115	139	178	28	18
6	25	25	417	500	1,250	150	2,580	107	122	441	27	25
7	23	33	362	400	900	154	1,540	99	99	749	26	24
8	24	43	335	300	700	152	893	115	209	785	24	35
9	24	57	305	220	540	161	791	143	271	541	25	26
10	25	51	258	180	430	180	818	182	157	498	25	22
11	22	59	177	140	350	176	739	483	113	481	30	23
12	22	68	164	110	300	163	591	410	92	410	25	25
13	21	64	150	90	260	164	453	367	397	252	23	27
14	21	58	130	85	230	153	351	353	432	184	23	27
15	20	61	101	85	200	133	279	327	632	127	24	24
16	19	215	114	85	180	122	237	275	1,110	95	28	50
17	18	606	106	130	170	114	208	215	500	77	28	227
18	18	581	92	2,800	160	110	1,480	384	329	63	26	661
19	16	603	95	3,180	150	114	2,910	1,140	269	54	25	461
20	15	516	103	2,780	140	132	2,560	1,140	206	80	24	432
21	14	500	90	2,180	140	151	1,660	1,250	152	80	23	477
22	14	504	108	2,180	140	138	1,500	1,890	121	97	22	445
23	14	462	345	2,300	160	131	1,370	2,040	626	119	22	328
24	16	380	250	2,490	180	275	1,060	1,640	1,020	106	20	314
25	22	290	210	1,500	200	1,120	779	1,130	688	72	20	339
26	23	212	339	900	225	1,100	577	781	687	69	21	205
27	23	161	578	800	236	841	436	530	715	56	20	228
28	21	229	2,590	964	237	775	337	357	740	50	19	273
29	21	716	3,090	2,850	-----	727	255	235	607	45	18	250
30	23	542	2,420	4,110	-----	646	199	167	413	41	18	189
31	25	-----	1,590	4,740	-----	554	-----	135	-----	38	17	-----
TOTAL	669	7,149	17,232	40,749	25,028	9,588	27,875	16,592	11,394	6,749	756	5,223
MEAN	21.6	238	556	1,314	894	309	929	535	380	218	24.4	174
MAX	31	716	3,090	4,740	4,590	1,120	2,910	2,040	1,110	785	34	661
MIN	14	21	90	85	140	110	199	99	92	38	17	16
CFSM	.03	.38	.90	2.12	1.44	.50	1.50	.86	.61	.35	.04	.28
IN.	.04	.43	1.03	2.44	1.50	.57	1.67	.99	.68	.40	.05	.31
CAL YR 1968	TOTAL 162,612	MEAN 444	MAX 5,840	MIN 14	CFSM .72	IN 9.74						
WTR YR 1969	TOTAL 169,004	MEAN 463	MAX 4,740	MIN 14	CFSM .75	IN 10.12						

PEAK DISCHARGE (BASE, 2,900 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-29	0200	17.48	3,200	01-31	0630	20.46	4,790
01-19	0430	17.56	3,230	04-19	1445	16.79	3,000

STREAMS TRIBUTARY TO LAKE ERIE

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., Allen County, 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.

PERIOD OF RECORD.--October 1930 to current year. Monthly discharge only for some periods, published in WSP 1307. Fragmentary gage-height records for period November 1924 to October 1927 are available in the District office.

GAGE.--Water-stage recorder. Datum of gage is 748.97 ft above mean sea level (levels by Indiana Flood Control and Water Resources Commission). Prior to Apr. 13, 1939, nonrecording gage on highway bridge at same datum.

AVERAGE DISCHARGE.--39 years, 548 cfs (9.77 inches per year).

EXTREMES.--Current year: Maximum discharge, 6,340 cfs Jan. 31 (gage height, 14.12 ft); minimum, 16 cfs Oct. 24, 25; minimum gage height, 0.76 ft Oct. 24.

Period of record: Maximum discharge, 13,600 cfs Feb. 11, 1959; maximum gage height, 19.42 ft Feb. 11, 1959 (ice jam); minimum observed, 3.4 cfs Oct. 19, 1934 (gage height, 0.28 ft).

REMARKS.--Records good. The flow is sometimes regulated by Grand Lake. There is slight diversion from or into Wabash River basin and into Miami and Erie Canal.

REVISIONS (WATER YEARS).--WSP 974: 1942. WSP 1337: 1933, 1947. WSP 1912: 1954, 1955, 1960, drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	25	523	1,810	5,960	249	521	206	176	334	46	19
2	31	25	558	1,600	5,440	240	469	179	150	214	42	18
3	30	25	736	1,300	4,870	218	419	163	142	173	29	17
4	35	24	681	1,100	4,060	199	356	150	168	304	37	18
5	36	23	598	900	2,750	186	1,470	136	174	306	26	19
6	34	23	508	700	1,620	173	3,390	126	161	305	34	22
7	31	28	414	500	1,170	173	2,480	118	131	839	32	30
8	29	32	374	350	932	177	1,200	135	338	924	21	30
9	29	42	349	270	744	179	901	161	408	659	30	35
10	31	53	310	210	564	195	876	235	262	517	31	34
11	30	49	270	180	445	206	827	540	172	497	31	27
12	28	55	244	155	391	191	668	557	128	454	32	26
13	28	64	187	140	330	188	513	428	157	361	20	27
14	27	61	162	130	300	181	398	389	994	255	27	29
15	26	61	138	125	260	165	322	363	999	173	27	30
16	25	81	125	125	230	146	271	322	1,570	126	29	31
17	25	451	143	370	210	137	241	269	1,300	100	30	77
18	24	650	120	3,550	190	131	1,460	312	700	83	32	482
19	23	678	112	4,440	180	131	3,720	1,400	450	73	30	562
20	21	603	120	4,170	165	151	3,690	1,430	280	87	27	414
21	20	541	121	3,340	158	185	2,470	1,260	220	113	26	443
22	19	541	112	2,790	154	188	1,740	1,850	180	106	25	459
23	18	522	261	3,000	165	166	1,610	2,300	400	108	24	386
24	17	449	412	3,200	177	244	1,280	2,070	800	126	24	301
25	17	354	274	2,000	194	1,450	951	1,430	1,250	108	22	338
26	19	262	230	1,300	222	1,590	693	969	742	87	21	275
27	24	193	532	1,100	244	1,150	517	656	722	151	20	203
28	25	181	2,980	2,350	253	970	403	443	778	76	21	246
29	24	576	3,810	4,320	-----	873	316	305	701	63	20	266
30	22	783	3,290	5,510	-----	744	249	218	512	56	20	226
31	23	-----	2,120	6,260	-----	620	-----	174	-----	50	19	-----
TOTAL	800	7,555	20,814	57,295	32,378	11,796	34,421	19,294	15,165	7,828	855	5,090
MEAN	25.8	252	671	1,849	1,156	381	1,147	622	506	253	28.9	170
MAX	36	783	3,810	6,260	5,960	1,590	3,720	2,300	1,570	924	46	562
MIN	17	23	112	125	154	131	241	118	128	50	19	17
CFSM	.03	.33	.88	2.43	1.52	.50	1.51	.82	.66	.33	.04	.22
IN.	.04	.37	1.02	2.80	1.58	.58	1.68	.94	.74	.38	.04	.25

CAL YR 1968 TOTAL 215,866 MEAN 590 MAX 7,490 MIN 17 CFSM .77 IN 10.54
WTR YR 1969 TOTAL 213,331 MEAN 584 MAX 6,260 MIN 17 CFSM .77 IN 10.41

PEAK DISCHARGE (BASE, 4,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-19	0945	11.69	4,460	01-31	1045	14.12	6,340

4-1825.9. Harbor 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., Allen County, at Ft. Wayne city limits, on left bank 50 ft upstream from bridge on State Highway 3, 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.

PERIOD OF RECORD.--May 1964 to current year. 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.

AVERAGE DISCHARGE.--5 years, 17.9 cfs (11.10 inches per year).

EXTREMES.--Current year: Maximum discharge, 628 cfs Jan. 29 (gage height, 10.70 ft); minimum daily, 0.20 cfs Oct. 13.

Period of record: Maximum discharge, 718 cfs May 16, 1968 (gage height, 11.30 ft); minimum, 0.1 cfs several days in September and November 1964; minimum gage height, 1.59 ft Nov. 1, 1964.

REMARKS.--Records good above 50 cfs and fair below, except those for period of no gage-height record, which are poor.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.41	.67	6.7	25	105	4.6	13	5.3	21	2.7	.80	.23
2	1.5	.53	7.6	18	51	4.1	16	4.8	14	2.0	.67	.24
3	.82	.41	7.0	14	30	4.6	14	4.3	7.9	4.6	.58	.24
4	.31	.41	5.1	10	22	4.6	15	3.6	5.8	3.8	.51	.25
5	.36	.53	4.1	8.0	16	4.1	141	3.6	10	19	.48	.26
6	.36	.82	2.5	6.2	13	4.1	96	3.6	8.2	28	.46	.28
7	.41	3.1	1.4	5.0	10	3.8	40	3.3	6.1	44	.43	.31
8	.36	1.7	.90	4.0	8.6	3.8	25	13	114	15	.41	.50
9	.53	.82	.74	3.2	7.2	5.6	19	14	35	8.5	.39	.32
10	1.3	.41	.82	2.6	6.3	5.1	16	38	16	6.1	.60	.30
11	.36	.36	.53	2.2	5.6	4.6	11	51	11	4.8	.40	.28
12	.31	.47	.82	1.9	5.1	5.6	9.4	24	28	3.8	.36	.27
13	.20	.41	1.4	1.6	4.6	4.1	8.5	16	69	2.9	.33	.25
14	.22	.41	.82	1.4	4.1	2.3	7.9	13	243	2.0	.31	.25
15	.60	6.7	.47	1.2	3.8	1.8	8.5	10	213	2.0	.30	.25
16	.74	12	.36	13	4.1	1.4	7.0	8.5	84	1.7	.30	11
17	.67	3.1	.53	104	3.8	1.6	8.5	8.8	30	1.3	.29	14
18	1.1	5.1	.74	334	3.1	1.8	138	106	17	1.0	.28	3.6
19	.47	2.3	3.3	73	3.1	2.3	174	154	11	1.3	.28	1.4
20	.31	1.3	1.0	27	2.9	4.6	63	46	8.2	20	.28	1.0
21	.31	.82	.67	19	3.8	5.8	34	22	6.4	10	.27	.74
22	.47	.82	7.1	20	4.6	4.1	23	16	11	3.0	.27	.90
23	.60	.53	14	45	4.6	4.6	17	11	32	2.0	.26	1.6
24	.53	.47	26	103	4.6	4.8	14	9.1	14	1.6	.24	2.5
25	.67	.53	5.1	30	4.8	134	12	7.3	9.1	1.2	.22	1.0
26	.53	.47	4.6	24	5.1	66	10	5.8	7.0	.92	.24	.67
27	.47	.36	71	18	5.1	38	8.2	5.3	6.4	6.0	.27	2.7
28	.41	22	328	271	4.6	33	9.4	4.8	4.6	4.0	.27	.90
29	.82	25	123	536	-----	23	7.0	4.6	3.3	2.0	.26	.67
30	.41	10	48	541	-----	17	5.8	4.1	4.1	1.4	.25	.60
31	.41	-----	26	228	-----	14	-----	11	-----	1.0	.24	-----
TOTAL	16.67	102.55	700.30	2,490.3	346.5	462.0	971.2	631.8	1,050.1	207.62	11.25	47.51
MEAN	.55	3.42	22.6	80.3	12.4	14.9	32.4	20.4	35.0	6.70	.36	1.58
MAX	1.5	25	328	541	105	134	174	154	243	44	.80	14
MIN	.20	.36	.36	1.2	2.9	1.4	5.8	3.3	3.3	.92	.22	.23
CFSM	.02	.16	1.03	3.67	.57	.68	1.48	.93	1.60	.31	.02	.07
IN.	.93	.17	1.19	4.23	.59	.78	1.65	1.07	1.78	.35	.02	.08

CAL YR 1968 TOTAL 6,729.12 MEAN 18.4 MAX 468 MIN .20 CFSM .84 IN 11.43
WTR YR 1969 TOTAL 7,038.10 MEAN 19.3 MAX 541 MIN .20 CFSM .88 IN 11.95

PEAK DISCHARGE (BASE, 250 CFS)

NOTE.--No gage-height record July 19 to Sept. 16

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
12-28	1000	8.57	386	05-18	2200	6.92	269
01-18	0600	9.14	434	06-14	1400	9.15	435
01-29	0300	10.70	628				

STREAMS TRIBUTARY TO LAKE ERIE

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., Allen County, on left bank 600 ft upstream from bridge on Landin Road, 1400 ft upstream from the Wabash Railroad bridge, 0.8 mile north of New Haven, 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.

PERIOD OF RECORD.--December 1946 to September 1956 (high-water records only), October 1956 to current year.

GAGE.--Water-stage recorder. Datum of gage is 724.51 ft above mean sea level. Prior to Sept. 7, 1956, nonrecording gage and Sept. 7, 1956, to Sept. 14, 1965, water-stage recorder at site 500 ft downstream at same datum.

AVERAGE DISCHARGE.--13 years (1956-69), 1,494 cfs (10.32 inches per year).

EXTREMES.--Current year: Maximum discharge, 18,700 cfs Jan. 31 (gage height, 21.26 ft); minimum, 109 cfs Sept. 1, 2 (gage height, 2.57 ft).

Period of record: Maximum discharge, 19,100 cfs Feb. 16, 1950 (gage height, 21.4 ft at site then in use); minimum daily discharge, 48 cfs Oct. 6, 13, 1963.

REMARKS.--Records good. Flow regulated by hydro-powerplant on the St. Joseph River 10.3 miles upstream from station. Flow slightly regulated by upstream reservoirs.

REVISIONS.--WSP 1912: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	266	172	2,750	5,500	16,800	947	1,940	1,560	906	988	645	120
2	269	218	2,700	4,800	15,300	835	2,060	1,530	867	636	573	144
3	401	195	2,550	4,700	13,900	867	2,140	1,430	686	1,340	460	133
4	315	185	2,390	4,000	12,700	975	2,130	1,300	730	1,280	352	125
5	179	182	2,170	3,300	9,770	814	3,930	1,160	867	1,430	368	161
6	183	216	1,770	3,150	7,090	780	7,780	1,050	784	929	320	328
7	219	540	1,430	2,690	5,060	770	7,070	1,010	746	3,470	300	324
8	251	216	1,190	2,080	3,790	779	4,840	1,040	1,120	3,700	304	291
9	209	221	1,050	1,660	3,020	786	3,780	1,360	1,240	2,680	251	213
10	273	237	916	1,410	2,340	779	3,420	1,630	1,010	1,830	318	198
11	194	279	731	991	1,950	782	2,960	3,620	768	1,500	209	141
12	231	234	756	900	1,650	693	2,340	4,120	894	1,270	222	169
13	171	265	773	800	1,460	635	1,760	3,110	1,500	1,040	255	181
14	214	273	795	730	1,300	495	1,530	2,840	2,660	767	227	183
15	188	491	730	700	1,170	784	1,270	2,580	3,640	671	223	154
16	209	946	670	700	1,060	598	1,190	2,220	3,190	446	222	198
17	215	1,230	640	1,230	964	509	1,080	1,750	2,090	516	217	868
18	180	1,510	640	5,890	950	567	3,230	2,230	1,220	421	210	595
19	177	2,400	660	7,470	900	561	9,000	4,800	1,000	408	183	788
20	164	2,250	680	6,910	860	589	10,000	3,940	916	897	222	589
21	154	1,950	710	5,910	840	648	8,300	3,100	1,020	731	210	546
22	178	1,700	853	5,110	820	717	6,530	3,190	721	598	219	632
23	176	1,480	1,050	5,590	821	720	5,850	3,780	963	718	189	578
24	167	1,290	1,140	8,160	837	1,280	5,220	3,520	1,970	616	132	542
25	206	1,080	955	6,800	954	4,330	3,990	2,580	1,780	443	202	467
26	166	850	950	5,200	983	5,460	2,900	1,890	1,250	970	147	488
27	180	760	1,850	4,240	945	4,380	2,220	1,320	1,310	2,400	122	413
28	171	1,370	8,760	5,720	957	3,810	2,060	1,120	1,310	1,120	167	374
29	202	2,490	11,300	12,300	-----	3,430	1,810	840	1,350	870	127	409
30	179	3,150	11,000	16,400	-----	2,940	1,310	702	1,160	930	120	399
31	216	-----	9,640	17,600	-----	2,480	-----	779	-----	829	148	-----
TOTAL	6,543	28,780	74,199	152,641	109,191	44,740	113,640	67,101	39,668	36,444	7,914	10,751
MEAN	211	959	2,394	4,924	3,900	1,443	3,788	2,165	1,322	1,176	255	358
MAX	401	3,150	11,300	17,600	16,800	5,460	10,000	4,800	3,640	3,700	645	868
MIN	164	172	640	700	820	495	1,080	702	686	408	120	120
CFSM	.11	.49	1.22	2.50	1.98	.73	1.93	1.10	.67	.60	.13	.18
IN.	.12	.54	1.40	2.89	2.07	.85	2.15	1.27	.75	.69	.15	.20

CAL YR 1968 TOTAL 693,043 MEAN 1,894 MAX 17,300 MIN 164 CFSM .96 IN 13.11
WTR YR 1969 TOTAL 691,612 MEAN 1,895 MAX 17,600 MIN 120 CFSM .96 IN 13.08

PEAK DISCHARGE (BASE, 9,500 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
12-29	1530	16.88	11,500	04-20	0745	15.71	10,200
01-31	0645	21.26	18,700				

4-1835, Maumee River at Antwerp, Ohio

LOCATION.--Lat 41°11'56", long 84°44'40", in sec. 22, T. 3 N., R. 1 E., Paulding County, on left bank 425 ft downstream from bridge on State Highway 49, 1 mile north of Antwerp, 7 miles downstream from Indiana State line, and 10 miles upstream from Marie DeLarme Creek.

DRAINAGE AREA.--2,128 sq mi.

PERIOD OF RECORD.--September 1921 to December 1935, April 1939 to current year.

GAGE.--Water-stage recorder. Datum of gage is 694.90 ft above mean sea level. Prior to Sept. 13, 1925, nonrecording gage at site 400 ft upstream at same datum.

AVERAGE DISCHARGE.--44 years, 1,650 cfs (10.53 inches per year).

EXTREMES.--Current year: Maximum discharge, 18,800 cfs Jan. 31 (gage height, 18.46 ft); minimum, 102 cfs Sept. 3 (gage height, 0.82 ft).

Period of record: Maximum discharge, 26,200 cfs May 20, 1943 (gage height, 20.29 ft); minimum, 24 cfs Oct. 17, 1930, June 21, 22, 1933 (gage height, 0.32 ft).

Flood of Mar. 27, 1913, estimated as 40,000 cfs.

REMARKS.--Records good. Low flow slightly regulated by powerplant at Fort Wayne, Indiana 32 miles upstream. Flow slightly regulated by upstream reservoirs.

REVISIONS (WATER YEARS).--WSP 1174: 1927, 1933, 1940. WSP 1387: 1922-23, 1925-27, 1934. WRD Ohio 1965: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	254	209	3,070	7,710	17,900	929	2,170	1,480	863	1,070	730	116
2	268	197	2,800	5,550	16,600	904	2,000	1,580	938	865	574	126
3	291	206	2,610	5,000	15,200	799	2,200	1,540	894	700	508	112
4	398	202	2,560	4,300	13,800	900	2,200	1,380	696	1,310	399	136
5	326	198	2,270	3,800	11,300	897	2,750	1,340	828	1,500	350	117
6	212	178	1,930	3,300	7,950	784	6,680	1,090	883	1,220	327	170
7	174	254	1,620	3,000	5,610	772	7,320	1,090	816	1,780	283	361
8	230	514	1,380	2,400	4,070	769	5,700	1,050	808	3,960	260	374
9	244	259	1,150	1,800	3,050	788	4,130	1,210	1,300	3,260	263	279
10	227	238	1,060	1,300	2,500	782	3,560	1,440	1,210	2,020	240	205
11	266	252	957	1,100	2,040	782	3,200	3,220	1,010	1,590	268	182
12	214	289	801	1,000	1,890	758	2,550	4,180	772	1,370	189	147
13	223	244	849	950	1,620	683	1,990	3,530	1,310	1,140	199	140
14	197	271	850	900	1,330	597	1,760	2,850	1,570	900	219	163
15	202	317	800	850	1,250	588	1,420	2,610	4,520	750	204	158
16	206	955	800	900	1,190	734	1,340	2,360	3,970	561	199	147
17	207	1,470	750	3,000	962	579	1,230	2,000	2,760	452	191	287
18	212	1,850	760	5,730	1,030	530	2,270	1,770	1,650	476	189	923
19	199	2,520	759	9,370	1,060	577	8,470	4,950	1,130	410	184	647
20	192	2,340	838	7,960	951	625	10,400	4,550	980	460	169	744
21	176	2,130	783	6,880	873	693	9,400	3,410	1,020	950	201	549
22	176	1,830	802	5,570	859	741	7,000	3,060	890	633	197	523
23	186	1,650	1,100	5,430	856	779	5,850	3,400	835	592	205	592
24	194	1,440	1,000	7,670	818	910	5,330	3,530	1,250	651	182	563
25	187	1,270	1,000	8,530	848	3,960	4,430	2,930	1,950	520	148	510
26	208	1,090	1,080	7,240	961	5,950	3,330	2,190	1,410	436	164	433
27	195	904	1,360	7,080	937	5,080	2,490	1,630	1,210	1,790	162	455
28	177	988	7,730	7,060	924	4,160	2,110	1,290	1,280	1,500	117	402
29	186	3,140	11,900	11,500	-----	3,640	1,960	1,020	1,240	960	150	359
30	206	3,430	11,700	16,800	-----	3,090	1,600	886	1,230	845	122	387
31	179	-----	10,400	18,600	-----	2,620	-----	735	-----	845	114	-----
TOTAL	6,812	30,835	77,469	172,280	118,379	46,400	116,840	69,301	41,223	35,516	7,707	10,307
MEAN	220	1,028	2,499	5,557	4,228	1,497	3,895	2,236	1,374	1,146	249	344
MAX	398	3,430	11,900	18,600	17,900	5,950	10,400	4,950	4,520	3,960	730	923
MIN	174	178	750	850	818	530	1,230	735	696	410	114	112
CFSM	.10	.48	1.17	2.61	1.99	.70	1.83	1.05	.65	.54	.12	.16
IN.	.12	.54	1.35	3.01	2.07	.81	2.04	1.21	.72	.62	.13	.18

CAL YR 1968 TOTAL 726,722 MEAN 1,986 MAX 17,300 MIN 174 CFSM .93 IN 12.70
WTR YR 1969 TOTAL 733,069 MEAN 2,008 MAX 18,600 MIN 112 CFSM .94 IN 12.81

ILLINOIS RIVER BASIN

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.

PERIOD OF RECORD.--January 1951 to current year.

GAGE.--Water-stage recorder. Datum of gage is 680.04 ft above mean sea level (levels by Indiana Flood Control and Water Resources Commission). Prior to June 26, 1956, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--18 years, 144 cfs (12.87 inches per year).

EXTREMES.--Current year: Maximum discharge, 486 cfs Jan. 30 (gage height, 7.73 ft); minimum, 68 cfs Sept. 16 (gage height, 2.66 ft).
Period of record: 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.--Records good except those for winter periods or no gage-height record, which are poor.

REVISIONS (WATER YEARS).--WSP 1338: Drainage area. WSP 1915: 1952, 1956-59.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	116	116	209	240	394	161	185	187	150	130	130	78
2	117	114	198	210	345	159	209	179	170	116	126	79
3	116	113	204	190	312	157	221	174	160	123	121	79
4	114	113	202	180	277	155	221	169	150	135	115	78
5	113	113	191	170	254	154	305	166	170	128	113	84
6	113	114	178	160	239	154	279	164	165	122	106	86
7	113	117	167	155	224	152	251	159	160	138	117	91
8	111	119	160	150	215	151	228	194	175	139	104	88
9	112	122	155	150	207	149	266	216	190	129	101	88
10	114	123	152	150	200	149	353	221	180	118	104	86
11	113	124	149	150	196	148	307	266	170	114	96	85
12	113	139	156	145	192	146	267	245	160	124	92	84
13	112	157	166	149	185	145	241	219	150	121	96	83
14	113	154	160	147	180	144	226	201	140	116	101	82
15	115	194	152	147	176	143	217	188	135	109	100	77
16	116	222	149	149	173	142	208	178	130	105	97	72
17	118	215	146	157	170	142	211	171	125	119	102	82
18	121	220	144	216	167	143	281	176	120	131	99	81
19	120	217	168	236	166	142	362	183	120	123	95	82
20	119	197	202	224	164	144	335	177	120	124	84	85
21	117	184	187	231	165	144	294	169	115	112	81	83
22	119	179	187	262	168	142	261	165	115	113	81	80
23	118	171	220	302	169	141	240	161	120	110	79	82
24	118	163	205	309	168	156	224	157	125	111	74	82
25	117	156	188	271	169	222	208	153	120	107	75	81
26	117	152	180	228	168	238	196	150	120	108	79	83
27	117	147	200	208	165	220	191	146	115	173	77	88
28	117	176	361	211	163	220	202	144	110	169	76	90
29	117	256	377	306	-----	228	204	134	110	152	76	87
30	116	232	316	461	-----	208	194	123	120	138	76	87
31	116	-----	273	447	-----	192	-----	125	-----	134	81	-----
TOTAL	3,588	4,819	6,102	6,711	5,771	5,091	7,387	5,460	4,210	3,891	2,949	2,493
MEAN	116	161	197	216	206	164	246	176	140	126	95.1	83.1
MAX	121	256	377	461	394	238	362	266	190	173	130	91
MIN	111	113	144	145	163	141	185	123	110	105	74	72
CFSM	.76	1.06	1.29	1.42	1.36	1.08	1.62	1.16	.92	.83	.63	.55
IN.	.88	1.18	1.49	1.64	1.41	1.25	1.81	1.34	1.03	.95	.72	.61

CAL YR 1968 TOTAL 61,447 MEAN 168 MAX 625 MIN 83 CFSM 1.10 IN 15.03
WTR YR 1969 TOTAL 58,472 MEAN 160 MAX 461 MIN 72 CFSM 1.05 IN 14.31

NOTE.--No gage-height record May 31 to July 1.

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., Starke County, on left bank at downstream side of bridge on U.S. Highway 30 at Davis, 0.5 mile downstream from Mill Creek, and 4 miles east of Hanna.

DRAINAGE AREA.--508 sq mi.

PERIOD OF RECORD.--July 1905 to July 1906 and October 1924 to current year. Monthly discharge only for some periods, published in WSP 1308.

GAGE.--Water-stage recorder. Datum of gage is 664.68 ft above mean sea level. July 13, 1905, to July 21, 1906, nonrecording gage at site 50 ft downstream at different datum. July 28, 1925, to May 18, 1929, nonrecording gage on bridge 0.5 mile downstream at different datum. Apr. 19, 1931, to Nov. 3, 1953, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--45 years (1924-69), 482 cfs (12.88 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,240 cfs Jan. 31, Feb. 1 (gage height, 11.25 ft); minimum, 266 cfs Sept. 4, (gage height, 5.63 ft).

Period of record: Maximum discharge observed, about 1,700 cfs Dec. 15, 1927 (gage height, 9.50 ft, site and datum then in use), from rating curve extended above 520 cfs; maximum gage height at present site and datum, 11.76 ft Oct. 16-18, 1954; minimum discharge observed, 154 cfs Aug. 30 to Sept. 3, 1941; minimum gage height observed, 2.97 ft Aug. 14, 1934.

REMARKS.--Records good except those for winter periods, which are fair.

REVISIONS (WATER YEARS).--WSP 1338: 1953, drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	377	361	731	940	1,240	584	691	757	496	453	477	279
2	373	358	678	840	1,230	574	700	711	595	431	457	277
3	373	354	656	760	1,220	570	746	668	644	419	433	276
4	366	353	640	700	1,180	565	753	630	593	427	415	268
5	361	352	613	640	1,140	552	834	604	589	436	398	270
6	360	355	576	600	1,090	548	902	591	646	420	386	281
7	360	366	545	560	1,030	548	889	578	632	456	374	286
8	359	376	520	530	981	539	843	618	624	568	373	284
9	356	376	503	520	933	532	838	759	702	551	365	288
10	365	376	490	500	885	520	995	834	728	504	369	287
11	365	376	482	490	843	510	1,050	955	668	473	358	278
12	361	386	492	480	801	497	1,030	999	606	532	349	278
13	354	410	516	470	761	492	970	957	557	517	343	275
14	352	422	516	470	722	484	913	885	527	467	340	272
15	352	461	500	523	691	482	867	814	514	443	341	270
16	351	552	488	506	664	482	825	748	499	421	337	271
17	351	593	478	510	646	479	792	684	483	407	346	281
18	364	615	470	595	628	491	893	664	470	432	346	279
19	365	634	493	735	615	492	1,070	724	465	445	337	274
20	362	613	570	757	606	484	1,140	733	456	439	327	274
21	359	570	598	757	604	483	1,140	700	444	424	314	272
22	360	539	591	803	607	475	1,110	660	439	406	308	270
23	360	518	632	882	611	470	1,060	628	462	394	305	270
24	360	500	662	937	609	510	999	600	466	394	298	283
25	372	483	630	893	609	672	937	570	461	403	290	281
26	373	469	598	909	602	797	882	548	452	397	288	278
27	366	457	597	799	597	808	827	532	431	447	293	280
28	365	484	805	746	591	799	819	520	418	511	289	285
29	370	699	1,030	904	-----	810	827	507	408	495	285	282
30	365	775	1,080	1,140	-----	783	799	491	426	464	284	281
31	363	-----	1,060	1,230	-----	731	-----	477	-----	474	281	-----
TOTAL	11,240	14,173	15,240	22,126	22,736	17,763	27,141	21,146	15,906	14,049	10,706	8,330
MEAN	363	472	621	714	812	573	905	682	530	453	345	278
MAX	377	775	1,080	1,230	1,240	810	1,140	999	728	568	477	288
MIN	351	352	470	470	591	470	691	477	408	394	281	268
CFSM	.71	.93	1.22	1.41	1.60	1.13	1.78	1.34	1.04	.89	.68	.55
IN.	.82	1.04	1.41	1.62	1.66	1.30	1.99	1.55	1.16	1.03	.78	.61
CAL YR 1968	TOTAL 201,408		MEAN 550		MAX 1,260		MIN 300		CFSM 1.08		IN 14.74	
WTR YR 1969	TOTAL 204,556		MEAN 560		MAX 1,240		MIN 268		CFSM 1.10		IN 14.98	

ILLINOIS RIVER BASIN

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., Marshall County, 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.

PERIOD OF RECORD.--August 1955 to current year.

GAGE.--Water-stage recorder. Datum of gage is 784.63 ft above mean sea level (levels by Indiana Flood Control and Water Resources Commission).

AVERAGE DISCHARGE.--14 years, 97.8 cfs (10.06 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,090 cfs Jan. 31 (gage height, 12.70 ft); minimum, 9.8 cfs Nov. 5; minimum gage height, 1.36 ft Sept. 14, 15, 22, 27.

Period of record: 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.--Records fair except those for winter periods, which are poor.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

CAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	11	226	336	955	83	109	111	41	28	45	13
2	16	11	175	224	668	77	182	96	158	22	38	13
3	15	11	178	154	457	74	214	84	96	19	35	12
4	14	11	153	122	315	71	180	75	66	19	31	12
5	12	10	126	102	232	65	393	69	255	19	29	12
6	12	11	98	91	187	65	324	63	203	18	26	17
7	12	13	81	81	152	64	203	59	105	179	24	17
8	11	16	69	74	134	60	155	95	96	398	22	15
9	11	18	62	70	118	59	276	137	162	170	21	13
10	13	16	58	65	106	55	536	177	118	98	20	12
11	13	16	55	60	102	51	331	459	86	71	20	12
12	13	16	59	55	92	48	217	283	69	57	20	12
13	11	17	74	49	84	46	167	180	63	46	19	11
14	12	17	75	47	76	44	138	133	52	39	18	11
15	11	99	63	46	72	41	129	106	48	33	17	11
16	11	181	59	49	71	40	122	90	41	29	17	12
17	12	192	53	63	66	41	115	79	36	33	22	14
18	29	234	50	431	62	43	379	84	33	138	19	12
19	40	220	112	455	65	45	787	119	31	81	17	11
20	29	146	195	265	66	48	682	100	28	69	16	11
21	22	111	121	294	77	50	401	83	24	56	16	11
22	19	96	118	405	88	44	264	74	26	41	15	10
23	17	84	283	544	86	44	194	66	31	35	14	12
24	16	74	189	532	88	79	154	59	29	35	14	12
25	15	63	136	296	98	366	129	54	26	33	14	11
26	14	57	120	196	93	317	111	48	24	29	13	11
27	13	51	225	138	92	227	99	43	21	238	14	12
28	13	179	863	168	88	257	131	40	19	237	13	11
29	13	640	993	755	-----	236	167	37	19	150	12	11
30	13	399	896	1,000	-----	161	132	34	31	80	12	11
31	11	-----	559	1,080	-----	122	-----	32	-----	40	12	-----
TOTAL	479	3,020	6,524	8,247	4,790	3,023	7,421	3,169	2,037	2,539	625	365
MEAN	15.5	101	210	266	171	97.5	247	102	67.9	81.9	20.2	12.2
MAX	40	640	993	1,080	955	366	787	459	255	398	45	17
MIN	11	10	50	46	62	40	99	32	19	18	12	10
CFSM	.12	.76	1.59	2.02	1.30	.74	1.87	.77	.51	.62	.15	.09
IN.	.13	.85	1.84	2.32	1.35	.85	2.09	.89	.57	.72	.18	.10

CAL YR 1968 TOTAL 43,326.1 MEAN 118 MAX 1,340 MIN 7.0 CFSM .90 IN 12.21
WTR YR 1969 TOTAL 42,239 MEAN 116 MAX 1,080 MIN 10 CFSM .88 IN 11.90

PEAK DISCHARGE (BASE, 800 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-29	1500	12.12	1,000	04-19	1800	10.69	844
01-31	0730	12.70	1,090				

5-5165. Yellow River at Plymouth, Ind.

LOCATION.--Lat 41°20'25", long 86°18'16", in NW 1/4 sec. 13, T. 33 N., R. 2 E., Marshall County, on left bank 50 ft upstream from LaPorte Street footbridge 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.

PERIOD OF RECORD.--July 1948 to current year.

GAGE.--Water-stage recorder. Datum of gage is 764.78 ft above mean sea level (levels by Indiana Flood Control and Water Resources Commission). Prior to Aug. 27, 1959, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--21 years, 244 cfs (11.67 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,940 cfs Feb. 1 (gage height, 12.42 ft); minimum, 33 cfs Sept. 30; minimum gage height, 4.13 ft Oct. 17, Nov. 3-7.

Period of record: Maximum discharge, 5,390 cfs Oct. 12, 13, 1954 (gage height, 17.13 ft); minimum, 12 cfs in the period Nov. 20 to Dec. 9, 1964; minimum gage height observed, 3.49 ft Jan. 11, 14, 1954.

REMARKS.--Records fair.

REVISIONS (WATER YEARS).--WSP 1338: 1950-51, drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	70	41	783	1,290	1,930	189	319	333	114	135	186	56
2	64	40	517	915	1,830	176	413	286	324	112	152	59
3	60	39	456	555	1,520	168	583	250	293	87	126	55
4	58	38	410	418	1,120	163	509	224	182	122	109	44
5	63	38	350	374	749	152	737	200	490	136	97	45
6	69	38	280	313	562	148	869	197	658	99	88	64
7	68	42	227	245	466	150	660	186	326	460	82	60
8	66	49	199	215	398	141	485	228	271	917	79	56
9	63	50	178	190	350	136	566	271	454	787	77	50
10	59	52	163	174	311	128	924	386	410	401	77	45
11	58	51	156	160	297	119	941	775	273	262	72	43
12	55	50	163	150	267	105	665	845	199	246	68	42
13	52	51	178	140	230	109	497	566	160	172	64	41
14	48	54	190	140	198	101	413	384	146	136	63	41
15	46	136	152	140	176	93	384	291	134	120	61	39
16	43	372	148	144	166	93	355	228	122	100	59	44
17	42	410	146	176	156	93	337	195	110	93	68	53
18	54	491	141	1,000	146	100	641	214	101	136	69	46
19	76	557	209	1,080	146	101	1,180	330	97	372	65	45
20	80	447	443	949	148	110	1,440	289	91	422	60	40
21	70	309	339	800	166	126	1,440	234	85	339	58	39
22	62	217	311	824	189	116	1,080	196	85	224	54	39
23	59	200	588	975	195	113	706	179	100	169	51	48
24	55	171	572	1,100	195	216	518	161	101	155	50	52
25	51	155	388	958	196	713	422	147	94	168	51	42
26	49	146	328	619	198	888	358	134	88	144	63	39
27	45	140	470	440	210	725	311	123	83	451	70	38
28	44	298	1,080	483	202	677	365	114	76	643	64	37
29	43	913	1,530	1,110	-----	672	466	107	70	374	57	35
30	42	1,060	1,630	1,580	-----	504	396	102	107	232	55	35
31	42	-----	1,580	1,840	-----	370	-----	93	-----	176	56	-----
TOTAL	1,756	6,645	14,305	19,497	12,717	7,696	18,980	8,258	5,834	8,398	2,351	1,372
MEAN	56.6	222	461	629	454	248	633	266	194	271	75.8	45.7
MAX	80	1,060	1,630	1,840	1,930	888	1,440	845	658	917	186	64
MIN	42	38	141	140	146	93	311	93	70	87	50	35
CFSM	.20	.78	1.62	2.21	1.60	.87	2.23	.94	.68	.95	.27	.16
IN.	.23	.87	1.87	2.55	1.67	1.01	2.49	1.08	.76	1.10	.31	.18

CAL YR 1968 TOTAL 103,900 MEAN 284 MAX 2,240 MIN 38 CFSM 1.00 IN 13.61
WTR YR 1969 TOTAL 107,799 MEAN 295 MAX 1,930 MIN 35 CFSM 1.04 IN 14.12

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., Starke County, on right bank 40 ft upstream from bridge on U.S. Highway 35 in Knox, 1.5 miles downstream from Eagle Creek, and 9 miles upstream from mouth.

DRAINAGE AREA.--425 sq mi.

PERIOD OF RECORD.--August 1905 to July 1906, August 1943 to current year.

GAGE.--Water-stage recorder. Datum of gage is 679.93 ft above mean sea level (levels by Indiana Flood Control and Water Resources Commission). August 1905 to July 1906, nonrecording gage at same site at different datum. August 1943 to July 17, 1952, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--26 years (1943-69), 378 cfs (12.08 inches per year).

EXTREMES.--Current year: Maximum discharge, 2,800 cfs Jan. 1 (gage height, 9.34 ft); minimum, 134 cfs Sept. 23 (gage height, 5.51 ft).
Period of record: 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.--Records good except those for winter periods, which are fair.

REVISIONS (WATER YEARS).--WSP 1278: 1952. WSP 1338: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	156	189	841	2,140	1,960	317	429	457	248	249	278	148
2	193	188	825	1,400	2,190	309	414	409	297	247	270	147
3	192	189	582	850	2,230	300	481	378	389	230	242	148
4	190	193	490	600	1,880	294	559	353	366	224	224	147
5	153	190	446	500	1,370	288	581	330	326	256	212	147
6	192	188	394	400	902	282	706	315	461	248	204	151
7	197	189	345	300	681	282	792	303	601	266	198	153
8	195	194	309	280	584	282	652	326	466	533	192	151
9	193	199	287	270	514	276	595	392	447	758	191	149
10	194	199	271	260	470	273	740	473	518	739	191	146
11	195	197	262	250	435	268	892	604	470	471	187	144
12	193	197	259	250	412	260	913	793	377	368	184	143
13	192	197	267	250	385	253	703	851	321	337	181	141
14	190	197	273	250	356	251	548	656	296	287	178	140
15	187	202	273	250	337	245	490	502	282	257	176	138
16	187	257	259	260	323	240	461	424	268	239	175	139
17	186	365	283	292	316	238	444	378	255	227	175	145
18	189	414	248	459	309	237	490	383	244	256	174	149
19	197	468	258	873	299	239	814	479	238	560	173	144
20	203	491	319	983	296	242	1,140	497	232	611	168	140
21	205	410	417	866	296	246	1,390	440	225	430	166	137
22	201	339	385	722	305	249	1,490	383	223	359	163	136
23	197	306	408	787	323	244	1,230	351	233	293	161	137
24	196	286	529	887	323	271	817	330	237	264	159	147
25	195	270	552	927	323	504	605	309	234	258	157	144
26	205	257	451	790	333	776	508	290	227	254	156	140
27	208	246	398	578	329	844	448	276	221	265	154	139
28	198	256	613	486	324	746	448	268	214	441	153	138
29	154	419	975	789	-----	675	480	266	210	525	154	137
30	192	677	1,210	1,230	-----	638	505	256	219	376	152	136
31	190	-----	1,430	1,660	-----	519	-----	247	-----	296	150	-----
TOTAL	6,035	8,369	14,859	20,839	18,805	11,088	20,765	12,719	9,345	11,124	5,698	4,301
MEAN	195	279	479	672	672	358	692	410	312	359	184	143
MAX	208	677	1,430	2,140	2,230	844	1,490	851	601	758	278	153
MIN	186	188	248	250	296	237	414	247	210	224	150	136
CFSM	.46	.66	1.13	1.58	1.58	.84	1.63	.97	.73	.84	.43	.34
IN.	.53	.73	1.30	1.82	1.65	.97	1.82	1.11	.82	.97	.50	.38
CAL YR 1968	TOTAL 168,398			MEAN 460	MAX 3,460	MIN 183	CFSM 1.08	IN 14.74				
WTR YR 1969	TOTAL 143,947			MEAN 394	MAX 2,230	MIN 136	CFSM .93	IN 12.60				

PEAK DISCHARGE (BASE, 1,600 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-01	2100	9.34	2,800	02-03	0045	8.78	2,310

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., Jasper County, 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.

PERIOD OF RECORD.--July 1948 to current year.

GAGE.--Water-stage recorder. Datum of gage is 649.65 ft above mean sea level (levels by Indiana Flood Control and Water Resources Commission). Prior to July 17, 1956, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--21 years, 1,249 cfs (12.97 inches per year).

EXTREMES.--Current year: Maximum daily discharge, 3,800 cfs Jan. 20 (gage height, unknown); minimum, 503 cfs Sept. 13 (gage height, 2.65 ft).

Period of record: Maximum discharge, 5,300 cfs Oct. 22, 1954 (gage height, 13.20 ft); minimum daily discharge, 280 cfs Jan. 25-29, 1963, result of freezeup; minimum gage height, 1.87 ft Sept. 9-19, 1964.

REMARKS.--Records good except those for winter periods, which are fair.

REVISIONS (WATER YEARS).--WSP 1338: Drainage area. WSP 1728: 1954(m)

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	758	668	1,890	2,100	3,040	1,450	1,960	2,100	1,260	1,140	1,330	526
2	733	654	1,950	1,900	3,140	1,440	1,910	2,010	1,350	1,160	1,350	521
3	724	660	1,940	1,700	3,230	1,420	1,910	1,910	1,490	1,100	1,270	521
4	702	649	1,860	1,500	3,290	1,420	1,910	1,800	1,540	1,070	1,170	516
5	691	638	1,760	1,350	3,290	1,390	1,970	1,720	1,510	1,100	1,080	511
6	685	654	1,640	1,250	3,220	1,370	2,060	1,650	1,530	1,120	1,010	519
7	691	674	1,520	1,200	3,070	1,350	2,140	1,590	1,670	1,120	963	534
8	688	699	1,410	1,200	2,890	1,340	2,220	1,600	1,760	1,320	927	532
9	682	716	1,340	1,200	2,690	1,320	2,270	1,800	1,810	1,610	900	526
10	691	716	1,290	1,200	2,500	1,290	2,390	2,010	1,850	1,720	900	529
11	694	702	1,240	1,200	2,340	1,260	2,500	2,220	1,870	1,650	876	519
12	691	694	1,230	1,200	2,220	1,220	2,570	2,380	1,800	1,520	836	508
13	685	741	1,260	1,200	2,100	1,200	2,590	2,460	1,640	1,480	814	539
14	677	769	1,220	1,200	1,980	1,170	2,520	2,490	1,490	1,370	794	542
15	666	828	1,180	1,250	1,880	1,150	2,430	2,420	1,400	1,230	783	519
16	654	1,000	1,160	1,500	1,780	1,130	2,310	2,270	1,320	1,120	761	511
17	652	1,170	1,160	2,700	1,720	1,130	2,200	2,120	1,260	1,060	766	547
18	663	1,320	1,140	3,100	1,660	1,140	2,190	2,000	1,210	1,180	764	560
19	668	1,440	1,170	3,400	1,590	1,160	2,360	1,960	1,170	1,300	747	547
20	680	1,520	1,310	3,800	1,540	1,160	2,550	2,000	1,130	1,470	710	534
21	680	1,500	1,400	3,600	1,510	1,150	2,690	2,000	1,090	1,420	680	526
22	671	1,420	1,460	3,000	1,510	1,130	2,790	1,920	1,050	1,250	654	519
23	663	1,340	1,550	2,900	1,520	1,120	2,880	1,810	1,080	1,140	641	516
24	643	1,260	1,610	2,480	1,520	1,190	2,900	1,710	1,120	1,120	625	555
25	663	1,210	1,760	2,430	1,520	1,530	2,810	1,620	1,110	1,160	604	563
26	699	1,150	1,790	2,320	1,470	1,830	2,640	1,530	1,100	1,130	604	547
27	710	1,130	1,650	2,250	1,460	1,990	2,460	1,460	1,050	1,180	602	526
28	702	1,150	1,830	2,160	1,460	2,090	2,330	1,410	993	1,360	586	526
29	688	1,510	2,210	2,350	-----	2,150	2,230	1,370	945	1,520	571	521
30	682	1,780	2,400	2,710	-----	2,140	2,160	1,330	1,000	1,490	550	516
31	674	-----	2,530	2,910	-----	2,070	-----	1,270	-----	1,340	537	-----
TOTAL	21,250	30,332	48,860	64,260	61,140	43,900	70,850	57,940	40,598	39,950	25,405	15,876
MEAN	685	1,011	1,576	2,073	2,184	1,416	2,362	1,869	1,353	1,289	820	529
MAX	758	1,780	2,530	3,800	3,290	2,150	2,900	2,490	1,870	1,720	1,350	563
MIN	643	638	1,140	1,200	1,460	1,120	1,910	1,270	945	1,060	537	508
CFSM	.52	.77	1.20	1.58	1.67	1.08	1.81	1.43	1.03	.99	.63	.40
IN.	.60	.85	1.39	1.83	1.74	1.25	2.01	1.65	1.15	1.14	.72	.45

CAL YR 1968 TOTAL 530,782 MEAN 1,450 MAX 4,110 MIN 594 CFSM 1.11 IN 15.09
 WTR YR 1969 TOTAL 523,361 MEAN 1,426 MAX 3,800 MIN 508 CFSM 1.09 IN 14.80

NOTE.--No gage-height record Jan. 10-22.

5-5179. State ditch near Kouts, Ind.

LOCATION.--Lat 41°19'08", long 87°04'55", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 11, T. 33 N., R. 6 W., Porter County, 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.

PERIOD OF RECORD.--July 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is 652.00 ft above mean sea level (State Highway Commission bench mark).

EXTREMES.--Current year: Maximum discharge, about 300 cfs Jan. 30 (gage height, unknown); minimum, 11 cfs Oct. 23; minimum gage height, 2.40 ft Aug. 31.

Period of record: Maximum discharge, about 300 cfs Jan. 30, 1969 (gage height, unknown); maximum gage height, 8.03 ft Aug. 17, 1968; minimum discharge, 11 cfs Oct. 23, 1968; minimum gage height, 2.40 ft Aug. 31, 1969.

REMARKS.--Records poor.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

LAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	12	21	37	120	20	33	27	23	27	17	14
2	15	12	22	32	100	20	47	26	23	22	17	14
3	15	12	24	29	80	20	42	25	22	21	16	14
4	14	12	24	27	70	20	47	24	22	83	16	14
5	15	12	20	25	60	20	101	24	21	39	16	14
6	14	12	19	24	55	20	57	24	21	29	16	14
7	14	12	18	24	50	20	45	23	21	46	16	14
8	14	12	19	23	45	20	39	30	23	43	16	14
9	14	14	18	23	40	20	80	69	27	32	16	15
10	13	14	17	22	36	19	149	120	27	29	16	15
11	13	14	16	22	33	20	71	138	22	26	16	14
12	12	14	16	22	30	19	52	67	21	24	15	14
13	12	14	17	22	28	19	44	52	20	22	15	14
14	12	14	21	22	25	19	40	44	20	22	15	14
15	12	19	25	23	23	19	43	38	20	21	15	14
16	12	20	23	24	22	19	40	34	20	20	15	14
17	12	19	20	27	21	19	74	31	19	20	15	14
18	12	19	15	100	21	19	71	30	19	19	14	14
19	12	18	16	92	21	19	96	29	19	20	14	14
20	12	18	18	86	20	19	56	28	19	20	14	14
21	12	18	17	91	20	19	45	27	18	19	14	14
22	12	17	18	97	20	19	40	26	19	18	14	14
23	11	17	22	92	20	19	36	25	19	18	14	14
24	12	17	27	86	20	31	32	24	19	18	14	14
25	13	16	34	79	20	67	31	23	19	18	14	14
26	13	16	27	70	20	56	29	23	18	18	14	14
27	12	18	42	80	20	44	28	23	18	20	14	14
28	12	22	64	100	20	57	29	22	18	18	14	14
29	12	27	58	125	-----	57	28	21	20	18	14	14
30	12	24	50	150	-----	44	28	21	35	17	14	14
31	12	-----	44	150	-----	34	-----	22	-----	17	14	-----
TOTAL	397	495	792	1,826	1,060	837	1,553	1,140	632	784	464	422
MEAN	12.8	16.2	25.5	58.9	37.9	27.0	51.8	36.8	21.1	25.3	15.0	14.1
MAX	15	27	64	150	120	67	149	138	35	83	17	15
MIN	11	12	15	22	20	19	28	21	18	17	14	14
CFSM	.40	.51	.81	1.86	1.19	.85	1.63	1.16	.66	.80	.47	.44
IN.	.47	.57	.93	2.14	1.24	.98	1.82	1.34	.74	.92	.54	.50

CAL YR 1968 TOTAL MEAN MAX MIN CFSM IN
WTR YR 1969 TOTAL 10,392 MEAN 28.5 MAX 150 MIN 11 CFSM .90 IN 12.19

PEAK DISCHARGE (BASE, 150 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE	NOTE.--No gage-height record Nov. 27 to Feb. 18.
01-30	unknown	unknown	a300	05-10	2300	5.73	248	
04-10	0600	5.34	209	07-04	1230	5.05	181	
04-17	1930	4.86	164					

a--About

5-5180, Kankakee River at Shelby, Ind.

LOCATION.--Lat 41°10'58", long 87°20'33", in NE½ sec. 33, T. 32 N., R. 8 W., Lake County, 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.

PERIOD OF RECORD.--October 1922 to current year. Monthly discharge only for some periods, published in WSP 1308.

GAGE.--Water-stage recorder. Datum of gage is 628.13 ft above mean sea level. Prior to Dec. 19, 1934, nonrecording gage at highway bridge about 400 ft upstream. Dec. 19, 1934, to Oct. 4, 1965, water-stage recorder on left bank 50 ft downstream, and Oct. 5, 1965, to Sept. 21, 1966, nonrecording gage on right bank 200 ft upstream. All at same datum.

AVERAGE DISCHARGE.--47 years, 1,528 cfs (11.84 inches per year).

EXTREMES.--Current year: Maximum discharge, 4,770 cfs Jan. 21 (gage height, 10.48 ft); minimum, 635 cfs Sept. 23 (gage height, 3.14 ft).

Period of record: Maximum discharge, 7,200 cfs Dec. 21, 1927 (gage height, 11.40 ft, 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 (site then in use) Aug. 4, 5, 1934.

REMARKS.--Records good.

REVISIONS (WATER YEARS).--WSP 1005: 1928(M). WSP 1338: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	985	859	2,180	2,700	4,160	1,940	2,630	2,760	1,590	1,370	1,510	689
2	953	853	2,280	2,400	4,130	1,920	2,590	2,650	1,630	1,410	1,510	680
3	937	851	2,330	2,100	4,090	1,910	2,560	2,520	1,730	1,370	1,480	681
4	919	846	2,240	1,900	4,060	1,880	2,560	2,390	1,820	1,340	1,390	676
5	906	833	2,280	1,750	4,050	1,860	2,670	2,270	1,850	1,410	1,290	671
6	900	842	2,170	1,660	4,040	1,830	2,760	2,160	1,830	1,380	1,220	672
7	896	862	2,040	1,600	3,990	1,810	2,770	2,070	1,910	1,370	1,150	669
8	896	876	1,890	1,550	3,910	1,790	2,790	2,110	2,050	1,470	1,110	667
9	893	891	1,780	1,500	3,770	1,770	2,860	2,310	2,200	1,670	1,080	664
10	892	894	1,700	1,500	3,600	1,730	3,090	2,760	2,250	1,860	1,070	667
11	888	898	1,630	1,500	3,430	1,690	3,220	3,210	2,270	1,910	1,050	661
12	889	883	1,600	1,500	3,230	1,640	3,240	3,340	2,230	1,880	1,010	648
13	884	896	1,600	1,500	3,050	1,600	3,270	3,340	2,110	1,800	982	642
14	873	927	1,580	1,550	2,860	1,570	3,250	3,320	1,910	1,690	961	668
15	856	1,000	1,500	1,600	2,700	1,530	3,230	3,260	1,770	1,540	939	660
16	841	1,130	1,520	1,800	2,550	1,510	3,170	3,150	1,650	1,410	929	642
17	835	1,290	1,490	3,100	2,390	1,500	3,090	2,990	1,560	1,300	972	660
18	851	1,430	1,480	3,770	2,330	1,500	3,090	2,840	1,500	1,310	985	684
19	850	1,560	1,510	4,130	2,230	1,510	3,180	2,720	1,460	1,410	953	677
20	846	1,660	1,650	4,590	2,150	1,520	3,310	2,670	1,410	1,550	923	662
21	857	1,700	1,740	4,480	2,090	1,510	3,370	2,640	1,350	1,620	891	654
22	851	1,670	1,830	3,730	2,070	1,490	3,440	2,570	1,310	1,510	860	648
23	856	1,600	1,990	3,500	2,060	1,480	3,470	2,470	1,310	1,350	833	639
24	843	1,530	2,050	3,470	2,050	1,550	3,500	2,330	1,340	1,290	816	650
25	840	1,470	2,070	3,310	2,050	2,010	3,480	2,180	1,340	1,330	797	669
26	875	1,420	2,130	3,140	2,020	2,410	3,410	2,050	1,320	1,330	780	669
27	900	1,370	2,200	3,020	1,980	2,580	3,260	1,930	1,290	1,390	768	664
28	887	1,390	2,360	2,990	1,960	2,690	3,130	1,840	1,240	1,480	760	655
29	878	1,710	2,730	3,330	-----	2,770	3,010	1,760	1,180	1,600	741	653
30	869	2,030	2,900	3,820	-----	2,760	2,870	1,700	1,220	1,680	722	649
31	863	-----	2,070	4,110	-----	2,710	-----	1,630	-----	1,610	703	-----
TOTAL	27,309	36,171	61,520	82,600	83,000	57,970	92,270	77,940	49,630	46,640	31,185	19,890
MEAN	881	1,206	1,985	2,665	2,964	1,870	3,076	2,514	1,654	1,505	1,006	663
MAX	985	2,030	2,970	4,590	4,160	2,770	3,500	3,340	2,270	1,910	1,510	689
MIN	825	833	1,480	1,500	1,960	1,480	2,560	1,630	1,180	1,290	703	639
CFSM	.50	.69	1.13	1.52	1.69	1.07	1.75	1.43	.94	.86	.57	.38
IN.	.58	.77	1.31	1.75	1.76	1.23	1.96	1.65	1.05	.99	.66	.42

CAL YR 1969 TOTAL 684,496 MEAN 1,870 MAX 5,010 MIN 824 CFSM 1.07 IN 14.52
WTR YR 1969 TOTAL 666,125 MEAN 1,825 MAX 4,590 MIN 639 CFSM 1.04 IN 14.13

5-5190. Singleton ditch at Schneider, Ind.

LOCATION.--Lat 41°12'44", long 87°26'44", on line between NE¼ sec. 21 and NW¼ sec. 22, T. 32 N., R. 9 W., Lake County, on left bank 15 ft upstream from bridge on Ackerman Avenue, 0.5 mile upstream from Bruce ditch, 1.5 miles downstream from Cedar Creek, and 1.6 miles north of Schneider.

DRAINAGE AREA.--122 sq mi.

PERIOD OF RECORD.--July 1948 to current year.

GAGE.--Water-stage recorder. Datum of gage is 623.67 ft above mean sea level. Prior to Oct. 1, 1949, nonrecording gage at same site at datum 2.00 ft higher. Oct. 1, 1949, to Aug. 13, 1951, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--21 years, 94.6 cfs (10.53 inches per year).

EXTREMES.--Current year: Maximum discharge, 952 cfs Jan. 30 (gage height, 9.87 ft); minimum, 14 cfs Sept. 29 (gage height, 1.55 ft).

Period of record: Maximum discharge, 1,140 cfs Feb. 1, 1968 (gage height, 11.12 ft); minimum, 3.0 cfs Sept. 7, 1964 (gage height, 1.13 ft).

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

REVISIONS.(WATER YEARS).--WSP 1338: Drainage area. WSP 1915: 1956-59.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	24	105	170	430	69	135	97	57	67	103	17
2	29	24	97	140	334	67	149	90	60	54	87	17
3	29	23	106	120	275	66	158	84	58	48	66	17
4	29	23	107	100	233	65	161	77	55	46	51	17
5	28	23	100	90	212	63	324	75	62	56	47	17
6	29	25	85	76	191	64	267	73	64	49	45	19
7	29	26	80	70	174	64	205	67	59	51	42	18
8	28	26	78	68	165	64	172	100	72	84	44	17
9	28	24	86	66	150	63	227	201	119	84	44	16
10	30	24	66	65	130	62	450	395	90	76	52	16
11	29	24	62	64	120	60	329	563	72	59	39	16
12	29	24	61	64	110	60	244	412	66	54	30	16
13	28	24	62	64	100	57	197	297	63	51	28	16
14	27	24	99	66	90	55	172	231	57	45	28	16
15	26	32	131	70	85	54	201	195	56	44	28	16
16	34	35	99	80	80	54	206	168	53	39	27	16
17	34	36	84	153	75	52	234	138	51	36	34	18
18	34	38	54	508	71	52	340	126	49	54	34	16
19	32	40	57	500	73	52	437	127	49	169	30	15
20	30	38	65	396	76	54	333	111	48	134	26	15
21	28	37	63	459	77	59	254	103	45	106	24	15
22	28	34	82	490	76	56	211	99	44	85	23	15
23	28	34	117	435	76	56	176	87	49	72	22	16
24	27	36	194	366	76	112	152	82	58	61	21	16
25	28	34	170	365	76	425	134	72	46	45	20	16
26	27	35	144	336	75	401	121	66	41	46	20	15
27	27	36	164	237	72	304	112	62	39	252	19	16
28	28	55	375	330	70	285	119	60	38	175	18	15
29	28	148	356	848	-----	240	117	57	38	116	18	15
30	25	124	244	866	-----	188	105	57	48	90	18	15
31	24	-----	210	585	-----	154	-----	54	-----	91	17	-----
TOTAL	890	1,130	3,803	8,247	3,772	3,477	6,442	4,426	1,706	2,439	1,105	485
MEAN	28.7	37.7	123	266	135	112	215	143	56.9	78.7	35.6	16.2
MAX	34	148	375	866	430	425	450	563	119	252	103	19
MIN	24	23	54	64	70	52	105	54	38	36	17	15
CFSM	.24	.31	1.01	2.18	1.10	.92	1.76	1.17	.47	.64	.29	.13
IN.	.27	.34	1.16	2.51	1.15	1.06	1.96	1.35	.52	.74	.34	.15

CAL YR 1968 TOTAL 40,044

MEAN 109

MAX 1,040

MIN 23

CFSM .90

IN 12.21

WTR YR 1969 TOTAL 37,922

MEAN 104

MAX 866

MIN 15

CFSM .85

IN 11.56

PEAK DISCHARGE (BASE, 730 CFS).--Jan. 30 (0430) 952 cfs (9.87 ft).

5-5195, West Creek near Schneider, Ind.

LOCATION.--Lat 41°12'52", long 87°29'36", in NW¼NE¼ sec. 19, T. 32 N., R. 9 W., Lake County, on left bank at downstream side of county highway bridge, 1.2 miles upstream from Singleton ditch, and 2.8 miles northwest of Schneider.

DRAINAGE AREA.--54.5 sq mi.

PERIOD OF RECORD.--July 1948 to December 1951, January 1954 to current year.

GAGE.--Water-stage recorder. Datum of gage is 627.86 ft above mean sea level (levels by Soil Conservation Service). Prior to Mar. 17, 1950, nonrecording gage 75 ft below bridge at same datum. Mar. 17, 1950, to Dec. 31, 1951, Jan. 1, 1954 to June 10, 1956, nonrecording gage, at present site and datum.

AVERAGE DISCHARGE.--18 years, 40.9 cfs (10.19 inches per year).

EXTREMES.--Current year: Maximum discharge, about 750 cfs Jan. 30 (gage height, unknown); minimum, 7.8 cfs Sept. 26, 27 (gage height, 0.65 ft).
Period of record: Maximum discharge, 1,840 cfs Oct. 10, 11, 1954 (gage height, 8.06 ft, from graph based on gage readings); minimum, 1.3 cfs Feb. 17, 1957 (gage height, 0.32 ft), result of freezeup.

REMARKS.--Records good except those for winter periods or no gage height record, which are poor.

REVISIONS(WATER YEARS).--WSP 1338: Drainage area. WSP 1388: 1952(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	10	34	50	400	18	57	33	28	33	183	9.6
2	12	10	29	42	280	18	76	31	43	25	102	9.6
3	11	10	32	36	200	18	83	29	38	19	68	9.3
4	11	10	31	30	140	18	88	27	33	18	53	9.0
5	11	10	27	26	100	17	172	26	30	20	44	9.6
6	11	11	23	23	70	17	122	26	29	18	38	11
7	11	11	21	19	54	17	86	25	27	36	33	9.3
8	11	11	21	18	45	18	67	183	33	49	30	9.0
9	11	10	18	18	40	17	96	155	76	37	28	8.8
10	12	10	15	18	35	17	153	307	55	31	25	8.5
11	12	10	15	17	30	16	103	387	39	26	22	8.8
12	11	9.6	15	17	26	16	74	198	29	21	20	9.0
13	11	9.5	16	17	23	16	61	122	24	18	18	8.8
14	11	9.8	17	18	21	16	53	86	20	15	18	8.8
15	10	14	19	18	20	15	70	64	19	13	17	8.5
16	11	16	13	29	19	15	72	53	19	12	17	8.8
17	11	17	13	54	18	15	115	45	18	11	16	9.3
18	12	18	12	414	18	16	162	41	18	337	15	8.8
19	11	20	16	243	18	16	191	39	19	336	14	8.8
20	11	19	19	156	18	17	111	37	17	154	13	9.0
21	11	17	16	195	18	18	79	34	16	90	12	8.5
22	10	15	19	193	19	18	63	35	16	60	12	8.5
23	10	13	37	212	19	18	54	32	17	44	12	8.8
24	10	12	51	180	19	69	47	30	17	53	14	9.0
25	10	12	61	160	19	288	43	29	16	34	12	8.8
26	10	12	49	180	19	238	39	27	15	30	11	8.3
27	10	12	59	150	18	163	36	26	14	481	11	8.3
28	10	25	233	130	18	151	36	24	13	206	11	8.5
29	11	71	157	550	-----	117	37	23	12	110	10	9.0
30	10	46	73	600	-----	84	34	27	18	71	9.9	8.5
31	10	-----	57	500	-----	65	-----	29	-----	206	9.6	-----
TOTAL	335	480.9	1,218	4,313	1,724	1,562	2,480	2,230	768	2,614	898.5	268.5
MEAN	10.8	16.0	39.3	139	61.6	50.4	82.7	71.9	25.6	84.3	29.0	8.95
MAX	12	71	233	600	400	288	191	387	76	481	183	11
MIN	10	9.5	12	17	18	15	34	23	12	11	9.6	8.3
CFSM	.20	.29	.72	2.55	1.13	.92	1.52	1.32	.47	1.55	.53	.16
IN.	.23	.33	.83	2.94	1.18	1.07	1.69	1.52	.52	1.78	.61	.18

CAL YR 1968 TOTAL 17,991.9 MEAN 49.2 MAX 1,470 MIN 9.5 CFSM .90 IN 12.28
WTR YR 1969 TOTAL 18,891.9 MEAN 51.8 MAX 600 MIN 8.3 CFSM .95 IN 12.89

PEAK DISCHARGE (BASE, 500 CFS)

NOTE.--No gage-height record Oct. 6 to Nov. 25, Jan. 24 to Feb. 17.

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
01-18	0900	5.28	531	07-18	2015	5.44	614
01-30	unknown	unknown	a750	07-27	1045	5.75	718
05-10	2230	5.57	655				

a--about

ILLINOIS RIVER BASIN

5-5200. Singleton ditch at Illinois, Ill.

LOCATION.--Lat 41°11'20", long 87°31'35", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 8, T. 31 N., R. 15 E., Kankakee County, Illinois, 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.

PERIOD OF RECORD.--October 1944 to current year.

GAGE.--Water-stage recorder. Datum of gage is 620.33 ft above mean sea level. Prior to Aug. 28, 1953, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--25 years, 165 cfs (10.23 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,840 cfs Jan. 29 (gage height, 10.07 ft); minimum, 23 cfs Sept. 15 (gage height, 1.33 ft).

Period of record: Maximum discharge, 2,040 cfs Feb. 14, 23, 1959; maximum gage height, 10.11 ft Mar. 4, 1963 (backwater from ice); minimum discharge, 4.5 cfs Sept. 8, 1964; minimum gage height, 0.71 ft Oct. 21, 1948.

REMARKS.--Records good except those for winter periods, which are fair.

REVISIONS (WATER YEARS).--WSP 1338: 1948(M), drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	42	164	260	674	109	233	184	124	103	256	32
2	55	42	147	215	515	107	257	173	138	88	182	31
3	56	42	157	180	416	105	280	165	130	78	139	30
4	53	41	161	155	373	104	272	156	119	74	113	29
5	52	42	152	135	314	102	519	150	119	86	100	31
6	52	44	145	120	278	103	448	146	119	80	93	36
7	52	47	160	110	250	103	347	144	112	98	87	31
8	51	46	126	105	239	103	294	292	126	131	85	29
9	50	45	122	105	223	103	348	399	202	123	84	28
10	52	44	115	100	210	100	680	626	168	110	88	27
11	50	44	108	100	200	99	532	1,040	132	94	77	27
12	49	42	93	100	180	96	399	778	116	86	66	26
13	47	43	95	100	165	94	326	564	106	80	62	26
14	46	43	113	100	154	92	289	446	98	73	61	24
15	45	57	121	105	144	89	335	374	95	70	60	23
16	51	64	109	140	135	89	356	325	91	66	58	25
17	54	64	100	218	131	87	383	277	86	63	65	27
18	52	68	95	789	126	87	564	250	84	204	63	28
19	51	72	91	805	125	88	694	246	85	432	58	27
20	49	69	104	612	122	91	551	225	80	268	54	27
21	47	66	96	709	119	97	422	208	76	184	51	27
22	47	65	108	985	118	93	354	201	74	139	48	27
23	47	62	188	764	118	93	302	184	77	117	45	28
24	46	63	325	613	118	175	265	172	86	116	45	29
25	46	61	339	665	117	655	240	155	75	92	42	29
26	46	60	248	725	115	654	221	147	69	87	40	27
27	46	59	240	536	112	490	206	137	66	519	38	29
28	46	85	627	543	111	455	215	131	63	386	37	28
29	47	238	580	1,490	-----	393	212	125	63	216	36	27
30	44	200	374	1,470	-----	313	197	126	74	157	35	27
31	43	-----	310	951	-----	261	-----	124	-----	238	32	-----
TOTAL	1,527	1,960	5,913	14,005	5,902	5,630	10,741	8,670	3,053	4,648	2,300	842
MEAN	49.3	65.3	191	452	211	182	358	280	102	150	74.2	28.1
MAX	56	238	627	1,490	674	655	694	1,040	202	519	256	36
MIN	43	41	91	100	111	87	197	124	63	63	32	23
CFSM	.22	.30	.87	2.06	.96	.83	1.63	1.28	.46	.68	.34	.13
IN.	.26	.33	1.00	2.38	1.00	.96	1.82	1.47	.52	.79	.39	.14

CAL YR 1968 TOTAL 67,253 MEAN 184 MAX 1,710 MIN 41 CFSM .84 IN 11.42
WTR YR 1969 TOTAL 65,191 MEAN 179 MAX 1,490 MIN 23 CFSM .82 IN 11.07

PEAK DISCHARGE (BASE, 1,100 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-29	2015	10.07	1,840	05-11	0600	7.20	1,110

5-5205, Kankakee River at Momence, Ill.

LOCATION.--Lat 41°09'36", long 87°40'07", in NE¼ sec. 24, T. 31 N., R. 13 E., Kankakee County, on right bank at Hill Street in Momence, 0.2 mile downstream from bridge on State Highways 1 and 17, and 1.2 miles upstream from Tower Creek.

DRAINAGE AREA.--2,340 sq mi, approximately.

PERIOD OF RECORD.--February to December 1905, February to July 1906, December 1914 to current year.

GAGE.--Water-stage recorder. Datum of gage is 609.18 ft above mean sea level. Prior to Aug. 1, 1938, nonrecording gage at site 0.2 mile upstream at datum 1.00 ft lower. Aug. 1, 1938, to Aug. 8, 1939, water-stage recorder at present site at datum 1.00 ft lower.

AVERAGE DISCHARGE.--54 years (1915-69), 1,857 cfs (10.78 inches per year).

EXTREMES.--Current year: Maximum discharge, about 6,300 cfs Jan. 21; maximum gage height, 5.78 ft Jan. 23 (ice jam); minimum discharge, 655 cfs Sept. 13, 14.

Period of record: Maximum discharge, 10,100 cfs Apr. 25, 1950 (gage height, 5.06 ft); maximum gage height observed, 8.09 ft Jan. 25, 1930, site and datum then in use (ice jam); minimum discharge observed, 306 cfs Sept. 1, 16, 17, 1919.

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

REVISIONS (WATER YEARS).--WSP 1238: 1916, 1930. WSP 1308: 1915(M), 1917(M), 1919(M), 1922(M), 1926(M), 1934-35(M), 1938(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	CCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,140	860	2,410	3,400	5,600	2,490	3,600	3,620	2,220	1,500	2,350	709
2	1,090	860	2,590	3,100	5,500	2,450	3,500	3,480	2,220	1,570	2,110	700
3	1,040	860	2,750	2,800	5,400	2,430	3,500	3,330	2,160	1,580	1,910	693
4	1,010	850	2,870	2,500	5,300	2,390	3,500	3,240	2,200	1,570	1,800	694
5	984	840	2,890	2,300	5,220	2,370	3,600	3,120	2,270	1,550	1,650	700
6	973	840	2,790	2,100	5,110	2,350	3,600	2,970	2,350	1,600	1,500	699
7	973	850	2,710	2,050	5,070	2,330	3,650	2,870	2,370	1,630	1,400	694
8	962	860	2,570	2,050	5,020	2,290	3,660	3,120	2,390	1,680	1,300	687
9	962	870	2,490	2,000	4,910	2,260	3,790	3,260	2,590	1,840	1,220	679
10	951	870	2,220	2,000	4,850	2,200	4,280	3,580	2,710	1,960	1,190	676
11	951	870	2,090	2,000	4,720	2,110	4,340	4,520	2,710	2,090	1,150	676
12	951	870	2,070	2,000	4,450	2,090	4,230	4,630	2,710	2,140	1,100	668
13	940	870	2,000	2,000	4,250	2,030	4,170	4,560	2,670	2,160	1,050	661
14	920	890	1,890	2,100	3,940	1,960	4,130	4,450	2,610	2,110	1,020	665
15	910	962	1,840	2,200	3,710	1,910	4,210	4,360	2,470	1,980	991	676
16	900	1,060	1,800	2,500	3,450	1,870	4,300	4,210	2,290	1,840	979	674
17	880	1,190	1,820	4,000	3,310	1,820	4,250	4,100	2,140	1,650	985	670
18	870	1,360	1,730	5,000	3,100	1,800	4,500	3,940	2,020	1,850	1,020	677
19	870	1,530	1,770	5,500	2,970	1,820	4,650	3,810	1,910	2,270	1,010	683
20	860	1,660	1,800	6,000	2,870	1,850	4,560	3,680	1,800	2,090	965	675
21	860	1,770	1,890	6,200	2,750	1,850	4,430	3,520	1,700	2,020	929	667
22	860	1,800	2,070	6,000	2,690	1,850	4,320	3,480	1,630	1,960	851	664
23	850	1,840	2,290	5,600	2,650	1,800	4,210	3,350	1,610	1,870	855	664
24	850	1,800	2,400	5,200	2,630	1,900	4,190	3,260	1,600	1,700	832	663
25	840	1,750	2,500	4,800	2,630	2,500	4,170	3,100	1,580	1,570	813	668
26	840	1,680	2,600	4,500	2,610	3,200	4,130	2,930	1,580	1,570	793	681
27	860	1,600	2,830	4,200	2,570	3,500	4,080	2,770	1,550	2,350	779	675
28	880	1,660	3,580	4,000	2,530	3,700	4,060	2,590	1,470	2,410	765	674
29	870	2,120	3,870	4,500	-----	3,800	3,900	2,490	1,410	2,090	756	666
30	860	2,260	3,710	5,200	-----	3,800	3,770	2,370	1,420	2,020	740	665
31	860	-----	3,600	5,600	-----	3,700	-----	2,290	-----	2,370	723	-----
TOTAL	28,567	38,102	76,440	113,400	109,810	74,420	121,280	107,000	62,360	58,630	35,628	20,343
MEAN	922	1,270	2,466	3,658	3,922	2,401	4,043	3,452	2,079	1,891	1,145	678
MAX	1,140	2,260	3,870	6,200	5,600	3,800	4,650	4,630	2,710	2,410	2,350	709
MIN	840	840	1,730	2,000	2,530	1,800	3,500	2,290	1,410	1,500	723	661
CFSM	.39	.54	1.05	1.56	1.68	1.03	1.73	1.48	.89	.81	.45	.29
IN.	.45	.61	1.21	1.80	1.75	1.18	1.93	1.70	.99	.93	.57	.32
CAL YR 1968	TOTAL 866,547			MEAN 2,368		MAX 8,100	MIN 840	CFSM 1.01	IN 13.77			
WTR YR 1969	TOTAL 845,980			MEAN 2,318		MAX 6,200	MIN 661	CFSM .99	IN 13.45			

ILLINOIS RIVER BASIN

5-5210, Iroquois River at Rosebud, Ind.

LOCATION.--Lat 41°02'00", long 87°10'49", in SW¼ sec. 24, T. 30 N., R. 7 W., Jasper County, 100 ft downstream from bridge on county road, 0.5 mile north of Rosebud, 0.5 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.

PERIOD OF RECORD.--July 1948 to current year.

GAGE.--Water-stage recorder. Datum of gage is 661.47 ft above mean sea level (levels by Indiana Flood Control and Water Resources Commission). Prior to Oct. 1, 1953, nonrecording gage on downstream side of county road bridge at same datum.

AVERAGE DISCHARGE.--21 years, 24.0 cfs (10.76 inches per year).

EXTREMES.--Current year: Maximum daily discharge, 190 cfs Jan. 29 (gage height, unknown); minimum, 3.2 cfs Sept. 14, 15 (gage height, 1.05 ft).
Period of record: Maximum discharge, 422 cfs Apr. 4, 1950; maximum gage height, 8.86 ft Feb. 10, 1959; minimum discharge, 0.2 cfs Oct. 11, 1964.

REMARKS.--Records good except those for periods of no gage-height record, which are fair.

REVISIONS (WATER YEARS).--WSP 1338: 1950-53, drainage area. WSP 1728: 1959-60(M). WSP 1915: 1959-60.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.9	6.5	27	42	81	17	31	34	26	12	14	3.7
2	7.1	6.3	26	50	64	17	43	31	26	11	11	3.8
3	6.7	6.9	27	35	55	17	43	29	24	10	8.7	3.8
4	6.9	6.3	24	29	48	17	44	28	22	11	8.1	4.0
5	7.1	6.1	20	23	42	17	64	27	20	10	7.3	4.4
6	7.5	7.5	23	20	39	17	51	26	19	14	6.7	4.7
7	7.5	7.9	19	16	36	17	42	25	19	13	6.3	4.2
8	6.9	6.9	21	15	34	17	37	35	20	13	6.3	3.9
9	7.1	6.5	21	14	33	17	85	44	19	13	7.5	4.1
10	7.3	6.5	13	13	32	17	118	76	18	12	6.7	4.1
11	6.7	6.5	14	13	31	16	82	94	17	15	6.1	3.8
12	6.7	6.9	13	12	29	17	63	75	16	29	5.7	3.7
13	6.7	6.1	13	12	32	15	54	60	15	18	5.5	3.6
14	6.7	6.5	15	12	26	14	49	51	15	14	5.3	3.5
15	6.7	9.3	13	14	20	14	62	44	17	12	5.2	3.3
16	6.5	11	13	95	20	14	57	39	18	10	6.9	4.1
17	7.3	11	17	69	19	13	51	41	15	9.3	10	6.4
18	7.7	12	12	37	18	13	72	82	15	9.1	7.1	7.5
19	7.1	12	14	47	17	14	145	81	14	13	6.1	5.0
20	8.3	9.9	15	62	17	14	96	62	14	11	5.7	4.7
21	6.7	9.1	13	72	16	14	69	52	12	9.5	5.5	4.5
22	7.3	8.5	19	68	16	13	57	48	12	8.5	5.2	3.9
23	7.3	8.1	29	62	17	13	48	43	16	7.9	4.5	4.8
24	6.3	8.1	32	62	17	35	42	39	15	7.5	4.8	5.2
25	6.3	11	23	34	17	83	39	37	14	7.3	4.7	4.4
26	5.9	9.5	17	43	17	75	37	34	13	7.5	4.5	4.0
27	6.9	8.5	26	119	17	54	36	32	12	47	4.3	4.1
28	6.3	36	79	140	17	55	41	29	11	33	4.2	3.8
29	5.9	52	66	190	-----	43	39	28	10	19	4.1	3.5
30	6.3	32	54	130	-----	36	35	26	13	18	3.9	3.6
31	6.3	-----	45	96	-----	32	-----	24	-----	22	3.7	-----
TOTAL	212.9	341.4	763	1,646	827	767	1,732	1,376	497	446.6	156.0	128.1
MEAN	6.87	11.4	24.6	53.1	29.5	24.7	57.7	44.4	16.6	14.4	6.32	4.27
MAX	8.3	52	79	190	81	83	145	94	26	47	14	7.5
MIN	5.9	6.1	12	12	16	13	31	24	10	7.3	3.7	3.3
CFSM	.23	.38	.81	1.75	.97	.82	1.91	1.46	.55	.48	.21	.14
IN.	.26	.42	.94	2.02	1.02	.94	2.13	1.69	.61	.55	.24	.16
CAL YR 1968	TOTAL 10,931.8		MEAN 29.9		MAX 316		MIN 5.5		CFSM .99		IN 13.42	
WTR YR 1969	TOTAL 8,933.0		MEAN 24.5		MAX 190		MIN 3.3		CFSM .81		IN 10.96	

NOTE.--No gage-height record Dec. 28 to Jan. 7, Jan. 28 to Feb. 10.

ILLINOIS RIVER BASIN

5-5220, Iroquois River near North Marlon, Ind.

LOCATION.--Lat 40°58'12", long 87°06'50", in S½ sec. 9, T. 29 N., R. 6 W., Jasper County, on left bank at upstream side of county highway bridge, 1.2 miles upstream from Ryan ditch, 2 miles east of North Marlon, and 3.5 miles northeast of Rensselaer.

DRAINAGE AREA.--134 sq mi.

PERIOD OF RECORD.--December 1948 to current year.

GAGE.--Water-stage recorder. Datum of gage is 646.68 ft above mean sea level. Prior to Sept. 6, 1955, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--20 years (1949-69), 139 cfs (11.86 inches per year).

EXTREMES.--Current year: Maximum discharge, 841 cfs Jan. 31 (gage height, 10.96 ft); minimum, 8.0 cfs Aug. 29 (gage height, 1.33 ft).

Period of record: Maximum discharge, 2,040 cfs June 10, 1958 (gage height, 15.09 ft); minimum, 1.5 cfs Sept. 8, 1964.

REMARKS.--Records good. Water can be diverted from Oliver ditch, an upstream tributary, into Ryan ditch, which enters below station.

REVISIONS.--WSP 1278: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	23	204	280	781	112	157	167	120	89	50	12
2	35	23	166	230	679	109	193	159	157	57	41	14
3	29	23	161	170	546	107	238	140	141	42	34	13
4	28	26	154	130	390	106	241	133	112	45	29	12
5	29	22	132	110	311	103	346	128	93	43	17	16
6	27	24	105	100	259	114	395	121	91	51	15	19
7	25	29	117	90	232	109	321	117	92	41	14	19
8	24	32	145	87	223	107	234	151	91	43	20	15
9	26	29	162	80	213	110	343	212	95	49	23	15
10	28	29	109	78	198	105	650	338	87	59	25	16
11	29	28	86	75	194	100	686	512	77	41	22	15
12	29	26	78	72	175	107	598	555	76	136	19	14
13	28	25	79	72	171	92	459	487	61	113	18	15
14	29	26	89	72	164	86	327	384	61	68	19	14
15	26	37	153	72	135	83	305	290	67	44	19	13
16	27	61	118	72	147	80	314	229	61	41	13	17
17	27	74	93	80	133	79	302	193	45	35	35	24
18	33	84	86	345	119	80	572	217	48	27	35	22
19	29	86	101	457	117	82	769	315	47	47	30	17
20	28	71	139	423	113	84	803	324	44	40	25	15
21	25	71	119	412	115	84	727	265	39	37	23	15
22	26	62	123	452	116	81	596	222	40	29	20	14
23	27	56	198	476	117	78	440	198	66	26	19	17
24	26	51	230	483	116	132	298	177	59	25	11	22
25	39	48	200	400	116	335	276	159	53	37	15	21
26	30	49	170	310	117	430	195	142	48	27	15	18
27	25	45	185	280	114	392	175	128	39	203	14	17
28	24	106	342	245	113	332	196	117	32	215	9.2	16
29	26	258	476	547	-----	290	214	103	25	109	9.7	17
30	24	271	441	783	-----	227	195	104	55	64	13	16
31	31	-----	344	834	-----	177	-----	100	-----	71	13	-----
TOTAL	860	1,793	5,305	8,312	6,223	4,511	11,515	6,887	2,122	1,954	664.9	490
MEAN	27.7	59.8	171	268	222	146	384	222	70.7	63.0	21.4	16.3
MAX	39	271	476	834	781	430	803	555	157	215	50	24
MIN	23	22	78	72	113	78	157	100	25	25	9.2	12
CFSM	.21	.45	1.28	2.00	1.66	1.09	2.86	1.66	.53	.47	.16	.12
IN.	.24	.50	1.47	2.31	1.73	1.25	3.20	1.91	.59	.54	.18	.14

CAL YR 1968 TOTAL 58,069 MEAN 159 MAX 1,260 MIN 12 CFSM 1.18 IN 16.12
WTR YR 1969 TOTAL 50,636.9 MEAN 139 MAX 834 MIN 9.2 CFSM 1.04 IN 14.05

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., Jasper County, on right bank 20 ft downstream from bridge on State Highway 114, 0.8 mile east of Rensselaer, 1.5 miles downstream from Ryan ditch, and 5.5 miles upstream from Slough Creek.

DRAINAGE AREA.--194 sq mi.

PERIOD OF RECORD.--July 1948 to current year.

GAGE.--Water-stage recorder. Datum of gage is 642.29 ft above mean sea level (levels by Indiana Flood Control and Water Resources Commission). Prior to July 8, 1949, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--21 years, 153 cfs (10.64 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,180 cfs Apr. 19; maximum gage height, 11.65 ft Jan. 30; minimum discharge, 8.2 cfs Aug. 29 (gage height, 3.14 ft).

Period of record: Maximum discharge, 2,550 cfs June 10, 1958 (gage height, 16.54 ft); minimum, 1.7 cfs Oct. 29, 30, 1964; minimum gage height, 2.73 ft Sept. 15, 1948.

REMARKS.--Records good except those for periods of no gage-height record, which are poor.

REVISIONS.--WSP 1338: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	27	230	317	989	105	199	198	139	99	60	16
2	33	25	182	375	819	103	257	186	195	70	45	19
3	33	26	175	281	618	103	314	164	166	61	37	15
4	29	30	167	192	416	102	320	154	132	63	32	13
5	29	26	142	141	336	99	448	148	110	69	19	17
6	29	28	107	110	282	111	486	140	105	86	17	23
7	36	34	114	100	247	106	401	134	105	58	16	20
8	30	38	98	91	235	107	307	172	104	66	23	17
9	32	36	105	85	219	110	516	247	107	75	26	18
10	33	35	90	80	202	106	887	413	99	78	28	20
11	31	37	84	78	196	97	883	639	89	59	25	18
12	29	33	80	77	173	105	741	680	85	175	21	16
13	29	31	82	76	160	91	548	579	70	140	20	18
14	31	33	63	77	157	84	386	447	69	91	21	17
15	27	45	72	80	140	80	362	344	76	58	22	15
16	30	67	83	90	149	79	365	275	70	50	15	18
17	30	79	71	258	123	76	405	230	55	45	43	27
18	38	88	73	513	105	80	938	255	56	35	43	23
19	34	91	100	493	104	83	1,160	357	56	58	35	19
20	31	76	150	445	100	87	1,110	364	52	50	29	18
21	29	73	126	457	103	88	952	303	46	45	26	16
22	30	67	130	550	105	83	745	255	50	36	24	15
23	31	60	223	595	106	81	528	225	114	30	22	19
24	31	56	195	504	106	151	362	201	91	30	12	23
25	43	53	205	339	108	459	280	181	79	44	14	21
26	37	54	195	314	109	567	235	161	68	32	18	19
27	29	49	176	236	107	490	207	146	56	250	16	18
28	27	108	415	440	106	419	236	131	47	290	11	17
29	29	295	584	890	-----	368	255	116	39	120	9.1	19
30	28	310	525	1,150	-----	294	231	116	61	72	16	17
31	35	-----	374	1,120	-----	228	-----	112	-----	82	18	-----
TOTAL	977	2,010	5,416	10,594	6,620	5,142	15,064	8,073	2,591	2,517	763.1	551
MEAN	31.5	67.0	175	342	236	166	502	260	86.4	81.2	24.6	18.4
MAX	43	310	584	1,150	989	567	1,160	680	195	290	60	27
MIN	27	25	63	76	100	76	199	112	39	30	9.1	13
CFSM	.16	.35	.90	1.76	1.22	.86	2.59	1.34	.45	.42	.13	.09
IN.	.19	.39	1.04	2.03	1.27	.99	2.89	1.55	.50	.48	.15	.11

CAL YR 1968 TOTAL 72,310 MEAN 198 MAX 1,720 MIN 18 CFSM 1.02 IN 13.86
WTR YR 1969 TOTAL 60,318.1 MEAN 165 MAX 1,160 MIN 9.1 CFSM .85 IN 11.56

NOTE.--No gage-height record July 6 to Aug. 20, Sept. 1-30.

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., Jasper County, 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.

PERIOD OF RECORD.--December 1948 to current year.

GAGE.--Water-stage recorder. Datum of gage is 651.30 ft above mean sea level. Prior to Aug. 5, 1955, nonrecording gage, and Aug. 5, 1955, to Sept. 30, 1965, water-stage recorder at present site at datum 2.00 ft higher.

AVERAGE DISCHARGE.--20 years (1949-69), 15.9 cfs (9.55 inches per year).

EXTREMES.--Current year: Maximum discharge, 581 cfs Jan. 28 (gage height, 8.41 ft); minimum, 0.48 cfs Sept. 13-16, but may have been less during period of ice effect.

Period of record: Maximum discharge, 958 cfs Dec. 21, 1967 (gage height, 10.89 ft); no flow at times during 1952, 1955, and 1964.

REMARKS.--Records good.

REVISIONS (WATER YEARS).--WSP 1338: Drainage area. WSP 1508: 1956.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	CCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	1.4	11	11	62	8.0	18	14	13	5.4	4.7	.67
2	1.4	1.3	11	7.4	46	8.0	39	12	21	4.5	3.9	.67
3	1.5	1.5	11	5.2	30	8.6	35	10	14	4.5	3.3	.93
4	1.2	1.6	9.6	4.4	23	8.6	42	8.9	10	4.9	3.0	1.8
5	1.0	1.7	7.4	3.8	20	8.9	89	8.0	8.3	23	2.7	2.1
6	1.1	1.9	5.8	3.5	16	9.7	64	7.5	7.2	180	2.6	2.3
7	.97	2.3	4.5	3.2	13	10	44	7.2	6.5	94	2.4	.93
8	.78	2.6	3.8	2.9	11	11	33	15	6.3	65	2.1	.73
9	.81	2.6	3.4	2.7	9.3	12	180	33	6.3	52	4.5	1.4
10	.87	2.6	3.4	2.6	7.8	11	126	72	6.1	34	4.1	.73
11	.75	2.3	3.4	2.6	6.9	8.9	71	65	6.5	25	2.1	1.2
12	.71	2.6	4.0	2.5	6.0	7.8	49	41	5.4	20	1.7	.67
13	.71	2.8	3.6	2.5	5.7	6.7	38	31	4.5	12	1.4	.62
14	.71	2.8	3.4	2.4	5.4	6.7	32	32	4.3	8.6	1.4	1.0
15	.93	3.4	2.6	2.4	5.2	5.8	48	23	4.7	6.3	1.2	.62
16	.87	4.1	2.6	2.4	5.1	5.6	35	17	4.7	5.1	1.7	1.4
17	1.1	2.8	2.5	13	5.0	6.7	38	14	4.5	4.3	2.0	5.8
18	1.7	4.1	2.8	137	4.9	9.2	183	15	3.9	3.7	1.4	3.3
19	1.6	3.6	5.1	27	4.9	12	183	17	4.1	3.2	1.1	1.2
20	1.6	2.1	5.1	14	4.9	14	86	15	3.5	3.9	.93	.86
21	1.3	1.9	4.0	21	5.1	12	58	12	3.0	3.5	.93	.79
22	1.5	2.1	9.6	27	5.8	9.4	40	12	5.8	3.2	.93	.73
23	1.7	1.9	17	34	6.5	9.4	28	12	118	2.9	1.7	1.0
24	1.6	1.5	8.1	23	6.5	58	20	9.4	44	6.3	.86	2.6
25	1.7	1.4	5.6	16	7.2	107	16	8.6	26	3.3	.79	1.4
26	1.4	1.4	4.9	8.1	7.8	71	14	7.5	16	4.1	2.6	.93
27	.99	1.4	10	6.9	8.0	55	12	7.5	11	67	2.0	1.0
28	1.1	16	64	180	8.0	56	27	8.0	7.8	20	1.7	1.7
29	1.2	24	45	341	-----	37	23	6.5	6.5	11	1.5	.93
30	1.3	13	26	278	-----	25	18	6.1	6.5	6.5	1.1	.86
31	1.4	-----	15	94	-----	18	-----	6.5	-----	5.4	.73	-----
TOTAL	36.80	114.7	315.2	1,281.5	347.0	637.0	1,689	553.7	389.4	692.6	63.07	40.87
MEAN	1.19	3.82	10.2	41.3	12.4	20.5	56.3	17.9	13.0	22.3	2.03	1.36
MAX	1.7	24	64	341	62	107	183	72	118	180	4.7	5.8
MIN	.71	1.3	2.5	2.4	4.9	5.6	12	6.1	3.0	2.9	.73	.62
CFSM	.05	.17	.45	1.83	.55	.91	2.49	.79	.57	.99	.05	.06
IN.	.06	.19	.52	2.11	.57	1.05	2.78	.91	.64	1.14	.10	.07

CAL YR 1968 TOTAL 5,408.04 MEAN 14.8 MAX 424 MIN .71 CFSM .65 IN 8.50
WTR YR 1969 TOTAL 6,160.84 MEAN 16.9 MAX 341 MIN .62 CFSM .75 IN 10.14

PEAK DISCHARGE (BASE, 340 CFS).--Jan. 28 (2045) 581 cfs (8.41 ft).

5-5235. Slough Creek near Collegeville, Ind.

LOCATION.--Lat 40°53'30", long 87°09'17", in SW¼NW¼ sec. 7, T. 28 N., R. 6 W., Jasper County, on right bank at downstream side of bridge on State Highway 53, 1.5 miles south of Collegeville, 2.5 miles upstream from mouth, and 2.8 miles downstream from Bice ditch.

DRAINAGE AREA.--84.1 sq mi.

PERIOD OF RECORD.--July 1948 to December 1951, October 1952 to current year. Prior to October 1965, published as Big Slough Creek near Collegeville.

GAGE.--Water-stage recorder. Datum of gage is 634.75 ft above mean sea level. Prior to Aug. 5, 1955, nonrecording gage and Aug. 5, 1955, to Oct. 8, 1958, water-stage recorder at same site at datum 3.00 ft higher.

AVERAGE DISCHARGE.--20 years, 65.8 cfs (10.62 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,620 cfs Jan. 30 (gage height, 14.0 ft, from floodmark); minimum, 4.2 cfs Oct. 27, Nov. 2, 3 (gage height, 2.73 ft).

Period of record: Maximum discharge, 2,390 cfs Dec. 22, 1967 (gage height, 16.88 ft); minimum daily discharge, 0.7 cfs Dec. 20-26, 1963.

REMARKS.--Records poor.

REVISIONS (WATER YEARS).--WSP 1338: Drainage area. WSP 1558: 1955(M), 1956(M), 1957.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	CCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.4	5.3	36	80	370	23	57	73	38	17	28	6.2
2	8.0	4.5	34	64	280	23	111	60	53	14	24	6.1
3	7.0	4.8	31	55	220	23	129	52	53	13	21	6.2
4	6.0	4.8	28	47	180	24	129	48	44	27	18	7.0
5	7.2	4.8	30	40	150	23	310	45	40	48	18	8.4
6	6.6	5.3	56	35	130	24	323	42	38	305	16	9.0
7	6.1	8.8	45	29	105	26	232	39	36	339	15	6.6
8	6.3	7.1	35	25	92	27	172	56	36	167	14	5.9
9	7.2	5.6	34	22	80	30	572	104	36	136	19	6.2
10	6.7	5.6	30	19	70	29	794	243	35	88	20	6.3
11	6.2	5.3	28	17	62	42	480	378	33	59	15	6.3
12	5.6	5.3	19	16	52	36	350	334	28	48	13	5.9
13	5.3	5.6	18	15	44	25	270	291	26	36	12	5.7
14	5.0	5.6	26	15	35	23	220	253	25	28	12	5.8
15	5.0	8.4	19	15	30	24	200	172	26	22	11	5.2
16	5.0	14	19	19	25	19	180	108	26	18	13	7.1
17	5.3	14	19	120	22	20	200	68	25	16	13	15
18	5.6	17	21	880	19	25	280	66	25	15	12	12
19	5.6	16	22	350	18	32	900	90	24	14	10	7.3
20	5.3	13	21	100	17	37	620	83	23	16	9.5	6.2
21	5.0	12	18	130	17	35	340	64	21	15	9.3	5.8
22	5.0	11	28	200	18	28	220	56	27	13	8.4	5.9
23	5.3	11	126	260	19	26	160	51	470	12	8.6	7.5
24	5.3	10	141	120	20	117	120	46	220	18	8.2	9.8
25	5.3	9.6	52	85	21	469	100	43	104	16	7.7	7.7
26	5.0	9.6	33	70	22	310	80	41	59	15	8.3	6.5
27	4.8	9.2	54	60	23	180	63	40	36	463	8.2	7.4
28	4.8	41	110	220	23	130	124	40	25	262	7.6	7.9
29	4.8	94	440	800	-----	96	117	38	20	105	7.5	6.8
30	4.8	52	270	1,500	-----	76	92	36	19	44	7.0	6.4
31	4.8	-----	120	540	-----	66	-----	34	-----	34	6.5	-----
TOTAL	176.3	420.2	1,967	5,948	2,164	2,068	7,945	3,094	1,671	2,423	401.4	216.1
MEAN	5.69	14.0	63.5	192	77.3	66.7	265	99.8	55.7	78.2	12.9	7.20
MAX	8.0	94	440	1,500	370	469	900	378	470	463	28	15
MIN	4.8	4.5	18	15	17	19	57	34	19	12	6.5	5.2
CFSM	.07	.17	.75	2.28	.92	.79	3.15	1.19	.66	.93	.15	.09
IN.	.08	.19	.87	2.63	.96	.91	3.51	1.37	.74	1.07	.18	.10
CAL YR 1968	TCTAL 31,310.0		MEAN 85.5		MAX 1,970	MIN 4.5	CFSM 1.02	IN 13.85				
WTR YR 1969	TCTAL 28,494.0		MEAN 78.1		MAX 1,500	MIN 4.5	CFSM .93	IN 12.60				

5-5240, Carpenter Creek at Egypt, Ind.

LOCATION.--Lat 40°51'58", long 87°12'20", on line between SW $\frac{1}{4}$ sec. 15 and NW $\frac{1}{4}$ sec. 22, T. 28 N., R. 7 W., Jasper County on left bank at downstream side of bridge on State Highway 16, 0.5 mile north of Egypt, 2.8 miles upstream from mouth, and 4 miles southwest of Collegeville.

DRAINAGE AREA.--48.1 sq mi.

PERIOD OF RECORD.--July 1948 to December 1951, October 1952 to current year.

GAGE.--Water-stage recorder. Datum of gage is 641.79 ft above mean sea level. Prior to Sept. 6, 1955, nonrecording gage, at same site and datum.

AVERAGE DISCHARGE.--20 years, 34.8 cfs (9.82 inches per year).

EXTREMES.--Current year: Maximum discharge, 1,090 cfs Jan. 29 (gage height, 9.88 ft); minimum, 0.04 cfs Sept. 30; minimum gage height, 1.82 ft Oct. 15, 16, 17.

Period of record: Maximum discharge, 3,720 cfs June 10, 1958 (gage height, 11.66 ft); no flow at times most years.

REMARKS.--Records fair.

REVISIONS (WATER YEARS).--WSP 1175: 1949(M). WSP 1338: Drainage area. WSP 1558: 1955-57. WSP 1728: 1951(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.89	.71	39	35	172	12	43	40	22	14	3.2	.44
2	.83	.77	36	26	111	12	67	37	35	11	4.6	.40
3	.93	.89	30	21	76	12	73	32	24	11	1.7	.40
4	.89	.89	27	17	62	13	77	29	22	10	2.2	.44
5	.95	.89	23	15	48	12	233	27	22	50	1.7	.61
6	.89	.89	17	13	42	14	196	26	21	216	1.8	.61
7	.95	1.8	15	11	36	15	120	24	19	311	1.4	.44
8	1.0	2.5	13	10	32	15	83	39	18	140	1.4	.26
9	1.1	1.6	10	9.0	29	17	275	78	18	172	2.0	.29
10	1.2	1.4	9.0	8.7	27	15	311	188	17	88	6.4	.32
11	1.2	1.2	8.8	8.2	25	16	175	208	16	54	5.2	.29
12	.89	1.1	11	8.0	24	15	111	121	15	92	3.7	.23
13	.83	.89	11	7.8	22	12	79	86	14	51	3.1	.20
14	.77	.95	8.2	7.7	19	12	64	81	13	27	2.1	.16
15	.61	2.7	7.1	7.7	16	11	90	62	13	18	1.4	.12
16	.61	9.7	6.4	11	18	11	83	50	13	16	1.2	.23
17	.71	8.0	6.4	39	15	11	95	41	13	14	1.2	3.2
18	1.6	14	7.0	262	12	14	342	41	13	9.5	1.2	2.2
19	.95	14	11	175	12	17	531	38	13	8.4	1.1	.61
20	.77	8.8	11	99	12	20	259	34	12	12	.95	.32
21	.66	6.3	7.8	108	11	20	173	29	11	6.3	.89	.16
22	.71	5.9	21	141	11	17	114	29	13	5.3	.71	.14
23	.89	5.2	55	165	12	18	80	25	177	4.4	.66	.12
24	.95	4.4	51	108	12	83	61	23	93	5.0	.61	.29
25	.89	3.8	26	56	11	282	52	23	48	3.7	.61	.40
26	.83	3.5	19	45	11	202	44	23	32	4.2	.56	.26
27	.77	3.3	33	31	12	134	39	22	23	90	.56	.14
28	.71	39	173	212	12	133	54	22	18	25	.48	.16
29	.71	104	163	920	-----	91	50	22	16	13	.48	.14
30	.71	52	79	825	-----	62	44	22	15	6.6	.44	.08
31	.66	-----	52	290	-----	46	-----	22	-----	3.8	.40	-----
TOTAL	26.96	301.08	586.7	3,692.1	902	1,364	4,018	1,544	799	1,592.2	53.95	13.66
MEAN	.87	10.0	31.8	119	32.2	44.0	134	49.8	26.6	51.4	1.74	.46
MAX	1.6	104	173	920	172	282	531	208	177	316	6.4	3.2
MIN	.61	.71	6.4	7.7	11	11	39	22	11	3.7	.40	.08
CFSM	.02	.21	.66	2.48	.67	.91	2.78	1.04	.55	1.07	.04	.009
IN.	.02	.23	.76	2.85	.70	1.05	3.11	1.19	.62	1.23	.04	.01

CAL YR 1968 TOTAL 13,708.48 MEAN 37.5 MAX 955 MIN .61 CFSM .78 IN 10.60
WTR YR 1969 TOTAL 15,293.65 MEAN 41.9 MAX 920 MIN .08 CFSM .87 IN 11.82

PEAK DISCHARGE (BASE, 600 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-29	0430	9.88	1,090	04-19	0500	8.85	642

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., Newton County, on right bank at downstream side of bridge on State Highway 55, 0.2 mile north of intersection of Highways 16 and 55, 0.6 mile west of Foresman, and 3 miles east of Brook.

DRAINAGE AREA.--452 sq mi.

PERIOD OF RECORD.--December 1948 to current year.

GAGE.--Water-stage recorder. Datum of gage is 624.00 ft above mean sea level. Prior to Sept. 7, 1955, nonrecording gage 2.5 miles upstream at datum 3.54 ft higher.

AVERAGE DISCHARGE.--20 years, 342 cfs (10.28 inches per year).

EXTREMES.--Current year: Maximum discharge, 3,060 cfs Jan. 31 (gage height, 18.21 ft); minimum, 35 cfs Aug. 30 (gage height, 3.80 ft).

Period of record: Maximum discharge, 5,930 cfs June 14, 1958 (gage height, 24.42 ft); minimum, 6.1 cfs Sept. 10, 1964; minimum gage height, 2.92 ft Sept. 27-29, 1956.

REMARKS.--Records fair. Records of suspended sediment loads for current year are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1338: 1953, drainage area (at former site). WSP 1438: 1955. WSP 1508: 1956.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR (OCTOBER 1968 TO SEPTEMBER 1969)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	57	483	774	2,830	220	620	478	194	149	202	37
2	50	55	412	647	2,480	218	581	427	243	143	143	37
3	51	51	358	525	2,080	218	646	383	274	119	116	37
4	49	51	327	383	1,680	219	681	341	236	114	99	37
5	44	53	296	276	1,350	217	810	313	198	150	81	38
6	48	53	232	223	1,080	224	998	293	176	410	68	44
7	51	54	204	199	832	237	1,020	276	169	693	59	45
8	54	68	198	188	663	239	950	313	167	702	54	43
9	51	69	184	136	564	246	982	448	168	677	68	39
10	55	66	170	171	488	243	1,400	674	165	587	92	39
11	55	64	150	157	448	227	1,620	1,000	154	426	74	39
12	53	64	158	149	382	218	1,620	1,150	142	397	60	39
13	50	63	156	145	349	210	1,350	1,150	127	393	52	37
14	50	59	138	145	330	188	1,320	1,100	120	295	49	37
15	51	66	125	146	284	173	1,180	999	126	197	43	37
16	49	108	139	153	272	169	1,090	947	127	141	50	36
17	50	146	141	185	272	166	984	672	116	124	50	49
18	55	161	138	647	227	172	1,290	550	107	105	68	62
19	59	175	148	952	213	192	2,020	544	106	99	66	52
20	57	163	188	968	204	217	2,420	564	102	114	57	45
21	54	140	202	947	202	231	2,360	540	92	108	50	42
22	52	131	202	1,010	208	218	2,120	470	92	94	47	40
23	53	120	322	1,140	217	209	1,800	405	486	78	45	40
24	55	113	355	1,210	218	309	1,490	356	691	78	44	48
25	56	102	354	1,060	218	764	1,200	316	571	93	40	50
26	64	96	314	908	218	1,080	934	278	399	79	40	47
27	63	93	309	727	218	1,160	705	251	270	613	41	45
28	56	151	543	715	218	1,160	587	226	179	922	39	46
29	53	420	830	1,500	-----	1,080	562	204	136	812	36	43
30	53	510	927	2,660	-----	945	526	192	126	547	36	42
31	54	-----	876	3,030	-----	771	-----	183	-----	326	37	-----
TOTAL	1,645	3,522	9,579	22,126	18,745	12,139	35,866	16,042	6,261	9,785	2,011	1,272
MEAN	53.1	117	309	714	669	392	1,196	517	209	316	64.9	42.4
MAX	64	510	927	3,030	2,830	1,160	2,420	1,150	691	922	202	62
MIN	44	51	125	145	202	166	526	183	92	78	36	36
CFSM	.12	.26	.68	1.58	1.48	.87	2.64	1.14	.46	.70	.14	.09
IN.	.14	.29	.79	1.82	1.54	1.00	2.95	1.32	.52	.81	.17	.10
CAL YR 1968	TOTAL 163,311		MEAN 446		MAX 4,380	MIN 42		CFSM .99	IN 13.44			
WTR YR 1969	TOTAL 138,993		MEAN 381		MAX 3,030	MIN 36		CFSM .84	IN 11.44			

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., Iroquois County, on left bank at upstream side of bridge on U.S. Highway 52 in 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.

PERIOD OF RECORD.--October 1944 to current year.

GAGE.--Water-stage recorder. Datum of gage is 614.34 ft above mean sea level. Prior to Aug. 5, 1945, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--25 years, 504 cfs (10.04 inches per year).

EXTREMES.--Current year: Maximum discharge, 3,700 cfs Feb. 1 (gage height, 18.66 ft); minimum, 30 cfs Sept. 15.
Period of record: 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 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	42	623	1,200	3,660	281	1,050	702	331	254	508	36
2	52	42	595	1,050	3,400	280	914	627	340	263	345	36
3	51	43	532	850	3,040	277	888	564	383	253	251	36
4	51	41	476	700	2,670	278	936	511	359	219	156	36
5	51	38	431	500	2,130	278	1,050	466	357	250	159	38
6	49	39	369	400	1,760	282	1,240	432	316	656	133	39
7	48	42	303	320	1,440	293	1,340	406	290	1,010	109	44
8	50	43	280	260	1,130	302	1,340	466	275	1,210	53	47
9	55	49	261	230	918	307	1,540	600	270	1,450	107	45
10	55	53	244	220	760	307	1,870	998	270	1,240	178	42
11	54	52	219	210	664	302	1,980	1,430	260	952	151	37
12	56	49	197	205	594	287	2,040	1,570	240	882	121	36
13	57	47	190	200	526	278	2,000	1,590	220	988	98	35
14	53	46	180	200	459	265	1,880	1,570	200	826	85	32
15	51	47	175	230	456	240	1,840	1,490	190	564	76	31
16	50	57	170	1,210	434	228	1,760	1,350	200	406	71	34
17	49	87	170	1,350	420	223	1,610	1,160	200	305	73	47
18	49	131	180	1,380	365	222	1,890	1,010	190	253	72	61
19	49	162	200	1,520	310	231	2,540	942	150	211	83	69
20	54	178	270	1,660	281	253	2,940	902	180	205	85	55
21	56	165	280	1,840	271	277	3,070	870	170	204	77	46
22	53	141	300	1,980	272	286	2,960	824	170	185	67	39
23	48	127	450	2,100	278	280	2,680	740	650	162	59	38
24	47	114	500	2,200	280	324	2,170	656	966	139	54	41
25	47	104	520	1,500	278	846	1,910	588	998	128	50	48
26	48	94	480	1,600	278	1,280	1,590	526	858	135	44	48
27	52	87	450	1,300	278	1,440	1,260	476	634	561	43	44
28	55	110	750	1,200	280	1,540	1,000	434	463	1,110	44	42
29	50	341	1,000	2,300	-----	1,520	836	396	343	1,170	42	35
30	44	560	1,300	3,470	-----	1,410	764	362	282	1,050	37	38
31	42	-----	1,400	3,650	-----	1,230	-----	341	-----	776	35	-----
TOTAL	1,580	3,131	13,499	37,435	27,632	15,847	50,888	24,999	10,835	18,057	3,546	1,259
MEAN	51.0	104	435	1,208	987	511	1,656	806	361	582	114	42.0
MAX	57	560	1,400	3,650	3,660	1,540	3,070	1,590	998	1,450	508	65
MIN	42	38	170	200	271	222	764	341	170	128	35	31
CFSM	.07	.15	.64	1.77	1.45	.75	2.49	1.18	.53	.85	.17	.06
IN.	.09	.17	.74	2.04	1.51	.86	2.77	1.36	.59	.98	.15	.07
CAL YR 1968	TOTAL 231,714		MEAN 633		MAX 6,290	MIN 38	CFSM .93	IN 12.64				
WTR YR 1969	TOTAL 208,708		MEAN 572		MAX 3,660	MIN 31	CFSM .84	IN 11.38				

ILLINOIS RIVER BASIN

5-5255. Sugar Creek at Milford, Ill.

LOCATION.--Lat 40°37'50", long 87°43'25", in N $\frac{1}{2}$ sec. 16, T. 25 N., R. 12 W., Iroquois County, 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.

PERIOD OF RECORD.--July 1948 to current year.

GAGE.--Nonrecording gage and crest-stage gage. Datum of gage is 622.00 ft above mean sea level.

AVERAGE DISCHARGE.--21 years, 323 cfs (10.20 inches per year).

EXTREMES.--Current year: Maximum discharge, 5,860 cfs Jan. 30 (gage height, 18.30 ft, from graph based on gage readings); minimum, 8.7 cfs Sept. 13.

Period of record: 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 1968 TO SEPTEMBER 1969

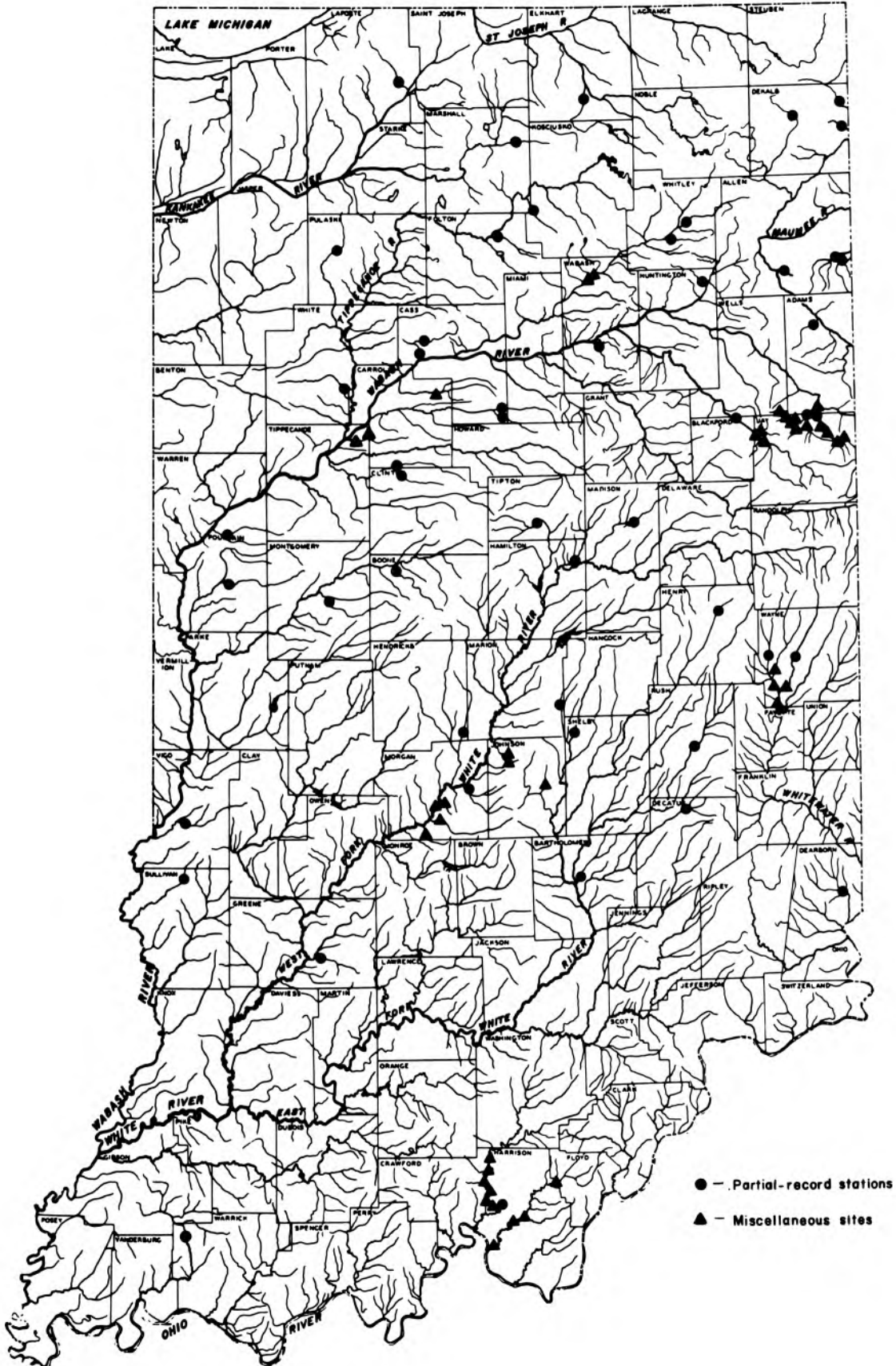
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	13	279	150	2480	74	406	256	176	156	53	15
2	14	15	315	120	1460	74	354	243	165	144	49	14
3	18	11	193	100	665	72	394	242	153	150	46	14
4	20	14	170	90	367	77	376	214	135	116	42	13
5	21	14	150	80	350	77	1010	208	120	350	39	12
6	17	11	122	70	320	80	2400	202	106	1850	36	15
7	13	16	103	65	311	84	1750	200	102	2150	34	16
8	13	18	86	60	347	90	1090	214	100	1300	30	14
9	12	23	83	58	450	102	1300	290	99	1000	34	13
10	12	21	66	56	435	88	2220	608	97	974	123	12
11	13	14	54	54	305	82	1850	1130	104	953	89	11
12	17	11	80	53	222	89	1430	830	96	746	53	11
13	18	11	67	52	183	83	1360	650	95	440	43	11
14	16	12	53	53	148	81	1180	500	100	248	37	11
15	14	17	50	55	140	68	1130	410	120	207	30	11
16	15	76	48	128	130	74	1520	370	105	176	27	13
17	13	108	47	391	120	88	1540	340	97	159	25	47
18	11	127	48	685	115	171	2560	315	93	159	24	106
19	11	125	49	808	110	118	3130	294	90	192	23	91
20	11	90	46	590	106	118	2570	267	85	180	28	51
21	12	70	45	650	103	116	2150	237	106	160	25	24
22	12	48	45	765	98	111	1670	236	390	135	23	13
23	12	42	46	1220	95	111	1040	228	971	116	21	20
24	11	36	50	1270	92	385	625	213	1260	103	20	36
25	13	33	55	690	96	1500	485	210	1030	99	20	41
26	14	31	70	490	89	1780	420	192	575	80	20	40
27	13	29	138	440	81	1520	370	176	306	165	21	20
28	12	59	490	490	77	1250	334	165	220	142	18	17
29	13	411	478	2820		950	314	159	200	100	18	15
30	12	373	265	5320	-----	668	274	152	175	82	17	14
31	11	-----	180	4070	-----	445	-----	146	-----	65	17	-----
TOTAL	427	1879	3971	21943	9495	10626	37252	9897	7471	12897	1085	741
MEAN	13.8	62.6	128	708	339	343	1,242	319	249	416	35.0	24.7
MAX	21	411	490	5,320	2,480	1,780	3,130	1,130	1,260	2,150	123	106
MIN	11	11	45	52	77	68	274	146	85	65	17	11
CFSM	.03	.15	.30	1.65	.79	.80	2.89	.74	.58	.97	.08	.06
IN.	.04	.16	.34	1.90	.82	.92	3.22	.86	.65	1.12	.09	.06

CAL YR 1968 TOTAL 133,694.4 MEAN 365 MAX 8,960 MIN 6.6 CFSM .85 IN 11.56
WTR YR 1969 TOTAL 117,684 MEAN 322 MAX 5,320 MIN 11 CFSM .75 IN 10.18

PEAK DISCHARGE (BASE, 2,500 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
01-30	1530	18.30	5,860	04-19	0400	16.00	3,500
04-06	1000	14.40	2,570	07-07	0100	14.30	2,520

PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES IN INDIANA



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 1969

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements	
					Date	Discharge (cfs)
OHIO RIVER BASIN						
Great Miami River						
3-2747	Whitewater River at Hagerstown, Ind.	Lat 39°55'05", long 85°09'22", in SE¼SW¼ sec. 14, T. 17 N., R. 12 E., at bridge on Jones Road, 0.15 mile north of Hagerstown, Wayne County.	29.2	1969	10-14-68 03-21-69 09-11-69	6.96 14.1 9.79
3-2749	Greens Fork at Greens Fork, Ind.	Lat 39°53'35", long 85°02'39", in NE¼SW¼ sec. 26, T. 17 N., R. 13 E., at bridge on State Highway 38, at west edge of Greens Fork, Wayne County.	66.7	1969	10-14-68 03-21-69 09-11-69	10.4 31.6 14.3
Tanners Creek						
3-2766	Tanners Creek near Guilford, Ind.	Lat 39°09'15", long 84°53'50", in E½ sec. 29, T. 6 N., R. 1 W., first principal meridian, Ohio, at bridge on Pribble Road, 2.3 miles southeast of Guilford, Dearborn County.		1969	10-15-68 03-21-69 09-11-69	0.71 10.6 0.67
Blue River						
3-3029	Spring Creek near White Cloud, Ind.	Lat 38°14'20", long 86°13'45", in SE¼ sec 19, T. 3 S., R. 3 E., at county highway bridge, 0.8 mile north of White Cloud, Harrison County, and at mouth of Harrison Spring.		1951-52 1954-69	10-17-68 11-19-68 12-16-68 01-21-69 03-05-69 04-07-69 05-15-69 06-18-69 07-29-69 09-03-69	8.53 10.3 34.4 214 94.5 117 118 102 46.2 29.8
Pigeon Creek						
3-3220.5	Pigeon Creek near Buckskin, Ind.	Lat 38°11'44", long 87°25'42", at corner of secs. 4, 5, 8, and 9, T. 4 S., R. 9 W., at bridge on State Highway 68, about 200 ft downstream from C.C.C. & St. L. R.R. bridge, 3 miles south of Buckskin, Warrick County.	a 184	1961-63 1965, 67 1969	10-23-68	19.3
Wabash River						
3-3228.6	Loblolly Creek at Geneva, Ind.	Lat 40°34'59", long 84°57'38", in NW¼NE¼ sec. 32, T. 25 N., R. 14 E., at bridge on U.S. Highway 27, at south edge of Geneva, Adams County.	67.2	1969	03-19-69 08-27-69	15.0 1.48
3-3228.8	Limberlost Creek at Geneva, Ind.	Lat 40°34'59", long 84°57'38", in NW¼NE¼ sec. 32, T. 25 N., R. 14 E., 50 ft above mouth, above bridge on U.S. Highway 27, at south edge of Geneva, Adams County.	41.7	1969	03-19-69 08-27-69	1.50 0.35
3-3237	Aboite Creek near Aboite, Ind.	Lat 40°59'23", long 85°21'00", on line between secs. 1 and 12, T. 29 N., R. 10 E., at bridge on Huntington County Road 1100 North, 800 ft above mouth, 2.25 miles northeast of Roanoke, Huntington County.	52.7	1969	10-03-68 03-19-69 08-26-69	2.49 13.1 2.44

Discharge measurements made at low-flow partial-record stations during water year 1969--Continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements	
					Date	Discharge (cfs)
OHIO RIVER BASIN--Continued						
Wabash River--Continued						
3-3242.5	Salamonie River at Montpelier, Ind.	Lat 40°33'33", long 85°16'43", in NE¼NE¼SE¼ sec. 4, T. 24 N., R. 11 E., at bridge on State Highway 303, at north edge of Montpelier, Blackford County.	253	1969	10-03-68 08-26-69	7.42 6.50
3-3247	Treaty Creek at Wabash, Ind.	Lat 40°47'31", long 85°48'36", in SE¼NE¼NE¼ sec. 14, T. 27 N., R. 6 E., at bridge on Cassatt Road, 0.5 mile southeast of Wabash, Wabash County.	30.1	1969	10-08-68 07-25-69 09-03-69	4.70 4.94 0.77
3-3275.9	Eel River near Columbia City, Ind.	Lat 41°08'33", long 85°27'25", in NW¼SE¼NE¼ sec. 13, T. 31 N., R. 9 E., at bridge on Old U.S. Highway 30, 1.5 miles east of Columbia City, Whitley County.	77.4	1969	10-09-68 09-04-69	13.2 14.2
3-3279	Sugar Creek near South Whitley, Ind.	Lat 41°04'31", long 85°36'54", on line between secs. 3 and 10, T. 30 N., R. 8 E., at bridge on State Highway 14, 0.3 mile east of junction with State Highway 5, at southeast edge of South Whitley, Whitley County.	30.7	1969	10-09-68	1.60
3-3291	Crooked Creek near Royal Center, Ind.	Lat 40°48'23", long 86°29'31", in NW¼ sec. 11, T. 27 N., R. 1 W., at culverts on Cass County 625 West Road, 4 miles south of Royal Center, Cass County.	35.9	1968-69	08-14-69 09-26-69	17.1 15.0
3-3291.5	Crooked Creek near Logansport, Ind.	Lat 40°45'51", long 86°29'54", in NW¼ sec. 26, T. 27 N., R. 1 W., at bridge on U.S. Highway 24, 6.5 miles west of Logansport, Cass County.	54.2	1968-69	08-14-69 09-26-69	32.6 36.7
3-3295.1	Deer Creek near Lincoln, Ind.	Lat 40°36'11", long 86°12'10", in NW¼ sec. 21, T. 25 N., R. 3 E., at bridge on U.S. Highway 35, one mile south of Lincoln, Cass County.	56.5	1968-69	08-15-69 09-30-69	8.20 12.6
3-3295.3	South Fork Deer Creek at Galveston, Ind.	Lat 40°34'54", long 86°11'23", in SE¼ sec. 28, T. 25 N., R. 3 E., at bridge on U.S. Highway 35, at Galveston, Cass County.	31.6	1968-69	08-15-69 09-30-69	2.54 3.60
3-3313.5	Yellow Creek near Mentone, Ind.	Lat 41°10'18", long 86°07'16", in NW¼NE¼ sec. 6, T. 31 N., R. 4 E., at bridge on State Highway 25, 4.5 miles west of Mentone, Fulton County.	47.8	1969	08-11-69 09-23-69	13.5 6.23
3-3313.75	Chippewanuck Creek near Rochester, Ind.	Lat 41°06'43", long 86°11'09", in NW¼NW¼ sec. 27, T. 31 N., R. 3 E., at bridge on State Highway 25, 3.5 miles north of Rochester, Fulton County.	43.7	1969	08-11-69 09-23-69	15.1 9.75
3-3323.5	Big Monon Creek near Medaryville, Ind.	Lat 41°03'21", long 86°50'02", in NW¼NW¼ sec. 13, T. 30 N., R. 4 W., at bridge on State Highway 14, 3.5 miles southeast of Medaryville, Pulaski County.	69.6	1969	10-14-68 08-06-69 09-10-69	28.8 50.1 22.3
3-3328	Big Creek near Monticello, Ind.	Lat 40°40'16", long 86°47'14", in SW¼ sec. 29, T. 26 N., R. 3 W., at county road bridge, 4.8 miles east of Chalmers, White County.	55.3	1968-69	08-07-69 09-10-69	16.1 6.63
3-3347	Middle Fork Wildcat Creek near Rossville, Ind.	Lat 40°25'47", long 86°36'15", in NE¼NE¼ sec. 23, T. 23 N., R. 2 W., at bridge on U.S. Highway 421, 1 mile northwest of Rossville, Clinton County.	54.0	1969	11-01-68 09-11-69	3.64 4.76
3-3347.5	Campbells Run near Rossville, Ind.	Lat 40°24'46", long 86°35'41", in SE¼NW¼ sec. 25, T. 23 N., R. 2 W., at bridge on U.S. Highway 421, 0.3 mile south of Rossville, Clinton County.	18.3	1969	11-01-68 09-11-69	0.56 0.73
3-3358	Big Shawnee Creek near Attica, Ind.	Lat 40°14'30", long 87°14'12", in NW¼ 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, Fountain County.	42.0	1968-69	09-12-69	9.61
3-3391.11	East Fork Coal Creek near Veedersburg, Ind.	Lat 40°05'48", long 87°14'34", in NW¼NW¼ sec. 17, T. 19 N., R. 7 W., at bridge on New U.S. Highway 41, 1.5 miles southeast of Veedersburg, Fountain County.	60.1	1969	11-01-68 09-12-69	12.8 8.29
3-3393	Prairie Creek at Thorntown, Ind.	Lat 40°07'46", long 86°36'01", in SE¼SE¼ sec. 35, T. 20 N., R. 2 W., at bridge on State Highway 47, at east edge of Thorntown, Boone County.	46.9	1969	10-31-68 09-11-69	3.23 5.00
3-3394.6	Walnut Fork Sugar Creek near Crawfordville, Ind.	Lat 40°02'49", long 86°51'33", in SE¼NW¼ sec. 34, T. 19 N., R. 4 W., at bridge on State Highway 32, 2.5 miles east of Crawfordville, Montgomery County.	44.8	1969	10-31-68 09-12-69	2.56 1.22
3-3415.8	Honey Creek near Terre Haute, Ind.	Lat 39°23'40", long 87°23'54", in SW¼ sec. 15, T. 11 N., R. 9 W., at bridge on U.S. Highway 41, at north edge of Allendale, and 3 miles south of the city limits of Terre Haute, Vigo County.	a 64	1965 1967 1969	11-14-68 03-20-69 07-18-69	3.98 15.8 11.8

Discharge measurements made at low-flow partial-record stations during water year 1969--Continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements	
					Date	Discharge (cfs)
OHIO RIVER BASIN--Continued						
Wabash River--Continued						
3-3419.2	Turman Creek near Farmersburg, Ind.	Lat 39°14'40", long 87°24'28", at corner of secs. 3, 4, 9, and 10, T. 9 N., R. 9 W., at bridge on Sullivan County Road 1100 North, 1.5 miles southwest of Farmersburg.	a 13	1964 1967 1969	11-04-68 03-20-69 07-18-69	0.07 1.20 0.18
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, 2 miles northeast of Alexandria, Madison County.	* 44.7	1960-65 1967-69	03-20-69 08-29-69	16.2 5.44
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, Hamilton County.	98.9	1946 1965 1968-69	03-20-69 09-04-69	36.1 7.31
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, 0.5 mile southwest of Tipton, Tipton County.	80.2	1968-69	03-20-69 09-03-69	38.7 2.34
3-3536.65	Stotts Creek near Martinsville, Ind.	Lat 39°30'02", long 86°19'57", in NE¼ sec. 8, T. 12 N., R. 2 E., at bridge on State Highway 37, 250 ft above mouth, 7.2 miles northeast of Martinsville, Morgan County.	60.1	1954 1968-69	09-15-69	1.61
3-3539	East Fork White Lick Creek at Mooresville, Ind.	Lat 39°38'47", long 86°20'47", in SE¼ sec. 18, T. 14 N., R. 2 E., at bridge on Mooresville Road, 0.8 mile west of Friendswood, and 3 miles northeast of Mooresville, Hendricks County.	42.8	1965 1968-69	09-15-69	3.40
3-3602.25	Plummer Creek near Bloomfield, Ind.	Lat 38°59'33", long 86°55'44", in NE¼ sec. 2, T. 6 N., R. 5 W., at bridge on U.S. Highway 231, 2.3 miles south of Bloomfield, Greene County.	66.7	1954 1968-69	11-01-68 02-25-69 09-15-69	2.71 25.4 1.75
3-3609.2	Big Blue River near New Castle, Ind.	Lat 40°00'15", long 85°20'48", at corner of secs. 13, 14, 23, and 24, T. 18 N., R. 10 E., at bridge on U.S. Highway 36, 5.2 miles east of Sulphur Springs and 5.2 miles north of New Castle, Henry County.	15.8	1965 1969	10-14-68 03-21-69 09-11-69	6.13 8.78 6.69
3-3617	Sugar Creek near Pleasant View, Ind.	Lat 39°38'49", long 85°55'09", in E½ sec. 24, T. 14 N., R. 5 E., at bridge on Interstate Highway 74, 1.75 miles southeast of Pleasant View, Shelby County.	130	1954 1960-69	10-15-68 03-20-69 09-12-69	15.6 48.3 25.0
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 East Troy Avenue, 2.4 miles northeast of New Bethel, Marion County.	51.0	1960-65 1967-69	10-15-68 03-20-69 09-12-69	0.71 11.5 3.24
3-3634	Flatrock River at Rushville, Ind.	Lat 39°36'15", long 85°26'39", in NW¼SW¼ sec. 5, T. 13 N., R. 10 E., at bridge on U.S. Highway 52, 0.3 mile south of courthouse in Rushville, Rush County.	168	1969	10-16-68 03-20-69 09-12-69	14.3 62.1 48.4
3-3643	Haw Creek near Columbus, Ind.	Lat 39°14'44", long 85°52'51", in W½SE¼ sec. 5, T. 9 N., R. 6 E., at bridge on county road, 1.1 miles north of corporate limits of Columbus, Bartholome County.	50.6	1960-65 1967-69	10-24-68	3.01
3-3644	Clifty Creek at Sandusky, Ind.	Lat 39°25'27", long 85°28'48", in NE¼NE¼ sec. 11, T. 11 N., R. 9 E., at bridge on State Highway 3, in Sandusky, Decatur County.	46.4	1969	10-02-68 03-20-69 09-12-69	0.67 10.7 2.72
STREAMS TRIBUTARY TO LAKE MICHIGAN						
St. Joseph River						
4-1004.9	Turkey Creek at New Paris, Ind.	Lat 41°30'00", long 85°50'40", in SW¼ sec. 9, T. 35 N., R. 6 E., at bridge on Elkhart County Road 46, 0.4 mile west of New Paris.	a160	1960-65 1967 1969	10-01-68 08-25-69	48.3 39.3

Discharge measurements made at low-flow partial-record stations during water year 1969--Continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements	
					Date	Discharge (cfs)
STREAMS TRIBUTARY TO LAKE ERIE						
Maumee River						
4-1778	Fish Creek near Artic, Ind.	Lat 41°29'15", long 84°50'13", in SE¼ sec. 18, T. 35 N., R. 15 E., at bridge on Dekalb County Road 12, 1.7 miles northwest of Artic.		1968-69	03-21-69 09-04-69	45.6 5.50
4-1779	Big Run at Butler, Ind.	Lat 41°26'09", long 84°52'08", in NE¼ sec. 1, T. 34 N., R. 14 E., at bridge on State Highway 1, 0.6 mile north of Butler, Dekalb County.		1968-69	03-21-69 09-03-69	6.51 1.96
4-1793.1	Cedar Creek at Waterloo, Ind.	Lat 41°26'14", long 85°01'03", in NW¼ sec. 3, T. 34 N., R. 13 E., at bridge on U.S. Highway 27, 0.3 mile northeast of Waterloo, Dekalb County.		1968-69	03-21-69 09-04-69	21.5 2.68
4-1811	Blue Creek near Pleasant Mills, Ind.	Lat 40°44'49", long 84°49'20", in NE¼NE¼ sec. 4, T. 26 N., R. 15 E., at bridge on State Highway 124, 1.5 miles west of Willshire, Ohio, and 2.2 miles southeast of Pleasant Mills, Adams County.		1969	10-01-68 03-20-69 09-03-69	1.93 22.6 1.28
4-1816	Holthouse ditch at Decatur, Ind.	Lat 40°50'48", long 84°56'44", in NW¼ sec. 4, T. 28 N., R. 14 E., at bridge on Winchester Road, 0.4 mile above mouth, and 1 mile northwest of Decatur, Adams County.		1968-69	03-20-69 09-03-69	13.1 0
4-1819	Houk ditch near Hassen Cassel, Ind.	Lat 40°59'27", long 85°05'32", in SW¼ sec. 5, T. 29 N., R. 13 E., at bridge on U.S. Highways 27 and 33, 0.4 mile above mouth, and 1.2 miles northwest of Hassen Cassel, Allen County.		1968-69	03-20-69 09-03-69	4.65 0
4-1913.4	Flatrock Creek near Townley, Ind.	Lat 41°00'51", long 84°51'06", in SE¼ sec. 32, T. 30 N., R. 15 E., at bridge on U.S. Highway 30, 1.2 miles southeast of Townley, Allen County.		1968-69	03-20-69 09-03-69	20.8 0.09
4-1913.6	Hoffman Creek at Townley, Ind.	Lat 41°01'16", long 84°52'16", in NE¼ sec. 31, T. 30 N., R. 15 E., at bridge on U.S. Highway 30, at Townley, Allen County.		1968-69	03-20-69 09-03-69	17.4 0
UPPER MISSISSIPPI RIVER BASIN						
Illinois River						
5-5151	Little Kankakee River near Mill Creek, Ind.	Lat 41°34'15", long 86°34'27", in center of sec. 18, T. 36 N., R. 1 W., at bridge on State Highway 4, 2.5 miles west of Mill Creek, LaPorte County.	a 39	1960-65 1968-69	08-13-69	36.0
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, 4.5 miles south of Bremen, Marshall County.	a 48	1956 1961-65 1967-69	08-12-69	8.58

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DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES
Measurements at miscellaneous sites

Measurements of streamflow at points other than gaging stations or partial-record stations are given in the following table.

Discharge measurements made at miscellaneous sites during water year 1969

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
Great Miami River Basin						
Martindale Creek	Whitewater River	Lat 39°48'46", long 85°08'52", in NE¼ sec. 26, T. 16 N., R. 12 E., 100 ft downstream from bridge on U.S. Highway 40, 0.6 mile west of Pershing, 1 mile east of Cambridge City, and 1.8 miles above mouth, Wayne County.	60.0	1954 1959	10-16-68	11.5
Whitewater River	Great Miami River	Lat 39°47'15", long 85°09'01", in NE¼ sec. 2, T. 15 N., R. 12 E., 200 ft upstream from bridge on East Milton Road, at east city limits of Milton, Wayne County.	198		10-14-68	47.5
Greens Fork	Whitewater River	Lat 39°46'22", long 85°06'30", in NW¼ sec. 8, T. 15 N., R. 13 E., 400 ft upstream from bridge on South Jacksonburg Road, 2500 ft upstream from Franklin Creek, 2.5 miles east of Milton, Wayne County.	87.0		10-16-68	17.0
Whitewater River	Great Miami River	Lat 39°42'14", long 85°06'53", in SE¼ sec. 31, T. 15 N., R. 13 E., 100 ft upstream from county road bridge, 0.65 mile west of community of Waterloo, and 2.25 miles north of city limits of Connersville, Fayette County.	310	1967	10-14-68	89.6
Nolands Fork	Whitewater River	Lat 39°42'14", long 85°06'18", in SW¼ sec. 32, T. 15 N., R. 13 E., 50 ft upstream from county road bridge in community of Waterloo, and 2.5 miles northeast of north city limits of Connersville, Fayette County.	100		10-14-68	21.1
Indian Creek Basin						
Indian Creek	Ohio River	Lat 38°18'25", long 86°01'30", in SW¼ sec. 25, T. 2 S., R. 4 E., at ford on private road, 0.5 mile north of State Highway 64, and 2.75 miles west of Georgetown, in Harrison County.			10-24-68	0.05
...Do.....	...do.....	Lat 38°12'43", long 86°08'09", in NE¼ sec. 36, T. 3 S., R. 3 E., 1500 ft downstream from sewage disposal plant at southwest edge of Corydon, Harrison County.			10-24-68	2.66
...Do.....	...do.....	Lat 38°12'05", long 86°10'18", in NW¼NE¼ sec. 3, T. 4 S., R. 3 E., 300 ft upstream from old dam, 2.5 miles southwest of Corydon, Harrison County.			10-31-68 12-16-68	2.28 25.8
...Do.....	...do.....	Lat 38°12'07", long 86°10'23", in NW¼NE¼ sec. 3, T. 4 S., R. 3 E., 150 ft downstream from old dam, 2.6 miles southwest of Corydon, Harrison County.			12-16-68	5.92
...Do.....	...do.....	Lat 38°07'40", long 86°13'53", in NW¼NE¼ sec. 31, T. 4 S., R. 3 E., at bridge on private road, 2.8 miles northeast of New Amsterdam, Harrison County.			10-31-68	0.78
Blue River Basin						
Blue River	Ohio River	Lat 38°22'38", long 86°15'35", in NW¼NE¼ sec. 2, T. 2 S., R. 2 E., at bridge known as Totten Ford Bridge on county road, 0.8 mile east of State Highway 66, and 2.5 miles north of Milltown, Crawford County.			10-30-68	17.8
...Do.....	...do.....	Lat 38°20'27", long 86°16'31", in NE¼SE¼ sec. 15, T. 2 S., R. 2 E., 350 ft downstream from dam in Milltown, Crawford County.			10-30-68	22.4
...Do.....	...do.....	Lat 38°18'55", long 86°17'20", in SW¼NW¼ sec. 27, T. 2 S., R. 2 E., 600 ft downstream from mouth of Slick Run, at community known as Devils Hollow, 2 miles southwest of Milltown, Crawford County.			10-30-68	17.2
...Do.....	...do.....	Lat 38°17'04", long 86°15'43", in NW¼SE¼ sec. 2, T. 3 S., R. 2 E., 1400 ft downstream from church known as Thompson Chapel, located on county road, 3 miles northwest of Moberly, Harrison County.			10-30-68	25.5
...Do.....	...do.....	Lat 38°16'17", long 86°16'24", in SW¼NW¼ sec. 11, T. 3 S., R. 2 E., 200 ft downstream from dam of Sharps Mill, located on Old Mill Road, in Harrison County, 4 miles east of Pilot Knob.			10-30-68 12-16-68	21.4 142

Discharge measurements made at miscellaneous sites during water year 1969--Continued

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
Blue River Basin--Continued						
Blue River	Ohio River	Lat 38°15'18", long 86°15'01", in NE¼SW¼ sec. 13, T. 3 S., R. 2 E., 50 ft downstream from old mill dam, 2.5 miles southwest of Moberly, Harrison County.			10-31-68	20.8
Spring Creek	Blue River	Lat 38°14'36", long 86°13'28", in SW¼NE¼ sec. 19, T. 3 S., R. 3 E., 250 ft downstream from Harrison Spring, 0.8 miles above mouth, and 1 mile north of White Cloud, Harrison County.			10-24-68	7.41
Wabash River Basin						
Wabash River	Ohio River	Lat 40°35'31", long 84°56'30", in NW¼SE¼ sec. 28, T. 25 N., R. 14 E., at bridge on State Highway 116, 1800 ft upstream from Loblolly Creek, 0.7 mile east of Geneva, Adams County.			10-09-68	9.97
Camp Run (head waters of Loblolly Creek)	Wabash River	Lat 40°34'32", long 85°04'58", in SE¼NW¼ sec. 32, T. 25 N., R. 13 E., at bridge on Wells County Road 1150 South, 1.4 miles southeast of Phenix.			10-08-68	0.05
...Do.....	...do.....	Lat 40°33'14", long 85°04'09", in NE¼NE¼ sec. 8, T. 24 N., R. 13 E., downstream from mouth of Bourne Williams ditch, 2500 ft upstream from Shirk Votaw ditch, 4.2 miles east of Fiat, Jay County.			10-08-68	0.07
Shirk Votaw ditch	Loblolly Creek	Lat 40°32'49", long 85°03'59", in SW¼NW¼ sec. 9, T. 24 N., R. 13 E., at bridge on State Highway 18, 1500 ft upstream from mouth, 1.2 miles northwest of Poling, Jay County.			10-08-68	0.03
Loblolly Creek	Wabash River	Lat 40°33'17", long 85°01'49", on line between secs. 2 and 3, T. 24 N., R. 13 E., at bridge on Jay County Road 115 East, 2200 ft upstream from Votaw ditch, 2.0 miles northeast of Poling.			10-09-68	0.74
Votaw ditch	Loblolly Creek	Lat 40°32'51", long 85°01'36", in SW¼NW¼ sec. 11, T. 24 N., R. 13 E., at bridge on State Highway 18, 3000 ft upstream from mouth, 1.7 miles northeast of Poling, Jay County.			10-08-68	0.02
Wolf Creek	Loblolly Creek	Lat 40°32'51", long 85°01'04", in SW¼NE¼ sec. 11, T. 24 N., R. 13 E., at bridge on State Highway 18, 2800 ft upstream from mouth, 2.1 miles northeast of Poling, Jay County.			10-08-68	0.01
Loblolly Creek	Wabash River	Lat 40°33'35", long 85°00'28", in NW¼SW¼ sec. 1, T. 24 N., R. 13 E., at bridge on Jay County Road 129 East, 3500 ft downstream from Wolf Creek, 2.7 miles southeast of Perryville.			10-09-68	1.19
Bear Creek	Loblolly Creek	Lat 40°32'52", long 84°59'55", in SW¼NE¼ sec. 12, T. 24 N., R. 13 E., at bridge on Jay County Road 24 South, 1.0 miles north of West Liberty.			10-08-68	0.43
Limberlost Creek	Loblolly Creek	Lat 40°30'16", long 84°50'52", in NE¼SW¼ sec. 29, T. 24 N., R. 15 E., at bridge on Jay County Road 209 East, 700 ft downstream from Wilson Creek, 1700 ft upstream from Bull Creek, 2.6 miles south of Trinity.			10-08-68	0.04
Bull Creek (Franks Drain)	Limberlost Creek	Lat 40°29'04", long 84°51'39", in SE¼SE¼ sec. 31, T. 23 N., R. 15 E., at bridge on State Highway 22, 1000 ft downstream from East Prong, and 3.5 miles north of Bellefontaine, Jay County.			10-08-68	0.01
Limberlost Creek	Loblolly Creek	Lat 40°32'24", long 84°54'56", in NE¼NE¼ sec. 15, T. 24 N., R. 14 E., 100 ft downstream from bridge on Jay County Road 175 East, 2500 ft upstream from Davidson ditch, and 2.5 miles east of Bryant.			10-08-68	0.63
Oakley ditch	Limberlost Creek	Lat 40°32'29", long 84°56'35", in SW¼SE¼ sec. 9, T. 24 N., R. 14 E., at bridge on State Highway 67, 3100 ft upstream from mouth, and 1 mile east of Bryant, Jay County.			10-08-68	0.01
Limberlost Creek	Wabash River	Lat 40°34'12", long 84°57'48", in NW¼NE¼ sec. 5, T. 24 N., R. 14 E., 300 ft upstream from bridge on Adams-Jay County Line Road, in Jay County, 0.2 mile west of U.S. Highway 27, 1.5 mile south of Geneva.			10-04-68	0.58

Discharge measurements made at miscellaneous sites during water year 1969--Continued

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
Wabash River Basin						
Salamonie River	Wabash River	Lat 40°29'12", long 85°09'02", in NW¼SE¼ sec. 34, T. 24 N., R. 12 E., at bridge on State Highway 1, at south edge of Pennville, Jay County.			10-07-68	5.34
...Do.....	...do.....	Lat 40°31'24", long 85°12'05", in Godfroy Reserve, T. 24 N., R. 12 E., at bridge on Blackford-Jay County Line, 300 ft upstream from Beaver Creek, and 2.8 miles southwest of Balbec.			10-07-68	6.31
Beaver Creek	Salamonie River	Lat 40°31'27", long 85°12'05", in Godfroy Reserve, T. 24 N., R. 12 E., at bridge on Blackford-Jay County Line, and 200 ft above mouth, 2.8 mile southwest of Balbec.			10-07-68	1.04
Eel River	Wabash River	Lat 40°58'23", long 85°49'58", in SW¼SW¼ sec. 11, T. 29 N., R. 6 E., 100 ft upstream from bridge on Laketon Road, in Laketon, Wabash County.			09-09-69	99.4
...Do.....	...do.....	Lat 40°56'53", long 85°53'27", in NW¼SW¼ sec. 20, T. 29 N., R. 6 E., 100 ft upstream from bridge on State Highway 15, 2100 ft upstream from Beargrass Creek, and 3 miles northeast of Roann, Wabash County.			09-08-69	140
Rock Creek	Wabash River	Lat 40°39'30", long 86°23'30", on line between secs. 34 and 35, T. 26 N., R. 1 E., Carroll County, at bridge on S.R. s 29 and 218, 0.2 mile downstream from Widow Creek, and 3 miles north of Deer Creek.	36.8		05-16-68	4,080
Bridge Creek tributary	Bridge Creek	Lat 40°32'52", long 86°42'33", on line between secs. 1 and 12, T. 24 N., R. 3 W., at culvert on Tippecanoe County Road 900 North, 0.1 mile upstream from mouth and 3 miles southwest of Delphi.	2.36		05-16-68	760
Bridge Creek	Wabash River	Lat 40°32'35", long 86°43'25", in sec. 11, T. 24 N., R. 3 W., Tippecanoe County, at bridge on S.R. 25, 0.8 mile upstream from mouth, and 4 miles southwest of Delphi.	6.10		05-16-68	2,100
White River	Wabash River	Lat 39°26'43", long 86°26'32", in SE¼ sec. 29, T. 12 N., R. 1 E., 1100 ft upstream from outlet of Lake Edgewood, and 1.4 miles northwest of Martinsville, Morgan County.			02-27-69	1,920
...Do.....	...do.....	Lat 39°26'02", long 86°27'00", in W½ sec. 32, T. 12 N., R. 1 E., at bridge on State Highway 39, 1.25 miles northwest of Martinsville, and 2.0 miles upstream from Lambs Creek, Morgan County (03-3541.25).	2,486	1925-27 c1931-32 1946, 48 1956-58 1963, 65	06-12-69 10-08-69	774 996
Little Indian Creek	White River	Lat 39°22'18", long 86°28'52", in SW¼ sec. 24, T. 11 N., R. 1 W., Morgan County, at bridge on State Highway 37, 1.2 miles upstream from Jordan Creek, and 3.5 miles southwest of Martinsville.	10.1		07-22-69	5,260
Pleasant Creek	Pleasant Run	Lat 39°36'36", long 86°06'48", in sec. 32, T. 14 N., R. 4 E., Johnson County, at culvert on U.S. 31 at Greenwood, and 0.8 mile above mouth.	3.90		07-20-69	1,300
Pleasant Run	White River	Lat 39°37'31", long 86°09'31", on line between secs. 25 and 26, T. 14 N., R. 3 E., Johnson County, at bridge on S.R. 135, 1.4 miles downstream from Fountain Creek, and 2 miles west of Greenwood.	14.2		07-20-69	4,540
Jordans Creek	Little Indian Creek	Lat 39°22'19", long 86°27'22", in sec. 19, T. 11 N., R. 1 E., Morgan County, at county road bridge, 1.4 miles upstream from Buckner Branch, and 3 miles south of Martinsville.	1.84		07-22-69	2,540
Hurricane Creek (03-3619.00)	Youngs Creek	Lat 39°29'53", long 86°01'34", on line between sec. 7, T. 12 N., R. 5 E., and sec. 12, T. 12 N., R. 4 E., at bridge on Johnson County Road 400 East, 1.0 mile northeast of Franklin.	14.0	1960-65 1967	05-24-68	1,590

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 by downstream order number 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. Surface area and capacity of lake is that surface area and capacity at the established level. Depth contour maps are only those surveyed by the Lake Section of Water Resources Division of the Geological Survey.

Lakes in the Ohio River basin for which records are available

Lake	County	Drainage Area (square mile)	Surface Area (acres)	Established Level ^{xx}	Capacity (acre-feet)	Depth Contour Map available	Records available
LAUGHERY CREEK BASIN							
03-2768.00 Versailles Lake near Versailles	Ripley	167.0	232	-	-	-	1957-69
BAYOU DRAIN BASIN							
03-3223.00 Hovey Lake near Mount Vernon	Posey	6.34	253	-	-	-	1950-69
WABASH RIVER BASIN							
03-3275.50 Everett Lake at Levert	Allen	*1.07	43	835.13	650	+	1946-66
03-3276.00 Blue Lake near Churubusco	Whitley	*3.58	239	850.28	5010	+	1946-69
03-3276.50 Shriner Lake at Tri-Lakes	Whitley	*0.94	111	907.04	-	-	1943-69
03-3277.00 Cedar Lake at Tri-Lakes	Whitley	*0.79	131	901.90	-	-	1943-49
03-3277.50 Round Lake at Tri-Lakes	Whitley	*3.36	125	901.90	-	-	1943-53
03-3278.00 Wilson Lake near Larwill	Whitley	*0.46	29	865.39	390	+	1946-52
03-3278.50 Little Wilson Lake near Larwill	Whitley	*0.52	8	865.39	130	+	1946-52
03-3281.00 Long Lake at Laketon	Wabash	*0.55	48	751.19	760	+	1946-51
							1959-69
03-3282.50 North Little Lake at Silver Lake	Kosciusko	*2.89	12	861.73	170	+	1947-69
03-3283.50 Silver Lake at Silver Lake	Kosciusko	*6.31	102	861.73	1520	+	1947-69
03-3284.00 Lukens Lake near Disko	Wabash	*1.76	46	-	1010	+	1948-49
							1959-69
03-3300.20 Crooked Lake near Wolf Lake	Noble	*1.51	206	905.69	9040	+	1943-53
03-3300.40 Big Lake near Wolf Lake	Noble	*8.89	228	898.18	5630	+	1943-69
03-3300.60 Goose Lake near Lorane	Whitley	*1.51	84	910.96	2180	+	1945-53
03-3300.80 Loon Lake at Ormas	Whitley	*11.1	222	895.14	5730	+	1943-66
03-3301.00 New Lake near Etna	Whitley	*0.29	50	903.91	880	+	1945-53
03-3301.20 Old Lake near Etna	Whitley	*2.81	32	898.07	620	+	1949-66
03-3301.40 Smalley Lake near Washington Center	Noble	*27.1	69	-	1520	+	1943-69
03-3301.60 Gilbert Lake near Washington Center	Noble	*0.37	28	-	490	+	1954-69
03-3301.80 Horseshoe Lake nr Washington Center	Noble	*1.62	18	901.80	250	+	1945-66
03-3302.00 Baugher Lake near Washington Center	Noble	*31.0	32	878.52	390	+	1945-51
03-3302.20 Wilnot Pond at Wilnot g	Noble	*35.2	10	-	-	-	1945-51
03-3302.40 Webster Lake at North Webster	Kosciusko	*49.2	774	852.75	-	-	1943-69
03-3302.43 James Lake at Oswego	Kosciusko	55.9	282	836.40	7580	+	1943-69
03-3302.60 Robinson Lake near Pierceton	Kosciusko	*7.15	59	851.09	1170	+	1946-51
03-3302.80 Troy Cedar Lake near Lorane	Whitley	*5.33	93	905.41	2540	+	1945-52
03-3303.00 Ridinger Lake near Pierceton	Kosciusko	*34.6	136	843.12	2900	+	1943-69
03-3303.20 Kuhn Lake near North Webster	Kosciusko	*3.85	137	837.50	1290	+	1945-69
03-3303.40 Big Barbee Lake near North Webster	Kosciusko	*44.7	304	837.50	5640	+	1945-69
03-3303.60 Little Barbee Lake near North Webster	Kosciusko	*49.0	74	837.50	960	+	1945-69
03-3303.80 Shoe Lake near Oswego	Kosciusko	*0.34	40	841.57	-	-	1946-53
03-3304.00 Banning Lake near North Webster	Kosciusko	*0.48	12	837.50	110	+	1945-69
03-3304.20 Irish Lake near North Webster	Kosciusko	*50.9	182	837.50	2330	+	1945-69
03-3304.40 Sechrist Lake near North Webster	Kosciusko	*0.58	105	837.50	2490	+	1945-69
03-3304.60 Sawmill Lake near North Webster	Kosciusko	*51.8	36	837.50	370	+	1945-69
03-3304.80 Tippecanoe Lake at Oswego	Kosciusko	*113	768	836.40	28,380	+	1943-69
03-3304.95 Oswego Lake at Oswego	Kosciusko	*113	83	836.40	780	+	1943-69
03-3310.10 Big Chapman Lake near Warsaw b	Kosciusko	*4.17	581	827.75	6080	+	1945-69
03-3310.20 Little Chapman Lake near Warsaw	Kosciusko	*7.13	177	827.75	1990	+	1945-69
03-3310.40 Pike Lake at Warsaw	Kosciusko	*41.5	203	805.64	2830	+	1954-69
03-3310.60 Fish Lake near Warsaw	Kosciusko	*4.93	15	845.52	-	-	1951-66
03-3310.80 Muskelonge Lake near Warsaw	Kosciusko	*11.8	32	842.67	300	+	1943-53
							1959-69
03-3311.00 Carr Lake near Claypool	Kosciusko	*2.27	79	848.88	1340	+	1947-53
03-3311.20 Sherburn Lake near Pierceton c	Kosciusko	*5.51	15	-	230	+	1954-69
03-3311.40 Winona Lake at Warsaw	Kosciusko	*32.1	562	811.06	16,680	+	1943-69
03-3311.60 Center Lake at Warsaw	Kosciusko	*0.73	120	803.86	2060	+	1945-69
03-3311.80 Palestine Lake at Palestine	Kosciusko	*32.4	290	-	1170	+	1954-69
03-3312.00 Crystal Lake near Atwood	Kosciusko	*0.45	76	789.69	930	+	1945-51
03-3312.20 Hoffman Lake at Atwood	Kosciusko	*8.07	180	785.85	3160	+	1945-53

Lakes in the Ohio River basin for which records are available--Continued

Lake	County	Drainage Area (square mile)	Surface Area (acres)	Established Levelxx	Capacity (acre-feet)	Depth Contour Map available	Records available
WABASH RIVER BASIN--Continued							
03-3312.40 Beaver Dam Lake near Silver Lake	Kosciusko	*2.83	146	868.95	3280	+	1947-53
03-3312.60 Loon Lake near Silver Lake	Kosciusko	*3.59	40	865.74	670	+	1947-53
03-3312.80 McClures Lake near Silver Lake	Kosciusko	*1.29	32	865.85	410	+	1945-52
03-3313.00 Hill Lake near Silver Lake	Kosciusko	*0.85	67	871.50	1300	+	1952-69
03-3313.20 Diamond Lake near Silver Lake	Kosciusko	*3.92	79	-	1280	+	1954-69
03-3313.40 Yellow Creek Lake near Silver Lake	Kosciusko	*11.1	151	860.50	4730	+	1945-53
03-3313.60 Rock Lake near Akron	Kosciusko	*2.74	56	847.29	360	+	1946-66
03-3313.70 Town Lake near Akron	Fulton	*2.77	23	-	220	+	1949-50
03-3313.80 Lake Manitou at Rochester	Fulton	*44.2	631	778.41	-	-	1943-69
03-3313.90 Zink Lake near Rochester	Fulton	*1.11	19	810.68	-	-	1952-55
03-3314.00 Nyona Lake near Greenoak	Fulton	*7.59	104	793.91	1340	+	1946-69
03-3314.20 South Mud Lake near Fulton	Fulton	*4.53	94	793.42	1020	+	1946-66
03-3314.40 Maxinkuckee Lake at Culver	Marshall	*13.7	*1864	733.12	45,600	+	1943-69
03-3314.60 Lost Lake near Culver d	Marshall	*14.2	40	732.00	-	-	1954-69
03-3314.80 Langenbaum Lake near Monterey	Starke	*0.72	48	717.96	260	+	1954-66
03-3317.00 Bruce Lake at Bruce Lake	Pulaski	*6.38	245	723.69	1790	+	1943-53
03-3322.00 Fletcher Lake at Fletcher	Fulton	*0.67	45	783.20	880	+	1946-53
03-3709.00 Starve Hollow Lake near Vallonia	Jackson	*6.67	145	-	980	+	1946-61
03-3717.00 Ogle Lake near Nashville	Brown	*1.03	20	-	250	+	1963-69 1954-69

Lakes in the St. Lawrence River basin for which records are available

STREAMS TRIBUTARY TO LAKE MICHIGAN

04-0925.00 Wolf Lake at Hammond	Lake	5.72	999	-	-	-	1946-49
04-0929.90 Lake George at Hobart	Lake	125	282	602.23	-	-	1946-69
04-0963.00 Saugany Lake near Rolling Prairie	LaPorte	0.82	74	781.21	2190	+	1946-50
04-0975.20 Lake Pleasant near Nevada Mills	Steuben	2.51	424	-	3490	+	1954-69
04-0975.50 Lake George at Jamestown	Steuben	12.3	488	985.28	-	-	1946-69
04-0975.96 Marsh Lake near Fremont	Steuben	14.8	-	-	-	-	1967-69
04-0976.00 Little Otter Lake near Fremont	Steuben	14.3	34	965.18	740	+	1946-53
04-0976.40 Big Otter Lake near Fremont	Steuben	19.8	69	965.18	1780	+	1946-53
04-0976.50 Snow Lake at Lake James	Steuben	36.3	310	964.96	-	-	1943-49
04-0976.60 Lake James at Lake James	Steuben	43.0	1,034	964.96	-	-	1943-49
04-0976.80 Jimmerson Lake at Nevada Mills g	Steuben	47.0	283	964.66	-	-	1946-69
04-0977.80 Loon Lake near Angola	Steuben	2.73	138	1,011.98	630	+	1954-66
04-0978.50 Crooked Lake at Crooked Lake	Steuben	11.9	733	988.17	-	-	1946-69
04-0979.50 Lake Gage at Panama	Steuben	17.2	324	954.25	-	-	1946-69
04-0979.60 Lime Lake at Panama	Steuben	17.4	44	954.25	-	-	1946-69
04-0981.00 Wall Lake near Orland	Lagrange	1.43	141	942.25	1640	+	1953-54
04-0981.10 Mud Lake near Orland	Steuben	1.64	25	939.01	-	-	1956-67
04-0983.00 Cedar Lake near Ontario	Lagrange	1.66	120	871.90	1020	+	1948-51
04-0990.50 Pigeon Lake near Angola	Steuben	30.6	61	988.24	930	+	1954-63
04-0991.00 Fox Lake near Angola	Steuben	1.13	142	1,018.83	3150	+	1946-53
04-0991.90 Pleasant Lake at Pleasant Lake	Steuben	0.94	53	963.52	1190	+	1946-66
04-0992.00 Long Lake at Moonlight	Steuben	70.8	92	-	1540	+	1946-69
04-0992.50 Bower Lake near Pleasant Lake	Steuben	87.5	25	948.50	280	+	1946-69
04-0992.60 Golden Lake near Pleasant Lake	Steuben	92.4	119	948.50	1810	+	1946-69
04-0994.00 Silver Lake near Angola	Steuben	3.72	238	959.40	2540	+	1945-53
04-0994.30 Bass Lake near Angola	Steuben	0.60	61	979.68	450	+	1954-66
04-0994.40 Howard Lake near Angola	Steuben	3.94	27	977.34	130	+	1954-63
04-0995.00 Hogback Lake near Angola	Steuben	102	146	948.50	1450	+	1946-69
04-0995.20 Otter Lake near Flint	Steuben	6.82	118	934.15	1960	+	1954-66
04-0995.40 Story Lake near Hudson	DeKalb	2.48	77	942.20	1020	+	1946
04-0995.60 Big Turkey Lake at Stroh	Lagrange	34.6	450	926.61	7,300	+	1945-66
04-0995.75 McClish Lake near Helmer	Lagrange	1.36	35	951.09	1210	+	1951-69
04-0995.80 Lake of the Woods near Helmer	Lagrange	5.36	136	951.09	5470	+	1951-69
04-0996.00 Big Long Lake near Stroh	Lagrange	4.13	388	956.21	-	-	1954-69
04-0996.20 Pretty Lake near Stroh	Lagrange	2.91	184	965.50	4720	+	1949-53 1963-65
04-0996.40 Little Turkey Lake at Elmira	Lagrange	56.0	135	925.72	1550	+	1945-66
04-0996.60 Royer Lake near Plato	Lagrange	4.91	69	936.50	1630	+	1952-66
04-0996.70 Fish Lake near Plato	Lagrange	10.8	100	936.50	4050	+	1945-69
04-0997.00 North Twin Lake near Howe	Lagrange	1.99	135	843.56	2120	+	1953-69
04-0997.10 South Twin Lake near Howe	Lagrange	3.13	116	843.56	3600	+	1953-69
04-0997.40 Shipshewana Lake near Shipshewana	Lagrange	4.00	202	852.04	1350	+	1951-69
04-0997.60 Fish Lake near Scott	Lagrange	6.14	139	814.42	2560	+	1954-69
04-0997.80 Stone Lake near Scott	Lagrange	1.32	152	818.76	2060	+	1954-69
04-0998.00 Emma Lake near Emma	Lagrange	14.8	42	880.87	700	+	1954-66
04-0998.20 Hunter Lake near Middleburg	Elkhart	0.72	99	856.90	1120	+	1946-53
04-0998.40 Wolf Lake near Goshen	Elkhart	0.87	100	813.00	-	-	1947-57

Lakes in the St. Lawrence River Basin for which records are available--Continued

Lake	County	Drainage Area (square mile)	Surface Area (acres)	Established Levelxx	Capacity (acre-feet)	Depth Contour Map available	Records available
STREAMS TRIBUTARY TO LAKE MICHIGAN--Continued							
04-0998.60 Heaton Lake near Elkhart	Elkhart	8.78	87	767.30	640	+	1946-53 1969
04-0998.80 Simonton Lake near Elkhart	Elkhart	4.37	282	772.19	1560	+	1946-69
04-0999.50 Indiana Lake near Bristol	Elkhart	0.53	122	759.73	3400	+	1946-53
04-1000.10 Cree Lake near Kendallville	Noble	4.90	58	945.23	910	+	1949-66
04-1000.20 Blackman Lake near Wolcottville	Lagrange	1.40	67	974.20	1210	+	1953-59
04-1000.30 Adams Lake near Wolcottville	Lagrange	5.69	308	953.59	7690	+	1946-69
04-1000.40 Atwood Lake near Wolcottville	Lagrange	1.31	170	899.99	1560	+	1948-53
04-1000.50 Witmer Lake near Wolcottville	Lagrange	35.8	204	897.36	7040	+	1945-69
04-1000.60 Westler Lake near Wolcottville	Lagrange	37.3	88	897.36	1770	+	1945-69
04-1000.70 Dallas Lake near Wolcottville	Lagrange	39.4	283	897.36	9970	+	1945-69
04-1000.80 Martin Lake near Valentine	Lagrange	5.36	26	899.45	890	+	1945-69
04-1000.90 Olin Lake near Valentine	Lagrange	6.12	103	899.45	9180	+	1945-69
04-1001.00 Oliver Lake near Valentine	Lagrange	11.3	362	899.45	-	-	1945-69
04-1001.10 Hackenberg Lake near Wolcottville	Lagrange	54.8	42	897.36	510	+	1945-69
04-1001.20 Messick Lake near Wolcottville	Lagrange	55.8	68	897.36	1450	+	1945-69
04-1001.30 Jones Lake near Cosperville fj	Noble	104	114	-	960	+	1948-69
04-1001.40 Bixler Lake at Kendallville	Noble	3.63	120	963.65	2090	+	1945-69
04-1001.50 Round Lake at Kendallville	Noble	3.60	99	-	2140	+	1954-69
04-1001.60 Little Long Lake at Kendallville	Noble	4.34	71	-	1750	+	1954-69
04-1001.70 Latta Lake near Rome City	Noble	4.37	42	918.71	900	+	1954-66
04-1001.80 Sylvan Lake at Rome City	Noble	31.5	575	916.20	-	-	1943-69
04-1001.90 Sacarider Lake near Kendallville	Noble	2.42	33	-	740	+	1954-63
04-1002.00 Tamarack Lake near Cosperville	Noble	15.1	50	885.55	880	+	1948-69
04-1002.10 Steinbarger Lake near Cosperville	Noble	25.3	73	885.55	1590	+	1948-69
04-1002.20 Waldron Lake near Cosperville	Noble	131	216	885.55	3120	+	1948-69
04-1002.30 Long Lake near Burr Oak	Noble	12.0	40	895.82	630	+	1945-69
04-1002.40 Sand Lake near Burr Oak	Noble	15.0	47	893.56	1270	+	1946-51
04-1002.50 Rivir Lake near Burr Oak	Noble	18.7	24	-	380	+	1954-65
04-1002.58 High Lake near Wolflake	Noble	4.75	123	896.35	1240	+	1961-69
04-1002.60 Bear Lake near Wolflake	Noble	6.12	136	894.60	3030	+	1943-69
04-1002.80 Muncie Lake near Burr Oak	Noble	43.4	47	-	580	+	1954-69
04-1002.90 Silver Lake near Wolflake	Noble	0.32	34	-	220	+	1953-63
04-1003.00 Skinner Lake near Albion	Noble	13.8	125	927.74	1750	+	1945-69
04-1003.10 Pleasant Lake near Wolflake	Noble	0.30	20	-	540	+	1952-53
04-1003.20 Upper Long Lake near Wolflake	Noble	2.03	86	-	1900	+	1956-69
04-1003.30 Lower Long Lake near Albion	Noble	3.96	66	889.81	1560	+	1946-52
04-1003.40 Eagle Lake near Kimmel	Noble	1.77	81	-	1050	+	1946-48
04-1003.50 Diamond Lake near Wawaka	Noble	2.82	105	-	2580	+	1946-69
04-1003.60 Sparta Lake at Kimmel	Noble	0.26	31	888.50	170	+	1946-51
04-1003.70 Engle Lake near Ligonier	Noble	3.22	48	-	670	+	1956-69
04-1003.80 Harper Lake near Washington Center	Noble	2.67	11	878.25	160	+	1946-69
04-1003.90 Knapp Lake near Washington Center	Noble	5.64	88	878.25	3040	+	1946-69
04-1004.00 Moss Lake near Washington Center	Noble	5.90	9	878.25	80	+	1946-69
04-1004.10 Hindman Lake near Washington Center	Noble	8.00	13	878.25	140	+	1946-69
04-1004.20 Gordy Lake near Cromwell	Noble	8.82	31	876.68	680	+	1953-66
04-1004.25 Rider Lake near Cromwell	Noble	9.12	5	876.68	30	+	1953-66
04-1004.30 Duely Lake near Cromwell gj	Noble	11.2	21	876.68	180	+	1953-66
04-1004.40 Village Lake near Cromwell	Noble	11.9	12	876.68	160	+	1953-66
04-1004.46 Flatbelly Lake near Syracuse	Kosciusko	4.40	326	-	-	-	1964-69
04-1004.48 Papakee Lake near Syracuse	Kosciusko	5.30	300	-	-	-	1964-69
04-1004.50 Wawasee Lake at Wawasee	Kosciusko	36.1	3060	858.89	67,210	+	1943-66
04-1004.60 Syracuse Lake at Syracuse	Kosciusko	37.4	414	858.87	5360	+	1943-69
04-1004.70 Dewart Lake near Leesburg	Kosciusko	7.88	551	867.70	9000	+	1945-69
04-1004.80 Wabee Lake near Milford	Kosciusko	13.4	187	829.79	4750	+	1946-53

STREAMS TRIBUTARY TO LAKE ERIE

04-1772.00 Clear Lake at Clear Lake	Steuben	6.86	800	1,037.38	24,990	+	1943-69
04-1772.10 Round Lake at Clear Lake	Steuben	7.25	30	1,037.38	340	+	1943-69
04-1773.00 Long Lake near Ray	Steuben	2.80	154	-	1840	+	1961-63
04-1776.80 Ball Lake near Hamilton	Steuben	11.6	87	-	3520	+	1961-69
04-1777.00 Hamilton Lake at Hamilton	Steuben	16.5	802	898.83	16,600	+	1943-69
04-1792.00 Indian Lake near Corunna	Dekalb	3.76	56	-	1220	+	1957
04-1793.00 Cedar Lake near Waterloo	Dekalb	23.4	28	896.76	230	+	1943-56

Lakes in the Upper Mississippi River basin for which records are available

ILLINOIS RIVER BASIN

05-5147.41 Hudson Lake at Hudson Lake	Laporte	3.06	432	763.09	5060	+	1946-69
05-5147.50 North Chain Lake at Lydick	St. Joseph	4.50	88	721.17	1400	+	1946-53
05-5147.60 South Chain Lake at Westfield	St. Joseph	6.00	90	717.04	270	-	1946-53
05-5147.70 Wharton Lake near South Bend	St. Joseph	1.75	-	-	-	-	1960-69
05-5150.30 Silver Lake near Rolling Prairie	LaPorte	0.82	54	795.20	-	-	1946-66

Lakes in the Upper Mississippi River basin for which records are available--Continued

Lake	County	Drainage Area (square mile)	Surface Area (acres)	Established Levelxx	Capacity (acre-feet)	Depth Contour Map available	Records available
ILLINOIS RIVER BASIN--Continued							
05-5152.00 Upper Fish Lake near Stillwell	LaPorte	9.71	139	688.22	1040	+	1946-53
05-5152.10 Lower Fish Lake near Stillwell	LaPorte	10.5	134	688.22	870	+	1946-53
05-5152.20 Pine Lake at LaPorte	LaPorte	5.88	564	796.20	-	-	1946-69
05-5152.30 Stone Lake at LaPorte	LaPorte	5.88	140	796.20	-	-	1946-69
05-5152.40 Clear Lake at LaPorte	LaPorte	0.35	106	798.20	760	+	1942-49
05-5156.00 Koontz Lake at Koontz Lake	Starke	6.46	346	714.56	3170	+	1952-69
05-5158.00 Riddles Lake near Lakeville	St. Joseph	13.5	77	817.50	640	+	1943-69
05-5162.00 Lake of the Woods near Bremen	Marshall	11.6	416	803.85	6810	+	1945-69
05-5166.00 Pretty Lake near Plymouth	Marshall	0.91	97	787.36	2140	+	1954-66
05-5167.00 Myers Lake near Twin Lakes	Marshall	1.66	96	768.69	2000	+	1945-53
05-5168.00 Mill Pond and Kreighbaum Lake near Twin Lakes	Marshall	4.86	168	767.75	1020	+	1945-53
05-5169.00 Eagle Lake near Ober	Starke	26.2	24	713.25	160	+	1946-53
05-5171.00 Skitz Lake near Knox	Starke	-	1,000	-	-	-	1949-53
05-5172.00 Bass Lake at Bass Lake	Starke	3.66	1405	713.65	-	-	1943-69
05-5176.00 Wauhob Lake near Valparaiso	Porter	0.29	21	-	-	-	1946-69
05-5176.50 Long Lake near Valparaiso	Porter	1.25	65	797.66	520	+	1947-52
05-5176.70 Spectacle Lake near Valparaiso	Porter	0.89	62	812.82	540	+	1946-53
05-5177.00 Flint Lake near Valparaiso	Porter	2.88	86	797.66	-	-	1946-69
05-5178.00 Eliza Lake near Beatrice	Porter	2.69	45	-	-	-	1954-69
05-5187.00 Cedar Lake at Cedar Lake	Lake	8.05	781	-	6750	+	1943-69
05-5188.00 Dalecarlia Lake near Creston	Lake	19.4	193	-	-	-	1947-52
05-5212.00 Ringneck Lake near Medaryville	Jasper	-	1400	-	-	-	1949-55
05-5257.00 J.C. Murphy Lake near Morocco	Newton	16.7	1515	-	-	-	1952-61

+ Depth contour maps available for sale by Indiana Department of Natural Resources, State Office Building, Indianapolis, Indiana

* Revised.

xx Elevation, in feet, above mean sea level.

a Formerly published as Rider Lake at Wilmot.

b Formerly published as Chapman Lake near Warsaw.

c Formerly published as Johnson Lake near Pierceton.

d Formerly published as Hawks Lake near Culver.

e Formerly published as Jimerson Lake at Nevada Mills.

f Formerly published as Sanford Lake near Cosperville.

g Formerly published as Duley Lake near Cromwell, and Druley Lake near Cromwell, and Druley Lake near Cromwell.

The lakes in Indiana which are not included in the cooperative stabilization program but which have been mapped for recreational purposes are shown in the following table. Surface areas and capacities are related to reference mean sea level elevation at time of mapping. Additional data is shown on map which are available for sale by the Indiana Department of Natural Resources, State Office Building, Indianapolis, Indiana.

Lake	County	Surface Area (acres)	Capacity (acre-feet)	Lake	County	Surface Area (acres)	Capacity (acre-feet)
OHIO RIVER BASIN							
Barr Lake	Fulton	22	470	Lake 16	Fulton	27	220
Bischoff Reservoir	Ripley	200	1920	Larwill Lake	Whitley	9	170
Black Lake	Whitley	24	400	Lenape Lake	Greene	36	330
Bowen Lake	Scott	7	60	Lincoln Park Lake	Spencer	58	520
Brown Lake	Whitley	23	580	Little Pike Lake	Kosciusko	25	140
Caldwell Lake	Kosciusko	45	800	McColley Lake	Wabash	28	410
Crane Lake	Noble	28	360	Round Lake	Wabash	48	540
Crosley Lake	Jennings	14	130	Scales Lake	Warrick	66	520
Ferdinand Lake	Dubois	42	440	Schlam Lake	Clark	19	170
Franke Lake	Clark	9	70	Sellers Lake	Kosciusko	32	340
Hartz Lake	Starke	28	370	Shakamak Lake	Clay	56	610
King Lake	Fulton	18	180	Twin Lakes	Wabash	18	190
Kunkel Lake	Wells	25	150	Whitewater Lake	Union	199	3650
Lake Freeman	Carroll	1547	26,000	Yellowwood Lake	Brown	133	1890
Lake Shafer	White	1291	13,120				
STREAMS TRIBUTARY TO LAKE MICHIGAN							
Appleman Lake	Lagrange	52	590	Mateer Lake	Lagrange	18	150
Bartley Lake	Noble	34	430	Miller Lake	Noble	11	160
Barton Lake	Steuben	94	1340	Millers Lake	Noble	28	410
Bell Lake	Steuben	38	510	Mud Lake	Noble	8	70
Boner Lake	Kosciusko	40	370	Norman Lake	Noble	14	280
Bowen Lake	Noble	30	1080	Pigeon Lake	Lagrange	61	1160
Bristol Lake	Noble	27	740	Port Mitchell Lake	Noble	15	180
Buck Lake	Lagrange	18	150	Rainbow Lake	Lagrange	16	250
Cass Lake	Lagrange	89	870	Schockopee Lake	Noble	21	280
Center Lake	Steuben	46	390	Shock Lake	Kosciusko	37	1210
Cline Lake	Lagrange	20	350	Smith Hole	Lagrange	2	10
Deer Lake	Noble	36	420	Still Lake	Lagrange	30	620
Dock Lake	Noble	16	230	Sweet Lake	Noble	16	210
Eve Lake	Lagrange	31	670	Tamarack Lake	Noble	84	1340
Fish Lake	Steuben	59	750	Walters Lake	Steuben	53	550
Hog Lake	LaPorte	59	690	Weir Lake	LaGrange	6	70
Hog Lake	Steuben	48	570	Wible Lake	Noble	49	650
Lime Lake	Steuben	30	330	Williams Lake	Noble	46	1070
Little Turkey Lake	Steuben	58	780	Wyland Lake	Kosciusko	6	100
Marl Lake	Noble	30	510				
STREAMS TRIBUTARY TO LAKE ERIE							
Dunton Lake	Dekalb	21	340	Mirror Lake	Steuben	9	120
Handy Lake	Steuben	16	290	Terry Lake	Dekalb	17	160
Lake Anne	Steuben	17	280				
UPPER MISSISSIPPI RIVER BASIN							
Cook Lake	Marshall	93	1,650	Gilbert Lake	Marshall	37	490
Dixon Lake	Marshall	33	480	Holem Lake	Marshall	40	390
Flat Lake	Marshall	26	210	Lawrence Lake	Marshall	69	1580

WATER RESOURCES DATA FOR INDIANA, 1969

PART 2. WATER-QUALITY RECORDS

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WATER-QUALITY STATIONS, IN DOWNSTREAM ORDER,
FOR WHICH RECORDS ARE PUBLISHED

(Letters after station name designate type of data: (c) chemical;
(t), water temperature; (s), sediment)

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OHIO RIVER BASIN

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WATER RESOURCES DATA FOR INDIANA, 1969

Part 2. Water-quality Records

INTRODUCTION

Water resources data for the 1969 water year for Indiana include records of data for the chemical and physical characteristics of surface water. Records for a few pertinent water-quality stations in bordering States are also included. The records were collected by the Water Resources Division of the U.S. Geological Survey under the direction of M. D. Hale, district chief. These data represent that portion of the National Water Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies in Indiana.

Through September 30, 1965, water-quality records which contain data for chemical quality, temperature, and suspended sediment were published in an annual review of U.S. Geological Survey water-supply papers entitled, "Quality of Surface Waters of the United States." Beginning with the 1964 water year, water-quality records have been released by the Geological Survey in annual reports on a State-boundary basis. Distribution of these reports is limited; they are designed primarily for rapid release of data shortly after the end of the water year to meet local needs. These records will be published later in Geological Survey water-supply papers.

COOPERATION

This report was prepared by the U.S. Geological Survey under cooperative agreement with the following organizations:

Indiana Department of Natural Resources, F. Perley Provost, succeeded by J. R. Lloyd, 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, R. W. Steele, chairman, R. H. Harrell, executive director, and F. L. Ashbaucher, chief engineer.

Ohio River Valley Water Sanitation Commission, E. J. Cleary, executive director and chief engineer.

Assistance in the form of funds or services were given by the Federal Water Pollution Control Administration and the Corps of Engineers, U.S. Army, in collecting records of water quality.

DEFINITION OF TERMS

Definition of terms related to water-quality and hydrologic data, as used in this report are defined as follows:

Biochemical oxygen demand (BOD) is the amount of oxygen required by bacteria while stabilizing decomposable organic matter under aerobic conditions.

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 immediate or delayed incubation membrane filter method.

Cubic foot per second (cfs, CFS) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to 7.48 gallons per second or 448.8 gallons per minute.

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

Mean discharge is the arithmetic mean of individual daily mean discharges during a specific period.

Instantaneous discharge is the discharge at a particular instant of time. If this discharge is reported instead of the daily mean, the heading of the discharge column in the tables is "Discharge (cfs)."

Hardness of water is a physical-chemical characteristic attributable to the presence of alkaline earths (principally calcium and magnesium) and is expressed as equivalent calcium carbonate (CaCO_3).

Micrograms per liter ($\mu\text{g/l}$, UG/L) is a more precise unit for expressing the concentration of chemical constituents in solution. One thousand micrograms per liter is equivalent to one milligram per liter. See below.

Milligrams per liter (mg/l , 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 or micrograms per liter may be converted to milliequivalents (one thousandth of a gram equivalent weight of a constituent) per liter by multiplying by the factors in table 1, page 255. 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 255.

Table 1.--Factors for conversion of chemical constituents in milligrams or micrograms per liter to milliequivalents per liter.

<u>Ion</u>	<u>Multi- ply by</u>	<u>Ion</u>	<u>Multi- ply by</u>
Aluminum (Al^{+3})*...	0.11119	Iodide (I^{-1}).....	0.00788
Ammonia as NH_4^{+1}05544	Iron (Fe^{+3})*.....	.05372
Barium (Ba^{+2}).....	.01456	Lead (Pb^{+2})*.....	.00965
Bicarbonate (HCO_3^{-1})	.01639	Lithium (Li^{+1})*...	.14411
Bromide (Br^{-1}).....	.01251	Magnesium (Mg^{+2})..	.03640
Calcium (Ca^{+2}).....	.04990	Manganese (Mn^{+2})*.	.03640
Carbonate (CO_3^{-2})..	.03333	Nickel (Ni^{+2})*....	.03406
Chloride (Cl^{-1})....	.02821	Nitrate (NO_3^{-1})...	.01613
Chromium (Cr^{+6})*...	.11539	Nitrite (NO_2^{-1})...	.02174
Cobalt (Co^{+2})*.....	.03394	Phosphate (PO_4^{-3})..	.03159
Copper (Cu^{+2})*.....	.03148	Potassium (K^{+1})...	.02557
Cyanide (CN^{-1})*....	.03844	Sodium (Na^{+1}).....	.04350
Fluoride (F^{-1}).....	.05264	Strontium (Sr^{+2})*.	.02283
Hydrogen (H^{+1}).....	.99209	Sulfate (SO_4^{-2})...	.02082
Hydroxide (OH^{-1})...	.05880	Zinc (Zn^{+2})*.....	.03060

*Constituent reported in micrograms per liter; multiply by factor and results by 1,000.

Table 2.--Factors for conversion of sediment concentration in parts per million to milligrams per liter*
(All values calculated to three significant figures)

<u>Range of concentration (ppm)</u>	<u>Multi- ply by</u>	<u>Range of concentration (ppm)</u>	<u>Multi- ply by</u>
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.

Partial-record station is a particular site where limited stream-flow or water-quality 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 0.004 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 transformed 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.

Solute is any substance derived from the atmosphere, vegetation, soil, or rocks that 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 and it may even vary in the same source with changes in the composition of the water.

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 or digital mechanism that automatically records water temperature on paper tape.

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 day is the quantity of a substance in solution or suspension that passes a stream section during a 24 hour period.

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-weight 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.

SPECIAL NETWORKS AND PROGRAMS

Some of the stations for which data are published in this report are included in special networks and programs. These stations are identified by their title, set in parentheses, under the station name.

Hydrologic bench-mark station is one that provides hydrologic data for a basin in which the hydrologic regimen 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.

DOWNSTREAM ORDER AND STATION NUMBERS

Records are listed in downstream direction along the main stream, and stations on tributaries are listed between stations on the main stream in the order in which those tributaries enter the main stream. Stations on tributaries entering above all mainstream stations are listed before the first mainstream station. Stations on tributaries to tributaries are listed in a similar manner. In the list of water-quality stations in the front of this report the rank of tributaries is indicated by indention, each indention representing one rank.

As an added means of identification, each water-quality station, gaging station, and partial-record station has been assigned a station number. These are in the same downstream order used in this report. In assigning station numbers no distinction is made between partial-record and continuous-record stations; therefore, the station number for a partial record station indicates downstream order position in a list made up of both types of stations. Water-quality stations located at or near gaging stations or partial-record stations have the same number as the gaging or partial-record station. 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 6-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.

The data in this report includes a description of the sampling station and tabulations of the samples analyzed. The description of the sampling station gives the location, drainage area, periods of record for the various water-quality data, extremes of the pertinent data, and general remarks, in a format similar to that used for streamflow gaging stations.

Data on the quality of surface water were collected from designated sampling sites (map on page 263) at predetermined intervals such as once daily, weekly, monthly or less frequently. Whereas at some sites it was necessary to continuously record data on a punched paper tape at 15-, 30-, or 60-minute intervals.

Water-quality information is presented for chemical quality, biological, microbiological, water temperature, 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. Microbiological information includes quantitative identification of certain bacteriological indicator organisms.

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.

Prior to the 1968 water year, data for chemical constituents and concentrations 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 reported 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 millions and milligrams per liter can be considered equal. In waters with a density greater than 1.000 g/ml, values in parts per million should be multiplied by the density to convert to milligrams per liter (See table 2 on page 255.) To convert temperature in degrees Fahrenheit to degrees Celsius, see table 3 below.

In October 1968, the Geological Survey began reporting many of the chemical constituents as well as the minor elements and some pollutants, in micrograms per liter instead of milligrams per liter. (See "Definitions of Terms," p. 254.)

Table 3.--Temperature conversion, 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

SOLUTES

The methods of collecting and analyzing water samples for determining the kinds and concentrations of solutes are described by Skougstad and Brown (1970). 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 must be sampled at several verticals across the channel to determine accurately the solute load.

At chemical quality stations where monitors are installed, the records consist of daily maximum, minimum, and mean values for each constituent measured. More detailed records (hourly values) may be obtained by writing the Water Resources District Office in Indianapolis.

TEMPERATURE

Water temperatures are measured at most of the water-quality stations. For daily stations, the water temperatures are taken at about the same time each day when sample is collected. Large streams have a small diurnal temperature change; shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

At stations where continuously recording thermographs are present, the records consist of maximum and minimum temperatures for each day and the monthly averages.

SEDIMENT

At some stations, suspended-sediment samples are collected daily with depth-integrating cable-suspended samplers from fixed sampling points at one or more verticals in cross section. A hand sampler is used at many stations during periods of low flow. Depth-intergrated 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 verticals.

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 the periodic measurements of the particle-size distribution of the suspended sediment are included.

WATER-SUPPLY PAPERS

Table 4 (below) shows the annual series of water-supply papers that give information on quality of surface waters in Indiana. Data for the Ohio River Basin are given in part 3, for the St. Lawrence River Basin in part 4 and for the Upper Mississippi River Basin in part 5.

Table 4.-- Water-supply paper numbers and parts, water years, 1947-66

<u>Year</u>	<u>Parts</u> <u>3-4</u>	<u>Parts</u> <u>5-6</u>	<u>Year</u>	<u>Parts</u> <u>3-4</u>	<u>Parts</u> <u>5-6</u>
1947	1102	1102	1957	1520	1521
1948	1132	1132	1958	1571	1572
1949	1162	1162	1959	1642	1643
1950	1186	1187	1960	1742	1743
1951	1197	1198	1961	1882	1883
1952	1250	1251	1962	1942	1943
1953	1290	1291	1963	1948	1949
1954	1350	1351	1964	1955	1965
1955	1400	1401	1965	1962	1963
1956	1450	1451	1966		A1993

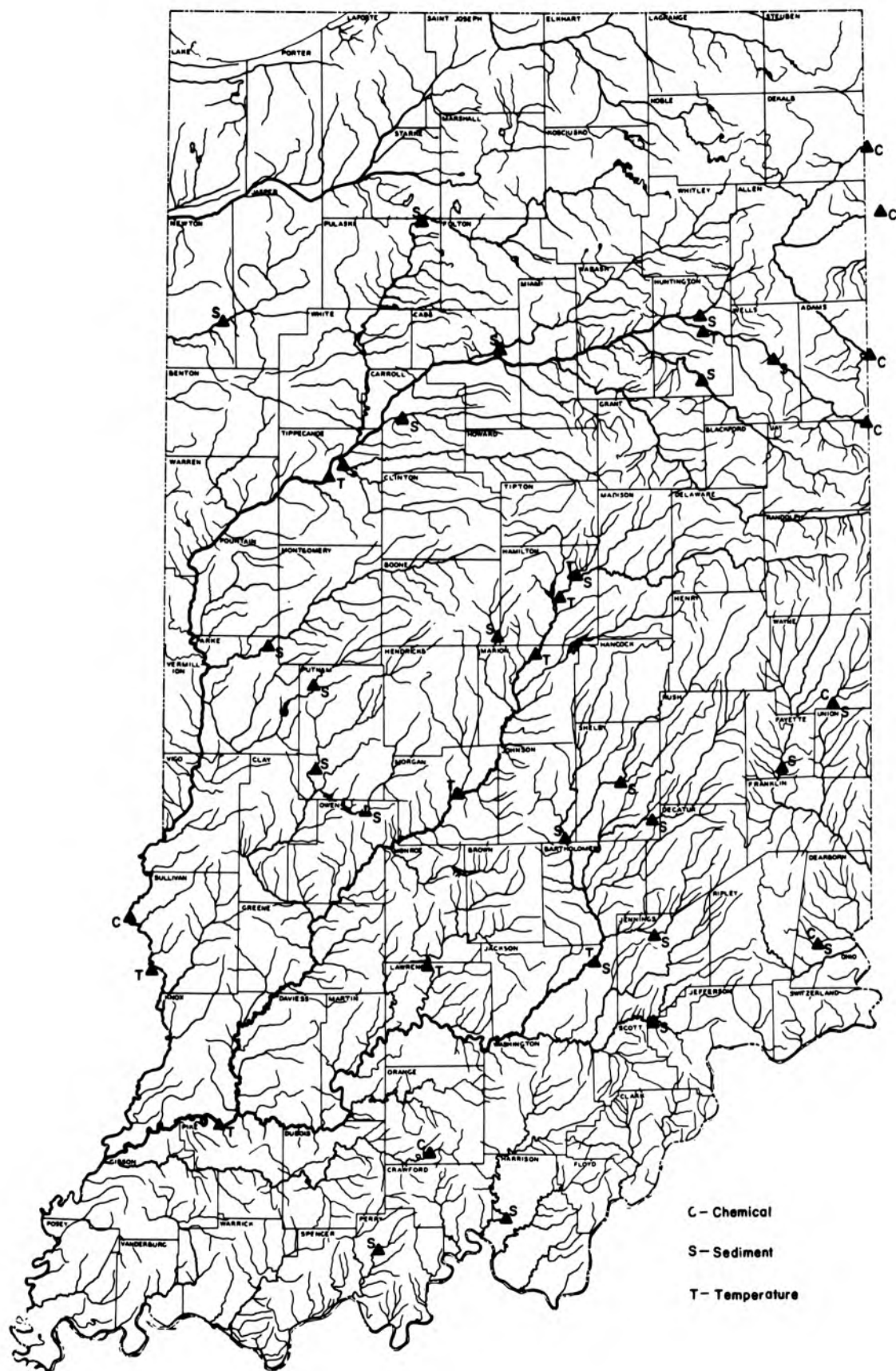
A In preparation

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QUALITY OF WATER STATIONS IN INDIANA



WABASH RIVER BASIN

3-3235. Wabash River at Huntington, Ind.

LOCATION.--Lat 40°51'20", long 85°29'53", Huntington County, temperature recorder at gaging station on right bank at the Huntington Water and Light Company Plant, 2 miles south of courthouse in Huntington, 3½ miles upstream from mouth of Little River, and at mile 409.

DRAINAGE AREA.--710 square miles.

PERIOD OF RECORD.--Water temperatures: October 1, 1963 to current year.

EXTREMES, Current year.--Water temperatures: Maximum, 28° C Aug. 14; minimum, freezing point Jan. 1-18.

EXTREMES, Period of record.--Water temperatures: Maximum, 32° C July 27, 1964; minimum, freezing point on several days most winters.

Temperature (°C) of water, water year October 1968 to September 1969
(Continuous ethyl alcohol-actuated thermograph)

		DAY																															AVER- AGE		
MONTH		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	18	19	19	16	14	13	13	13	14	16	15	15	16	19	20	20	20	20	17	16	14	13	13	12	12	11	11	11	9	9	9	15		
	MINIMUM	17	18	16	14	12	13	13	12	13	13	14	14	15	16	18	18	19	17	15	13	12	13	12	12	11	10	10	9	9	8	8	13		
NOVEMBER																																			
	MAXIMUM	12	12	12	12	11	11	11	10	9	7	6	6	6	6	7	7	7	7	7	6	4	4	6	6	6	6	6	6	6	6	--	8		
	MINIMUM	9	12	12	11	11	11	10	9	7	6	6	6	6	6	6	7	7	7	6	4	4	4	4	6	6	6	6	6	6	6	--	7		
DECEMBER																																			
	MAXIMUM	6	6	6	6	6	3	2	2	2	2	2	2	3	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2		
	MINIMUM	6	6	6	6	6	3	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2		
JANUARY																																			
	MAXIMUM	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
	MINIMUM	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	1	1	1	1	0		
FEBRUARY																																			
	MAXIMUM	2	2	2	2	2	2	1	1	1	1	2	3	3	3	2	2	2	2	2	3	3	3	3	3	3	3	3	3	4	--	--	--	2	
	MINIMUM	1	2	2	2	2	1	1	1	1	1	1	2	2	2	2	1	2	2	2	2	2	3	3	3	3	3	3	3	3	--	--	--	2	
MARCH																																			
	MAXIMUM	3	4	4	4	6	6	6	6	4	4	3	4	4	4	6	6	7	7	7	8	7	8	7	7	7	7	6	4	4	4	4	4	5	
	MINIMUM	3	3	3	3	3	6	5	3	3	3	3	3	3	3	3	3	4	5	6	6	6	6	7	7	6	4	4	4	4	4	3	4		
APRIL																																			
	MAXIMUM	5	5	7	7	8	9	9	10	11	11	12	12	12	12	13	12	16	17	17	13	11	11	11	11	11	12	12	15	17	17	13	14	--	12
	MINIMUM	4	5	5	6	7	8	9	9	10	11	11	11	11	12	12	12	14	14	13	11	11	11	11	11	11	10	11	13	13	11	11	--	10	
MAY																																			
	MAXIMUM	16	17	17	17	17	17	18	17	15	14	14	15	14	16	16	17	16	16	17	17	18	18	18	18	16	17	17	18	18	20	20	20	17	
	MINIMUM	11	13	14	14	14	15	15	15	14	14	14	14	14	14	15	15	15	15	16	17	17	18	18	16	16	16	17	17	18	18	17	15		
JUNE																																			
	MAXIMUM	19	19	18	22	22	23	21	21	22	23	25	25	23	21	21	20	19	18	20	20	21	21	21	22	23	23	23	23	22	23	--	21		
	MINIMUM	18	18	17	18	19	19	19	19	19	19	20	23	21	19	19	19	18	18	18	18	19	19	19	19	19	22	23	22	21	21	22	--	20	
JULY																																			
	MAXIMUM	26	26	26	25	24	25	26	26	25	24	22	23	23	24	24	24	24	25	24	23	24	24	24	26	26	27	28	27	26	26	27	26	25	
	MINIMUM	22	22	23	22	22	22	24	25	24	22	19	19	20	21	21	22	22	22	22	22	22	22	22	23	24	23	24	24	23	23	23	24	22	
AUGUST																																			
	MAXIMUM	27	26	27	26	27	27	26	28	27	26	26	26	26	24	28	27	27	26	27	26	26	26	25	26	26	27	27	27	26	27	27	27	27	
	MINIMUM	24	24	23	23	23	24	26	26	24	23	23	23	24	24	25	24	24	24	25	24	23	22	22	23	24	25	24	23	24	25	24	24	24	
SEPTEMBER																																			
	MAXIMUM	26	26	26	26	25	27	26	26	23	21	21	23	23	23	23	23	24	21	21	20	19	19	19	18	18	17	18	18	17	16	18	--	22	
	MINIMUM	24	25	25	25	24	25	25	23	21	18	19	20	20	20	21	21	20	19	19	19	19	19	18	18	17	17	17	17	15	14	15	--	20	

3-3285. Eel River near Logansport, Ind. (Lat 40 46 55 Long 086 15 50)

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DISCHARGE (CFS)	SUSPENDED SEDIMENT		DATE	TIME	DISCHARGE (CFS)	SUSPENDED SEDIMENT	
			CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)				CONCEN- TRATION (MG/L)	DISCHARGE (TONS/DAY)
OCT 27, 1968	0930	198	122	65	FEB 25.....	1900	443	66	79
OFC 4.....	1115	747	96	194	APR 11.....	1350	896	62	150
JAN 30, 1969	1430	11400	298	9170	MAY 21.....	1120	1070	66	191

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969
 (METHODS OF ANALYSIS: R, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPE; S, SIEVE;
 V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEMP- PERA- TURE (C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED												METHOD OF ANALY- SIS
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00		
JAN 30, 1969	1445	1.0	11400	303	9330	57	68	75	79	84	85	88	92	98	100	--	SAWC	
JAN 30.....	1445	1.0	11400	303	9330	24	37	54	70	77	78	84	89	97	100	--	SRN	

DAILY SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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				680	107	196	190	48	25
2				701	169	320	193	48	25
3				497	122	164	196	48	25
4				430	107	124	205	47	26
5				389	106	111	196	46	24
6				362	105	103	202	45	25
7				340	104	95	199	45	24
8				323	102	89	211	45	26
9				323	100	87	202	45	25
10				327	100	88	193	45	23
11				311	98	82	185	45	22
12				295	92	73	185	45	22
13				283	84	64	182	46	23
14				275	75	56	180	47	23
15				263	62	44	175	48	23
16				259	45	31	193	49	26
17				283	35	27	303	51	42
18				267	35	25	335	52	47
19				263	36	26	287	54	42
20				252	36	24	230	55	34
21				244	34	22	211	53	30
22				234	34	21	202	52	28
23				230	35	22	205	52	29
24				227	36	22	241	50	33
25				224	38	23	241	47	31
26				217	40	23	220	44	26
27				211	41	23	214	42	24
28				205	42	23	214	40	23
29				202	45	25	208	38	21
30				196	46	24	202	36	20
31				193	47	24	--	--	--
TOTAL				9506	--	2081	6400	--	817

WABASH RIVER BASIN

3-3355. Wabash River at Lafayette, Ind.

LOCATION.--Lat 40°25'19", long 86°53'49", Tippecanoe County, temperature recorder at gaging station 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 square miles.

PERIOD OF RECORD.--Water temperatures: July 1954 to September 1964, August 1967 to current year.

EXTREMES, Current year.--Water temperatures: Maximum, 28° C July 18-20; minimum, freezing point (recorded) Dec. 29 to Jan. 10.
EXTREMES, Period of record.--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 1968 to September 1969
(Continuous ethyl alcohol-acuated thermograph)

		DAY																															AVER- AGE
MONTH		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	19	19	19	19	18	18	17	17	17	17	17	17	17	17	17	18	18	19	19	19	19	18	17	17	16	16	14	14	14	13	13	12
	MINIMUM	19	19	19	18	18	17	17	17	17	17	17	17	17	17	17	17	18	19	19	19	18	17	17	16	16	14	14	14	13	13	12	12
NOVEMBER																																	
	MAXIMUM	13	13	13	13	13	12	12	12	11	11	11	9	9	9	8	8	8	8	8	8	8	7	7	6	6	6	6	7	7	7	7	--
	MINIMUM	12	13	13	13	13	12	12	12	11	11	9	9	9	8	8	8	8	8	8	8	7	7	6	6	6	6	6	7	7	7	7	--
DECEMBER																																	
	MAXIMUM	7	6	6	6	6	6	5	4	4	4	4	3	3	4	4	4	3	3	3	3	3	3	2	2	2	2	2	1	1	0	0	
	MINIMUM	6	6	6	6	6	6	5	4	4	4	3	3	3	4	3	3	3	3	3	3	3	2	2	2	2	2	2	1	1	0	0	
JANUARY																																	
	MAXIMUM	0	0	0	0	0	0	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2	
	MINIMUM	0	0	0	0	0	0	0	0	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2	
FEBRUARY																																	
	MAXIMUM	2	2	2	2	2	2	2	2	2	--	--	--	--	--	--	--	--	--	--	--	2	3	3	3	3	3	3	3	3	--	--	
	MINIMUM	2	2	2	1	1	2	2	2	2	--	--	--	--	--	--	--	--	--	--	--	2	2	3	3	3	3	2	3	3	--	--	
MARCH																																	
	MAXIMUM	3	4	4	4	4	4	4	4	3	3	3	3	4	4	4	5	6	8	9	9	8	9	9	8	8	7	6	6	6	6		
	MINIMUM	3	3	3	4	4	4	4	3	3	3	2	2	4	3	4	5	6	8	8	8	8	8	8	8	7	6	5	6	6	6		
APRIL																																	
	MAXIMUM	7	8	8	9	10	10	11	12	12	13	12	12	13	13	13	13	14	16	16	13	13	13	13	12	12	13	14	15	15	14	13	
	MINIMUM	5	7	8	8	9	10	10	11	12	12	12	12	12	13	13	13	14	13	14	13	13	13	12	12	11	12	13	14	14	13	12	
MAY																																	
	MAXIMUM	14	16	17	18	18	19	19	19	17	17	15	14	14	14	13	16	17	17	17	17	16	16	16	16	16	17	18	19	19	21	22	
	MINIMUM	13	14	16	17	18	18	19	19	17	17	15	14	14	14	14	16	17	17	17	16	16	16	16	16	16	17	18	19	19	21	22	
JUNE																																	
	MAXIMUM	22	22	19	19	21	23	23	22	22	22	23	24	24	23	21	19	19	20	21	22	22	22	21	21	21	21	21	22	23	24	25	
	MINIMUM	22	19	18	18	19	21	22	22	21	21	22	23	23	21	19	19	19	19	20	21	21	21	21	21	21	21	21	22	23	24	24	
JULY																																	
	MAXIMUM	24	26	26	27	27	26	24	23	22	23	24	24	24	25	26	27	27	28	28	28	27	27	27	27	27	27	26	26	26	24	24	
	MINIMUM	23	24	26	26	26	24	23	22	22	22	23	24	24	24	25	26	27	27	28	27	26	26	27	27	27	25	26	26	24	23	24	
AUGUST																																	
	MAXIMUM	24	24	24	24	25	25	25	26	26	22	23	24	25	26	27	27	27	26	27	27	26	24	25	25	26	26	26	27	27	27	28	
	MINIMUM	24	24	24	24	24	24	24	24	22	21	22	23	24	25	26	26	26	25	26	26	24	23	23	23	23	25	24	25	25	25	26	
SEPTEMBER																																	
	MAXIMUM	28	27	26	26	25	26	26	26	24	21	21	22	22	23	23	22	22	21	20	19	19	21	21	21	21	19	20	20	19	19	--	
	MINIMUM	26	25	25	25	24	24	24	24	21	19	20	20	21	22	22	22	21	20	19	19	19	21	21	21	19	19	19	19	19	--	21	

3-3408. BIG RACCOON CREEK NEAR FINCASTLE, IND.

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 ft upstream from Ramp Creek, and 3.1 miles northwest of Fincastle.

DRAINAGE AREA.--132 sq mi.

RECORDS AVAILABLE.--Water temperatures: July 1965 to September 1969.

Sediment records: August 1959 to September 1969.

EXTREMES, 1968-69.--Sediment concentrations: Maximum daily, 12,500 mg/l Jan. 30; minimum daily, 6 mg/l Mar. 1, 2.

Sediment loads: Maximum daily, 115,000 tons Jan. 30; minimum daily, 0.21 ton Nov. 1.

EXTREMES, 1959-69.--Water temperatures (1965-68): Maximum, 31°C July 16, 1966; minimum, freezing point on several 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 Dec. 31 to Jan. 15. Daily loads were computed by subdivision on Nov. 7, 15, 16, 28, Dec. 27, Jan. 17-19, 28, 31, Feb. 8, Mar. 24, Apr. 5, 9, 17, May 18, June 15, 24, 28, July 6, 7, 11-13, 20, 21, 25, 27, Aug. 9, 17, Sept. 2.

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969
(ONCE-DAILY MEASUREMENT BETWEEN 1400 AND 1800)

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..	--	--	14	--	--	--	--	--	17	--	--	--	18	--	--	--	16	--	--	--	--	12	--	12	--	12	--	14	--	12	12	--	
NOVEMBER.	--	--	10	--	9	--	8	--	--	8	--	--	8	--	--	10	12	10	--	--	11	--	--	12	--	12	--	--	--	--	--	--	
DECEMBER.	11	--	12	--	--	--	--	--	--	--	--	--	--	--	--	11	--	--	--	--	--	3	--	--	--	--	--	9	--	--	--	--	
JANUARY..	--	--	--	--	--	--	--	--	--	--	12	--	--	--	--	--	0	--	--	--	--	--	--	--	--	--	--	0	10	11	11	--	
FEBRUARY.	12	--	--	--	13	--	--	14	--	--	12	--	--	--	--	--	--	--	10	--	--	--	--	--	--	--	10	--	--	--	--	--	
MARCH....	--	--	--	--	8	--	6	--	--	8	--	--	8	--	--	--	--	--	--	--	--	10	8	--	10	--	--	13	--	--	--	--	
APRIL....	--	--	--	--	10	--	--	--	--	--	--	--	--	--	--	8	--	--	--	--	--	--	12	--	--	--	--	--	10	--	8	--	--
MAY.....	--	--	9	--	--	--	10	--	--	--	12	--	--	--	--	--	--	13	--	--	--	--	12	--	--	--	18	--	15	--	--	--	--
JUNE.....	--	--	--	--	--	--	--	--	--	--	17	--	--	--	--	--	--	--	--	--	--	19	--	21	--	22	--	--	--	--	--	--	--
JULY.....	--	--	--	--	--	23	24	--	--	25	--	--	24	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
AUGUST...	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SEPTEMBER	26	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	18	14	--	--	--	--	15	--	--	--	--

WABASH RIVER BASIN

3-3408. BIG RACCOON CREEK NEAR FINCASTLE, IND.--Continued

DAILY SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)
1	8.1	60	1.3	8.6	9	.21	196	850	450
2	8.1	60	1.3	10	10	.27	248	890	596
3	7.8	60	1.3	13	10	.35	214	1200	693
4	7.5	60	1.2	15	10	.40	172	1130	525
5	8.1	57	1.2	13	10	.35	138	850	317
6	8.4	55	1.2	11	11	.33	105	530	150
7	8.4	52	1.2	19	34	1.8	84	350	79
8	8.4	50	1.1	25	45	3.0	66	282	50
9	8.7	47	1.1	26	23	1.6	61	237	39
10	9.8	45	1.2	22	12	.71	54	224	33
11	9.4	45	1.1	18	10	.49	50	223	30
12	9.4	44	1.1	16	10	.43	52	225	32
13	9.0	43	1.0	14	10	.38	67	226	41
14	8.7	44	1.0	13	10	.35	70	229	43
15	8.0	43	.93	16	106	5.4	56	231	35
16	8.0	38	.82	198	1560	1010	52	331	46
17	8.5	33	.76	286	3370	2600	50	375	51
18	10	28	.76	310	5500	4600	49	327	43
19	11	22	.65	284	4820	3700	55	276	41
20	12	17	.55	178	2850	1370	58	223	35
21	11	13	.39	128	1950	674	50	197	27
22	10	10	.27	103	1780	495	56	207	31
23	9.0	10	.24	85	1850	425	160	283	122
24	8.5	11	.25	75	1810	367	160	263	105
25	8.2	13	.29	63	1300	221	133	211	76
26	8.0	25	.54	54	550	80	116	202	63
27	7.8	30	.63	49	360	48	445	1000	2130
28	7.8	29	.61	82	562	139	2190	3050	18000
29	7.8	28	.59	355	1800	1730	1100	1460	4340
30	8.0	23	.50	254	1300	892	500	700	945
31	8.0	15	.32	--	--	--	300	380	308
TOTAL	271.4	--	25.40	2743.6	--	18367.07	7107	--	29476

DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)
1	150	290	117	730	166	327	73	6	1.2
2	100	220	59	493	60	80	70	6	1.1
3	70	190	36	390	38	40	66	7	1.2
4	60	84	14	284	23	18	63	9	1.5
5	53	25	3.6	242	15	9.8	60	10	1.6
6	50	42	5.7	250	12	8.1	60	13	2.1
7	48	31	4.0	296	11	8.8	63	13	2.2
8	46	20	2.5	703	412	1380	64	16	2.8
9	44	12	1.4	972	730	1920	79	19	4.1
10	44	10	1.2	473	375	479	69	20	3.7
11	44	10	1.2	328	250	221	64	24	4.1
12	44	10	1.2	270	179	130	60	30	4.9
13	44	10	1.2	194	125	65	60	37	6.0
14	45	10	1.2	153	91	38	63	33	5.6
15	46	10	1.2	128	68	24	58	25	3.9
16	72	10	1.9	111	55	16	56	20	3.0
17	736	5010	26200	109	44	13	58	18	2.8
18	7540	7620	55300	40	33	8.0	62	18	3.0
19	631	1730	3200	82	22	4.9	65	20	3.5
20	312	500	421	75	12	2.4	65	22	3.9
21	236	179	114	73	10	2.0	62	23	3.9
22	220	143	85	75	10	2.0	54	23	3.4
23	270	145	106	82	10	2.2	52	24	3.4
24	535	203	293	79	10	2.1	87	61	16
25	256	125	86	79	9	1.9	146	155	61
26	204	93	51	79	8	1.7	131	143	51
27	158	47	20	78	8	1.7	116	100	31
28	1280	5200	20800	76	7	1.4	111	67	20
29	2630	2100	14900	--	--	--	110	54	16
30	3410	12500	115000	--	--	--	90	43	10
31	1770	3770	23200	--	--	--	82	32	7.1
TOTAL	16148	--	260028.3	6994	--	4808.0	2319	--	285.0

3-3408. BIG RACCOON CREEK NEAR FINCASTLE, IND.--Continued

DAILY SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)
1	82	25	5.5	106	37	11	39	16	1.7
2	92	22	5.5	97	31	8.1	46	27	3.4
3	82	19	4.2	87	29	6.8	39	23	2.4
4	78	16	3.4	79	28	6.0	34	17	1.6
5	312	2100	2340	75	27	5.5	33	15	1.3
6	388	2320	2430	70	26	4.9	32	15	1.3
7	260	1390	976	66	26	4.6	28	15	1.1
8	203	1140	625	66	25	4.5	26	15	1.1
9	306	1720	1660	79	25	5.3	24	14	.91
10	405	2190	2390	89	25	6.0	22	13	.77
11	264	1110	791	79	24	5.1	20	12	.65
12	203	550	301	68	23	4.2	19	11	.56
13	171	360	166	60	23	3.7	28	10	.76
14	173	290	135	58	22	3.4	28	10	.76
15	223	740	446	55	21	3.1	70	394	121
16	227	760	466	51	20	2.8	111	824	247
17	230	565	384	48	20	2.6	65	497	87
18	1150	3740	11600	119	1530	886	47	348	44
19	739	2880	5750	223	4120	2680	43	240	28
20	448	1300	1570	147	1090	433	38	150	15
21	324	550	481	111	570	171	32	90	7.8
22	252	330	225	92	280	70	28	50	3.8
23	201	153	83	79	160	34	228	1670	1030
24	164	74	33	70	110	21	296	1980	2180
25	140	48	18	63	60	10	485	5100	6680
26	126	33	11	57	35	5.4	298	1150	981
27	118	31	9.4	51	34	4.7	185	610	305
28	183	135	67	46	32	4.0	201	460	250
29	140	79	30	42	27	3.1	196	326	173
30	119	54	17	39	21	2.2	122	230	76
31	--	--	--	37	15	1.5	--	--	--
TOTAL	7803	--	33023.5	2409	--	4213.5	2863	--	12246.91

DAY	JULY			AUGUST			SEPTEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)
1	89	195	47	70	280	53	10	35	.94
2	63	168	29	58	212	33	147	1190	658
3	50	141	19	46	177	22	27	361	26
4	43	114	13	38	153	16	17	228	10
5	37	89	8.9	33	128	11	15	156	6.3
6	288	7700	9640	28	105	7.9	13	105	3.7
7	340	7770	7580	25	82	5.5	13	90	3.2
8	196	2000	1060	22	60	3.6	12	89	2.9
9	128	1450	501	234	814	1400	10	85	2.3
10	90	1100	267	640	3120	5390	9.0	85	2.1
11	176	3300	3040	264	1250	841	8.5	89	2.0
12	274	4920	3820	160	700	302	8.4	89	2.0
13	189	2200	1250	102	380	105	8.4	87	2.0
14	95	750	192	69	209	39	8.4	89	2.0
15	44	550	73	51	148	20	8.2	81	1.8
16	37	500	50	43	109	13	27	249	18
17	28	450	34	78	197	44	760	4100	8410
18	22	400	24	60	118	19	300	3600	2920
19	17	350	16	44	87	10	160	2500	1080
20	214	5930	5970	37	77	7.7	100	2250	608
21	210	2910	1740	32	67	5.8	80	1900	410
22	146	1100	434	26	53	3.7	60	400	65
23	142	600	230	22	42	2.5	66	88	16
24	100	700	189	19	40	2.1	82	69	15
25	232	1900	1260	17	40	1.8	70	58	11
26	156	480	202	16	40	1.7	55	48	7.1
27	284	3500	3240	15	40	1.6	43	40	4.6
28	332	3800	3410	14	40	1.5	36	34	3.3
29	207	1500	838	12	39	1.3	31	26	2.2
30	144	500	144	11	38	1.1	28	25	1.9
31	94	357	91	11	37	1.1	--	--	--
TOTAL	4472	--	45461.9	2297	--	8416.9	2212.9	--	14297.34

TOTAL DISCHARGE FOR YEAR (CFS-DAYS)
TOTAL LOAD FOR YEAR (TONS)57839.9
430449.82

WABASH RIVER BASIN

3-3408. BIG RACCOON CREEK NEAR FINCASTLE, IND.--Continued

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969
 (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- PERA- TURE (C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE											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	
NOV 16, 1968	1800	10.0	355	2050	1960	24	36	52	75	89	98	100	--	--	--	--	SRWC
JAN 28, 1969	1800	0.0	2340	5990	37800	13	17	23	35	52	77	96	100	--	--	--	SRWC
MAY 18.....	1700	13.0	147	2700	1070	44	61	80	93	95	98	99	99	100	--	--	SRWC
JUN 24.....	2100	22.0	478	5550	7160	33	50	65	77	82	98	100	--	--	--	--	SRWC

3-3419.1, Wabash River at Hutsonville, Ill.

LOCATION.--Lat 39°08'03", long 87°39'30", Crawford County, at Intake line to Ohio River Valley Water Sanitation Commission (ORSANCO) monitor station at Central Illinois Public Service Company at Hutsonville.

DRAINAGE AREA.--12,600 sq mi approximately.

RECORDS AVAILABLE.--Chemical analyses: November 1964 to December 1965, October 1967 to September 1969.

Water temperatures: November 1964 to December 1965, October 1967 to September 1969.

EXTREMES, Current Year.--Specific conductance: Maximum daily, 712 micromhos Dec. 23; minimum daily, 245 micromhos Jan. 31.

Water temperatures: Maximum, 29° C July 17-20, Aug. 20, 21, 31, Sept. 1; minimum, 0° Jan. 2.

EXTREMES, Period of record.--Specific conductance: Maximum daily, 784 micromhos Jan. 24, 1965; minimum daily, 233 micromhos Jan. 30, 1968.

Water temperatures: Maximum, 31° C Aug. 19, 1965; minimum, 0° C Jan. 2, 1969.

REMARKS.--Records of discharge are available for Wabash River at Riverton, Ind. (drainage area 13,100 sq mi approximately). Other chemical analyses published in WRD Ohio 1969.

**SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969
(ONCE-DAILY MEASUREMENT, USUALLY AT 0800)**

DAY	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
1.....	618	656	618	476	268	602	605	--	632	575	542	596
2.....	614	640	630	486	272	600	609	590	632	589	530	598
3.....	623	653	627	517	262	634	616	606	638	609	564	566
4.....	610	650	612	559	270	646	622	618	627	610	593	585
5.....	591	655	626	544	283	646	566	624	622	617	587	589
6.....	606	662	625	574	299	649	586	629	626	635	603	603
7.....	583	660	642	565	323	651	558	629	611	617	585	570
8.....	587	666	665	582	348	660	516	632	577	575	608	586
9.....	625	661	664	595	365	650	486	631	568	374	579	600
10.....	625	660	--	602	358	646	467	612	586	399	566	595
11.....	632	686	670	600	367	646	500	620	574	442	543	631
12.....	616	661	685	600	393	646	524	603	586	481	451	622
13.....	624	650	685	543	418	649	531	588	586	516	524	607
14.....	618	659	686	602	467	653	521	583	624	525	482	596
15.....	618	672	697	613	460	643	468	577	567	528	508	593
16.....	610	667	690	640	468	649	546	558	552	527	546	566
17.....	617	642	694	647	469	660	573	568	536	532	572	568
18.....	600	656	694	--	467	659	415	574	467	559	602	532
19.....	608	591	697	--	481	658	396	486	469	578	600	407
20.....	606	602	701	372	508	663	466	479	466	586	583	417
21.....	616	602	707	422	534	656	505	565	543	552	554	470
22.....	622	618	705	437	566	656	531	554	571	484	566	499
23.....	625	632	712	422	560	652	543	597	573	489	568	512
24.....	620	643	684	404	578	636	557	572	606	531	561	522
25.....	642	636	685	424	542	554	553	572	574	538	568	536
26.....	642	638	670	446	580	604	555	583	430	565	566	560
27.....	654	649	670	442	596	592	555	599	420	553	572	556
28.....	667	650	651	464	592	573	516	614	492	478	582	563
29.....	666	645	638	321	--	593	558	626	566	456	590	560
30.....	674	659	678	269	--	589	566	630	568	601	611	587
31.....	667	--	536	265	--	598	--	640	--	527	616	--
AVERAGE	623	647	648	494	431	632	533	545	561	533	562	558

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	DISSOLVED OXYGEN (MG/L)	PER-CENT SATURATION	BIO-CHEMICAL OXYGEN DEMAND (MG/L)	COLI-FORM (COLONIES PER 100 ML)	FECAL COLI-FORM (COLONIES PER 100 ML)	AMMONIA NITROGEN (MG/L)	NITRITE (N) (MG/L)	NITRATE (N) (MG/L)	ORGANIC NITROGEN (N) (MG/L)	DIS-SOLVED PHOSPHORUS (P) (MG/L)	TOTAL PHOSPHORUS (P) (MG/L)
JULY 23...	--	--	3.0	58000	9300	--	--	--	--	--	--
AUG. 14...	4.8	59	1.7	50000	2300	.08	.00	1.2	.60	.10	.59
SEPT. 11...	--	--	--	18000	--	--	--	--	--	--	--

**TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969
(ONCE-DAILY MEASUREMENT, USUALLY AT 0800)**

	DAY																															AVFR-AGE
MONTH	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..	22	23	22	19	19	19	18	17	18	17	18	19	19	19	20	21	21	21	18	17	17	16	16	15	14	13	13	13	13	13	18	
NOVEMBER..	15	16	16	15	16	16	16	14	13	12	11	9	8	9	11	12	12	11	9	8	6	6	7	8	8	9	9	9	8	--	11	
DECEMBER..	8	7	7	7	7	6	5	4	3	--	3	5	8	7	5	6	6	6	6	7	6	7	6	4	3	3	3	5	3	3	5	
JANUARY..	1	0	1	1	2	2	1	2	3	3	2	3	2	3	4	5	6	--	--	1	2	2	2	3	2	1	2	2	4	6	4	
FEBRUARY..	4	3	3	1	2	2	3	2	3	3	2	2	1	2	3	3	2	3	3	4	5	6	6	8	7	7	7	--	--	--	4	
MARCH....	7	7	8	9	9	10	10	9	9	8	7	7	7	7	8	8	9	9	12	13	13	13	14	14	13	12	10	8	8	8	9	
APRIL....	8	9	11	12	14	13	14	14	14	16	16	15	14	14	14	16	17	16	15	16	16	17	17	14	13	14	14	16	16	14	--	14
MAY.....	--	16	16	16	19	21	22	22	22	21	19	17	16	16	16	17	18	19	19	19	19	19	18	17	17	18	20	21	24	24	19	
JUNE.....	24	23	24	22	22	22	22	23	24	23	24	25	26	26	23	22	22	21	20	21	21	22	22	24	23	23	24	26	26	27	--	23
JULY.....	28	28	27	27	28	28	28	28	26	25	24	24	28	27	27	28	29	29	29	29	28	27	27	28	28	28	28	27	26	26	26	27
AUGUST...	26	26	26	26	27	27	27	27	28	28	27	27	25	26	26	27	27	27	27	29	29	27	27	27	27	27	27	28	29	29	29	27
SEPTEMBER	29	28	28	28	28	28	28	27	26	24	24	23	23	24	24	24	24	22	21	20	20	21	21	21	21	20	21	21	21	--	24	

WABASH RIVER BASIN

3-3420, Wabash River at Riverton, Ind.

LOCATION.--Lat 39°01'13", long 87°34'07", Sullivan County, temperature recorder at center pier of Illinois Central Railroad bridge at Riverton, 0.6 mile downstream from Turtle Creek, and at mile 162.0.

DRAINAGE AREA.--13,100 square miles, approximately.

PERIOD OF RECORD.--Water temperatures: July 1954 to September 1961, October 1962 to September 1965, October 1967 to current year.

EXTREMES, Current year.--Water temperatures: Maximum, 31° C Aug. 19-21; minimum, freezing point on many days December to February.

EXTREMES, Period of record.--Water temperatures: Maximum, 33° C July 20 and Aug. 29, 1954; minimum, freezing point on many days during most winters.

REMARKS.--Temperatures affected by powerplant upstream.

Temperature (°C) of water, water year October 1968 to September 1969
(Continuous ethyl alcohol-actuated thermograph)

		DAY																															AVER- AGE
MONTH	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	--	--	--	--	--	--	18	18	19	18	18	19	20	20	20	21	22	22	21	20	18	18	17	17	16	14	14	13	12	12	14	18	
MINIMUM	--	--	--	--	--	--	18	18	18	18	18	18	19	20	20	20	21	21	20	18	18	17	16	16	14	13	13	12	11	12	12	17	
NOVEMBER																																	
MAXIMUM	15	15	15	15	16	16	16	15	14	13	11	10	10	11	12	12	--	12	10	9	8	7	7	8	8	8	9	10	10	9	--	11	
MINIMUM	14	15	15	15	15	16	15	14	13	11	10	9	9	10	11	11	--	10	9	8	7	6	6	7	7	8	8	9	9	8	--	11	
DECEMBER																																	
MAXIMUM	8	7	7	7	6	6	5	5	4	3	3	4	5	5	4	3	4	3	4	5	4	5	6	6	4	3	1	1	2	2	2	4	
MINIMUM	7	6	6	6	6	5	5	4	3	2	2	3	4	4	3	3	3	3	4	4	4	5	6	6	4	3	1	0	0	1	2	3	
JANUARY																																	
MAXIMUM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	2	3	3	2	1	2	2	2	2	1	0	0	0	3	3	3	1	
MINIMUM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	2	2	0	0	0	2	2	1	0	0	0	0	0	3	2	1	
FEBRUARY																																	
MAXIMUM	3	2	2	2	2	2	2	3	3	2	2	2	1	1	1	0	1	2	3	4	4	5	6	6	6	6	6	6	--	--	--	3	
MINIMUM	2	1	1	1	1	2	2	2	2	2	2	1	0	0	0	0	0	1	2	3	4	4	5	6	6	6	5	5	--	--	--	2	
MARCH																																	
MAXIMUM	5	6	6	7	7	8	8	8	7	7	6	6	6	6	6	6	7	8	10	11	11	11	12	12	11	10	9	8	6	6	6	8	
MINIMUM	5	5	5	6	6	7	7	7	7	6	5	5	5	5	5	5	6	7	8	10	10	10	10	11	11	10	9	8	6	6	6	7	
APRIL																																	
MAXIMUM	7	8	9	11	12	12	12	12	13	13	13	13	13	13	14	15	16	16	15	15	14	14	14	14	13	13	13	14	15	15	14	--	13
MINIMUM	6	7	8	9	11	11	11	11	12	13	12	12	12	12	12	14	15	15	14	14	13	13	13	12	12	12	13	14	14	14	--	12	
MAY																																	
MAXIMUM	15	16	17	18	19	21	22	22	22	20	18	16	15	15	15	15	17	18	19	19	20	20	20	19	18	18	19	21	22	23	24	19	
MINIMUM	14	15	16	16	18	19	21	22	20	18	16	15	15	14	15	15	17	18	19	19	19	19	19	18	18	18	19	20	22	23	24	18	
JUNE																																	
MAXIMUM	24	24	22	22	22	23	24	24	24	24	25	25	25	25	24	20	21	20	20	21	22	22	23	24	24	24	25	26	26	27	--	23	
MINIMUM	24	22	22	21	21	22	22	23	23	23	24	24	24	24	20	20	20	20	20	20	21	22	22	23	24	23	24	25	26	26	--	23	
JULY																																	
MAXIMUM	28	28	28	28	29	29	30	29	27	26	24	25	26	26	27	28	28	30	30	30	30	29	28	29	29	29	29	28	28	28	28	28	
MINIMUM	27	27	27	27	28	28	29	27	26	24	24	24	25	26	26	27	27	28	29	29	29	27	28	27	28	28	28	28	26	26	27	27	
AUGUST																																	
MAXIMUM	28	28	28	28	29	30	30	30	30	29	28	28	28	28	28	28	29	29	30	31	31	31	29	28	28	28	28	30	30	30	31	31	29
MINIMUM	27	27	27	27	28	28	29	29	29	28	28	27	26	27	27	28	28	29	30	30	30	29	28	28	28	28	28	28	29	29	29	28	
SEPTEMBER																																	
MAXIMUM	31	29	30	30	29	30	30	29	28	26	25	24	25	25	25	24	24	23	23	21	22	22	22	21	21	21	21	21	20	21	--	25	
MINIMUM	29	28	29	29	29	29	29	28	26	25	24	23	23	24	23	23	23	23	21	21	21	21	21	21	21	20	20	21	20	19	--	24	

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 Strawn, 7 miles northeast of Noblesville, 9.5 miles upstream from Cicero Creek, and at mile 277.4.

DRAINAGE AREA.--828 square miles.

PERIOD OF RECORD.--Water temperatures: October 1953 to July 1957, October 1962 to current year.

EXTREMES, Current year.--Water temperatures: Maximum, 29° C July 18, 19; minimum, 1° C Jan. 18, 29, 30.

EXTREMES, Period of record.--Water temperatures: Maximum, 31° C July 14, 1954; minimum, freezing point many days during winter months.

Temperature (°C) of water, water year October 1968 to September 1969
(Continuous ethyl alcohol-actuated thermograph)

DAY																																		AVER- AGE
MONTH	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	18	18	18	17	14	13	13	13	14	14	14	14	16	18	19	19	19	19	18	16	15	14	13	13	13	13	11	11	11	10	9	9	15	
MINIMUM	17	18	17	14	13	13	13	12	13	14	13	14	14	16	18	18	19	18	16	15	13	13	13	13	13	11	11	11	10	9	8	9	14	
NOVEMBER																																		
MAXIMUM	12	13	13	12	12	12	12	11	10	8	8	7	7	6	6	7	8	8	9	7	5	4	3	5	6	6	6	8	9	9	9	--	8	
MINIMUM	10	12	12	12	12	12	11	10	8	7	6	6	6	6	6	7	8	7	5	4	3	3	3	5	5	5	8	8	9	8	--	7		
DECEMBER																																		
MAXIMUM	8	7	7	7	7	6	4	4	3	3	3	5	6	6	4	2	2	3	4	4	4	4	4	3	2	2	3	5	5	4	3	4		
MINIMUM	7	7	7	7	6	4	4	3	2	2	2	3	5	4	2	2	2	2	2	3	4	4	4	3	2	2	2	3	4	3	3	4		
JANUARY																																		
MAXIMUM	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	4	6	6	4	2	2	2	2	2	2	2		
MINIMUM	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1	2	2	2	3	4	4	4	2	2	2	2	1	1	2		
FEBRUARY																																		
MAXIMUM	2	2	2	2	2	3	3	3	3	2	3	3	3	2	2	2	3	4	4	4	5	6	6	6	6	6	6	6	--	--	--	4		
MINIMUM	2	2	2	2	2	2	3	3	2	2	2	3	2	2	2	2	2	3	4	4	4	5	6	6	6	6	5	5	--	--	--	3		
MARCH																																		
MAXIMUM	6	6	7	7	7	7	7	7	6	6	4	4	4	5	6	7	8	9	11	12	12	11	9	9	9	8	7	7	7	7	7	7		
MINIMUM	5	6	6	6	6	6	6	6	6	6	4	3	3	4	4	5	6	8	9	11	11	9	9	9	8	7	6	6	7	6	6	6		
APRIL																																		
MAXIMUM	7	9	11	12	12	12	11	12	12	12	12	12	12	12	13	15	17	17	12	11	11	11	10	10	12	13	16	16	14	13	--	12		
MINIMUM	6	7	9	11	12	11	10	11	12	12	11	11	11	12	12	13	15	12	11	9	9	10	9	9	10	11	13	14	13	12	--	11		
MAY																																		
MAXIMUM	14	17	19	20	21	21	21	21	20	17	14	13	13	16	18	21	21	20	19	17	17	17	16	17	18	20	20	22	23	23	23	19		
MINIMUM	12	14	16	18	19	19	20	20	17	14	12	12	13	13	16	18	20	19	17	17	16	17	16	16	17	18	18	19	21	22	22	17		
JUNE																																		
MAXIMUM	24	24	21	18	21	22	22	22	22	22	23	24	23	22	21	18	18	18	19	19	20	20	19	19	19	22	23	24	24	26	--	21		
MINIMUM	23	21	18	16	18	21	21	22	20	19	21	23	22	21	18	17	17	18	18	19	18	19	18	19	18	19	22	23	23	23	--	20		
JULY																																		
MAXIMUM	26	26	26	27	27	24	23	23	23	24	24	26	27	27	27	28	28	29	29	28	27	24	26	26	26	27	27	25	24	24	24	26		
MINIMUM	24	23	24	25	24	22	23	22	22	23	23	24	25	26	26	26	27	28	28	27	24	24	24	24	24	24	24	23	23	22	24	24		
AUGUST																																		
MAXIMUM	24	24	24	24	24	26	25	27	27	22	21	22	23	24	25	25	25	25	26	26	25	24	23	23	23	24	24	24	24	25	26	24		
MINIMUM	24	24	23	23	24	24	24	25	22	21	21	21	22	23	24	24	24	24	24	24	23	22	23	23	23	24	23	23	24	24	24	23		
SEPTEMBER																																		
MAXIMUM	26	25	24	24	24	24	24	24	23	21	19	19	19	20	22	21	21	19	18	18	18	18	19	20	20	19	18	18	18	17	18	--	21	
MINIMUM	24	24	23	23	23	24	24	23	21	19	19	19	19	20	20	20	21	19	18	18	18	18	19	19	18	18	18	17	16	16	--	20		

WABASH RIVER BASIN

3-3490. White River at Noblesville, Ind.

LOCATION.--Lat 40°02'50", long 86°01'00", Hamilton County, temperature recorder at gaging station 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 square miles.

PERIOD OF RECORD.--Water temperatures: November 1952 to current year.

EXTREMES, Current year.--Water temperatures: Maximum, 32° C July 18, 19; minimum, freezing point on several days during December and January.

EXTREMES, Period of record.--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 1968 to September 1969
(Continuous ethyl alcohol-actuated thermograph)

	DAY																																AVER- AGE
MONTH	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	19	19	20	18	17	14	14	14	16	16	16	16	17	19	20	20	21	21	19	18	16	16	15	14	13	13	12	12	11	11	11	10	16
MINIMUM	18	19	18	16	14	13	13	14	13	14	13	14	16	16	19	20	20	19	18	16	13	14	13	13	12	12	11	9	9	9	9	14	
NOVEMBER																																	
MAXIMUM	12	13	13	13	14	13	13	12	11	9	8	8	8	8	9	9	9	9	8	7	6	7	7	7	9	9	9	9	8	8	--	10	
MINIMUM	9	11	12	11	12	12	11	11	9	7	6	7	7	7	8	8	9	8	7	6	4	4	5	7	6	7	7	8	8	7	--	8	
DECEMBER																																	
MAXIMUM	7	7	7	7	7	5	3	2	3	3	4	4	6	6	4	2	3	3	3	4	4	4	2	2	1	1	1	4	4	2	2	4	
MINIMUM	6	6	6	6	5	3	2	1	1	1	1	3	4	3	2	1	1	1	2	2	2	2	2	1	1	0	1	1	2	2	2	2	
JANUARY																																	
MAXIMUM	2	1	1	1	1	1	1	2	2	1	2	2	1	2	3	3	1	1	1	1	3	4	5	5	3	1	1	1	3	4	4	2	
MINIMUM	1	1	0	1	1	0	1	1	0	1	1	1	1	0	1	1	1	0	0	1	1	3	4	3	1	1	0	1	1	3	4	1	
FEBRUARY																																	
MAXIMUM	4	3	3	3	3	3	4	4	4	3	3	3	3	2	2	2	3	4	5	6	6	6	6	6	6	6	6	6	--	--	--	4	
MINIMUM	3	3	2	2	2	3	3	4	3	2	2	2	2	1	1	1	1	2	3	4	4	5	5	5	4	4	4	4	--	--	--	3	
MARCH																																	
MAXIMUM	6	7	7	8	8	7	7	7	4	6	5	5	6	6	6	6	9	9	12	12	11	11	9	9	9	8	6	6	7	6	7	7	
MINIMUM	4	4	4	5	5	5	5	4	4	4	3	2	2	3	3	3	4	6	8	9	9	8	8	8	8	6	4	6	6	6	5	5	
APRIL																																	
MAXIMUM	9	11	12	12	13	13	12	13	14	14	14	14	14	--	--	--	--	--	--	--	--	12	12	11	12	13	15	17	17	15	14	--	
MINIMUM	8	8	10	11	12	12	11	12	13	13	12	12	13	--	--	--	--	--	--	--	--	11	11	11	10	11	13	15	15	14	12	--	
MAY																																	
MAXIMUM	15	17	19	21	22	22	23	23	21	17	14	13	14	16	19	21	21	21	19	18	17	17	17	18	19	21	22	24	26	25	25	20	
MINIMUM	12	14	17	18	19	20	21	21	17	14	12	12	13	13	16	18	20	19	18	17	16	17	16	16	17	18	19	19	22	23	22	17	
JUNE																																	
MAXIMUM	25	24	21	19	22	24	25	25	23	24	26	26	26	25	21	19	19	19	21	22	22	22	21	21	21	24	25	26	26	27	--	23	
MINIMUM	23	21	19	17	18	19	22	23	20	19	22	24	24	21	19	18	17	19	18	19	19	19	20	19	20	19	21	23	24	25	26	--	
JULY																																	
MAXIMUM	27	27	27	28	29	29	23	23	23	24	26	28	28	28	29	30	31	32	32	30	27	26	27	27	27	27	27	24	23	24	25	27	
MINIMUM	25	24	24	25	26	23	22	22	22	23	24	24	26	26	26	27	28	29	29	27	25	23	23	24	23	24	24	22	21	21	22	24	
AUGUST																																	
MAXIMUM	26	26	26	24	26	26	26	27	27	22	19	19	22	24	24	24	24	26	26	26	24	24	24	23	25	26	26	24	26	26	26	25	
MINIMUM	23	23	21	21	22	23	23	24	22	19	18	18	19	21	22	23	23	22	23	23	22	20	21	20	21	22	22	22	23	24	24	22	
SEPTEMBER																																	
MAXIMUM	25	24	24	25	24	24	23	23	23	19	18	18	19	19	22	22	22	18	17	17	17	19	19	20	19	19	19	17	18	18	--	20	
MINIMUM	23	23	22	22	22	23	22	22	19	17	17	16	16	18	18	20	18	17	16	16	16	17	18	18	17	17	17	16	15	16	--	18	

3-3510. White River near Nora, Ind.

LOCATION.--Lat 39°54'35", long 86°06'20", Marion County, temperature recorder at gaging station on downstream side of center pier of bridge on State Highway 100, 2 miles east of Nora, 14 miles upstream from Fall Creek, and at mile 253.4.

DRAINAGE AREA.--1,219 square miles.

PERIOD OF RECORD.--Water temperatures: June 1954 to May 1960, October 1962 to current year.

EXTREMES, Current year.--Water temperatures: Maximum, 27° C July 4-7; minimum, 1° C Jan. 16-21.

EXTREMES, Period of record.--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 1968 to September 1969
(Continuous ethyl alcohol-actuated thermograph)

	DAY																																AVER-
MONTH	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	AGE	
OCTOBER																																	
MAXIMUM	19	19	18	18	16	14	14	13	12	12	11	11	13	14	14	14	15	16	16	14	14	13	13	13	13	11	11	11	9	9	--	14	
MINIMUM	19	18	18	16	14	14	13	12	11	11	11	11	11	13	14	14	14	15	14	13	13	12	12	12	11	10	10	10	9	9	--	13	
NOVEMBER																																	
MAXIMUM	11	11	11	12	12	12	12	12	11	10	9	8	8	8	9	9	10	10	9	9	8	7	7	8	8	8	8	9	9	9	9	--	10
MINIMUM	9	11	11	11	12	12	12	11	10	9	8	8	7	7	8	9	9	9	9	8	7	7	7	7	8	8	8	8	9	9	--	9	
DECEMBER																																	
MAXIMUM	9	9	8	8	8	7	6	6	5	4	4	5	6	6	5	4	4	4	4	4	4	4	4	4	4	3	3	4	4	4	4	5	
MINIMUM	9	8	8	8	7	6	6	5	4	4	4	4	5	5	4	4	3	3	4	4	4	4	4	4	3	3	3	3	4	4	4	5	
JANUARY																																	
MAXIMUM	4	3	2	3	3	3	2	2	2	2	2	2	2	2	2	2	1	1	1	1	2	3	3	4	4	3	2	3	3	4	4	2	
MINIMUM	3	2	2	2	3	3	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	2	3	3	3	2	2	2	3	4	4	2	
FEBRUARY																																	
MAXIMUM	4	4	4	4	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	5	6	6	6	6	6	6	6	--	--	--	5	
MINIMUM	4	4	4	3	3	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	5	6	6	6	6	6	6	6	--	--	--	4	
MARCH																																	
MAXIMUM	6	6	6	6	6	6	6	6	6	6	6	6	5	6	6	6	6	7	8	9	9	9	10	10	10	10	9	9	9	9	9	7	
MINIMUM	6	6	6	6	6	6	6	6	6	6	6	5	5	5	6	6	6	6	7	8	9	9	9	10	10	9	9	9	9	9	9	7	
APRIL																																	
MAXIMUM	9	9	11	11	12	12	13	13	14	14	15	15	16	16	17	17	18	18	18	16	15	14	14	13	13	13	14	14	14	13	--	14	
MINIMUM	9	9	9	11	11	12	12	13	13	14	14	15	15	16	16	17	17	18	16	15	14	14	13	13	13	13	13	14	13	13	--	14	
MAY																																	
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
JUNE																																	
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	17	17	18	18	19	19	19	20	21	23	24	24	24	--	--	
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	17	17	17	18	18	19	19	19	20	21	23	24	25	--	--	
JULY																																	
MAXIMUM	26	26	26	27	27	27	27	--	--	--	23	23	24	24	24	25	26	26	26	25	24	24	23	24	24	25	--	--	--	--	23	--	
MINIMUM	25	26	25	26	27	27	22	--	--	--	23	23	23	23	23	23	25	25	25	23	23	23	23	23	23	24	--	--	--	--	23	--	
AUGUST																																	
MAXIMUM	23	23	23	23	23	23	24	24	24	22	21	20	20	21	22	23	23	23	23	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MINIMUM	23	23	23	23	23	23	23	24	22	21	20	20	20	21	22	21	23	23	23	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SEPTEMBER																																	
MAXIMUM	--	24	24	23	23	23	23	22	22	20	18	17	17	17	17	17	18	18	17	17	17	17	17	17	17	17	17	17	17	16	--	19	
MINIMUM	--	24	23	23	23	23	22	22	20	18	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	16	16	--	18

WABASH RIVER BASIN

3-3655. East Fork White River at Seymour, Ind.

LOCATION.--Lat 38°58'57", long 85°53'57", Jackson County, at gaging station 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 square miles.

PERIOD OF RECORD.--Water temperatures: October 1954 to current year.

Sediment records: July 1966 to current year.

EXTREMES, Current year.--Water temperatures: Maximum, 27° C July 17-20; minimum, 1° C on several days during December and January.

Sediment concentrations: Maximum daily, 964 mg/l Jan. 30; minimum daily, 18 mg/l Aug. 26.

Sediment loads: Maximum daily, 69,500 tons Jan. 30; minimum daily, 30 tons Oct. 8, 11.

EXTREMES, Period of record.--Water temperatures: Maximum, 31° C July 13, 14, 1966; minimum, freezing point on many days during winter months. Maximum temperature of 32° C was observed on July 19, 1954.

Sediment concentrations: Maximum daily, 1,200 mg/l May 25, June 25, 1968; minimum daily 4 mg/l Nov. 5, 1966.

Sediment loads: 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 ft upstream from recorder. Sediment samples collected at highway bridge, 1,700 ft upstream from gaging station. Sediment loads were computed from subdivided days on Jan. 18.

REVISIONS.--Revised figures for suspended sediment loads for water year 1968 superseding those previously published are given herewith: January total, 19,389 tons, Total load for year, 815,269 tons.

Temperature (°C) of water, water year October 1968 to September 1969
(Continuous ethyl alcohol-actuated thermograph)

	DAY																																AVER- AGE
MONTH	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	20	20	20	19	17	17	16	15	16	16	16	17	17	18	19	20	20	20	19	18	17	16	16	15	14	13	12	12	11	10	11	16	
MINIMUM	19	20	19	17	17	16	15	14	15	16	16	16	17	17	18	19	20	19	18	17	16	16	15	14	13	12	12	11	10	10	10	16	
NOVEMBER																																	
MAXIMUM	12	13	13	13	13	13	12	12	11	10	9	8	7	7	8	9	9	9	9	8	7	6	7	8	8	8	8	9	9	9	--	9	
MINIMUM	11	12	13	13	13	12	12	11	10	9	8	7	7	7	7	8	9	9	8	7	6	6	6	7	7	8	8	8	9	8	--	9	
DECEMBER																																	
MAXIMUM	8	7	7	7	7	6	5	4	3	3	3	3	4	5	5	4	3	2	2	2	3	3	3	3	3	2	1	2	4	4	3	4	
MINIMUM	7	7	7	7	7	6	5	4	3	3	3	3	3	4	4	3	2	2	2	2	3	3	3	3	3	2	1	1	1	2	4	3	
JANUARY																																	
MAXIMUM	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	--	4	4	4	2	1	2	3	6	6	2	
MINIMUM	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	2	--	3	4	2	1	1	1	2	3	6	
FEBRUARY																																	
MAXIMUM	6	5	4	3	3	3	4	4	4	3	3	3	3	3	2	2	2	3	3	3	4	4	5	5	5	5	5	5	--	--	--	4	
MINIMUM	5	4	3	3	3	3	3	4	3	3	2	3	3	3	2	2	2	2	3	3	3	4	4	5	5	5	4	4	--	--	--	3	
MARCH																																	
MAXIMUM	4	6	6	6	6	6	7	7	7	6	5	5	5	5	6	6	7	8	9	11	11	11	11	10	10	9	8	8	8	8	8	7	
MINIMUM	4	4	5	6	6	6	6	7	6	5	4	4	4	5	5	6	6	7	8	9	11	10	10	10	9	8	7	7	8	8	7	7	
APRIL																																	
MAXIMUM	8	9	11	12	13	14	14	14	15	16	16	16	15	14	14	15	17	17	16	14	13	13	13	13	13	14	15	16	16	15	--	14	
MINIMUM	7	8	9	11	12	13	13	14	14	15	15	15	14	14	14	14	15	16	14	13	13	13	13	12	13	13	14	15	15	14	--	13	
MAY																																	
MAXIMUM	15	16	17	18	19	20	21	21	21	18	16	15	15	16	17	18	19	19	19	18	18	18	18	18	18	18	19	19	21	22	23	19	
MINIMUM	14	15	16	17	18	19	19	21	18	16	15	14	15	15	16	17	18	19	18	18	18	18	18	17	17	18	19	19	21	22	22	18	
JUNE																																	
MAXIMUM	23	23	22	20	21	22	22	23	23	23	23	24	24	23	22	21	19	19	20	21	22	22	22	22	23	23	24	26	26	26	--	22	
MINIMUM	23	22	20	19	20	21	22	22	23	22	22	23	23	22	21	19	19	19	20	21	21	21	22	22	22	23	23	24	26	26	--	22	
JULY																																	
MAXIMUM	26	26	25	26	26	26	26	25	25	25	24	24	25	25	26	26	27	27	27	27	26	24	24	24	24	24	23	23	--	--	--	25	
MINIMUM	25	24	24	24	26	26	25	25	25	24	24	24	24	25	25	25	26	27	27	26	24	24	23	24	23	23	23	--	--	--	--	25	
AUGUST																																	
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
SEPTEMBER																																	
MAXIMUM	--	--	--	--	--	23	23	23	23	21	20	18	18	19	19	19	19	19	18	18	18	18	19	19	19	18	18	18	17	17	--	19	
MINIMUM	--	--	--	--	--	23	23	23	21	20	18	18	18	18	19	19	19	18	18	17	17	18	18	19	18	18	18	17	16	16	--	19	

3-3655. East Fork White River at Seymour, Ind.--Continued

DAILY SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)
1	458	38	47	387	76	79	3750	114	1150
2	451	43	52	385	76	79	4000	75	810
3	444	49	59	378	77	79	4560	68	837
4	482	55	72	374	87	88	4740	73	934
5	542	50	73	380	132	135	5420	79	1160
6	528	26	37	385	77	80	4120	78	868
7	500	28	38	408	58	64	3100	65	544
8	490	23	30	403	69	75	2510	68	461
9	472	25	32	412	60	67	2110	63	359
10	458	27	33	437	72	85	1820	58	285
11	444	25	30	450	72	87	1660	60	269
12	429	38	44	450	64	78	1530	61	252
13	434	79	93	439	76	90	1490	62	249
14	426	75	86	429	70	81	1480	74	296
15	423	46	53	444	100	120	1430	66	255
16	412	37	41	532	100	144	1290	74	258
17	402	81	88	1250	109	368	--	--	--
18	398	46	49	2260	100	610	1230	88	292
19	393	72	76	2010	86	467	1280	96	332
20	391	75	79	1770	45	215	1420	76	291
21	386	74	77	1480	44	176	1560	63	265
22	390	76	80	1240	45	151	1620	106	464
23	384	76	79	1080	46	134	3310	102	912
24	386	76	79	1030	41	114	4180	82	925
25	394	76	81	1640	47	208	3420	64	591
26	389	76	80	2490	54	363	2540	52	357
27	389	76	80	2090	61	344	2430	79	518
28	391	76	80	1810	62	303	7750	477	9980
29	392	76	80	3020	109	889	12300	207	8870
30	387	76	79	4180	104	1170	11500	140	4350
31	386	76	79	--	--	--	10400	92	2580
TOTAL	13251	--	1986	34043	--	6943	109950	--	37714

DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	LOAD (TONS)
1	6500	50	878	29500	400	31900	1540	34	141
2	4290	52	602	24400	150	9880	1480	46	184
3	3540	70	669	16000	102	4410	1410	43	164
4	2900	72	564	10200	85	2340	1360	56	206
5	2300	86	534	7710	69	1440	1310	62	219
6	2100	84	476	6170	77	1280	1260	52	177
7	2050	58	321	5950	90	1450	1230	41	136
8	1820	82	403	5690	80	1230	1220	33	109
9	1720	100	464	8290	200	4480	1230	37	123
10	1560	88	371	10100	177	4830	1240	38	127
11	1390	87	327	10300	106	2950	1220	56	184
12	1280	87	301	7820	71	1500	1170	50	158
13	1240	97	325	5810	65	1020	1130	45	137
14	1200	94	305	4350	70	822	1090	57	168
15	1140	74	228	3570	72	694	1060	57	163
16	1110	91	273	3090	63	526	1030	57	159
17	1340	128	463	2780	60	450	1000	58	157
18	10400	546	14400	2540	66	453	989	60	160
19	20300	400	21900	2370	69	442	985	60	160
20	18500	213	10600	2230	60	361	994	59	158
21	15700	113	4790	2100	56	318	972	52	136
22	9470	109	2740	2010	56	304	942	47	120
23	5530	93	1390	1940	73	382	921	40	99
24	5900	88	1400	1880	61	310	977	20	53
25	7200	134	2600	1810	60	293	1190	29	93
26	7100	63	1210	1740	50	235	1280	35	121
27	4200	60	680	1670	59	266	1290	20	70
28	3600	109	1060	1600	56	242	1260	24	82
29	8890	404	9700	--	--	--	1320	27	96
30	26200	964	68200	--	--	--	1700	26	119
31	35000	735	69500	--	--	--	1800	24	117
TOTAL	215470	--	217724	183620	--	74808	37600	--	4296

WABASH RIVER BASIN

3-3655. East Fork White River at Seymour, Ind.--Continued

DAILY SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

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	1660	39	175	1950	40	211	1340	114	412
2	1580	63	249	1820	53	260	1270	124	425
3	1590	54	232	1710	48	222	1190	72	231
4	1550	37	155	1610	44	191	1130	56	171
5	1820	50	246	1540	40	166	1090	52	153
6	2470	62	413	1480	40	160	1040	58	163
7	2490	45	303	1430	40	154	1010	74	202
8	2520	38	259	1430	42	162	976	83	219
9	2220	37	222	2030	131	718	928	90	226
10	2010	34	185	2230	108	650	896	104	252
11	1850	32	160	2190	88	520	865	78	182
12	1670	32	144	2000	52	281	839	82	186
13	1520	31	127	1810	49	239	1190	161	517
14	1520	53	218	1670	42	189	1670	542	2440
15	3040	202	1660	1550	38	159	1370	145	536
16	3430	50	463	1440	32	124	2400	268	1740
17	2990	134	1080	1380	60	224	2920	315	2480
18	5210	408	5740	1560	164	691	2690	178	1290
19	12400	387	13000	5500	635	9430	2070	85	475
20	13500	225	8200	10900	441	13000	1680	90	408
21	12200	103	3390	8500	169	3880	1450	114	446
22	8970	71	1720	4930	93	1240	1300	115	404
23	6040	60	978	3420	94	868	1510	161	656
24	4570	54	666	2730	112	826	2080	378	2120
25	3690	55	548	2310	102	636	2690	398	2890
26	3130	51	431	2020	117	638	3950	354	3780
27	2760	31	231	1790	105	507	5460	287	4230
28	2510	35	237	1610	68	296	4570	175	2160
29	2300	36	224	1480	68	272	3170	164	1400
30	2120	34	195	1390	82	308	2440	181	1190
31	--	--	--	1310	78	276	--	--	--
TOTAL	115330	--	41871	78720	--	37498	57184	--	31984

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	1900	149	764	2360	117	746	742	77	154
2	1610	127	552	2080	125	702	764	63	130
3	1440	112	435	1890	122	623	929	50	125
4	1290	88	307	1710	123	568	902	31	75
5	1190	88	283	1570	125	530	848	34	78
6	1150	107	332	1470	124	492	862	44	102
7	2480	191	1280	1390	96	360	1030	43	120
8	2970	173	1390	1320	106	378	1020	36	99
9	2500	174	1170	1280	110	380	913	27	67
10	2790	184	1390	1280	134	463	854	30	69
11	3010	189	1540	2140	120	693	800	39	84
12	3380	205	1870	2580	115	801	760	48	98
13	3870	214	2240	2070	66	369	727	47	92
14	2580	180	1250	1660	65	291	700	53	100
15	1920	100	518	1440	72	280	677	34	62
16	1560	105	442	1330	77	277	659	25	44
17	1360	127	466	1290	65	226	648	24	42
18	1230	124	412	1220	75	247	654	31	55
19	1130	117	357	1180	59	188	906	26	64
20	1120	64	194	1140	55	169	1280	31	107
21	5390	710	10300	1090	59	174	1120	24	73
22	10900	294	8650	1060	82	235	968	25	65
23	28000	184	13900	1000	101	273	875	25	59
24	32400	80	7000	959	92	238	833	26	58
25	15800	57	2430	921	72	179	790	28	60
26	9330	81	2040	890	18	43	774	26	54
27	6180	98	1640	861	19	44	758	30	61
28	4370	132	1560	832	26	58	723	25	49
29	4150	128	1430	807	39	85	691	29	54
30	3410	133	1220	785	37	78	668	35	63
31	2770	143	1070	761	47	97	--	--	--
TOTAL	163180	--	68432	42366	--	10287	24875	--	2363

TOTAL DISCHARGE FOR YEAR (CFS-DAYS)
TOTAL LOAD FOR YEAR (TONS)

1075589
535906

3-3655. East Fork White River at Seymour, Ind.--Continued

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968
 (METHODS OF ANALYSIS: R, ROTTON WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIFV;
 V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEMP- PERA- TURE (C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE												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		
APR 5, 1968	1615	12.0	11700	361	11400	53	61	74	81	88	89	92	100	--	--	--	SWRC	
MAY 25.....	0710	16.0	54400	1050	154000	63	77	87	96	99	100	--	--	--	--	--	SWRC	
JUN 25.....	0700	22.0	6060	1210	19800	54	78	89	95	98	99	100	--	--	--	--	SWRC	
JUL 26.....	1710	24.0	9530	1220	31400	48	66	80	94	98	100	--	--	--	--	--	SWRC	
JUL 26.....	1710	24.0	9530	1220	31400	26	38	57	75	96	97	100	--	--	--	--	SRN	
JAN 18, 1969	1600	2.0	11900	592	19000	42	51	64	78	87	93	96	100	--	--	--	SWRC	
JAN 30.....	1600	6.0	31800	957	82200	30	38	50	62	68	73	75	87	97	100	--	SWRC	

3-3725. Salt Creek near Harrodsburg, Ind.

LOCATION.--Lat 39°00'16", long 86°30'31", Monroe County, temperature recorder at gaging station on right bank, 1,300 ft downstream from Monroe Reservoir dam, 0.9 mile upstream from Clear Creek, 2.2 miles southeast of Harrodsburg, and 25.1 miles upstream from mouth.

DRAINAGE AREA.--432 square miles.

PERIOD OF RECORD.--Water temperatures: August 1966 to current year.

EXTREMES, Current year.--Water temperatures: Maximum, 26° C Aug. 1, 3-7; minimum, 3° C on many days December to February.

EXTREMES, Period of record.--Water temperatures: Maximum, 26° C Aug. 21, 26, 27, 1968, Aug. 1, 3-7, 1969; minimum, 1° C Jan. 4, 5, 8-13, 1968. Maximum observed temperature, 31° C Aug. 6, 1964.

REMARKS.--Flow regulated by Monroe Reservoir (capacity, 418,700 acre-ft).

Temperature (°C) of water, water year October 1968 to September 1969
(Continuous ethyl alcohol-actuated thermograph)

	DAY																															AVER- AGE	
MONTH	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	21	21	21	20	20	20	19	19	19	19	19	19	19	19	19	19	19	19	19	19	18	18	18	18	18	17	17	17	17	16	16	16	19
MINIMUM	21	20	20	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	18	18	18	18	18	18	17	17	16	16	16	16	16	15	18
NOVEMBER																																	
MAXIMUM	16	16	15	15	15	16	16	15	15	14	14	13	13	12	12	12	12	12	12	12	11	11	11	11	11	11	11	11	10	9	--	13	
MINIMUM	15	15	15	15	15	15	15	15	14	14	13	13	12	12	12	12	12	12	12	11	11	11	11	11	11	11	11	11	9	9	--	12	
DECEMBER																																	
MAXIMUM	9	9	9	9	9	8	8	8	8	8	7	7	7	6	6	6	5	5	5	5	5	5	5	5	4	4	4	4	3	3	3	6	
MINIMUM	9	9	9	9	8	8	8	8	8	7	7	6	6	6	5	5	5	5	5	5	5	5	4	4	4	4	4	3	3	3	3	6	
JANUARY																																	
MAXIMUM	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4	4	4	3	
MINIMUM	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4	4	3	
FEBRUARY																																	
MAXIMUM	4	4	4	4	4	4	4	4	4	4	4	4	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	--	--	4	
MINIMUM	4	4	4	4	4	4	4	4	4	4	4	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	--	--	3	
MARCH																																	
MAXIMUM	3	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	5	4	5	5	5	5	5	6	6	6	6	6	5	
MINIMUM	3	3	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	5	5	5	6	6	6	6	4	
APRIL																																	
MAXIMUM	6	6	6	7	7	8	9	9	10	9	11	11	11	11	11	11	11	12	12	12	11	12	12	12	12	12	12	13	13	13	--	10	
MINIMUM	6	6	6	6	6	7	8	8	8	9	9	9	11	11	11	11	11	11	11	11	11	11	11	12	11	11	12	12	13	13	--	10	
MAY																																	
MAXIMUM	14	14	14	16	16	16	16	16	15	14	14	14	14	14	16	17	17	17	17	18	19	19	19	19	19	17	17	17	17	17	17	16	
MINIMUM	13	14	14	14	16	16	16	16	15	14	14	14	14	14	16	16	16	17	16	16	17	18	19	19	19	17	16	16	17	16	17	16	
JUNE																																	
MAXIMUM	17	17	17	17	17	18	18	19	21	21	20	19	19	19	21	21	21	20	20	20	20	21	21	20	21	20	20	20	21	21	21	--	20
MINIMUM	16	16	16	16	16	16	16	17	18	20	19	18	17	19	19	20	20	20	19	19	19	19	20	19	19	19	18	18	18	21	21	--	18
JULY																																	
MAXIMUM	22	22	22	22	22	23	23	22	22	22	22	23	23	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	25	25	23	
MINIMUM	21	20	20	21	21	21	21	21	22	22	22	23	23	24	24	24	24	24	24	24	24	24	24	23	23	24	24	24	23	23	23	25	23
AUGUST																																	
MAXIMUM	26	25	26	26	26	26	26	25	25	25	25	25	24	24	24	24	24	24	24	24	24	24	25	24	24	24	25	24	24	24	24	24	25
MINIMUM	25	25	25	26	26	26	24	24	24	24	23	24	24	24	24	24	24	23	23	23	23	23	24	24	24	24	24	24	24	24	24	24	24
SEPTEMBER																																	
MAXIMUM	24	24	24	24	24	24	24	24	24	24	24	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	22	22	22	22	22	--	23
MINIMUM	24	24	24	23	24	24	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	22	22	22	22	22	22	--	23

3-3740. White River at Petersburg, Ind.

LOCATION.--Lat 38°30'39", long 87°17'22", Pike County, 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.

PERIOD OF RECORD.--Water temperatures: June 1964 to current year.

EXTREMES, Current year.--Water temperatures: Maximum, 29° C July 5-9, 17-21; minimum, 1° C Jan. 4-13.

EXTREMES, Period of record.--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 1968 to September 1969
(Continuous ethyl alcohol-actuated thermograph)

	DAY																																AVER- AGE
MONTH	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	22	22	22	21	19	18	18	18	18	18	18	19	20	21	22	22	22	22	21	19	19	18	18	17	16	14	13	13	11	11	12	18	
MINIMUM	22	22	21	19	18	18	17	16	17	18	18	18	19	20	21	22	22	21	19	18	18	18	17	16	14	12	13	11	11	10	11	17	
NOVEMBER																																	
MAXIMUM	14	14	14	14	13	13	13	12	11	9	9	8	7	7	8	9	10	9	9	8	7	6	7	8	8	8	8	9	9	9	--	10	
MINIMUM	12	14	13	13	13	13	12	11	9	9	8	7	7	7	7	8	9	9	8	7	6	6	6	7	8	8	8	8	9	8	--	9	
DECEMBER																																	
MAXIMUM	8	8	8	8	8	7	7	6	6	5	5	5	6	5	4	3	3	3	4	4	4	4	4	4	3	3	3	4	4	4	4	5	
MINIMUM	8	8	8	8	7	7	6	6	5	5	4	4	5	4	3	3	3	3	4	4	4	4	4	4	3	3	3	3	4	4	4	5	
JANUARY																																	
MAXIMUM	4	3	2	2	1	1	1	1	1	1	1	1	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	5	6	2	
MINIMUM	3	2	2	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	5	2	
FEBRUARY																																	
MAXIMUM	6	6	6	5	5	5	5	5	5	5	4	4	4	4	4	3	3	3	3	3	4	4	4	4	5	5	6	6	6	--	--	--	5
MINIMUM	6	6	5	5	5	5	5	5	5	4	4	4	4	4	3	3	3	3	3	3	3	4	4	4	4	4	5	6	6	--	--	--	4
MARCH																																	
MAXIMUM	6	6	6	6	6	6	6	6	6	6	6	6	6	6	7	7	8	9	10	12	12	12	12	11	11	9	9	9	9	9	8	8	
MINIMUM	6	6	6	6	6	6	6	6	6	6	5	5	6	6	6	7	7	8	9	10	11	11	11	11	9	9	8	8	9	8	8	7	
APRIL																																	
MAXIMUM	9	9	11	12	13	13	13	13	14	14	15	15	15	15	14	15	15	16	16	15	15	15	15	15	14	14	15	16	16	16	--	14	
MINIMUM	8	9	9	11	12	13	13	13	13	14	14	14	15	14	14	14	15	15	15	15	15	15	15	14	14	14	15	16	16	16	15	--	14
MAY																																	
MAXIMUM	16	17	17	18	19	19	20	21	21	20	18	18	18	18	18	18	19	19	19	19	19	19	19	19	19	20	21	22	22	23	24	19	
MINIMUM	16	16	17	17	18	19	19	20	20	18	18	17	17	18	18	18	18	19	19	19	19	19	19	19	19	20	20	21	21	22	22	23	19
JUNE																																	
MAXIMUM	24	24	24	23	23	24	25	26	26	25	25	26	26	26	25	24	23	23	23	23	23	23	23	23	24	25	26	27	28	28	28	--	25
MINIMUM	24	24	23	23	23	23	24	25	25	24	24	25	26	25	24	23	23	23	22	22	22	23	23	23	23	24	25	26	27	28	28	--	24
JULY																																	
MAXIMUM	28	28	28	28	29	29	29	29	29	28	27	27	27	27	27	28	28	29	29	29	29	29	29	28	27	26	24	24	24	24	24	24	27
MINIMUM	28	28	28	28	28	29	29	29	29	28	27	27	27	27	27	27	28	28	29	29	29	29	28	27	26	24	24	24	24	24	24	24	27
AUGUST																																	
MAXIMUM	24	24	24	24	25	26	26	26	26	26	26	26	26	26	26	26	26	26	27	27	27	27	27	26	24	25	26	26	26	27	27	26	
MINIMUM	24	24	24	24	25	26	26	26	26	25	26	26	26	26	26	26	26	26	26	27	26	26	24	24	25	26	26	26	26	26	27	27	26
SEPTEMBER																																	
MAXIMUM	27	27	27	26	26	26	26	26	26	26	24	23	22	22	22	22	22	22	22	22	22	22	22	21	21	22	22	21	21	19	21	--	23
MINIMUM	27	27	26	26	26	26	26	26	26	24	23	22	21	22	22	22	22	22	22	22	22	22	20	21	21	21	21	20	21	19	19	--	23

3-2750. Whitewater River near Alpine, Ind. (Lat 39 34 23 Long 085 09 27)

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	DATE	TIME	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)
OCT 16, 1968	1315	134	18	6.5	APR 16.....	1515	837	56	127
NOV 20.....	1200	421	28	32	MAY 20.....	1845	2370	117	717
DEC 30.....	1240	1480	78	312	MAY 20.....	1915	2220	120	719
JAN 30, 1969	1420	11800	754	24000	JUL 1.....	1645	411	63	70
FEB 5.....	1420	1070	50	144	SEP 9.....	1415	224	62	37
MAR 13.....	1330	327	30	26					

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969
 (METHODS OF ANALYSIS: R, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIFVE;
 V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEMP- PERA- TURE (C)	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE											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	
JAN 30, 1969	1420	10.0	11800	730	23300	39	49	61	72	82	87	91	94	98	100	--	SWAC
JAN 30.....	1420	10.0	11800	730	23300	15	25	40	57	77	85	91	95	99	100	--	SRN

3-2756. East Fork Whitewater River at Abington, Ind. (Lat 39 43 57 Long 084 57 35)

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	DATE	TIME	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)
OCT 11, 1968	1155	50	4	.54	APR 17.....	1200	181	20	9.8
NOV 21.....	1600	163	18	7.9	MAY 20.....	1800	720	108	210
JAN 2, 1969	1015	231	49	31	MAY 22.....	1915	316	74	63
JAN 30.....	1300	3910	407	4300	JUL 3.....	1500	111	4	1.2
FEB 6.....	1130	340	36	33	SEP 8.....	1610	62	5	.84
MAR 12.....	1350	132	13	4.6					

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969
 (METHODS OF ANALYSIS: R, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIFVE;
 V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEMP- PERA- TURE (C)	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE											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	
JAN 30, 1969	1300	8.0	3910	395	4170	36	44	53	64	76	82	88	93	97	100	--	SWAC
JAN 30.....	1300	8.0	3910	395	4170	12	21	39	54	72	76	85	92	96	100	--	SRN

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	DIS- CHARGE (CFS)	SILICA (SI02) (MG/L)	TOTAL IRON (FE) (UG/L)	IRON (FE) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DISS- SOLVED MANGANESE (MN) (UG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)
AUG. 05....	107	7.5	100	30	30	0	76	32	19	.3	316	0
SEPT. 08....	62	5.0	100	100	40	40	83	28	20	3.7	316	0

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	SULFATE (SO4) (MG/L)	CHLOR- IDE (CL) (MG/L)	FLUOR- IDE (F) (MG/L)	NITRATE (NO3) (MG/L)	DISS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DISS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	TEMP- ERATURE (DEG C)	COLOR (PLATI- NUM- COBALT UNITS)
AUG. 05....	58	26	.7	10	372	384	321	62	677	7.9	24	10
SEPT. 08....	54	29	.4	12	408	390	322	63	687	7.9	23	10

3-2767. South Hogan Creek near Dillsboro, Ind. (Lat 39 01 47 Long 085 02 17)

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	DIS- CHARGE (CFS)	SILICA (SiO ₂) (MG/L)	IRON (FE) (UG/L)	TOTAL MAN- GANESE (MN) (UG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO ₃) (MG/L)	CAR- BONATE (CO ₃) (MG/L)	SULFATE (SO ₄) (MG/L)	CHLO- RIDE (CL) (MG/L)
OCT. 15...	.08	5.8	180	50	76	19	15	3.2	238	0	74	23
NOV. 19...	4.1	6.2	70	50	78	15	21	5.5	226	0	73	30
DEC. 26...	20	9.6	90	40	76	13	9.5	2.7	224	0	60	12
JAN. 29...	681	5.3	150	140	34	5.3	4.4	2.7	93	0	29	7.0
MAR. 27...	31	5.7	230	30	71	18	10	2.3	214	0	68	14
APR. 22...	41	8.5	120	0	66	18	8.4	2.0	226	0	60	9.0
MAY 27...	6.4	7.2	70	70	80	22	10	2.1	242	0	74	14
JUNE 26...	3.0	7.7	160	20	73	12	14	3.2	208	0	65	12
AUG. 12...	2.9	7.0	50	40	50	6.6	7.5	4.0	153	0	32	9.2
SEPT. 10...	.68	7.6	50	20	58	11	8.5	4.2	188	0	40	10

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	FLUO- RIDE (F) (MG/L)	NITRATE (NO ₃) (MG/L)	TOTAL PHOS- PHORUS (PO ₄) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	HARD- NESS (CA, MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	TEMP- ERATURE (DEG C)	COLOR (PLATI- NUM- COBALT UNITS)
OCT. 15...	.2	.2	.12	343	334	268	72	568	7.8	20	3
NOV. 19...	.2	7.6	.72	350	348	256	71	589	7.6	6	10
DEC. 26...	.2	6.7	.10	302	300	243	60	510	7.9	0	7
JAN. 29...	.2	6.0	.04	153	140	107	31	245	7.5	2	30
MAR. 27...	.2	1.3	.46	313	--	251	76	507	8.2	4	20
APR. 22...	.1	2.2	.19	308	286	240	54	478	8.2	12	3
MAY 27...	.2	.6	.26	312	330	290	92	523	8.1	18	5
JUNE 26...	.2	1.6	.24	272	291	232	61	494	7.8	22	25
AUG. 12...	.2	2.3	.63	214	194	152	26	345	7.5	20	30
SEPT. 10...	.3	.6	.18	233	232	190	36	408	7.8	18	8

HOGAN CREEK BASIN

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

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	DATE	TIME	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)
AUG 12, 1969	1000	2.9	66	.52	SEP 10, 1969	1030	.68	46	.08

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	DISSOLVED OXYGEN (MG/L)	PERCENT SATURATION	COLOR-FORM (COLONIES PER 100 ML)	BIO-CHEMICAL OXYGEN DEMAND (MG/L)	TOTAL CHROMIUM (CR) (UG/L)	NICKEL (NI) (UG/L)	COPPER (CU) (UG/L)	LEAD (PB) (UG/L)	ZINC (ZN) (UG/L)	COBALT (CO) (UG/L)	ARSENIC (AS) (UG/L)	CADMIUM (CD) (UG/L)
OCT. 15...	8.0	87	1,000		0	0	10	20	10	10	0	0
NOV. 19...	11.0	88	500	--	--	--	--	--	--	--	--	--
DEC. 26...	14.0	96	2200	--	--	--	--	--	--	--	--	--
JAN. 29...	13.0	94	15000	--	--	--	--	--	--	--	--	--
MAR. 27...	14.0	107	--	--	--	--	--	--	--	--	--	--
APR. 22...	12.0	111	240	--	--	--	--	--	--	--	--	--
MAY 27...	10.0	105	260	--	--	--	--	--	--	--	--	--
JUNE 26...	9.0	102	540		0	0	0	20	10	0	0	0
AUG. 12...	9.1	99	3,700	3.2	--	--	--	--	--	--	--	--
SEPT. 10...	8.8	93	700		--	--	--	--	--	--	--	--

BLUE RIVER BASIN

3-3030. Blue River near White Cloud, Ind. (Lat 38 14 04 Long 086 13 38)

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INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	DATE	TIME	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)
OCT 17, 1968	1450	28	1	.08	APR 7.....	1720	573	24	37
NOV 19.....	1710	36	23	2.2	MAY 15.....	1230	554	32	48
DEC 16.....	1815	180	18	8.7	JUN 18.....	1710	413	87	97
JAN 21, 1969	1215	1480	48	192	JUL 29.....	1710	208	44	25
JAN 31.....	1515	11000	310	9210	SEP 3.....	1000	461	72	90
MAR 5.....	1020	288	16	12					

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969
 (METHODS OF ANALYSIS: R, 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- PERA- TURE (C)	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED											METHOD OF ANALYSIS
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	
JAN 31, 1969	1515	6.0	11000	312	9270	24	34	46	63	83	93	97	100	--	--	--	SWAC
JAN 31.....	1515	6.0	11000	312	9270	9	15	27	45	72	88	95	100	--	--	--	SWAC

ANDERSON RIVER BASIN

3-3033. Middle Fork Anderson River at Bristow, Ind. (Lat 38 08 19 Long 086 43 16)

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	DATE	TIME	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)
OCT 23, 1968	1015	.16	21	.01	MAY 6.....	1030	14	20	.76
JAN 30, 1969	1700	1100	96	285	JUN 20.....	1045	10	14	.38
JAN 31.....	1700	596	117	188	AUG 5.....	1210	3.2	12	.10
FEB 20.....	1030	22	23	1.4	SEP 18.....	1220	.90	10	.02
MAR 26.....	1145	148	28	11					

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969
 (METHODS OF ANALYSIS: R, 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- PERA- TURE (C)	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED											METHOD OF ANALYSIS
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	
JAN 31, 1969	1700	7.0	596	116	187	57	66	74	82	95	99	100	--	--	--	--	SWAC

3-3225. Wabash River near New Corydon, Ind. (Lat 40 33 50 Long 084 48 10)

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TEMP- ERATURE (DEG C)	DIS- SOLVED IRON (FE) (MG/L)	MAG- NE- SIUM (MG) (MG/L)	SULFATE (SO ₄) (MG/L)	CHLO- RIDE (CL) (MG/L)	NITRATE (N) (MG/L)	NITRITE (N) (MG/L)	AMMONIA NITRO- GEN (N) (MG/L)	ORGANIC NITRO- GEN (N) (MG/L)	DIS- SOL- VED- PHOS- PHORUS (P) (MG/L)
JULY 31...	20	2100	32	162	41	--	--	--	--	--
AUG. 20...	25	130	30	226	58	1.2	.04	.27	1.3	.39
SEPT. 18...	16	250	17	78	24	--	--	--	--	--

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TOTAL PHOS- PHORUS (P) (MG/L)	HARD- NESS (CA, MG) (MG/L)	ALKA- LINITY AS CaCO ₃ (MG/L)	DISS- OLVED OXYGEN (MG/L)	PER- CENT SATUR- ATION	BIO- CHEM- ICAL OXYGEN DEMAND (MG/L)	COLI- FORM (COL- ONIES PER 100 ML)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	PH (UNITS)	TUR- BID- ITY (JTU)
JULY 31...	--	316	159	5.4	59	4.8	12900	720	7.5	47
AUG. 20...	.62	443	233	8.4	100	3.6	1800	1050	7.3	12
SEPT. 18...	--	202	92	6.6	66	--	40000	470	7.1	72

3-3230. Wabash River at Bluffton, Ind. (Lat 40 44 30 Long 085 10 19)

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	DATE	TIME	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)
OCT 3, 1968	1330	17	68	3.1	MAR 12.....	1220	153	26	11
NOV 14.....	1005	27	20	1.5	APR 21.....	1300	2690	166	1210
DEC 16.....	1240	99	24	6.4	JUN 2.....	1220	98	84	22
JAN 27, 1969	1220	463	52	65	JUL 14.....	1250	165	122	54
JAN 30.....	0820	3730	365	3680	AUG 26.....	1020	15	80	3.2

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969
 (METHODS OF ANALYSIS: R, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPENSED; N, IN NATIVE WATER; P, PIPE; S, SIFVE;
 V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEMP- ERATURE (C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE											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	
JAN 30, 1969	0840	4.0	3720	368	3700	81	92	96	98	99	99	100	--	--	--	--	SRWC
JAN 30.....	0840	4.0	3720	368	3700	48	69	85	97	98	98	100	--	--	--	--	SRW

3-3243. Salamonie River near Warren, Ind. (Lat 40 42 45 Long 085 27 13)

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	DATE	TIME	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)
OCT 3, 1968	0920	15	71	2.9	APR 21.....	0945	2650	160	1140
NOV 14.....	0805	20	140	7.6	JUN 2.....	0920	76	58	12
JAN 27, 1969	1000	244	45	30	JUL 14.....	1000	133	130	47
JAN 30.....	1135	6000	369	5980	AUG 25.....	1500	16	41	1.8
MAR 12.....	0940	124	46	15					

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969
 (METHODS OF ANALYSIS: R, 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- PERA- TURE (C)	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE											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	
JAN 30, 1969	1155	6.0	5940	366	5870	75	87	90	93	95	96	100	--	--	--	--	SRWC
JAN 30.....	1155	6.0	5940	366	5870	42	61	81	91	94	95	100	--	--	--	--	SWN

3-3257. Deer Creek near Delphi, Ind. (Lat 40 35 25 Long 086 37 15)

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	DATE	TIME	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)
AUG 7, 1969	1700	70	48	9.1	SEP 19.....	1140	331	164	147

3-3315. Tippecanoe River near Ora, Ind. (Lat 41 09 26 Long 086 33 49)

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	DATE	TIME	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)
OCT 24, 1968	1420	334	8	7.2	APR 11.....	0950	1650	12	53
DEC 3.....	1705	1230	19	63	MAY 20.....	1440	1180	37	118
JAN 15, 1969	1310	708	20	38	JUL 1.....	1730	506	30	41
JAN 30.....	1800	3610	88	858	AUG 14.....	1100	356	46	44
FEB 25.....	1305	920	13	32					

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969
 (METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIFVE;
 V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEMP- PERA- TURE (C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE											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	
JAN 30, 1969	1815	1.0	2710	91	666	27	31	36	38	41	42	45	65	99	100	--	SAWC

3-3350. Wildcat Creek near Lafayette, Ind. (Lat 40 26 26 Long 086 49 46)

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	DATE	TIME	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)
NOV 20, 1968	0940	885	80	191	JUN 30.....	1515	214	49	28
JAN 31, 1969	1405	11000	346	10300	AUG 14.....	1105	479	50	65
FEB 14.....	1100	760	150	308					

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969
 (METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIFVE;
 V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEMP- PERA- TURE (C)	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE											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	
JAN 31, 1969	1420	1.0	11000	338	10000	39	49	55	64	72	77	82	87	96	100	--	SAWC
JAN 31.....	1420	1.0	11000	338	10000	10	21	36	51	71	74	81	87	96	100	--	SRN

3-3400. Sugar Creek near Byron, Ind. (Lat 39 55 52 Long 087 07 33)

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	DATE	TIME	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)
NOV 13, 1968	1300	127	58	20	JUN 5.....	1150	196	10	5.3
JAN 23, 1969	1045	1340	98	355	JUL 30.....	1145	380	75	73
JAN 31.....	1805	9730	418	11000	SEP 24.....	1445	264	20	14
APR 16.....	1100	961	23	60					

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969
 (METHODS OF ANALYSIS: R, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIFVE;
 V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEMP- PERA- TURE (C)	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE											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	
JAN 31, 1969	1745	4.0	9850	397	10600	29	37	44	52	66	74	80	86	96	100	--	SAWC
JAN 31.....	1745	4.0	9850	397	10600	13	19	30	42	61	68	78	86	96	100	--	SRN

3-3470. White River at Muncie, Ind. (Lat 40 12 15 Long 085 23 14)

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	DATE	TIME	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)
NOV 20, 1968	1105	246	29	19	FEB 1, 1969	1115	1300	84	295

3-3485. White River near Noblesville, Ind. (Lat 40 07 46 Long 085 57 46)

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	DATE	TIME	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)
MAY 27, 1969	0840	450	33	40	AUG 29.....	1415	197	28	15
JUL 31.....	1550	365	34	34	SEP 29.....	0935	284	18	14

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969
 (METHODS OF ANALYSIS: R, 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- PERA- TURE (C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE											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	
FEB 1, 1969	1405	2.0	8280	80	1790	73	79	85	90	94	95	96	98	100	--	--	SAWC
FEB 1.....	1405	2.0	8280	80	1790	2	26	50	80	89	89	94	97	100	--	--	SAN

3-3532. Eagle Creek at Zionsville, Ind. (Lat 39 56 56 Long 086 15 22)

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	DATE	TIME	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)
AUG 12, 1969	0815	89	55	13					

3-3575. Big Walnut Creek near Reelsville, Ind. (Lat 39 32 11 Long 086 58 35)

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	DATE	TIME	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)
SEP 10, 1969	1100	33	30	2.7					

3-3580. Mill Creek near Cataract, Ind. (Lat 39 26 00 Long 086 45 48)

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	DATE	TIME	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)
SEP 9, 1969	1350	12	46	1.5					

3-3615. Big Blue River at Shelbyville, Ind. (Lat 39 31 45 Long 085 46 55)

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	DATE	TIME	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)
OCT 1, 1968	1720	83	33	7.4	APR 28.....	1330	406	36	39
NOV 12.....	1415	94	55	14	MAY 21.....	1115	507	33	45
DEC 12.....	1050	261	134	94	JUN 5.....	1820	170	24	11
JAN 13, 1969	1805	224	164	99	JUL 11.....	1345	778	146	307
JAN 30.....	1630	7990	384	8280	AUG 20.....	1745	186	68	34
FEB 17.....	1540	429	79	92	SEP 23.....	1615	170	26	12
MAR 24.....	1425	234	55	35					

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969
 (METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIFVE;
 V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEMP- PERA- TURE (C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE												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		
JAN 30, 1969	1630	10.0	7990	395	8520	53	63	73	80	87	91	93	96	99	100	--	SRWC	
JAN 30.....	1630	10.0	7990	395	8520	21	32	50	67	82	85	90	93	97	100	--	SRN	

3-3625. Sugar Creek near Edinburg, Ind. (Lat 39 21 39 Long 085 59 51)

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	DATE	TIME	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)
OCT 3, 1968	0930	128	82	28	MAR 27.....	1320	217	64	37
NOV 15.....	1150	68	98	18	APR 30.....	1305	337	22	20
DEC 11.....	1555	244	94	62	JUN 10.....	1445	89	107	26
JAN 14, 1969	1200	194	82	43	JUL 15.....	1455	331	60	54
JAN 31.....	1030	10200	183	5040	AUG 22.....	1200	129	56	20
FEB 20.....	1435	333	97	87	SEP 18.....	1700	428	46	53

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969
 (METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIFVE;
 V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEMP- PERA- TURE (C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE												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		
JAN 31, 1969	1030	4.0	10200	188	5180	77	86	91	93	94	95	97	100	--	--	--	SRWC	
JAN 31.....	1030	4.0	10200	188	5180	35	52	74	90	92	93	96	100	--	--	--	SRN	

3-3635. Flatrock River at St. Paul, Ind. (Lat 39 25 03 long 085 38 03)

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	DATE	TIME	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)
AUG 20, 1969	1515	159	20	3.2	SEP 23.....	1400	104	35	9.8

3-3650. Sand Creek near Brownsville, Ind. (Lat 39 05 03 Long 085 39 32)

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	DATE	TIME	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)
AUG 20, 1969	1145	17	30	1.4	SEP 24.....	1700	5.5	44	.65

3-3665. Muscatatuck River near Deputy, Ind. (Lat 38 48 15 Long 085 40 26)

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	DATE	TIME	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)
OCT 15, 1968	1400	3.6	18	.17	APR 9.....	1515	226	21	13
NOV 18.....	1505	73	34	2.7	MAY 12.....	1500	172	16	7.4
DEC 9.....	0920	260	38	27	JUN 20.....	1125	66	70	12
JAN 22, 1969	1545	512	20	28	JUL 31.....	1115	41	36	4.0
JAN 31.....	1230	3310	146	1300	SEP 4.....	1500	2.6	20	.14
MAR 6.....	1300	62	28	4.7					

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969
 (METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIFVF;
 V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEMP- ERATURE (C)	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE											METHOD OF ANALYSIS
						PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED											
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	
JAN 31, 1969	1230	6.0	3310	138	1230	37	44	60	75	93	98	100	--	--	--	--	SAWC

3-3744.7. Patoka River near English, Ind. (at bridge on State Highway 37)
(Lat 38 26 26 Long 86 27 21)

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	DIS- CHARGE (CFS)	SILICA (SiO ₂) (MG/L)	TOTAL IRON (FE) (UG/L)	IRON (FE) (UG/L)	TOTAL MANGANESE (MN) (UG/L)	DISS- OLVED MANGANESE (MN) (UG/L)	CAL- CIUM (CA) (MG/L)	MAG- NE- SIUM (MG) (MG/L)	SODIUM (NA) (MG/L)	PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO ₃) (MG/L)	CAR- BONATE (CO ₃) (MG/L)
JULY 24...	19.1	10	180	140	40	40	45	12	3.6	1.9	172	0
SEPT. 02...	83	--	400	210	340	240	59	5.6	3.5	2.2	188	0
22...	1.4	6.1	150	40	30	20	69	7.6	3.2	2.0	212	0

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	SULFATE (SO ₄) (MG/L)	CHLO- RIDE (CL) (MG/L)	FLUO- RIDE (F) (MG/L)	NITRATE (NO ₃) (MG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS) (MG/L)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SPECI- FIC CONDO- UCTANCE (MICRO- MHOS)	PH (UNITS)	TEMP- ERATURE (DEG C)	COLOR (PLATI- NUM- COBALT UNITS)
JULY 24...	22	3.0	.1	2.7	200	184	162	20	328	7.8	22	7
SEPT. 02...	21	4.0	.1	.9	192	194	170	18	350	7.2	22	9
22...	23	4.0	.1	.7	225	220	203	30	387	7.8	15	5

4-1781. St. Joseph River at Ohio-Indiana border near Newville, Ind. (Lat 41 22 29 Long 85 48 41)

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TEMP- ERATURE (DEG C)	NITRATE (N) (MG/L)	AMMONIA NITRO- GEN (N) (MG/L)	ORGANIC NITRO- GEN (N) (MG/L)	DIS- SOL- VED- PHOS- PHORUS (P) (MG/L)	TOTAL PHOS- PHORUS (P) (MG/L)	DISS- OLVED OXYGEN (MG/L)
JULY 30...	22	.90	.06	.61	.15	.29	6.4
AUG. 06...	22	.50	.09	.70	.07	.21	7.3
SEPT. 03...	22	.24	.07	.96	.09	.20	9.5

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	PER- CENT SATUR- ATION	COLI- FORM (COL- ONIES PER 100 ML)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	PH (UNITS)	COLOR (PLATI- NUM- COBALT UNITS)
JULY 30...	73	--	470	308	--	80
AUG. 06...	83	7400	590	382	--	32
SEPT. 03...	108	3200	580	394	7.9	120

4-1810.5. St. Marys River at RR bridge at Wilshire, Ohio (Lat 40 45 07 Long 84 47 36)

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TEMP- ERATURE (DEG C)	NITRATE (N) (MG/L)	AMMONIA NITRO- GEN (N) (MG/L)	ORGANIC NITRO- GEN (N) (MG/L)	DIS- SOL- VED- PHOS- PHORUS (P) (MG/L)	TOTAL PHOS- PHORUS (P) (MG/L)	DISS- OLVED OXYGEN (MG/L)
JULY 30...	26	.40	.01	.50	.26	.42	7.4
AUG. 20...	25	.50	.11	1.7	.33	.55	7.1
SEPT. 18...	19	5.9	.12	2.1	.21	.55	6.9

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	PER- CENT SATUR- ATION	COLI- FORM (COL- ONIES PER 100 ML)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	PH (UNITS)	COLOR (PLATI- NUM- COBALT UNITS)
JULY 30...	90	7800	720	498	--	60
AUG. 20...	84	13000	710	520	7.1	23
SEPT. 18...	73	80000	430	288	--	45

4-1835, Maumee River at Antwerp, Ohio (Lat 41 11 56 long 084 44 40)

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TEMP- ERATURE (DEG C)	SULFATE (SO ₄) (MG/L)	CHLO- RIDE (CL) (MG/L)	NITRATE (N) (MG/L)	NITRITE (N) (MG/L)	AMMONIA NITRO- GEN (N) (MG/L)	ORGANIC NITRO- GEN (N) (MG/L)	TOTAL PHOS- PHORUS (P) (MG/L)	HARD- NESS (CA, MG) (MG/L)
OCT. 24...	11	118	44	--	--	--	--	--	350
JULY 30...	26	--	--	1.9	--	.03	.75	.65	--
AUG. 06...	26	--	--	1.9	.00	.02	1.2	.49	--
20...	23	--	--	1.5	--	.03	1.7	1.8	--
SEPT. 03...	26	--	--	1.8	--	.06	1.8	2.3	--
18...	20	--	--	3.4	--	1.3	2.0	2.4	--

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	ALKA- LINITY AS CaCO ₃ (MG/L)	DISS- OLVED OXYGEN (MG/L)	PER- CENT SATUR- ATION	CULI- FORM (COL- ONIES PER 100 ML)	SPECI- FIC COND- UCTANCE (MICRO- MHOS)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)	PH (UNITS)	COLOR (PLATI- NUM- COBALT UNITS)
OCT. 24...	239	--	--	--	810	516	7.6	--
JULY 30...	--	5.2	63	--	570	384	--	35
AUG. 06...	--	9.3	113	4000	590	402	--	25
20...	--	10.0	119	--	720	464	7.9	23
SEPT. 03...	--	10.5	128	100	740	500	7.8	30
18...	--	2.6	28	--	710	432	--	20

5-5245. Iroquois River near Foresman, Ind. (Lat 40 52 14 Long 087 18 24)

INSTANTANEOUS SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DATE	TIME	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	DATE	TIME	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)
OCT 10, 1968	1230	55	110	16	MAY 8, 1969	1420	327	123	109
JAN 31, 1969	1040	3090	112	931	JUN 26, 1969	1700	362	97	95
FEB 12, 1969	1430	380	75	77	AUG 19, 1969	1200	76	148	30

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969
(METHODS OF ANALYSIS: R, 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- ERATURE (C)	DISCHARGE (CFS)	CONCENTRATION (MG/L)	SUSPENDED SEDIMENT DISCHARGE (TONS/DAY)	PARTICLE SIZE PERCENT FINER THAN THE SIZE (IN MILLIMETERS) INDICATED											METHOD OF ANALYSIS
						.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	
JUL 10, 1968	1210	24.0	288	ND	62	31	43	58	79	88	92	96	100	--	--	--	SAWC

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