October 1, 1978

FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI).

Multiply inch-pound units	By	To obtain SI units
	Length	
inches (in)	2.54×10^{1}	millimeters (mm)
	2.54×10^{-2}	meters (m)
feet (ft)	3.048×10^{-1}	meters (m)
miles (mi)	1.609×10^{0}	kilometers (km)
	Area	
acres	4.047×10^{3}	square meters (m^2)
	4.047×10^{-1}	square hectometers (hm^2)
	4.047×10^{-3}	square kilometers (km^2)
square miles (mi^2)	2.590×10^{0}	square kilometers (km^2)
	Volume	
gallons (gal)	3.785×10^{0}	liters (L)
	3.785×10^{0}	cubic decimeters (dm^3)
	3.785×10^{-3}	cubic meters (m^3)
million gallons	3.785×10^{3}	cubic meters (m^3)
	3.785×10^{-3}	cubic hectometers (hm^3)
cubic feet (ft^3)	2.832×10^{1}	cubic decimeters (dm^3)
	2.832×10^{-2}	cubic meters (m^3)
cfs-days	2.447×10^{3}	cubic meters (m^3)
	2.447×10^{-3}	cubic hectometers (hm^3)
acre-feet (acre-ft)	1.233×10^{3}	cubic meters (m^3)
	1.233×10^{-3}	cubic hectometers (hm^3)
	1.233×10^{-6}	cubic kilometers (km^3)
	Flow	
cubic feet per second (ft^3/s)	2.832×10^{1}	liters per second (L/s)
	2.832×10^{1}	cubic decimeters per second (dm^3/s)
	2.832×10^{-2}	cubic meters per second (m^3/s)
gallons per minute (gal/min)	6.309×10^{-2}	liters per second (L/s)
	6.309×10^{-2}	cubic decimeters per second (dm^3/s)
	6.309×10^{-5}	cubic meters per second (m^3/s)
million gallons per day	4.381×10^{1}	cubic decimeters per second (dm^3/s)
	4.381×10^{-2}	cubic meters per second (m^3/s)
	Mass	
tons (short)	9.072×10^{-1}	megagrams (Mg) or metric tons

Water Resources Data Indiana

Water Year 1990

by J.A. Stewart and G.E. Nell

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT IN-90-1
Prepared in cooperation with the State of Indiana
and with other agencies

U. S. DEPARTMENT OF THE INTERIOR

MANUEL LUJAN, JR., Secretary

U.S. GEOLOGICAL SURVEY

Dallas L. Peck, Director

For additional information, write to
District Chief, Water Resources Division
U.S. Geological Survey
5957 Lakeside Boulevard
Indianapolis, Indiana 46278

1991

PREFACE

This volume of the annual hydrologic data report of Indiana is one of a series of annual reports that document hydrologic data gathered from the U.S. Geological Survey's surface- and ground-water data-collection networks in each State, Puerto Rico, and the Trust Territories. These records of streamflow, stage, lake levels, ground-water levels, and water quality provide the hydrologic information needed by State, local, and Federal agencies, and the private sector for developing and managing our Nation's land and water resources.

This report is the culmination of a concerted effort by dedicated personnel of the U.S. Geological Survey who collected, compiled, analyzed, verified, and organized the data, and who typed, edited, and assembled the report. In addition to the authors, who had primary responsibility for assuring that the information contained herein is accurate, complete, and adheres to Geological Survey policy and established guidelines, the following individuals contributed significantly to the collection, processing, and tabulation of the data:

D. V. Arvin
B. L. Benedict
H. R. Christensen
J. R. Davis
C. E. Deiwert
T. J. Eaton
W. F. Hadley
L. E. Hammil
D. L. Hess
G. A. Hodkins
R. E. Hoggatt
J. H. Ibsen
C. R. Keeton
M. T. Kelly
P. H. Laird
D. K. Majors
J. D. Martin
H. T. Nguyen
R. R. Ondrish
K. R. Williams

The following individuals contributed significantly to the typing, drafting, and assembling of the report:

D. K. Majors
L. M. Huff

This report was prepared in cooperation with the State of Indiana and with other agencies under the general supervision of D. K. Stewart, District Chief, Indiana, and S. P. Sauer, Regional Hydrologist, Northeastern Region.

50272-101

REPORT DOCUMENTATION PAGE	1. REPORT NO. USGS/WRD/HD-91/263	2.	3. Recipient's Accession No.

4. Title and Subtitle
Water Resources Data--Indiana, Water Year 1990

5. Report Date
April 1991

6.

7. Author(s)
J. A. Stewart and G. E. Nell

8. Performing Organization Rept. No.
USGS-WDR-IN-91-1

9. Performing Organization Name and Address
U.S. Geological Survey, Water Resources Division
5957 Lakeside Boulevard
Indianapolis, Indiana 46278

10. Project/Task/Work Unit No.

11. Contract(C) or Grant(G) No.
(C)
(G)

12. Sponsoring Organization Name and Address
U.S. Geological Survey, Water Resources Division
5957 Lakeside Boulevard
Indianapolis, Indiana 46278

13. Type of Report & Period Covered
Annual - Oct. 1, 1989 to Sept. 30, 1990

14.

15. Supplementary Notes
Prepared in cooperation with the State of Indiana and with other agencies.

16. Abstract (Limit: 200 words)

Water resources data for the 1990 water year for Indiana consist of records of discharge, stage, and water quality of streams and wells; reservoir stage and contents; and water levels in lakes and wells. This report contains records of discharge for 181 stream-gaging stations, stage for 7 stream stations, stage and contents for 1 reservoir, water quality for 3 streams and 5 observation wells, and water levels for 80 lakes and 95 observation wells. Additional water data were collected at various sites, not part of the systematic data-collection program, and are shown as miscellaneous measurements. These data represent that part of the National Water Data System operated by the U.S. Geological Survey in Indiana in cooperation with State and Federal agencies.

17. Document Analysis a Descriptors
*Indiana, *Hydrologic data, *Surface water, *Ground water, *Water quality, Flow rates, Gaging stations, Lakes, Reservoirs, Chemical analyses, Sediments, Water temperatures, Water levels, Water analyses.

b. Identifiers/Open-Ended Terms
Sampling sites

c. COSATI Field/Group

18. Availability Statement: No restriction on distribution. This report may be purchased from: National Technical Information Service Springfield, VA 22161

19. Security Class (This Report) Unclassified

20. Security Class (This Page) Unclassified

21. No. of Pages 356

22. Price

(See ANSI-Z39.18) See Instructions on Reverse

OPTIONAL FORM 272 (4-77)
(Formerly NTIS-35)
Department of Commerce

CONTENTS

ILLUSTRATIONS

TABLES

STREAM AND RESERVOIR GAGING STATIONS, IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED

(d-discharge, e-gage heights, c-chemical, t-temperature, s-sediment, v-contents)

LAKE GAGING STATIONS, IN ALPHABETICAL ORDER, FOR WHICH RECORDS ARE PUBLISHED

(e - gage heights)

GROUND-WATER GAGING STATIONS, IN ALPHABETICAL ORDER BY COUNTY, FOR WHICH RECORDS ARE PUBLISHED

(e - gage heights, c - chemical, t - temperature)

INTRODUCTION

The Water Resources Division of the U.S. Geological Survey, in cooperation with State and Federal agencies, obtains a large amount of data pertaining to the water resources of Indiana each water year. These data, accumulated during many water years, constitute a valuable data base for developing an improved understanding of the water resources of the State. To make these data readily available to interested parties outside the U.S. Geological Survey, the data are published annually in this report series entitled "Water Resources Data - Indiana."

Water-resources data for the 1990 water year for Indiana consist of record of discharge, stage, and water quality of streams, and water levels of lakes and ground-water wells. This volume contains records for water discharge at 181 gaging stations, stage at 7 gaging stations, stage and contents at 1 reservoir, water quality at 3 stream sites and 5 observation wells, water levels at 80 lakes, and water levels at 95 observation wells. Locations of the streamflow and water-quality sites, and ground-water observation wells are shown on figures 4, 5, and 7. The number of lakes by county having 1989 water-level records are shown on figure 6. A systematic collection of stages on selected lakes was begun in 1943 in cooperation with the State of Indiana, Department of Natural Resources. The data collected since the beginning of record have not been published previously in the annual water data reports for Indiana. They are available in the Indiana District Office. A selected amount of lake data was published in Water-Supply Paper 1363, "Hydrology of Indiana Lakes," by J. I. Perrey and D. M. Corbett (1956). Additional lake data were published in Open-File Report 88-331, "Annual maximum and minimum lake levels for Indiana, water years 1942-85," by Kathleen K. Fowler (1988). These data represent that part of the National Water Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies in Indiana.

This series of annual reports for Indiana began with the 1961 water year with a report that contained only data relating to the quantities of surface water. For the 1964 water year, a similar report was introduced that contained only data relating to water quality. Beginning with the 1975 water year, the report format was changed to present, in one volume, data on quantity and quality of surface and ground water.

Prior to introduction of this series and for several water years concurrent with it, water-resources data for Indiana were published in U.S. Geological Survey Water-Supply Papers. Data on stream discharge and stage and on lake or reservoir contents and stage, through September 1960, were published annually under the title "Surface-Water Supply of the United States." Stream discharge and stage data were published in four compilation reports (through 1950, 1951-60, 1961-65, and 1966-70 water years). Data on chemical quality,

temperature, and suspended sediment for the 1941 through 1970 water years were published annually under the title "Quality of Surface Waters of the United States," and water levels for the 1935 through 1974 water years were published under the title "Ground-Water Levels in the United States." The above-mentioned Water-Supply Papers may be consulted in the libraries of the principal cities of the United States and may be purchased from U.S. Geological Survey, Books and Open-File Reports, Federal Center, Building 41, Box 25425, Denver, CO 80225.

Publications similar to this report are published annually by the U.S. Geological Survey for all States. These official U.S. Geological Survey reports have an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water-Data Report IN-90-1." For archiving and general distribution, the reports for 1971-74 water years also are identified as water-data reports. These water-data reports are for sale in paper copy or in microfiche by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161.

Every five years since 1950 the Geological Survey has compiled data on water use in the United States. During 1987, this effort was completed again for 1985 use in Indiana primarily through the auspices of the Water Management Branch, Division of Water, Indiana Department of Natural Resources. The Water Management Branch found that in 1985 more than 8 billion gallons per day were withdrawn from the surface- and ground-water resources of Indiana to meet the needs of its citizens. Approximately 92 percent of this withdrawal was from surface-water sources. The largest single source was Lake Michigan, which accounted for about 40 percent of the water withdrawn.

Additional information, including current prices, for ordering specific reports may be obtained from the District Chief at the address given on the back of the title page or by telephone (317) 290-3333.

COOPERATION

The U.S. Geological Survey and organizations of the State of Indiana have had cooperative agreements for the systematic collection of streamflow records since 1930, for ground-water levels since 1940, for lake stages since 1943, and for water-quality records since 1951. Organizations that supplied data are acknowledged in station manuscripts. Organizations that assisted in collecting data in this report through cooperative agreement with the U.S. Geological Survey are:

State of Indiana, Department of Natural Resources, Patrick R. Ralston, Director, through the Bureau of Water and Mineral Resources, Gary N. Doxtater, Deputy Director

State of Indiana, Department of Environmental Management, Kathy Prosser, Commissioner, and Charles Bardonner, Assistant Commissioner

State of Indiana, Department of Highways, Christine W. Letts, Director

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

The following organizations aided in collecting records: The cities of Carmel, Columbus, Elkhart, Fort Wayne, Indianapolis, and Syracuse; Hoosier Energy, Indianapolis Water Co.; Indianapolis Power and Light Co.; Public Service Company of Indiana; Container Corporation of America; Prudential Insurance Co.; Northern Indiana Public Service Co.; Sheller-Globe Corp.

SUMMARY OF HYDROLOGIC CONDITIONS

Precipitation patterns in Indiana differ seasonally and geographically. Although some precipitation falls each month, the greatest amounts usually fall during February, March, and April. Average annual amounts (fig. 1) range from about 34 inches in the northeastern part of the State to about 46 inches in the south-central part. Evapotranspiration consumption is relatively uniform and averages 26 inches per year (Clark, 1980).

Runoff generally follows the precipitation patterns. Average annual amounts (fig. 2) range from about 12 inches in northern and central parts of the State to about 18 inches in the extreme southern part.

Precipitation and runoff amounts in Indiana during the 1990 water year departed significantly from normal. Precipitation ranged from normal in the south-central part of the State to about 10 inches above normal in the east-central part. Runoff in the State was well above normal. Runoff ranged from a low value of 2 inches above normal to a high value of about 8 inches above normal in the state.

The effects of greater-than-normal precipitation on discharges are shown on figure 3, which compares 1990 water year monthly and annual mean discharges at three Indiana index stations to monthly and annual median discharges for the period 1951-80. Although some of the 1990 monthly means at the index stations were less than the 1951-80 medians, most monthly mean and all annual mean discharges were significantly greater than the medians. The 1990 annual mean discharges at the index stations reflected the generally wet year and ranged from 126 to 142 percent of their respective medians.

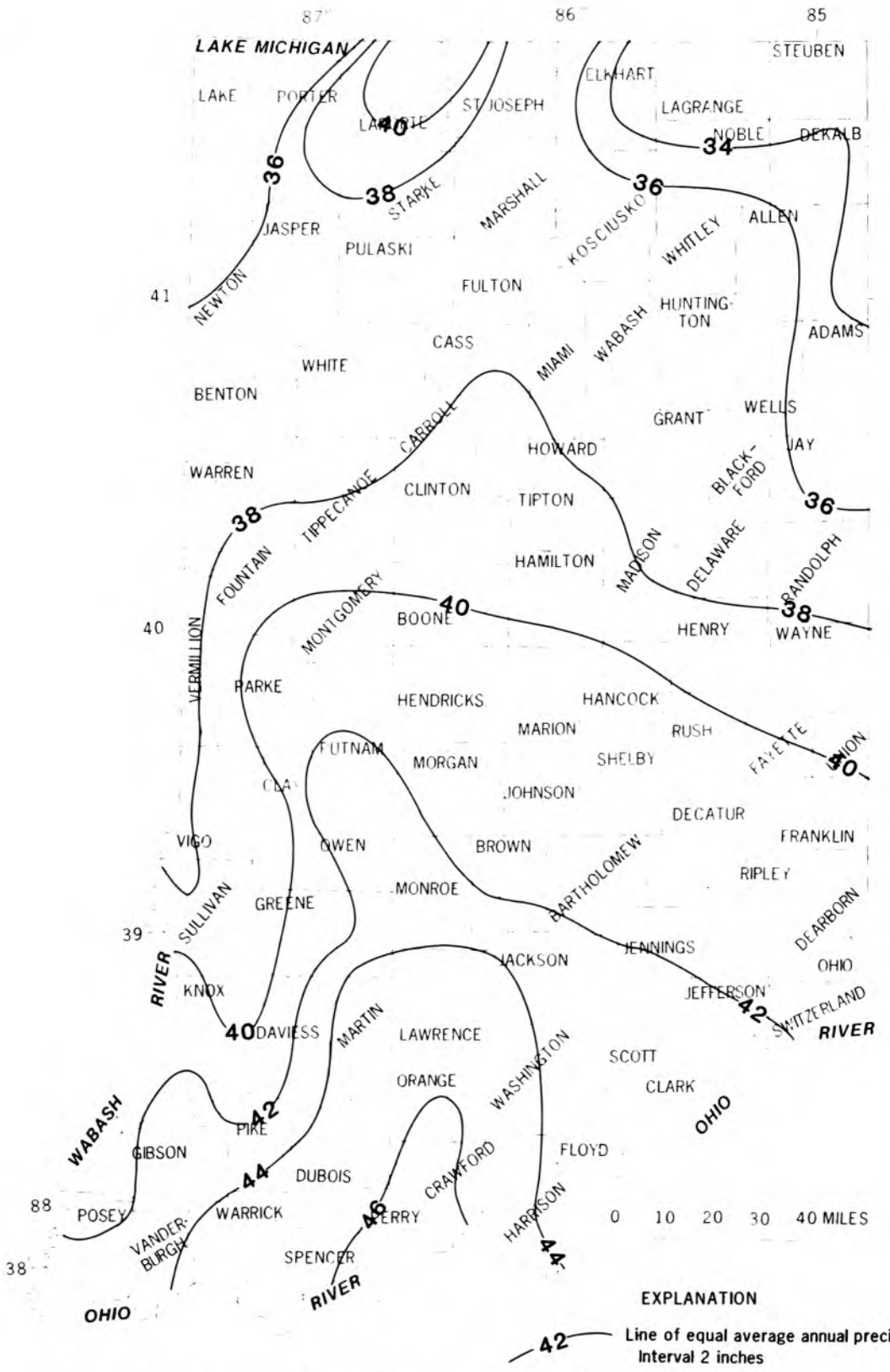


Figure 1.-- Average annual precipitation in Indiana, 1951-80.

(Data from National Oceanic and Atmospheric Administration, 1983.)

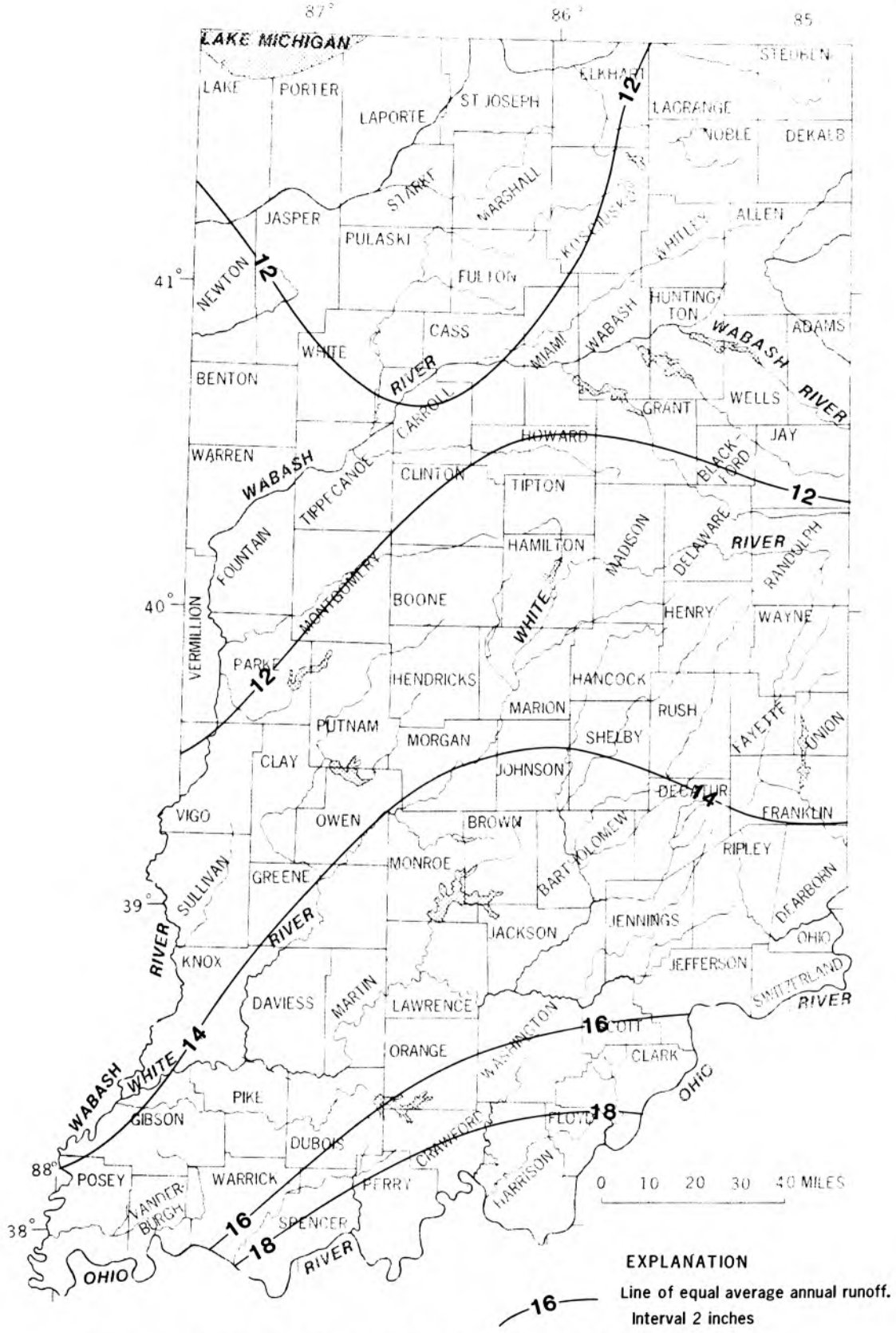


Figure 2.– Average annual runoff in Indiana, 1951-80.

(Data from Gebert, Graczyk, and Krug, 1985)

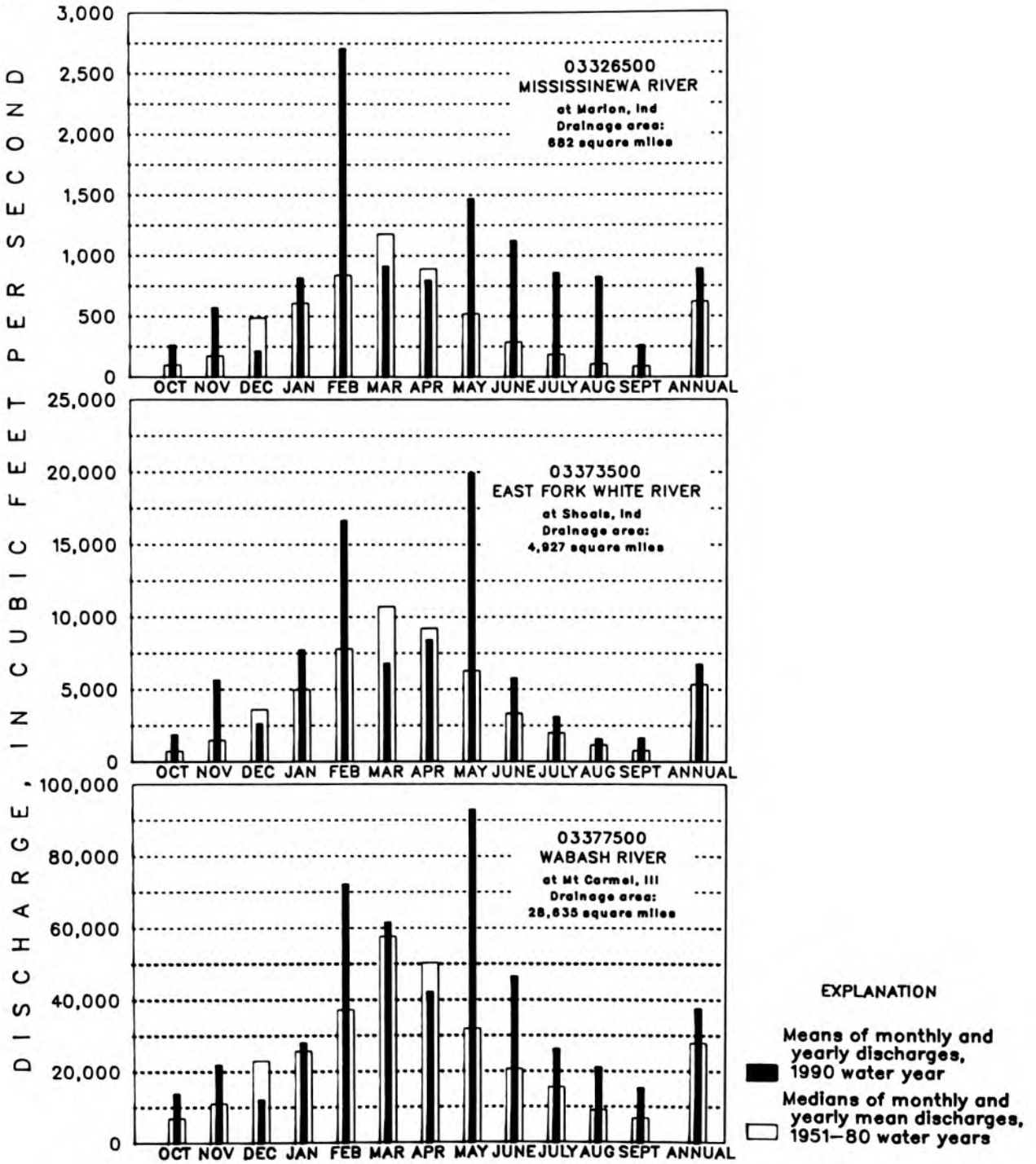


Figure 3. —— Mean discharges at Indiana index stations during 1990 water year and median discharges for period 1951–80.

October 1989 precipitation amounts ranged from 1.5 inches below normal in the northwestern part of Indiana, to near normal in the south-central and southeastern parts. Monthly mean discharges at the three index stations ranged from 199 to 262 percent of the monthly medians.

During November, precipitation ranged from 1 inch below normal in southwestern part of Indiana to near normal in the central, southeastern, and the north-central part of the State. Monthly mean discharges at the index stations ranged from 197 to 328 percent of the monthly medians.

During December, precipitation amounts were all less than normal ranging from about 2 inches below normal in the southwestern part of the State to more than 1 inch below normal in the northeastern part. Monthly mean discharges at the index stations ranged from 32 to 72 percent of the monthly medians.

January 1990 precipitation in Indiana ranged from 1 inch below normal in the west-central part of the State to about 0.6 inch above normal in the southwestern part of the State. Monthly mean discharges at the index stations ranged from 103 to 150 percent of the monthly medians.

During February, precipitation in Indiana was well above normal, ranging from near 2 inches above normal in the south-central part of the State, to near 4 inches above normal in the northeastern part. Monthly mean discharges at the index stations ranged from 104 to 323 percent of the monthly medians.

March precipitation amounts ranged from 2 inches below normal in the southwestern and south-central part of the State to less than 1 inch above normal in the northwestern part. Monthly mean discharges at the index stations ranged from 61 to 107 percent of the monthly medians.

April precipitation was approaching 2 inches below normal in the northwestern part of the State, and was normal in the southwestern and southeastern parts. Monthly mean discharges at the index stations ranged from 84 to 89 percent of the monthly medians.

May precipitation was well above normal throughout the State, ranging from about 2 inches above normal in the northwestern part of the State, to over 6 inches above normal in the southwestern part. Monthly mean discharges at the index stations ranged from 282 to 328 percent of the monthly medians.

During June, precipitation varied from near 0.5 inch below normal in the northwestern, and north-central part of the State, to about 2 inches above normal in the southwestern part. Monthly mean discharges at the index stations ranged from 225 to 391 percent of the monthly medians.

July precipitation in Indiana ranged from about 0.6 below normal in the southeastern part of the State, to near 2 inches above in the west-central part. Monthly mean discharges at the index stations ranged from 156 percent above normal to 465 percent of the monthly medians.

August precipitation was well above normal in most of the State, except in the southwestern, south-central, and west-central parts, which were near normal. Precipication in other parts of the State ranged from about 1.5 inches above normal in the central part to about 4.3 inches above normal in the east-central part. Monthly mean discharges at the index stations ranged from 130 to 763 percent of the monthly medians.

September precipitation ranged from about 1.4 inches below normal in the northwestern part of the State, to near normal in the central part. Monthly mean discharges at the index stations ranged from 203 to 290 percent of the monthly medians.

SPECIAL NETWORKS AND PROGRAMS

Hydrologic Bench-Mark Network is a nationwide network of 57 sites in small drainage basins around the country whose purposes are to provide consistent data on the hydrology, water quality, and related factors in undeveloped watersheds, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by the activities of man.

National Stream Quality Accounting Network (NASQAN) is a nationwide data-collection network of approximately 500 sites designed by the U.S. Geological Survey to meet many of the information needs of government agencies and other groups involved in natural or regional water-quality planning and management. NASQAN sites generally are located at the downstream ends of hydrologic accounting units designated by the U.S. Geological Survey Office of Water Data Coordination in consultation with the Water Resources Council. The objectives of NASQAN are to: (1) Obtain information on the quality and quantity of water moving within and from the United States through a systematic and uniform process of data collection, summarization, analysis, and reporting; (2) describe the areal variability of water quality in the Nation's rivers through analysis of data from this and other programs; (3) detect changes or trends with time in the pattern of occurrence of water-quality characteristics; and (4) provide a nationally consistent data base useful for water-quality assessment and hydrologic research.

EXPLANATION OF THE RECORDS

The surface-water and ground-water records published in this report are for the 1990 water year that began October 1, 1989, and ended September 30, 1990. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow and stage data, stage and content data for a reservoir, water-quality data for surface-water and ground-water, lake-level data, peak-flow data, and ground-water-level data. The following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

Station Identification Numbers

Each data station, whether streamsite or well, in this report is assigned a unique identification number. This number is unique in that it applies specifically to a given station and to no other. The number usually is assigned when a station is first established and is retained for that station indefinitely. The systems used by the U.S. Geological Survey to assign identification numbers for surface-water stations and for ground-water well sites differ, but both are based on geographic location. The "downstream order" system is used for regular surface-water stations and for surface-water stations where only miscellaneous measurements are made; the "latitude-longitude" system is used for wells.

Downstream Order System

Since October 1, 1950, the order of listing hydrologic-station records in U.S. Geological Survey reports is in a downstream direction along the main stream. All stations on a tributary entering upstream from a mainstream station are listed before that station. A station on a tributary that enters between two mainstream stations is listed between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary with respect to the stream to which it is immediately tributary is indicated by an indention in the "List of Stations" in the front of this report. Each indention represents one rank. This downstream order and system of indention show which stations are on tributaries between any two stations and the rank of the tributary on which each station is situated.

The station-identification number is assigned according to downstream order. In assigning station numbers, no distinction is made between partial-record stations and other 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 series of 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 03335500, which appears just to the left of the station name, includes the 2-digit Part number "03" plus the 6-digit downstream-order number "335500." The Part number designates the major river basin; for example, Part "03" is the Ohio River basin.

Records in this report are in Part 03 (Ohio River basin), Part 04 (St. Lawrence River basin), and Part 05 (Upper Mississippi River basin). All records for a drainage basin encompassing more than one State can be arranged in downstream order by assembling pages from the various State reports by station number to include all records in the basin.

Latitude-Longitude System

The identification numbers for wells are assigned according to the grid system of latitude and longitude. The number consists of 15 digits. The first six digits denote the degrees, minutes, and seconds of latitude, the next seven digits denote degrees, minutes, and seconds of longitude, and the last two digits (assigned sequentially) identify the wells or other sites within a 1-second grid. This site-identification number, once assigned, is a pure number and has no locational significance. In the rare instance where the initial determination of latitude and longitude are found to be in error, the station will retain its initial identification number; however, its true latitude and longitude will be listed in the LOCATION paragraph of the station description.

In addition, each well in Indiana carries dual-identification numbers. The second system is by county name with a sequential number of the well; that is, number one is the first well in that county for which records were obtained.

Data Collection and Computation

The data obtained at a complete-record gaging station on a stream or canal consist of a continuous record of stage, individual measurements of discharge throughout a range of stages, and notations regarding factors that may affect the relations between stage and discharge. These data, together with supplemental information, such as weather records, are used to compute daily discharges.

Continuous records of stage are obtained with analog recorders that trace continuous graphs of stage, with digital recorders that punch stage values on paper tapes at selected time intervals, or with data collection platforms that store stage data electronically. Measurements of discharge are made with current meters using methods adopted by the U.S. Geological Survey as a result of experience accumulated since 1880. These methods are described in standard textbooks, in Water-Supply Paper 2175, and in U.S. Geological Survey Techniques of Water-Resources Investigations (TWRI), Book 3, Chap. A6.

In computing discharge records, results of individual measurements are plotted against the corresponding stages, and stage-discharge relation curves are then constructed. From these curves, rating tables indicating the approximate discharge for any stage within the range of the measurements are prepared. If it is necessary to define extremes of discharge outside the range of the current-meter measurements, the curves are extended using: (1) Logarithmic plotting; (2) velocity-area studies; (3) results of indirect measurements of peak discharge, such as slope-area or contracted-opening measurements, and computations of flow over dams or weirs; or (4) step-backwater techniques.

Daily mean discharges are computed by applying the instantaneous stages (gage heights) to the stage-discharge curves or tables and then assigning the arithmetic mean. 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 the individual discharge measurements and notes of the personnel making the measurements are applied to the gage heights before the discharges are determined from the curves or tables. This shifting-control method also is used if the stage-discharge relation is changed temporarily because of aquatic growth or debris on the control. For some stations, formation of ice in the winter may so obscure the stage-discharge relations that daily mean discharges must be estimated from other information such as temperature and precipitation records, notes of observations, and records for other stations in the same or nearby basins for comparable periods.

At some stream-gaging stations, the stage-discharge relation is affected by the 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 computing discharge. 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 computing discharge.

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 from the recorded range in stage, previous or following record, discharge measurements, weather records, and comparison with other station records from the same or nearby basins. Information explaining how estimated daily-discharge values are identified in station records is included in the next two sections, "Data Presentation" (REMARKS paragraph) and "Identifying Estimated Daily Discharge."

Data Presentation

The records published for each gaging station consist of two parts, the manuscript or station description and the data table for the current water year. The manuscript provides, under various headings, descriptive information, such as station location, period of record, average discharge, historical extremes, record accuracy, and other remarks pertinent to station operation and regulation. The following information, as appropriate, is provided with each continuous record of discharge. Comments that follow clarify information presented under the various headings of the station description.

LOCATION.--Information on locations is obtained from the most accurate maps available. The location of the gage with respect to the cultural and physical features in the vicinity and with respect to the reference place mentioned in the station name is given. River mileages were determined by methods given in "River Mileage Measurement," Bulletin 14, revision of October 1968, prepared by the Water Resources Council or were provided by the U.S. Army Corps of Engineers.

DRAINAGE AREA.--Drainage areas are measured using the most accurate maps available.

PERIOD OF RECORD.--This indicates the period for which there are published records for the station or for an equivalent station. An equivalent station is one that was in operation at a time that the present station was not, and whose location was such that records from it can reasonably be considered equivalent with records from the present station.

REVISED RECORDS.--Published records, because of new information, occasionally are found to be incorrect, and revisions are printed in later reports. Listed under this heading are all the reports in which revisions have been published for the station and the water years to which the revisions apply. If a revision did not include daily, monthly, or annual figures of discharge, that fact is noted 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 most recently revised figure was first published is given.

GAGE.--The type of gage in current use, the datum of the current gage referred to National Geodetic Vertical Datum of 1929 (see glossary), and a condensed history of the types, locations, and datums of previous gages are given under this heading.

REMARKS.--All periods of estimated daily-discharge record will either be identified by date in this paragraph of the station description for water-discharge stations or flagged in the daily-discharge table. (See next section, "Identifying Estimated Daily Discharge.") If a remarks statement is used to identify estimated record, the paragraph will begin with this information presented as the first entry. The paragraph is also used to present information relative to the accuracy of the records, to special methods of computation, to conditions that affect natural flow at the station and, possibly, to other pertinent items. For reservoir stations, information is given on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir.

COOPERATION.--Records provided by a cooperating organization or obtained for the U.S. Geological Survey by a cooperating organization are identified here.

AVERAGE DISCHARGE.--The discharge value given is the arithmetic mean of the water-year mean discharges. It is computed only for stations having at least 5 water years of complete record, and only water years of complete record are included in the computation. It is not computed for stations where diversions, storage, or other water-use practices cause the value to be meaningless. If water developments significantly altering flow at a station are put into use after the station has been in operation for a period of years, a new average is computed as soon as 5 water years of record have accumulated following the development. The median of yearly mean discharges also is given under this heading for stations having 10 or more water years of record, if the median differs from the average given by more than 10 percent.

EXTREMES FOR PERIOD OF RECORD.--Extremes include maximum stages and maximum instantaneous discharges and minimum daily discharge. The maximum discharge is the instantaneous maximum corresponding to the highest stage that occurred. The higher stage may have been obtained from a graphic or digital recorder, a crest-stage gage, or by direct observation of a nonrecording gage. If the maximum stage did not occur on the same day as the maximum discharge or content, it is given separately.

EXTREMES OUTSIDE PERIOD OF RECORD.--Included here is information concerning major floods or unusually low flows that occurred outside the stated period of record. The information may or may not have been obtained by the U.S. Geological Survey.

EXTREMES FOR CURRENT YEAR.--Extremes given here are similar to those for the period of record, except the peak discharge listing may include secondary peaks. For stations meeting certain criteria, all peak discharges and stages occurring during the water year and greater than a selected base discharge are presented under this heading. The peaks greater than the base discharge, excluding the highest one, are referred to as secondary peaks. Peak discharges are not published for canals, ditches, drains, or streams for which the peaks are subject to substantial control by man. The time of occurrence for peaks is expressed in 24-hour local standard time. For example, 12:30 a.m. is 0030, and 1:30 p.m. is 1330. The minimum for the current water year appears below the table of peak data.

REVISIONS.--If a critical error in published records is discovered, a revision is included in the first report published following discovery of the error.

Although rare, occasionally the records of a discontinued gaging station may need revision. Because for these stations there would be no current or, possibly, future station manuscript published to document the revision in a "Revised Records" entry, users of data for these stations who obtained the record from previously published data reports may wish to contact the offices whose addresses are given on the back of the title page of this report to determine if the published records were ever revised after the station was discontinued. Of course, if the data were obtained by computer retrieval, the data would be current and there would be no need to check because any published revision of data is always accompanied by revision of the corresponding data in computer storage.

The daily table for stream-gaging stations gives mean discharge for each day and is followed by monthly and yearly summaries. In the monthly summary below the daily table, the line headed "TOTAL" gives the sum of the daily figures. 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 is usually expressed in cubic feet per second per square mile (line headed "CFSM"), or in inches (line headed "IN."). Figures for 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. In the yearly summary below the monthly summary, the figures shown are the appropriate discharges for the calendar and water years.

Identifying Estimated Daily Discharge

Estimated daily-discharge values published in the water-discharge tables of annual State data reports are identified either by flagging individual daily values with the letter symbol "e" and printing a table footnote, "Estimated," or by listing the dates of the estimated record in the "REMARKS" paragraph of the station description.

Accuracy of the Records

The accuracy of streamflow records 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 measurements of stage, measurements of discharge, and interpretation of records.

The accuracy attributed to the records is indicated under "REMARKS." "Excellent" means that about 95 percent of the daily discharges are within 5 percent of their true values; "good," within 10 percent; and "fair," within 15 percent. Records that do not meet the criteria mentioned are rated "poor." Different accuracies may be attributed to different parts of a given record.

Daily mean discharges in this report are given to the nearest hundredth of a cubic foot per second for values less than 1 ft^3/s; to the nearest tenth between 1.0 and 10 ft^3/s; to whole numbers between 10 and 1,000 ft^3/s; and to 3 significant figures for more than 1,000 ft^3/s. The number of significant figures used is based solely on the magnitude of the discharge value. The same rounding rules apply to discharges 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, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or to other factors. For such stations, figures of cubic feet per second per square mile and of runoff, in inches, are not published unless satisfactory adjustments can be made for diversions, for changes in contents of reservoirs, or for other changes incident to use and control. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur if adjustments or losses are large in comparison with the observed discharge.

Other Records Available

Information used in the preparation of the records in this publication, such as discharge-measurement notes, gage-height records, temperature measurements, and rating tables is on file in the Indiana District Office. Also, most of the daily mean discharges are in computer-readable form and have been analyzed statistically. Information on the availability of the unpublished information or on the results of statistical analyses of the published records may be obtained from the Indiana District Office.

Records of Surface-Water Quality

Records of surface-water quality ordinarily are obtained at or near stream-gaging stations because interpretation of records of surface-water quality nearly always requires corresponding discharge data.

Classification of Records

Water-quality data for surface-water sites are grouped into one of three classifications. A continuing-record station is a site where data are collected on a regularly scheduled basis. Frequency may be one or more times daily, weekly, monthly, or quarterly. A partial-record station is a site where limited water-quality data are collected systematically over a period of years. Frequency of sampling usually is less than quarterly. A miscellaneous sampling site is a location other than a continuing or partial-record station where random samples are collected to give better areal coverage to define water-quality conditions in the river basin.

A careful distinction needs to be made between "continuing records," as used in this report, and "continuous recordings," which refers to a continuous graph or a series of discrete values punched at short intervals on a paper tape. Some records of water quality, such as temperature and specific conductance, may be obtained through continuous recordings; however, because of cost, most data are obtained monthly or less frequently.

Records of surface-water quality in this report are for continuing-record stations only. These stations are part of the Hydrologic Bench-Mark Network or the National Stream Quality Accounting Network (NASQAN). Locations of stations for which records on the quality of surface water appear in this report are shown on figures 4 and 5.

Arrangement of Records

Water-quality records collected at a surface-water daily record station are published immediately following that record, regardless of the frequency of sample collection. Station number and name are the same for both records.

Onsite Measurements and Sample Collection

The major concern in obtaining water-quality data is assuring that the data represent the in situ quality of the water. To assure this, certain measurements, such as water temperature, pH, specific conductance, alkalinity, and dissolved oxygen, are made onsite when the samples are taken. To assure that measurements made in the laboratory also represent the in situ water, carefully prescribed procedures need to be followed in collecting the samples, in treating the samples to prevent changes in quality pending analysis, and in shipping the samples to the laboratory. Procedures for onsite measurements and for collecting, treating, and shipping samples are given in publications on "Techniques of Water-Resources Investigations," Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4. All of these references are listed under "PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS" which appears at the end of the introductory text. Detailed information on collecting, treating, and shipping samples also may be obtained from the U.S. Geological Survey, Indiana District Office.

One sample can define adequately the water quality at a given time only if the mixture of solutes and sediment throughout the stream cross section is homogeneous. However, the concentration of solutes and sediment at different locations in the cross section can vary widely with different rates of water discharge, depending on the sources of the solutes and sediment, the turbulence and mixing of the stream, and other factors. Most streams must be sampled through several vertical sections using a depth-integrating sampler to obtain a representative sample. All samples obtained for the National Stream Quality Accounting Network and the Hydrologic Bench-Mark Network are obtained from at least several verticals.

Laboratory Measurements

Specific conductance, pH, air and water temperatures, dissolved oxygen, barometric pressure, and alkalinity are measured onsite. Fecal coliform and fecal streptococci bacteria are analyzed in the Indiana District laboratory. Suspended sediment and particle-size distribution are analyzed in the U.S. Geological Survey laboratory in Iowa City, Iowa. All other samples are analyzed in the U.S. Geological Survey National Water-Quality Laboratory in Arvada, Colorado. Methods used in analyzing sediment samples are given in TWRI, Book 5, Chap. C1. Methods used by the National Water-Quality Laboratory are given in TWRI, Book 5, Chap. A1, A4, and A5.

Data Presentation

For continuing-record stations, information pertinent to the history of station operation is provided in descriptive headings preceding the tabular data. These descriptive headings give details regarding location, drainage area, period of record, and type of data available.

In the descriptive headings, if the location is identical to that of the discharge gaging station, neither the LOCATION nor the DRAINAGE AREA statements are repeated. The following information, as appropriate, is provided with each continuous-record station. Comments that follow clarify information presented under the various headings of the station description.

LOCATION.--See "Data Presentation" under "Records of Stage and Water Discharge."

DRAINAGE AREA.--See "Data Presentation" under "Records of Stage and Water Discharge."

PERIOD OF RECORD.--This indicates the periods for which there are published water-quality records for the station.

REMARKS.--Remarks provide added information pertinent to the collection, analysis, or computation of the records.

REVISIONS.--If errors in published water-quality records are discovered after publication, appropriate updates are made to the Water-Quality File in the U.S. Geological Survey's computerized data system, WATSTORE, and subsequently by monthly transfer of update transactions to the U.S. Environmental Protection Agency's STORET system. Because the usual volume of updates makes it impractical to document individual changes in the State data-report series

or elsewhere, potential users of U.S. Geological Survey water-quality data are encouraged to obtain all required data from the appropriate computer file to ensure the most recent updates.

Remark Codes

The following remark codes may appear with the water-quality data in this report:

PRINTED OUTPUT	REMARK
E	Estimated value
>	Actual value is known to be greater than the value shown
<	Actual value is known to be less than the value shown
K	Results based on colony count outside the acceptance range (nonideal colony count)
L	Biological organism count less than 0.5 percent (organism may be observed rather than counted).
D	Biological organism count equal to or greater than 15 percent (dominant).
&	Biological organism estimated as dominant.

NOTE: In March 1989 the National Water-Quality Laboratory discovered a bias in the turbidimetric method for sulfate analysis, indicating that values below 75 mg/L have a median positive bias of 2 mg/L above the true value for the period between 1982 and 1989. Sulfate values in this report have not been corrected for this bias.

Records of Lake Levels

Water-level data from a network of lake gaging stations are given in this report. These data are intended to provide a historical record of water-level changes in lakes where established average legal levels have been designated by the State. Numbers of lakes by county having current water-level records are shown on figure 6.

Data Collection and Computation

Measurements of water levels are made under varying conditions, but the methods are standardized to the extent possible. The equipment and measuring techniques used at each lake gage will ensure that the measurements are of consistent accuracy and reliability.

Tables of water-level data are presented by lake names arranged in alphabetical order. The prime identification number for a given lake is the "downstream-order" number previously discussed in this report and appears to the left of the lake name.

Lake-level records are obtained from direct measurement with a steel tape, from observation of steel staff gages, or from punched tape in a water-stage recorder. The water-level measurements in this report are given in feet above gage datum. Gage datum is a datum plane above the National Geodetic Vertical Datum of 1929. Water levels are reported to one-hundredth of a foot.

Data Presentation

Each lake record consists of two parts, the station description, and the data table of water levels observed during the year. The description of the lake gage is presented first through use of descriptive headings preceding the tabular data which precedes the hydrograph. Comments that follow clarify information presented under the various headings.

LOCATION.--See "Data Presentation" under "Records of Stage and Water Discharge."

SURFACE AREA.--This entry specifies the surface area of the lake at its established legal level.

DRAINAGE AREA.--See "Data Presentation" under "Records of Stage and Water Discharge."

PERIOD OF RECORD.--This entry indicates the periods for which lake-level records at the site have been collected.

DATUM OF GAGE.--This entry indicates the datum of the current gage referred to the National Geodetic Vertical Datum of 1929 (see glossary).

GAGE.--The type of gage in current use and a condensed history of the types, locations, and datums of previous gages are given under this heading.

ESTABLISHED LEGAL LEVEL.--This entry indicates the average level in feet above gage datum and National Geodetic Vertical Datum of 1929 at which the lake is to be maintained, the data of decree, and court specifying the decreed level.

LAKE-LEVEL CONTROL.--This entry indicates the type of structure used to maintain the lake level.

INLET AND OUTLET.--This entry, if appropriate, describes where surface inflow comes into the lake and where outflow departs. Some lakes may have neither inlets, outlets, nor both; in such cases parts or all of this heading may not appear.

EXTREMES FOR PERIOD OF RECORD.--Extremes include maximum and minimum levels and the dates of occurrence.

REVISIONS.--If a critical error in published records is discovered, a revision is included in the first report published following discovery of the error.

A table of water levels follows the station description for each lake gage. Water levels are reported in feet above gage datum. Only abbreviated tables are published; water-levels at midnight (2400) are listed for every fifth day and at the end of the month (EOM). The highest and lowest 2400 levels with dates of occurrence and mean of the water year are shown on a line below the abbreviated table. Because all values are not published, the extremes may be values not listed in the table. Missing records are indicated by dashes in place of the water level.

Records of Ground-Water Levels

Only water-level data from a representative network of observation wells are given in this report. These data are intended to provide a sampling and historical record of water-level changes in the State's most important aquifers. Locations of the observation wells in this network in Indiana are shown on figure 7.

Data Collection and Computation

Measurements of water levels are made in many types of wells under varying conditions, but the methods of measurement are standardized to the extent possible. The equipment and measuring techniques used at each observation well ensure that measurements at each well are of consistent accuracy and reliability.

Tables of water-level data are presented by counties arranged in alphabetical order. The prime identification number for a given well is the 15-digit number that appears in the upper left corner of the table. The secondary identification number is the local well number.

Water-level records are obtained from direct measurements with a steel tape or punched tape of a water-stage recorder. The water-level measurements in this report are given in feet with reference to land-surface datum (lsd). Land-surface datum is a datum plane that is approximately at land surface at each well. If known, the elevation of the land-surface datum is given in the well description. The height of the measuring point (MP) above or below land-surface datum is given in each well description.

Water levels are reported to as many significant figures as can be justified by the local conditions. For example, in a measurement of a depth to water of several hundred feet, the error of determining the absolute value of the total depth to water may be a few tenths of a foot, whereas the error in determining the net change of water level between successive measurements may be only one-hundredth or a few hundredths of a foot. For lesser depths to water, the accuracy is greater. Accordingly, most measurements are reported to one-hundredth of a foot, but some are given to one-tenth of a foot or a larger unit.

Data Presentation

Each well record consists of two parts, the station description and the data table of water levels observed during the water year. The description of the well is presented first through use of descriptive headings preceding the tabular data. The comments that follow clarify information presented under the various headings.

LOCATION.--This paragraph follows the well-identification number and reports the latitude and longitude (given in degrees, minutes, and seconds), a landline location designation, the hydrologic-unit number, the distance and direction from a geographic point of reference, and the owner's name.

AQUIFER.--This entry designates by name (if a name exists) and geologic age the aquifer(s) open to the well.

WELL CHARACTERISTICS.--This entry describes the well in terms of depth, diameter, casing depth and/or screened interval, method of construction, use, and additional information such as casing breaks, collapsed screen, and other changes since construction.

INSTRUMENTATION.--This paragraph provides information on both the frequency of measurement and the collection method used, allowing the user to better evaluate the reported water-level extremes by knowing whether they are based on weekly, monthly, or some other frequency of measurement.

DATUM.--This entry describes both the measuring point and the land-surface elevation at the well. The measuring point is described physically (such as top of collar, notch in top of casing, plug in pump base and so forth), and in relation to land surface (such as 1.3 ft above land-surface datum). The elevation of the land-surface datum is described in feet above (or below) National Geodetic Vertical Datum of 1929 (NGVD of 1929); it is reported with a precision depending on the method of determination.

REMARKS.--This entry describes factors that may influence the water level in a well or the measurement of the water level. It should identify wells that also are water-quality observation wells and may be used to acknowledge the assistance of local (non-U.S. Geological Survey) observers.

PERIOD OF RECORD.--This entry indicates the period for which there are published records for the well. It reports the month and year of the start of publication of water-level records by the U.S. Geological Survey and the words "to current year" if the records are to be continued into the following year. Periods for which water-level records are available but are not published by the U.S. Geological Survey may be noted.

EXTREMES FOR PERIOD OF RECORD.--This entry contains the highest and lowest water levels of the period of published record, with respect to land-surface datum, and the dates of their occurrence.

Tables of water levels follow the station description for each well. Water levels are reported in feet below land-surface datum. Only abbreviated tables are published; water-level highs and lows are listed for every fifth day and at the end of the month (EOM). The highest and lowest water levels of the water year and their dates of occurrence are shown on a line below the abbreviated tables. Because all values are not published, the extremes may be values that are not listed in the tables. Missing records are indicated by dashes in place of the water level.

Records of Ground-Water Quality

Records of ground-water quality in this report differ from other types of records in that they consist of only one set of measurements for the water year. Ground-water quality is sampled immediately after installation and development of a new observation well. As new observation wells are usually installed late in the water year, records of ground-water quality are typically published in the first water year with complete records for ground-water levels.

Sample Collection and Analysis

Measurements of specific conductance, pH, water temperature, dissolved oxygen, and alkalinity are measured onsite. Other constituents and properties are analyzed in the U.S. Geological Survey National Water-Quality Laboratory in Arvada, Colorado. Methods used in collecting and analyzing ground-water-quality samples are given in TWRI, Book 1, Chap. D2, and Book 5, Chap. A1.

Data Presentation

Records of ground-water quality immediately follow records of ground-water levels.

ACCESS TO WATSTORE DATA

The National WATer Data STOrage and REtrieval System (WATSTORE) was established for handling water data collected through the activities of the U.S. Geological Survey and to provide for more effective and efficient means of releasing the data to the public. The system is operated and maintained on the central computer facilities of the U.S. Geological Survey at its National Center in Reston, Virginia.

WATSTORE can provide a variety of useful products ranging from simple data tables to complex statistical analyses. A minimal fee, plus the actual computer cost incurred in producing a desired product, is charged to the requester. Information about the availability of specific types of data, the acquisition of data or products, and user charges can be obtained locally from the offices whose addresses are given on the back of the title page.

General inquiries about WATSTORE may be directed to:

Chief Hydrologist
U.S. Geological Survey
437 National Center
Reston, Virginia 22092

DEFINITION OF TERMS

Terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. Also, see table for converting English units to International System (SI) units on the inside of the back cover.

Acre-foot (AC-FT, ac-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equal to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.

Aquifer is a geologic formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield significant quantities of water to wells and springs.

Artesian means confined and is used to describe a well in which the water level stands above the top of the aquifer tapped by the well. A flowing artesian well is one in which the water level is above the land surface.

Bacteria are microscopic unicellular organisms, typically spherical, rod-like, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, while others perform an essential role in nature in the recycling of materials; for example, by decomposing organic matter into a form available for reuse by plants.

Fecal coliform bacteria are bacteria that are present in the intestine or feces of warm-blooded animals. They are often used as indicators of the sanitary quality of the water. In the laboratory, they are defined as all organisms that produce blue colonies within 24 hours when incubated at 44.5 °C ± 0.2 °C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal streptococcal bacteria are bacteria found also in the intestine of warm-blooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as Gram-positive, cocci bacteria which are capable of growth in brain-heart infusion broth. In the laboratory, they are defined as all the organisms which produce red or pink colonies within 48 hours at 35 °C ± 1.0 °C on KF-streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Bed material is the sediment mixture of which a streambed, lake, pond, reservoir, or estuary bottom is composed.

Bottom material: See Bed material.

Color unit is produced by 1 milligram per liter of platinum in the form of the chloro-platinate ion. Color is expressed in units of the platinum-cobalt scale.

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.

Control structure as used in this report is a structure on a stream, canal, or lake that is used to regulate the flow or stage or to prevent the intrusion of salt water.

Cubic foot per second (ft^3/s) 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 or 0.02832 cubic meters per second.

Cubic foot per second-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, approximately 1.9835 acre-feet, about 646,000 gallons, or 2,445 cubic meters.

Cubic feet per second per square mile [$(ft^3/s)/mi^2$] 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.

Discharge is the volume of water (or more broadly, volume of fluid plus suspended sediment) that passes a given point within a given period of time.

Mean discharge (MEAN) is the arithmetic mean of individual daily mean discharges during a specific period.

Instantaneous discharge is the discharge at a particular instant of time.

Dissolved refers to that material in a representative water sample which passes through a 0.45-micron (µm) membrane filter. This is a convenient operational definition used by Federal agencies that collect water data. Determinations of "dissolved" constituents are made on subsamples of the filtrate.

Dissolved-solids concentration of water is determined either analytically by the "residue-on-evaporation" method, or mathematically by totaling the concentrations of individual constituents reported in a comprehensive chemical analysis. During the analytical determination of dissolved solids, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. Therefore, in the mathematical calculation of dissolved-solids concentration, the bicarbonate value, in milligrams per liter, is multiplied by 0.492 to reflect the change.

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

Drainage basin is a part of the surface of the earth that is occupied by a drainage system, which consists of a surface stream or a body of impounded surface water together with all tributary surface streams and bodies of impounded surface water.

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 hydrologic data are obtained.

Hardness of water is a physical-chemical characteristic that commonly is recognized by the increased quantity of soap required to produce lather. It is computed as the sum of equivalents of polyvalent cations and is expressed as the equivalent concentration of calcium carbonate ($CaCO_3$).

Hydrologic unit is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as delineated by the Office of Water Data Coordination on the State Hydrologic Unit Maps; each hydrologic unit is identified by an 8-digit number.

Land-surface datum (lsd) is a datum plane that is approximately at land surface at each ground-water observation well.

Measuring point (MP) is an arbitrary permanent reference point from which the distance to the water surface in a well is measured to obtain the water level.

Micrograms per gram (µg/g) is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the element per unit mass (gram) of material analyzed.

Micrograms per liter (UG/L, µg/L) is a unit expressing the concentration of chemical constituents in solution as mass (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to one milligram per liter.

Milligrams per liter (MG/L, mg/L) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per liter represents the mass of solute per unit volume (liter) of water. Concentration of suspended sediment also is expressed in mg/L and is based on the mass of dry sediment per liter of water-sediment mixture.

National Geodetic Vertical Datum of 1929 (NGVD of 1929) is a geodetic datum derived from a general adjustment of the first order level nets of both the United States and Canada. It was formerly called "Sea Level Datum of 1929" or "mean sea level" in this series of reports. Although the datum was derived from the average sea level over a period of many years at 26 tide stations along the Atlantic, Gulf of Mexico, and Pacific coasts, it does not necessarily represent local mean sea level at any particular place.

Organism count/volume refers to the number of organisms collected and enumerated in a sample and adjusted to the number per sample volume, usually milliliter (mL) or liter (L). Numbers of planktonic organisms can be expressed in these terms.

Total organism count is the total number of organisms collected and enumerated in any particular sample.

Parameter code is a 5-digit number used in the U.S. Geological Survey computerized data system, WATSTORE, to uniquely identify a specific constituent. The codes used in WATSTORE are the same as those used in the U.S. Environmental Protection Agency data system, STORET. The U.S. Environmental Protection Agency assigns and approves all requests for new codes.

Partial-record station is a particular site where limited streamflow and/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 a particle determined by either sieve or sedimentation methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) determine fall diameter of particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling).

Particle-size classification used in this report agrees with the recommendation made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

Classification	Size (mm)	Method of analysis
Clay.....	0.00024 - 0.004	Sedimentation
Silt.....	.004 - .062	Sedimentation
Sand.....	.062 - 2.0	Sedimentation or sieve
Gravel.....	2.0 - 64.0	Sieve

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. Most of the organic matter is removed, and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native-water analysis.

Picocurie (PC, pCi) is one-trillionth (1×10^{-12}) of the amount of radioactivity represented by a curie (Ci). A curie is the amount of radioactivity that yields 3.7×10^{10} radioactive disintegrations per second (dpm). A picocurie yields 2.22 dpm.

Return period is the average time interval between occurrences of a hydrological event of a given or greater magnitude, usually expressed in years. May also be called recurrence interval.

Runoff in inches (IN., 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.

Sediment is solid material that originates mostly from disintegrated rocks and is transported by, suspended in, or deposited from water; it includes chemical and biochemical precipitates and decomposed organic material, such as humus. The quantity, characteristics, and cause of the occurrence of sediment in streams are influenced by environmental factors. Some major factors are degree of slope, length of slope, soil characteristics, land usage, and quantity and intensity of precipitation.

Bed load is the sediment that is transported in a stream by rolling, sliding, or skipping along the bed and very close to it. In this report, bed load is considered to consist of particles in transit within 0.25 ft of the streambed.

Bed load discharge (tons per day) is the quantity of bed load measured by dry weight that moves past a section as bed load in a given time.

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.

Suspended-sediment concentration is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 ft above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L).

Mean concentration is the time-weighted concentration of suspended sediment passing a stream section during a 24-hour day.

Suspended-sediment discharge (tons/day) is the rate at which dry mass of sediment passes a section of a stream or is the quantity of sediment, as measured by dry mass or volume, that passes a section in a given time. It is calculated in units of tons per day as follows: Concentration (mg/L) x discharge (ft^3/s) x 0.0027.

Suspended-sediment load is a general term that refers to material in suspension. It is not synonymous with either discharge or concentration.

Total-sediment discharge (tons/day) is the sum of the suspended-sediment discharge and the bed-load discharge. It is the total quantity of sediment, as measured by dry mass or volume, that passes a section during a given time.

Total-sediment load or total load is a term which refers to the total sediment (bed load plus suspended-sediment load) that is in transport. It is not synonymous with total-sediment discharge.

7-day 10-year low flow (7 Q_{10}) is the discharge at the 10-year recurrence interval taken from a frequency curve of annual values of the lowest mean discharge for 7 consecutive days (the 7-day low flow).

Sodium-adsorption-ratio (SAR) is the expression of relative activity of sodium ions in exchange reactions within soil and is an index of sodium or alkali hazard to the soil. Waters range in respect to sodium hazard from those which can be used for irrigation on almost all soils to those which are generally unsatisfactory for irrigation.

Solute is any substance that is dissolved in water.

Specific conductance is a measure of the ability of a water to conduct an electrical current. It is expressed in microsiemens per centimeter at 25 °C. Specific conductance is related to the type and concentration of ions in solution and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is about 65 percent of the specific conductance (in microsiemens). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

Stage-discharge relation is the relation between gage height (stage) and volume of water, per unit of time, flowing in a channel.

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," as streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

Surface area of a lake is that area outlined on the latest U.S. Geological Survey topographic map as the boundary of the lake and measured by a planimeter in acres. In localities not covered by topographic maps, the areas are computed from the best maps available at the time planimetered. All areas shown are those for the stage when the planimetered map was made.

Surficial bed material is the part (0.1 to 0.2 ft) of the bed material that is sampled using U.S. Series Bed-Material Samplers.

Suspended (as used in tables of chemical analyses) refers to the amount (concentration) of undissolved material in a water-sediment mixture. It is associated with the material retained on a 0.45-µm filter.

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that is retained on a 0.45-µm membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Determinations of "suspended, recoverable" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of: (1) Dissolved; and (2) total recoverable concentrations of the constituent.

Suspended, total is the total amount of a given constituent in the part of a representative water-suspended sediment sample that is retained on a 0.45-µm membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total."

Determinations of "suspended, total" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of: (1) Dissolved; and (2) total concentrations of the constituent.

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 year.

Tons per acre-foot indicates the dry mass of dissolved solids in 1 acre-foot of water. It is computed by multiplying the concentration of the constituent, in milligrams per liter, by 0.00136.

Tons per day (T/DAY) is the quantity of a substance in solution or suspension that passes a stream section during a 24-hour period.

Total is the total amount of a given constituent in a representative water-suspended sediment sample, regardless of the constituent's physical or chemical form. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent present in both the dissolved and suspended phases of the sample. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total." (Note that the word "total" does double duty here, indicating both that the sample consists of a water-suspended sediment mixture and that the analytical method determined all of the constituent in the sample.)

Total discharge is the total quantity of any individual constituent, as measured by dry mass or volume, that passes through a stream cross section per unit of time. This term needs to be qualified, such as "total sediment discharge," "total chloride discharge," and so on.

Total, recoverable is the amount of a given constituent that is in solution after a representative water-suspended sediment sample has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all particulate matter is not achieved by the digestion treatment, and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the dissolved and suspended phases of the sample. To achieve comparability of analytical data, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Water year in U.S. Geological Survey reports dealing with surface-water supply is the 12-month period October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 1985, is called the "1985 water year."

WDR is used as an abbreviation for "Water-Data Report" in the REVISED RECORDS paragraph to refer to State annual hydrologic-data reports (WRD was used as an abbreviation for "Water-Resources Data" in reports published prior to 1976).

Weighted average is used in this report to indicate discharge-weighted average. It is computed by multiplying the discharge for a sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the sum of the discharges. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all the water passing a given location during the water year after thorough mixing in the reservoir.

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

Table 1.--Factors for conversion of chemical constituents in milligrams or micrograms per liter to milliequivalents per liter

Ion	Multiply by	Ion	Multiply by
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})	.08226
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 divide results by 1,000.

Table 2.--Factors for conversion of sediment concentrations in milligrams per liter to parts per million*
(All values calculated to three significant figures)

Range of concentration in 1,000 mg/L	Divide by	Range of concentration in 1,000 mg/L	Divide by	Range of concentration in 1,000 mg/L	Divide by	Range of concentration in 1,000 mg/L	Divide by
0 - 8	1.00	201-217	1.13	411-424	1.26	619-634	1.39
8.05- 24	1.01	218-232	1.14	427-440	1.27	636-650	1.40
24.2 - 40	1.02	234-248	1.15	443-457	1.28	652-666	1.41
40.5 - 56	1.03	250-264	1.16	460-473	1.29	668-682	1.42
56.5 - 72	1.04	266-280	1.17	476-489	1.30	684-698	1.43
72.5 - 88	1.05	282-297	1.18	492-508	1.31	700-715	1.44
88.5 -104	1.06	299-313	1.19	508-522	1.32	717-730	1.45
105 -120	1.07	315-329	1.20	524-538	1.33	732-747	1.46
121 -136	1.08	331-345	1.21	540-554	1.34	749-762	1.47
137 -152	1.09	347-361	1.22	556-570	1.35	765-780	1.48
153 -169	1.10	363-378	1.23	572-585	1.36	782-796	1.49
170 -185	1.11	380-393	1.24	587-602	1.37	798-810	1.50
186 -200	1.12	395-409	1.25	604-617	1.38		

*Based on water density of 1.000 mg/L and a specific gravity of sediment of 2.65.

The U.S. Geological Survey publishes a series of manuals describing procedures for planning and conducting specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, Section A of Book 3 (Applications of Hydraulics) pertains to surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises.

The reports listed below are for sale by the U.S. Geological Survey, Books and Open-File Reports Section, Federal Center, Box 25425, Denver, Colorado 80225 (authorized agent of the Superintendent of Documents, Government Printing Office). Prepayment is required. Remittance should be sent by check or money order payable to the U.S. Geological Survey. Prices are not included because they are subject to change. Current prices can be obtained by writing to the above address. When ordering or inquiring about prices for any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations."

1-D1. *Water temperature--influential factors, field measurement, and data presentation*, by H. H. Stevens, Jr., J. F. Ficke, and G. F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages.

1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W. W. Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages.

2-D1. *Application of surface geophysics to ground-water investigations*, by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages.

2-D2. *Application of seismic-refraction techniques to hydrologic studies*, by F. P. Haeni: USGS--TWRI Book 2, Chapter D2. 1988. 86 pages.

2-E1. *Application of borehole geophysics to water-resources investigations*, by W. S. Keys and L. M. MacCary: USGS--TWRI Book 2, Chapter E1. 1971. 126 pages.

2-F1. *Application of drilling, coring, and sampling techniques to test holes and wells*, by Eugene Shuter and Warren E. Teasdale: USGS--TWRI Book 2, Chapter F1. 1989. 97 pages.

3-A1. *General field and office procedures for indirect discharge measurements*, by M. A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 pages.

3-A2. *Measurement of peak discharge by the slope-area method*, by Tate Dalrymple and M. A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages.

3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages.

3-A4. *Measurement of peak discharge at width contractions by indirect methods*, by H. F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 pages.

3-A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages.

3-A6. *General procedure for gaging streams*, by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6. 1968. 13 pages.

3-A7. *Stage measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3. Chapter A7. 1968. 28 pages.

3-A8. *Discharge measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages.

3-A9. *Measurement of time of travel in streams by dye tracing*, by F. A. Kilpatrick and J. F. Wilson, Jr.: USGS--TWRI Book 3, Chapter A9. 1989. 27 pages.

3-A10. *Discharge ratings at gaging stations*, by E. J. Kennedy: USGS--TWRI Book 3, Chapter A10. 1984. 59 pages.

3-A11. *Measurement of discharge by moving-boat method*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 pages.

3-A12. *Fluorometric procedures for dye tracing*, by J. F. Wilson, Jr., E. D. Cobb, and F. A. Kilpatrick: USGS--TWRI Book 3, Chapter A12. 1986. 41 pages.

3-A13. *Computation of continuous records of streamflow*, by E. J. Kennedy: USGS--TWRI Book 3, Chapter A13. 1983. 53 pages.

3-A14. *Use of flumes in measuring discharge*, by F. A. Kilpatrick and V. R. Schneider: USGS--TWRI Book 3, Chapter A14. 1983. 46 pages.

3-A15. *Computation of water-surface profiles in open channels*, by Jacob Davidian: USGS--TWRI Book 3, Chapter A15. 1984. 48 pages.

3-A16. *Measurement of discharge using tracers*, by F. A. Kilpatrick and E. D. Cobb: USGS--TWRI Book 3, Chapter A16. 1985. 52 pages.

3-A17. *Acoustic velocity meter systems*, by Antonius Laenen: USGS--TWRI Book 3, Chapter A17. 1985. 38 pages.

3-A18. *Determination of stream reaeration coefficients by use of tracers*, by F. A. Kilpatrick, R. E. Rathbun, N. Yotsukura, G. W. Parker, and L. L. DeLong: USGS--TWRI Book 3, Chapter A18. 1989. 52 pages.

3-A19. *Levels of streamflow gaging stations*, by E. J. Kennedy: USGS--TWRI Book 3, Chapter A19. 1990. 27 pages.

3-B1. *Aquifer-test design, observation, and data analysis*, by R. W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages.

3-B2. *Introduction to ground-water hydraulics, a programmed text for self-instruction*, by G. D. Bennett: USGS--TWRI Book 3, Chapter B2. 1976. 172 pages.

3-B3. *Type curves for selected problems of flow to wells in confined aquifers*, by J. E. Reed: USGS--TWRI Book 3, Chapter B3. 1980. 106 pages.

3-B4. *Regression modeling of ground-water flow*, by Richard L. Cooley and Richard L. Naff: USGS--TWRI Book 3, Chapter B4. 1990. 232 pages.

3-B5. *Definition of boundary and initial conditions in the analysis of saturated ground-water flow systems--An introduction*, by O. L. Franke, T. E. Reilly, and G. D. Bennett: USGS--TWRI Book 3, Chapter B5. 1987. 15 pages.

3-B6. *The principle of superposition and its application in ground-water hydraulics*, by T. E. Reilly, O. L. Franke, and G. D. Bennett: USGS--TWRI Book 3, Chapter B6. 1987. 28 pages.

3-C1. *Fluvial sediment concepts*, by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages.

3-C2. *Field methods for measurement of fluvial sediment*, by H. P. Guy and V. W. Norman: USGS--TWRI Book 3, Chapter C2. 1970. 59 pages.

3-C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages.

4-A1. *Some statistical tools in hydrology*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A1. 1968. 39 pages.

4-A2. *Frequency curves*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages.

4-B1. *Low-flow investigations*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972. 18 pages.

4-B2. *Storage analyses for water supply*, by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages.

4-B3. *Regional analyses of streamflow characteristics*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 pages.

4-D1. *Computation of rate and volume of stream depletion by wells*, by C. T. Jenkins: USGS-TWRI Book 4, Chapter D1. 1970. 17 pages.

5-A1. *Methods for determination of inorganic substances in water and fluvial sediments*, by M. J. Fishman and L. C. Friedman: USGS--TWRI Book 5, Chapter A1. 1989. 545 pages.

5-A2. *Determination of minor elements in water by emission spectroscopy*, by P. R. Barnett and E. C. Mallory, Jr.: USGS--TWRI Book 5, Chapter A2. 1971. 31 pages.

5-A3. *Methods for the determination of organic substances in water and fluvial sediments*, edited by R. L. Wershaw, M. J. Fishman, R. R. Grabbe, and L. E. Lowe: USGS--TWRI Book 5, Chapter A3. 1987. 80 pages.

5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples*, by L. J. Britton and P. E. Greeson, editors: USGS--TWRI Book 5, Chapter A4. 1989. 363 pages.

5-A5. *Methods for determination of radioactive substances in water and fluvial sediments*, by L. L. Thatcher, V. J. Janzer, and K. W. Edwards: USGS--TWRI Book 5, Chapter A5. 1977. 95 pages.

5-A6. *Quality assurance practices for the chemical and biological analyses of water and fluvial sediments*, by L. C. Friedman and D. E. Erdmann: USGS--TWRI Book 5, Chapter A6. 1982. 181 pages.

5-C1. *Laboratory theory and methods for sediment analysis*, by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages.

6-A1. *A modular three-dimensional finite-difference ground-water flow model*, by M. G. McDonald and A. W. Harbaugh: USGS--TWRI Book 6, Chapter A1. 1988. 586 pages.

7-C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments*, by P. C. Trescott, G. F. Pinder, and S. P. Larson: USGS--TWRI Book 7, Chapter C1. 1976. 116 pages.

7-C2. *Computer model of two-dimensional solute transport and dispersion in ground water*, by L. F. Konikow and J. D. Bredehoeft: USGS--TWRI Book 7, Chapter C2. 1978. 90 pages.

7-C3. *A model for simulation of flow in singular and interconnected channels*, by R. W. Schaffrannek, R. A. Baltzer, and D. E. Goldberg: USGS--TWRI Book 7, Chapter C3. 1981. 110 pages.

8-A1. *Methods of measuring water levels in deep wells*, by M. S. Garber and F. C. Koopman: USGS--TWRI Book 8, Chapter A1. 1968. 23 pages.

8-A2. *Installation and service manual for U.S. Geological Survey manometers*, by J. D. Craig: USGS--TWRI Book 8, Chapter A2. 1983. 57 pages.

8-B2. *Calibration and maintenance of vertical-axis type current meters*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages.

SELECTED REFERENCES

Clark, G. D., ed., 1980, The Indiana water resource: Availability, uses, and needs: Indianapolis, Indiana Department of Natural Resources, 1508 p.

Fowler, K. K., 1988, Annual maximum and minimum lake levels for Indiana, water years 1942-85: U.S. Geological Survey Open-File Report 88-331, 363 p.

Gebert, W. A., Graczyk, D. J., and Krug, W. R., 1985, Average annual runoff in the United States, 1951-80: U.S. Geological Survey Open-File Report 85-627.

Glatfelter, D. R., 1984, Techniques for estimating magnitude and frequency of floods on streams in Indiana: U.S. Geological Survey Water-Resources Investigations Report 84-4134, 110 p.

Indiana Department of Natural Resources, 1986, Coordinated discharges of selected streams in Indiana: Indiana Department of Natural Resources, Division of Water.

National Oceanic and Atmospheric Administration, 1983, Monthly normals of temperature, precipitation, and heating and cooling days, 1951-80: no. 81.

National Oceanic and Atmospheric Administration, 1986-87, Climatological data, Indiana: Asheville, N.C., National Climatic Center, v. 90, nos. 10-12, and v. 91, nos. 1-9.

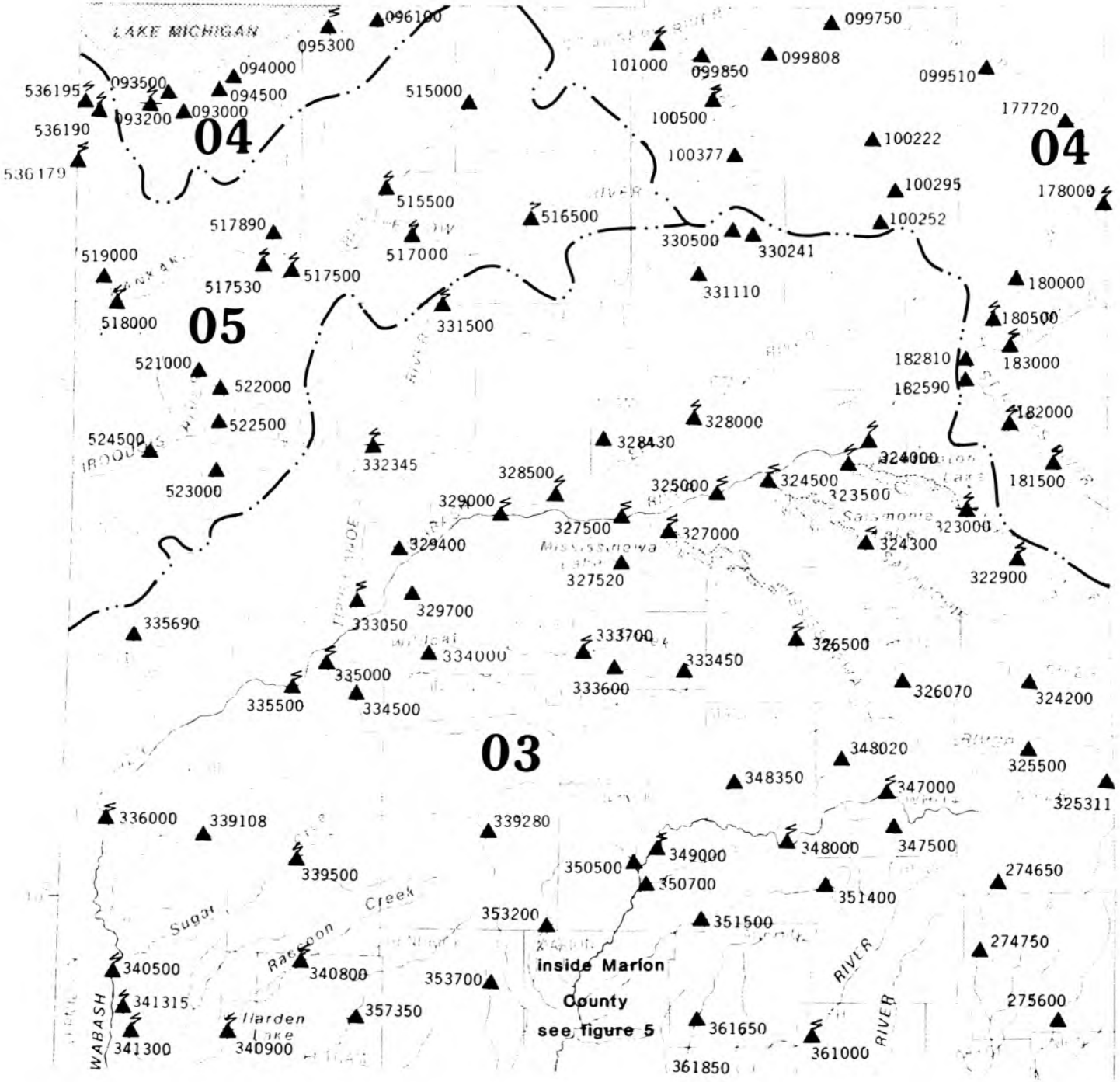
Perrey, J. I., and Corbett, D. M., 1956, Hydrology of Indiana lakes: U.S. Geological Survey Water-Supply Paper 1363, 347 p.

Rantz, S. E., and others, 1982, Volume 1, Measurement of stage and discharge: U.S. Geological Survey Water-Supply Paper 2175, 284 p.

Rantz, S. E., and others, 1982, Volume 2, Computation of discharge: U.S. Geological Survey Water-Supply Paper 2175, 631 p.

Stewart, J. A., 1983, Low-flow characteristics of Indiana streams: U.S. Geological Survey Open-File Report 82-1007, 277 p.

Stewart, J. A., Miller, R. L., and Butch, G. K., 1986, Cost-effectiveness of the U.S. Geological Survey stream-gaging program in Indiana: U.S. Geological Survey Water-Resources Investigations Report 85-4343, 92 p.


LAKE MICHIGAN
04
04
05
03
095300
096100
099750
101000
099850
099808
099510
536195
093500
094000
094500
093200
093000
515000
100500
177720
536190
100222
536179
100377
100295
178000
515500
516500
100252
517890
517000
330500
330241
519000
517530
517500
331110
180000
518000
331500
180500
521000
182810
183000
522000
182590
522500
328000
182000
524500
328430
332345
324000
328500
325000
324500
181500
523000
329000
323500
327500
327000
323000
329400
324300
327520
322900
329700
335690
333050
326500
333700
334000
333450
335000
333600
326070
324200
335500
334500
348020
325500
348350
347000
325311
336000
339108
339280
348000
347500
339500
350500
349000
274650
350700
351400
353200
351500
274750
340500
340800
353700
341315
357350
275600
341300
340900
361650
361000
361850
Sugar Creek
Raccoon Creek
WABASH
Harden Lake
inside Marion County
see figure 5
RIVER

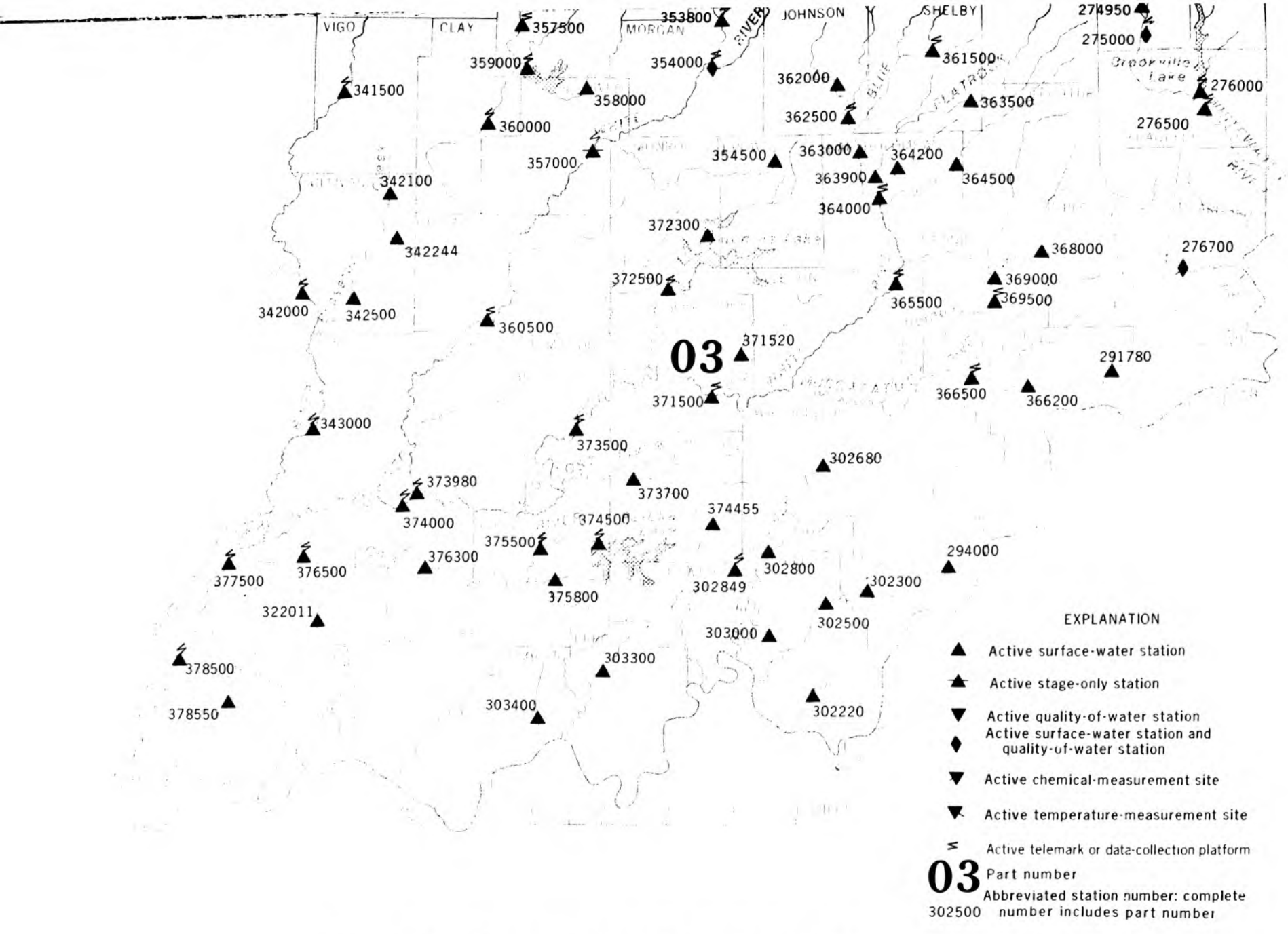


Figure 4.-- Locations of stream flow and water-quality gaging stations in Indiana.

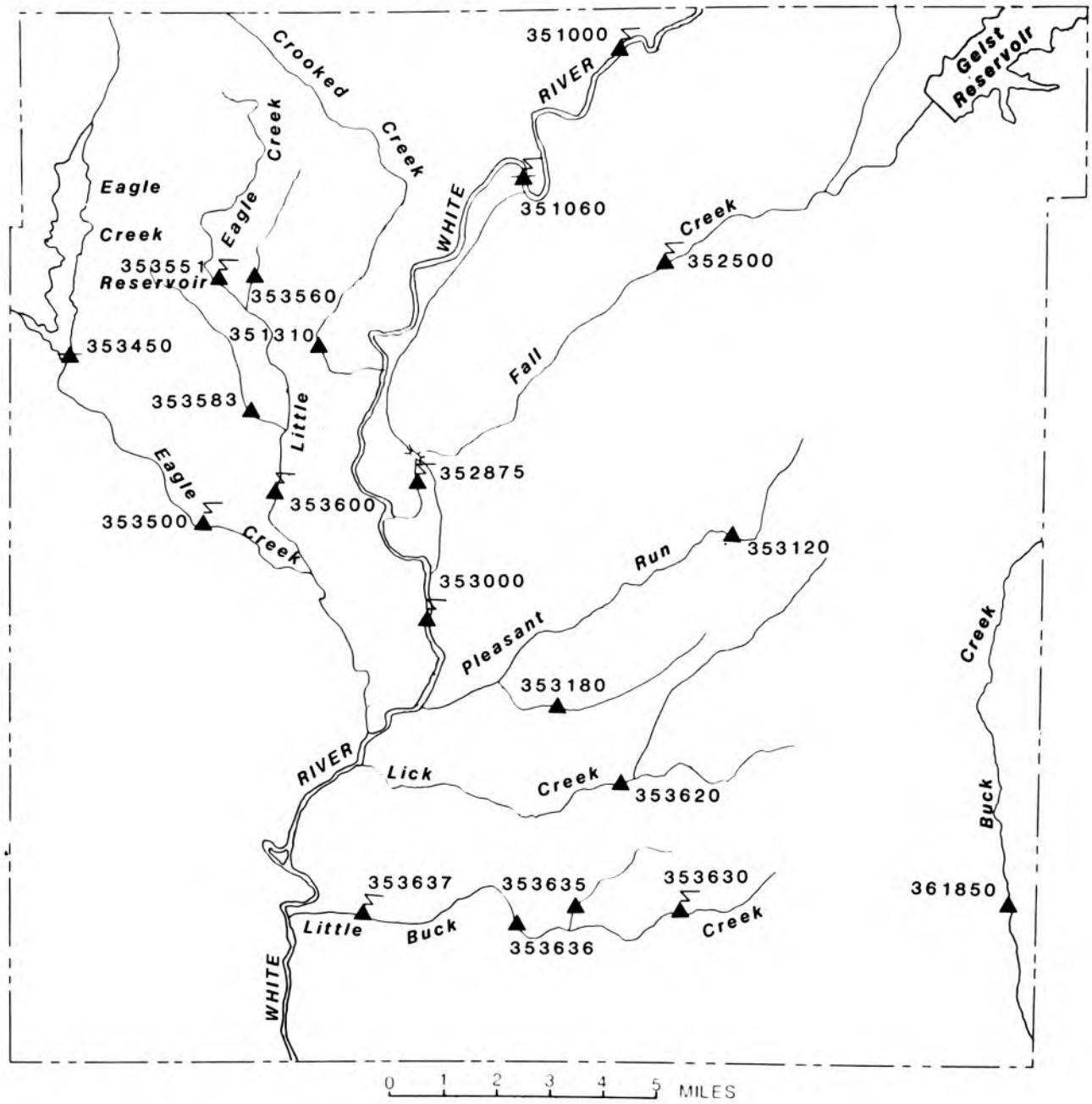


Figure 5.-- Location of stream flow and water-quality gaging stations in Marion county

03274650 WHITEWATER RIVER NEAR ECONOMY, IN

LOCATION.--Lat 40°00'05", long 85°06'56", in NW¼NE¼ sec.19, T.18 N., R.13 E., Wayne County, Hydrologic Unit 05080003, on right bank 6 ft downstream from bridge on Wayne County Line Road, 1.7 mi upstream from Little Creek, 2.4 mi northwest of Economy, and at mile 91.9.

DRAINAGE AREA.--10.4 mi^2.

PERIOD OF RECORD.--October 1970 to current year.

REVISED RECORDS.--WRD IN 83-1: 1982.

GAGE.--Water-stage recorder. Datum of gage is 1,066.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 14-27, and Sept. 10-30. Records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--20 years, 11.3 ft^3/s, 14.76 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,100 ft^3/s Aug. 20, 1979, gage height, 8.85 ft; minimum daily, 0.22 ft^3/s Sept. 1, 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 15	1200	546	7.22	May 16	0100	*763	*7.94
Mar. 11	0700	405	6.66	June 9	0900	202	5.58
May 13	0100	290	6.11				

Minimum daily discharge, 0.60 ft^3/s Dec. 22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.3	1.3	1.7	23	16	14	22	4.3	8.2	2.8	2.5	9.1
2	3.2	1.2	1.6	10	66	13	23	4.0	19	2.5	2.3	6.0
3	3.0	1.1	1.5	7.2	41	11	14	4.3	17	2.3	2.2	4.7
4	2.8	1.1	1.5	38	73	9.0	11	34	12	2.2	6.0	3.9
5	2.7	1.1	1.6	25	41	8.4	9.1	44	9.1	2.1	14	3.3
6	2.6	1.1	1.6	13	32	7.6	7.5	24	8.1	2.0	6.2	3.1
7	2.3	1.3	1.3	8.9	25	6.7	6.5	13	7.4	1.9	3.8	2.9
8	2.1	2.9	1.2	7.3	20	6.8	6.0	8.4	13	1.9	2.9	3.0
9	2.1	2.7	1.2	6.7	20	7.1	5.7	6.8	80	1.8	2.5	18
10	2.2	1.9	1.2	9.2	19	8.7	47	6.8	30	1.8	2.3	10
11	2.3	1.5	1.2	7.4	15	136	51	5.3	16	4.3	2.2	7.0
12	2.2	1.3	1.1	5.6	12	48	31	43	9.5	33	2.0	5.6
13	2.1	1.2	1.0	4.2	11	36	21	142	7.5	23	6.3	4.2
14	2.0	1.6	.90	4.1	18	29	15	44	6.5	20	3.9	6.0
15	2.0	32	.80	4.1	210	24	12	76	5.8	11	2.7	10
16	2.1	59	.70	3.9	82	38	10	250	5.0	6.3	2.3	6.0
17	2.2	33	.70	5.1	46	25	8.3	82	4.7	4.4	2.2	4.8
18	2.2	17	.75	6.6	36	15	6.7	41	4.3	3.5	21	3.5
19	2.3	8.7	.78	5.2	30	12	6.4	32	3.9	3.0	11	4.5
20	2.4	7.7	.76	19	23	9.2	7.3	28	4.9	7.8	8.9	3.4
21	2.8	4.9	.66	23	16	8.4	13	25	4.2	25	40	4.0
22	3.0	3.9	.60	15	32	7.8	8.8	18	3.9	43	19	11
23	2.3	3.1	.63	11	33	6.8	7.4	13	3.9	33	14	7.0
24	2.0	2.7	.67	8.7	22	6.2	6.5	11	3.6	16	9.2	5.6
25	1.7	2.7	.70	8.0	15	5.8	5.9	12	3.1	8.7	6.3	4.5
26	1.6	2.5	.72	6.0	12	5.5	5.7	24	3.0	5.9	4.7	4.0
27	1.6	2.3	.73	5.3	16	5.1	5.4	21	3.2	4.7	3.8	3.5
28	1.5	2.3	.74	4.7	20	5.0	5.4	15	2.9	4.0	4.0	3.3
29	1.5	1.8	.83	5.1	---	5.8	5.0	13	2.8	3.3	69	3.2
30	1.5	1.7	3.4	4.5	---	11	4.7	10	2.8	3.1	23	3.1
31	1.5	---	72	4.1	---	29	---	9.0	---	2.7	14	---
TOTAL	69.1	206.6	104.77	308.9	1002	560.9	388.3	1063.9	305.3	287.0	314.2	168.2
MEAN	2.23	6.89	3.38	9.96	35.8	18.1	12.9	34.3	10.2	9.26	10.1	5.61
MAX	3.3	59	72	38	210	136	51	250	80	43	69	18
MIN	1.5	1.1	.60	3.9	11	5.0	4.7	4.0	2.8	1.8	2.0	2.9
CFSM	.21	.66	.32	.96	3.44	1.74	1.24	3.30	.98	.89	.97	.54
IN.	.25	.74	.37	1.10	3.58	2.01	1.39	3.81	1.09	1.03	1.12	.60

CAL YR 1989 TOTAL 6051.77 MEAN 16.6 MAX 431 MIN .60 CFSM 1.59 IN. 21.65
WTR YR 1990 TOTAL 4779.17 MEAN 13.1 MAX 250 MIN .60 CFSM 1.26 IN. 17.09

03274750 WHITEWATER RIVER NEAR HAGERSTOWN, IN

LOCATION.--Lat 39°52'25", long 85°09'47", in NE¼NE¼ sec.3, T.16 N., R.12 E., Wayne County, Hydrologic Unit 05080003, on left bank at downstream side of bridge on Jerry Meyers Road, 1.0 mi upstream from Pronghorn Run, 1.5 mi north of Interstate 70, 2.0 mi downstream from Nettle Creek, 2.6 mi south of Hagerstown, and at mile 84.9.

DRAINAGE AREA.--58.7 mi^2.

PERIOD OF RECORD.--October 1970 to current year.

GAGE.--Water-stage recorder. Datum of gage is 950.00 ft above National Geodetic Vertical Datum of 1929 (Indiana Flood Control and Water Resources Commission bench mark).

REMARKS.--Estimated daily discharges: Dec. 14-26. Records good.

AVERAGE DISCHARGE.--20 years, 67.4 ft^3/s, 15.59 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,300 ft^3/s Jan. 26, 1976, gage height, 10.89 ft; maximum gage height, 11.48 ft May 26, 1989; minimum daily discharge, 5.3 ft^3/s Aug. 5, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 15	1800	1,800	10.27	May 16	0800	*1,910	*10.58
May 13	0700	1,310	8.84				

Minimum daily discharge, 17 ft^3/s Dec. 22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	27	41	70	50	85	129	60	75	42	28	58
2	37	27	41	52	241	82	113	59	83	40	27	51
3	35	27	39	48	117	78	89	60	82	38	27	46
4	34	26	39	116	427	73	82	236	75	36	39	43
5	34	26	40	78	143	72	78	263	72	34	50	40
6	34	26	40	59	103	69	74	107	71	34	32	37
7	33	31	38	52	91	66	70	83	69	32	28	35
8	32	34	37	49	82	66	68	75	72	31	27	37
9	31	34	37	47	86	68	67	70	200	30	26	121
10	31	31	37	48	85	70	225	71	95	30	25	65
11	31	30	37	46	75	625	214	66	77	42	25	51
12	30	29	35	45	69	176	118	229	71	79	25	45
13	30	28	34	41	67	122	96	792	67	71	44	41
14	30	33	31	41	79	104	87	190	65	68	30	47
15	29	178	27	41	1060	97	81	348	63	57	26	54
16	30	240	21	40	456	145	76	1350	59	45	26	42
17	30	92	20	41	170	108	73	459	57	38	25	36
18	29	70	21	43	130	91	69	189	54	34	89	34
19	30	59	22	41	115	83	68	145	52	31	60	39
20	31	58	22	60	101	79	69	124	64	33	85	35
21	31	54	20	73	94	77	80	113	56	69	139	36
22	30	51	17	59	129	75	72	100	52	105	93	59
23	30	49	18	52	128	72	69	92	51	97	70	52
24	29	47	19	50	105	71	67	87	49	66	58	42
25	29	46	19	48	89	70	65	91	45	51	47	37
26	29	46	20	45	82	68	64	161	45	43	40	34
27	28	45	21	44	87	67	62	122	46	37	34	32
28	28	44	21	42	96	66	62	96	45	33	31	31
29	27	42	24	43	---	69	65	90	44	30	399	30
30	27	41	30	42	---	77	62	81	43	30	97	30
31	28	---	260	41	---	119	---	78	---	29	69	---
TOTAL	954	1571	1128	1597	4557	3190	2614	6087	1999	1435	1821	1340
MEAN	30.8	52.4	36.4	51.5	163	103	87.1	196	66.6	46.3	58.7	44.7
MAX	37	240	260	116	1060	625	225	1350	200	105	399	121
MIN	27	26	17	40	50	66	62	59	43	29	25	30
CFSM	.52	.89	.62	.88	2.77	1.75	1.48	3.35	1.14	.79	1.00	.76
IN.	.60	1.00	.71	1.01	2.89	2.02	1.66	3.86	1.27	.91	1.15	.85

CAL YR 1989 TOTAL 29492 MEAN 80.8 MAX 1420 MIN 17 CFSM 1.38 IN. 18.69
WTR YR 1990 TOTAL 28293 MEAN 77.5 MAX 1350 MIN 17 CFSM 1.32 IN. 17.93

03274950 LITTLE WILLIAMS CREEK AT CONNERSVILLE, IN

LOCATION.--Lat 39°38'16", long 85°10'20", in SW¼NE¼ sec.27, T.14 N., R.12 E., Fayette County, Hydrologic Unit 05080003, on downstream left bank wingwall of bridge on State Highway 44, 1 mi west of Connersville, and 2.6 mi upstream from mouth.

DRAINAGE AREA.--9.16 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 842.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 17 to Nov. 7, Dec. 14-27, Jan. 1-3, 5-14, June 5-12, 21-24, July 10, and Sept. 17-30. Records good except for estimated daily discharges which are poor. Peak flows affected by ponding at abandoned railroad culvert 0.5 mi upstream.

AVERAGE DISCHARGE.--22 years, 9.83 ft^3/s, 14.57 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,560 ft^3/s June 22, 1974, gage height, 10.13 ft; minimum daily, no flow on many days in 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 15	1200	477	6.27	May 15	1200	492	6.35
Mar. 11	0300	492	6.35	May 17	0100	484	6.31
May 4	1510	*756	*7.52	Aug. 29	0100	669	7.16

Minimum daily discharge, 1.1 Dec. 22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	1.9	3.1	9.0	9.6	9.9	19	8.3	9.7	4.1	4.8	6.9
2	1.2	1.9	3.1	6.6	25	9.9	16	7.8	11	3.7	4.6	5.7
3	1.2	1.8	2.7	6.0	16	9.4	13	8.3	9.8	3.6	4.4	5.1
4	1.2	1.8	2.7	15	120	8.8	12	151	9.2	3.1	7.4	4.7
5	1.2	1.7	2.9	9.0	23	8.7	11	28	9.0	3.0	6.1	4.5
6	1.2	1.7	3.2	7.4	14	8.4	11	14	8.7	2.7	4.7	4.4
7	1.2	3.5	2.9	6.0	13	8.0	9.9	12	8.4	2.5	4.4	4.3
8	1.2	6.7	2.5	5.2	11	8.2	9.7	10	8.2	2.5	4.3	4.6
9	1.3	4.0	2.5	4.6	11	8.3	9.5	9.2	16	2.4	4.1	6.3
10	1.4	2.7	2.5	4.4	10	16	17	10	14	2.6	4.0	4.6
11	1.4	2.1	2.5	4.3	9.0	152	16	8.7	10	12	4.0	4.4
12	1.4	2.0	2.3	4.2	7.6	20	13	25	9.0	73	3.9	4.3
13	1.4	1.8	2.1	4.1	7.2	16	12	49	7.9	12	4.4	4.3
14	1.5	2.8	1.8	4.0	9.2	14	12	15	12	13	3.9	21
15	1.5	43	1.6	3.9	198	14	11	94	8.5	9.9	3.8	8.4
16	1.6	24	1.4	3.9	36	25	10	128	7.3	8.6	3.7	6.2
17	1.7	9.1	1.2	4.5	17	17	9.8	101	6.5	7.4	3.6	5.0
18	1.9	6.3	1.3	4.8	14	14	9.3	16	5.9	5.9	5.1	4.7
19	2.0	5.2	1.5	4.2	13	13	9.2	14	5.2	4.8	3.8	7.0
20	2.1	4.9	1.5	19	11	12	9.9	13	14	14	10	5.4
21	2.1	4.4	1.4	14	11	11	15	13	8.0	35	12	5.0
22	2.0	4.1	1.1	9.7	13	11	12	12	7.2	30	6.4	6.6
23	2.0	3.8	1.2	8.0	12	10	11	12	6.6	16	5.7	5.8
24	1.9	3.5	1.3	7.1	12	10	10	11	6.2	9.7	5.3	5.0
25	1.9	3.6	1.4	6.8	9.7	9.8	9.5	12	6.0	7.7	5.0	4.6
26	1.8	3.7	1.5	6.1	9.4	9.4	9.1	18	5.4	6.8	4.8	4.3
27	1.8	3.5	1.7	5.9	11	9.0	8.7	13	5.2	6.3	4.6	4.0
28	1.8	3.7	1.8	5.6	10	8.8	9.3	12	4.8	5.9	22	3.7
29	1.8	3.3	4.2	6.4	---	10	9.1	11	4.4	5.6	230	3.5
30	1.8	3.2	9.4	5.7	---	11	8.4	11	4.1	5.4	12	3.2
31	2.1	---	30	5.5	---	15	---	10	---	5.2	8.2	---
TOTAL	49.8	165.7	100.3	210.9	662.7	507.6	342.4	857.3	248.2	324.4	411.0	167.5
MEAN	1.61	5.52	3.24	6.80	23.7	16.4	11.4	27.7	8.27	10.5	13.3	5.58
MAX	2.1	43	30	19	198	152	19	151	16	73	230	21
MIN	1.2	1.7	1.1	3.9	7.2	8.0	8.4	7.8	4.1	2.4	3.6	3.2
CFSM	.18	.60	.35	.74	2.58	1.79	1.25	3.02	.90	1.14	1.45	.61
IN.	.20	.67	.41	.86	2.69	2.06	1.39	3.48	1.01	1.32	1.67	.68

CAL YR 1989 TOTAL 3670.9 MEAN 10.1 MAX 455 MIN 1.1 CFSM 1.10 IN. 14.91
WTR YR 1990 TOTAL 4047.8 MEAN 11.1 MAX 230 MIN 1.1 CFSM 1.21 IN. 16.44

03275000 WHITEWATER RIVER NEAR ALPINE, IN

(National stream-quality accounting network station)

LOCATION.--Lat 39°34'46", long 85°09'29", in SE¼NW¼ sec.14, T.13 N., R.12 E., Fayette County, Hydrologic Unit 05080003, on right bank at Nulltown, 400 ft upstream from Wilson Creek, 0.4 mi upstream from bridge on County Road 480 South, 2.0 mi northeast of Alpine, 5.1 mi upstream from Bear Creek, and at mile 54.8.

DRAINAGE AREA.--522 mi^2.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--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. WDR IN-79-1: 1975 (P).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 750.19 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 9, 1928, nonrecording gage and Nov. 10, 1928, to Sept. 30, 1982, at site 0.5 mi downstream at same datum.

REMARKS.--Estimated daily discharges: Dec. 14-24. Records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--62 years, 556 ft^3/s, 14.27 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,100 ft^3/s Jan. 14, 1937, gage height, 16.61 ft (at site then in use); maximum gage height 19.01 ft, May 26, 1989; minimum daily discharge, 3.0 ft^3/s Aug. 6, 1934.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 6,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 16	1100	10,600	16.75	May 13	2400	7,160	14.93
Mar. 11	0400	6,910	14.77	May 17	0400	*12,500	*17.46

Minimum daily discharge, 100 ft^3/s Dec. 22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	244	130	258	1150	361	842	1360	427	616	292	274	682
2	235	123	254	571	1410	790	1630	398	660	272	259	553
3	223	121	244	460	1740	746	1120	395	720	256	245	477
4	217	119	238	637	4690	679	905	2200	610	250	367	410
5	204	117	243	1040	3010	645	778	3500	561	239	489	372
6	197	124	254	661	1540	610	674	1630	539	227	389	337
7	191	144	245	521	1250	580	602	1070	526	222	300	301
8	184	229	228	443	1060	571	563	824	506	221	264	296
9	184	255	208	400	961	576	538	692	709	220	240	575
10	183	231	209	388	1010	638	740	656	1230	215	227	638
11	171	200	210	393	848	5930	2600	599	653	362	218	445
12	168	183	202	360	735	3380	1400	886	542	1550	200	372
13	162	163	184	308	664	1690	1020	5410	477	884	211	419
14	157	169	170	283	638	1260	849	3850	625	797	263	444
15	151	605	160	278	4570	1060	740	3110	482	789	228	548
16	150	2660	130	269	8850	1700	662	7760	402	555	196	459
17	149	1310	120	263	2930	1560	609	9180	366	444	187	374
18	146	844	130	284	1740	1130	562	3070	350	379	321	331
19	153	612	135	295	1360	923	537	1760	319	340	450	411
20	160	532	130	579	1120	789	545	1360	553	478	773	384
21	163	456	120	1040	980	712	951	1150	522	869	1330	339
22	151	396	100	808	1000	669	792	1010	415	949	1010	375
23	152	356	110	627	1270	621	647	864	419	1350	689	438
24	149	327	120	562	1110	587	584	768	426	810	516	420
25	146	308	122	509	888	567	547	746	350	579	414	361
26	143	307	129	464	802	544	516	1350	327	477	347	327
27	140	300	132	408	802	526	492	1540	315	407	307	302
28	135	302	134	377	904	505	477	1090	308	366	401	279
29	130	283	147	373	---	523	501	931	293	330	5020	267
30	130	265	222	360	---	583	454	775	284	312	2200	250
31	134	---	1290	340	---	1080	---	679	---	294	1020	---
TOTAL	5202	12171	6578	15451	48243	33016	24395	59680	15105	15735	19355	12186
MEAN	168	406	212	498	1723	1065	813	1925	503	508	624	406
MAX	244	2660	1290	1150	8850	5930	2600	9180	1230	1550	5020	682
MIN	130	117	100	263	361	505	454	395	284	215	187	250
CFSM	.32	.78	.41	.95	3.30	2.04	1.56	3.69	.96	.97	1.20	.78
IN.	.37	.87	.47	1.10	3.44	2.35	1.74	4.25	1.08	1.12	1.38	.87

CAL YR 1989 TOTAL 262103 MEAN 718 MAX 13800 MIN 100 CFSM 1.38 IN. 18.68
WTR YR 1990 TOTAL 267117 MEAN 732 MAX 9180 MIN 100 CFSM 1.40 IN. 19.04

03275000 WHITEWATER RIVER NEAR ALPINE, IN
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL ANALYSIS: October 1986 to current year.
SEDIMENT DISCHARGE: July 1968 to September 1976, October 1986 to current year (partial-record station).

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM) (90095)	PH (STAND-ARD UNITS) (00400)	PH LAB (STAND-ARD UNITS) (00403)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)
OCT											
02...	1400	236	696	691	8.1	8.2	22.5	17.5	745	10.1	109
DEC											
06...	1400	257	708	715	8.3	8.1	6.0	6.0	742	11.5	96
FEB											
14...	1230	628	672	666	8.2	8.1	4.5	8.0	745	10.8	93
APR											
12...	1200	1390	498	540	8.1	8.0	10.0	7.5	749	10.6	90
JUN											
20...	1230	907	490	511	7.9	8.0	22.0	18.5	738	7.4	82
SEP											
06...	1615	330	677	682	8.0	8.2	32.0	23.5	731	8.5	105

DATE	TUR-BID-ITY (NTU) (00076)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L) (39036)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)
OCT											
02...	0.8	87	62	350	55	89	31	13	2.2	290	295
DEC											
06...	0.3	610	200	360	65	91	32	15	2.1	290	294
FEB											
14...	2.0	790	350	340	68	86	30	11	2.0	270	270
APR											
12...	24	570	370	270	67	68	24	6.0	1.9	210	202
JUN											
20...	290	K88000	K110000	250	51	62	22	12	3.0	190	194
SEP											
06...	4.0	73	370	350	63	90	31	13	2.3	280	289

DATE	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)
OCT											
02...	277	360	0	45	22	0.2	7.9	375	406	239	0.03
DEC											
06...	287	322	18	47	29	0.3	7.5	425	419	295	0.02
FEB											
14...	269	329	0	45	25	0.3	7.6	410	390	695	0.02
APR											
12...	210	246	0	30	16	0.1	6.6	331	298	1240	0.02
JUN											
20...	194	237	0	34	21	0.5	5.0	274	294	671	0.06
SEP											
06...	297	353	0	41	25	0.2	9.4	400	403	356	0.02

03275000 WHITEWATER RIVER NEAR ALPINE, IN --Continued
(National stream-quality accounting network station)

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)
OCT										
02...	4.0	0.06	0.08	0.5	0.08	0.08	0.03	<10	1	86
DEC										
06...	4.0	0.09	0.08	0.7	0.09	0.06	0.07	<10	<1	83
FEB										
14...	4.8	0.16	0.15	1.4	0.07	0.04	0.06	--	--	--
APR										
12...	5.3	0.04	0.04	1.6	0.12	0.05	0.04	<10	<1	52
JUN										
20...	3.8	0.37	0.38	1.6	0.18	0.14	0.14	20	1	55
SEP										
06...	3.9	0.06	0.03	0.5	0.08	0.08	0.08	--	--	--

DATE	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)
OCT										
02...	<0.5	<1	1	<3	<1	11	1	8	8	<0.1
DEC										
06...	<0.5	2	<1	<3	2	4	<1	7	11	<0.1
FEB										
14...	--	--	--	--	--	--	--	--	--	--
APR										
12...	<0.5	<1	<1	<3	3	22	<1	4	7	<0.1
JUN										
20...	<0.5	<1	<1	<3	5	9	<1	7	5	<0.1
SEP										
06...	--	--	--	--	--	--	--	--	--	--

DATE	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT										
02...	<10	4	<1	1	440	<6	31	13	8.5	43
DEC										
06...	10	2	<1	<1	430	<6	8	25	17	24
FEB										
14...	--	--	--	--	--	--	--	66	112	42
APR										
12...	10	1	<1	1	220	<6	5	99	372	84
JUN										
20...	40	2	<1	1	220	<6	<3	E1050	E2570	E98
SEP										
06...	--	--	--	-	--	--	--	39	35	37

03275600 EAST FORK WHITEWATER RIVER AT ABINGTON, IN

LOCATION.--Lat 39°43'57", long 84°57'35", in NE¼SW¼ sec.2, T.12 N., R.2 W., Wayne County, Hydrologic Unit 05080003, at downstream side of center pier of bridge on county road at Abington, 3 mi downstream from Elkhorn Creek, 8 mi southwest of Richmond, and at mile 26.7.

DRAINAGE AREA.--200 mi^2.

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

REVISED RECORDS.--WSP 2108: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 791.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 14-27. Records good except for estimated daily discharges and period of July 15 to Sept. 30, which are poor.

AVERAGE DISCHARGE.--25 years, 225 ft^3/s, 15.28 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,000 ft^3/s (revised) July 20, 1969, gage height, 16.18 ft; minimum daily, 11 ft^3/s Aug. 18, 19, 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 4	1300	3,920	10.11	May 16	1300	*8,020	*12.58
Feb. 15	2100	7,960	12.55	Aug. 22	0600	4,660	10.69
May 4	1700	3,310	9.57	Aug. 29	1100	4,300	10.42

Minimum daily discharge, 39 ft^3/s Oct. 28, 29.

REVISIONS.--The peak discharges and maximum (*) reported for water years 1966-1979, 1982, 1987 and 1989 have been revised, as shown in the following table. They supercede figures published in reports for 1966, 1967, 1968, 1969, 1970, 1971, 1972, 1973, 1974, 1975, 1976, 1977, 1978, 1979, 1982, 1987, and 1989.

Water Year	Date	Discharge (ft^3/s)	Gage height (ft)	Water Year	Date	Discharge (ft^3/s)	Gage height (ft)
1966	Feb. 11, 1966	*3,480	*9.20	1973	Mar. 11, 1973	4,680	10.31
					Mar. 14, 1973	2,240	7.78
1967	Dec. 7, 1966	4,560	10.21		Mar. 17, 1973	2,340	7.90
	Dec. 9, 1966	8,080	12.61		July 24, 1973	3,920	9.64
	Mar. 21, 1967	3,600	9.32		July 25, 1973	4,820	10.42
	May 6, 1967	5,630	11.02		July 26, 1973	2,260	7.80
	May 7, 1967	*10,200	*13.54		Aug. 20, 1973	2,540	8.15
	May 11, 1967	5,060	10.60				
	June 28, 1967	5,180	10.69	1974	Jan. 19, 1974	3,670	9.39
					May 17, 1974	5,390	10.85
1968	May 16, 1968	4,710	10.33		June 22, 1974	*6,770	*11.80
	May 24, 1968	*11,600	*14.05				
	May 27, 1968	6,450	11.59	1975	Jan. 11, 1975	2,650	8.28
	July 16, 1968	4,170	9.88		Jan. 29, 1975	4,070	9.78
	Aug. 10, 1968	3,230	8.93		Feb. 24, 1975	*10,300	*13.56
					Mar. 19, 1975	2,470	8.06
1969	Dec. 28, 1968	3,630	9.35		Mar. 29, 1975	3,710	9.43
	Jan. 18, 1969	6,370	11.54		Apr. 25, 1975	4,600	10.24
	Jan. 30, 1969	6,340	11.52		Apr. 28, 1975	5,870	11.19
	Feb. 8, 1969	2,280	7.83				
	May 19, 1969	4,100	9.81	1976	Jan. 26, 1976	*6,840	*11.85
	June 23, 1969	4,190	9.90				
	July 20, 1969	*20,000	*16.18	1977	Apr. 2, 1977	*6,550	*11.66
1970	Jan. 29, 1970	4,960	10.53	1978	Dec. 14, 1977	*8,040	*12.59
	Apr. 2, 1970	*10,200	*13.54		Dec. 18, 1977	3,670	9.39
	Apr. 24, 1970	5,200	10.71		May 24, 1978	5,260	10.75
	Aug. 20, 1970	2,930	8.60				
				1979	Dec. 4, 1978	3,230	8.93
1971	Feb. 4, 1971	4,610	10.25		Jan. 1, 1979	3,370	9.08
	Feb. 17, 1971	4,000	9.72		Feb. 23, 1979	6,600	12.85
	Feb. 22, 1971	*6,050	*11.32		July 25, 1979	5,150	11.76
	May 6, 1971	3,010	8.69		July 29, 1979	*7,980	*13.61
1972	Apr. 7, 1972	2,390	7.97	1982	Jan. 23, 1982	5,520	12.02
	Apr. 13, 1972	*6,300	*11.49		Feb. 17, 1982	*7,190	*13.21
	Apr. 16, 1972	2,690	8.33				
	Apr. 22, 1972	2,460	8.05	1987	Oct. 1, 1986	*10,800	*14.74
					Oct. 4, 1986	6,970	13.09
1973	Nov. 2, 1972	2,620	8.24				
	Nov. 14, 1972	*5,060	*10.60	1989	May 23, 1989	6,690	11.93
	Dec. 6, 1972	4,270	9.97		May 26, 1989	*12,700	*14.45
	Mar. 10, 1973	2,410	7.99		Sept. 15, 1989	3,100	9.37

03275600 EAST FORK WHITEWATER RIVER AT ABINGTON, IN --Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49	43	95	271	151	213	371	185	224	75	91	145
2	48	42	91	165	610	206	391	180	254	70	87	128
3	48	42	89	142	438	198	285	181	247	66	82	115
4	46	41	87	208	2300	184	254	1090	222	63	172	105
5	45	40	88	250	797	177	235	1150	202	61	646	101
6	45	42	91	180	413	170	221	412	196	58	201	96
7	45	73	90	152	352	162	210	293	194	55	129	92
8	43	105	84	137	301	160	203	253	196	53	104	89
9	42	92	79	129	297	166	199	232	241	53	91	101
10	47	76	79	133	325	175	390	227	245	51	84	89
11	44	66	79	133	268	1840	648	210	188	162	78	82
12	43	59	76	122	238	589	328	321	160	1220	73	80
13	43	56	71	107	222	344	269	1850	145	465	109	79
14	41	75	65	102	235	291	250	700	151	1170	105	93
15	40	413	60	103	3730	270	234	1390	174	608	85	98
16	40	1010	50	101	2560	558	223	5470	131	269	75	85
17	41	326	47	110	619	400	215	2900	119	175	70	75
18	43	217	50	127	394	299	204	758	110	139	210	72
19	50	173	54	123	319	264	199	484	101	120	110	91
20	50	160	54	390	270	243	209	381	196	119	134	83
21	52	149	50	408	242	232	404	328	158	487	896	79
22	47	132	40	259	254	226	284	293	124	503	2960	86
23	46	121	43	203	259	219	241	268	120	505	510	82
24	46	113	47	183	244	214	223	252	115	260	238	80
25	44	109	48	169	210	209	212	277	100	183	161	76
26	42	112	52	154	200	204	204	591	92	149	128	73
27	41	107	60	138	208	197	198	480	90	128	111	70
28	39	110	66	130	231	195	197	331	87	115	102	68
29	39	103	70	133	---	209	194	291	81	105	1530	66
30	40	97	112	132	---	225	189	255	77	100	404	65
31	43	---	487	124	---	328	---	236	---	97	194	---
TOTAL	1372	4304	2554	5218	16687	9367	7884	22269	4740	7684	9970	2644
MEAN	44.3	143	82.4	168	596	302	263	718	158	248	322	88.1
MAX	52	1010	487	408	3730	1840	648	5470	254	1220	2960	145
MIN	39	40	40	101	151	160	189	180	77	51	70	65
CFSM	.22	.72	.41	.84	2.98	1.51	1.31	3.59	.79	1.24	1.61	.44
IN.	.26	.80	.48	.97	3.10	1.74	1.47	4.14	.88	1.43	1.85	.49

CAL YR 1989 TOTAL 79005 MEAN 216 MAX 6720 MIN 32 CFSM 1.08 IN. 14.69
WTR YR 1990 TOTAL 94693 MEAN 259 MAX 5470 MIN 39 CFSM 1.30 IN. 17.61

03276000 EAST FORK WHITEWATER RIVER AT BROOKVILLE, IN

LOCATION.--Lat 39°26'02", long 85°00'12", in NE¼NE¼ sec.20, T.9 N., R.2 W., Franklin County, Hydrologic Unit 05080003, on right bank 100 ft upstream from bridge on State Highway 101, at Brookville, 0.4 mi downstream from Brookville Lake, and 1.8 mi upstream from mouth.

DRAINAGE AREA.--380 mi^2.

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

REVISED RECORDS.--WSP 1555: 1954(M), 1955(P). WSP 1908: 1955, drainage area.

GAGE.--Water-stage recorder. Datum of gage is 621.76 ft above National Geodetic Vertical Datum of 1929. 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. Aug. 21, 1965 to Sept. 30, 1981, water-stage recorder at same site and datum. Oct. 1, 1981 to Sept. 30, 1986, daily discharge provided by U.S. Army Corps of Engineers.

REMARKS.--No estimated daily discharges. Records good. Water temperature probe connected to a Data Collection Platform since Nov. 5, 1986. Flow regulated by Brookville Lake since January 1974.

AVERAGE DISCHARGE.--36 years, 399 ft^3/s, 14.26 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 36,100 ft^3/s Jan. 21, 1959; maximum gage height, 17.35 ft May 24, 1968; no flow, July 27, 1982.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 4,790 ft^3/s May 23; minimum daily, 42 ft^3/s Dec. 2-6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	100	76	231	65	484	634	242	429	236	73	67	2090
2	100	76	42	162	487	386	239	550	239	74	67	1000
3	100	76	42	237	483	222	209	335	241	74	67	493
4	100	75	42	238	514	224	156	192	391	74	67	496
5	100	75	42	236	485	225	84	141	526	74	67	325
6	100	75	42	236	926	222	74	136	336	73	67	130
7	100	75	54	236	1470	225	74	1280	249	72	583	66
8	100	75	64	235	1470	225	74	2060	248	73	604	67
9	101	106	64	235	1470	225	75	3380	248	73	69	185
10	101	132	65	406	1470	232	95	2550	246	73	68	590
11	101	131	65	776	1470	247	79	889	244	75	65	567
12	101	130	66	775	1120	550	82	596	241	639	66	249
13	82	339	67	774	867	770	141	439	241	960	67	247
14	72	473	67	772	1370	770	193	1170	237	980	67	246
15	73	722	67	396	1270	772	193	1910	241	965	67	246
16	74	831	67	225	81	780	193	1760	243	965	67	241
17	74	825	67	167	74	773	193	63	243	965	67	238
18	74	819	67	71	74	771	192	1250	245	964	67	236
19	75	816	64	71	722	770	191	1980	246	426	68	239
20	76	813	65	77	1760	770	192	1980	248	127	133	230
21	75	1170	64	500	2160	772	198	3190	510	129	771	225
22	75	1590	64	777	2150	438	195	4470	518	129	1580	224
23	74	1870	64	776	2140	233	549	4790	247	456	2060	219
24	74	1860	64	776	2130	235	606	3000	246	956	1470	128
25	74	1850	63	389	2120	235	458	1490	240	646	889	65
26	74	1840	62	64	975	235	252	803	250	504	526	65
27	74	2090	62	65	225	236	126	803	252	509	251	65
28	75	2240	62	64	455	236	135	803	138	510	85	65
29	76	1760	63	316	---	238	200	803	70	408	128	65
30	76	836	65	481	---	240	235	434	72	67	537	65
31	76	---	72	483	---	240	---	233	---	67	1660	---
TOTAL	2627	23846	2055	11081	30422	13131	5925	43909	7932	12180	12417	9367
MEAN	84.7	795	66.3	357	1086	424	197	1416	264	393	401	312
MAX	101	2240	231	777	2160	780	606	4790	526	980	2060	2090
MIN	72	75	42	64	74	222	74	63	70	67	65	65

CAL YR 1989 TOTAL 161854.3 MEAN 443 MAX 4800 MIN 6.1
WTR YR 1990 TOTAL 174892 MEAN 479 MAX 4790 MIN 42

03276500 WHITEWATER RIVER AT BROOKVILLE, IN

(Former National stream-quality accounting network station)

LOCATION.--Lat 39°24'24", long 85°00'46", in NE¼NW¼ sec.32, T.9 N., R.2 W., Franklin County, Hydrologic Unit 05080003, on right bank at downstream side of highway bridge, 0.3 mi downstream from East Fork Whitewater River, 1.1 mi south of Brookville, and at mile 29.3.

DRAINAGE AREA.--1,224 mi^2.

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.

REVISED RECORDS.--WSP 1335: 1915-17, 1929, 1930(M), 1933(M), 1934, 1935(m), 1936. WSP 1505: 1916(M). WSP 1908: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 595.71 ft above National Geodetic Vertical Datum of 1929. 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.

REMARKS.--Estimated daily discharges: Dec. 14-27, and June 28 to July 11. Records good except for estimated daily discharges, which are fair. Flow regulated by Brookville Lake since January 1974.

AVERAGE DISCHARGE.--69 years (water years 1916-17, 1924 to current year), 1,278 ft^3/s, 14.18 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 81,800 ft^3/s Jan. 21, 1959, gage height, 27.78 ft, from rating curve extended above 45,000 ft^3/s on basis of contracted-opening measurement of peak flow; minimum daily, 60 ft^3/s July 27, 1934.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 25, 1913, reached a stage of 39.0 ft, at present datum, from floodmarks (discharge not determined).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 20,400 ft^3/s May 17, gage height, 13.25 ft; minimum daily, 200 ft^3/s Dec. 22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	406	276	676	2130	1300	2050	2500	1340	1230	480	395	3330
2	388	270	388	1130	2640	1650	2930	1460	1230	460	376	1990
3	383	267	366	1040	3220	1350	2100	1190	1520	430	362	1200
4	372	267	353	1140	8380	1260	1670	7970	1400	410	396	1110
5	366	283	350	1730	5690	1190	1400	9890	1450	400	981	877
6	360	299	351	1300	3640	1130	1230	3870	1190	380	643	615
7	352	348	363	1060	3800	1080	1110	3680	1210	370	993	489
8	350	677	360	956	3520	1050	1030	3960	1090	360	1020	467
9	345	702	340	897	3470	1050	977	4770	1060	355	379	1620
10	346	572	339	1030	3760	1070	2670	3920	1650	350	351	1670
11	341	505	341	1430	3240	7810	4260	2200	1250	480	331	1490
12	339	465	330	1400	2610	5440	2490	2160	1050	3890	318	1610
13	320	693	314	1340	2120	3530	1900	6850	959	2540	313	1040
14	305	869	300	1310	2620	2820	1680	6520	919	2350	334	838
15	298	2020	280	908	7590	2500	1520	5600	1330	2140	349	1050
16	305	4820	230	665	12800	4500	1380	14200	919	1860	320	907
17	309	3040	225	597	5400	3630	1270	17900	842	1660	304	777
18	299	2250	240	558	2810	2790	1180	7340	791	1540	307	699
19	312	1880	260	563	2850	2420	1120	5550	739	946	521	2510
20	314	1720	260	1420	3550	2230	1110	4710	954	546	669	1160
21	319	2030	240	2300	3760	2100	1740	5230	1410	1220	2330	863
22	318	2430	200	2180	3730	1640	1700	6040	1280	1280	2970	779
23	311	2630	220	1900	4080	1290	1780	6120	920	1870	3130	792
24	305	2580	230	1760	4010	1230	1750	4550	1050	2190	2300	685
25	290	2540	235	1260	3710	1250	1470	3020	863	1510	1540	545
26	288	2520	240	797	2340	1190	1180	2720	773	1160	1020	490
27	282	2710	250	710	1470	1120	982	3220	730	1060	700	452
28	281	2870	257	655	1960	1080	960	2690	590	1010	483	423
29	274	2400	269	910	---	1090	1100	2460	480	889	7720	400
30	267	1420	419	1130	---	1240	1070	1790	470	453	3990	383
31	276	---	2290	1130	---	2070	---	1340	---	425	3360	---
TOTAL	10021	46353	11516	37336	110070	65850	49259	154260	31349	35014	39205	31261
MEAN	323	1545	371	1204	3931	2124	1642	4976	1045	1129	1265	1042
MAX	406	4820	2290	2300	12800	7810	4260	17900	1650	3890	7720	3330
MIN	267	267	200	558	1300	1050	960	1190	470	350	304	383
CFSM	.26	1.26	.30	.98	3.21	1.74	1.34	4.07	.85	.92	1.03	.85
IN.	.30	1.41	.35	1.13	3.35	2.00	1.50	4.69	.95	1.06	1.19	.95

CAL YR 1989 TOTAL 608323 MEAN 1667 MAX 18200 MIN 200 CFSM 1.36 IN. 18.49
WTR YR 1990 TOTAL 621494 MEAN 1703 MAX 17900 MIN 200 CFSM 1.39 IN. 18.89

03276700 SOUTH HOGAN CREEK NEAR DILLSBORO, IN

(Hydrologic bench-mark station)

LOCATION.--Lat 39°01'47", long 85°02'17", in SW¼NW¼ sec.7, T.4 N., R.2 W., Dearborn County, Hydrologic Unit 05090203, on left downstream abutment of bridge on county road at Dillsboro Station, 1.2 mi northeast of Dillsboro, and 1.5 mi downstream from Whitaker Creek.

DRAINAGE AREA.--38.1 mi^2.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WDR IN-72-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 571.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Nov. 24, Dec. 8-10, 12-29, Jan. 1, 2, 7, 9, 13, Feb. 26, and Feb. 28 to Mar. 5. Records poor.

AVERAGE DISCHARGE.--29 years, 43.1 ft^3/s, 15.36 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,000 ft^3/s Apr. 29, 1970, maximum gage height, 12.7 ft, from floodmarks Apr. 29, 1970 and from crest-stage gage June 10, 1981; no flow at times most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 21, 1959, reached a stage of 14.00 ft, discharge, 16,300 ft^3/s on basis of contracted-opening measurement.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 15	2145	4,430	8.24	May 16	2330	*6,210	*9.44

Minimum daily discharge, no flow Aug. 11, 12, 17-19

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	10	10	100	83	48	64	28	10	1.7	.19	7.4
2	1.3	11	9.7	60	176	40	63	30	13	1.4	.13	4.4
3	1.3	8.8	7.8	34	99	33	39	25	35	1.2	.11	3.0
4	1.2	7.4	7.7	76	655	28	32	553	13	.91	.09	2.2
5	1.0	6.7	7.7	56	115	23	28	276	9.6	.77	.07	1.7
6	1.1	12	7.3	33	60	18	24	171	72	1.2	.06	1.3
7	1.6	36	7.7	30	55	15	22	82	269	2.7	.05	1.1
8	1.5	167	8.8	22	47	14	20	50	49	1.4	.03	.85
9	1.4	45	12	20	179	14	19	40	27	.89	.02	.99
10	1.2	22	18	19	168	16	594	34	18	.65	.01	.99
11	1.3	15	15	17	61	39	186	30	12	1.3	.00	.96
12	1.2	11	13	15	42	26	56	38	9.0	11	.00	1.2
13	1.2	8.8	10	14	34	21	37	581	7.3	9.3	.01	1.0
14	1.0	7.9	9.0	13	28	19	32	88	37	24	.03	21
15	.91	545	8.0	14	1750	19	27	445	19	7.2	.03	47
16	17	302	5.0	13	619	384	23	2030	7.9	3.5	.02	8.6
17	83	52	4.0	15	74	84	21	1270	5.1	2.3	.00	4.4
18	32	30	3.2	113	43	44	18	77	4.0	1.5	.00	2.7
19	80	22	2.8	39	33	36	16	42	3.2	1.1	.00	81
20	98	20	2.4	759	26	31	17	32	10	1.6	.10	27
21	54	16	2.2	130	22	27	651	28	13	8.5	52	10
22	33	14	2.1	59	22	24	94	41	24	8.9	48	7.9
23	23	12	2.0	41	23	21	55	29	14	4.4	5.1	5.6
24	18	11	2.0	34	22	21	41	23	9.6	3.3	2.0	4.0
25	14	10	2.2	29	21	33	34	21	9.3	1.9	1.1	3.0
26	12	11	2.4	23	30	48	28	21	4.2	1.2	.68	2.5
27	10	12	2.8	20	82	33	26	17	2.8	.84	.40	2.0
28	8.9	16	5.0	19	64	27	25	16	2.0	.59	.25	1.8
29	8.2	14	11	46	---	26	25	16	1.5	.42	643	1.6
30	7.8	12	53	68	---	28	23	14	1.5	.30	44	2.0
31	8.3	---	505	70	---	59	-	12	---	.24	14	---
TOTAL	525.41	1467.6	758.8	2001	4633	1299	2340	6160	712.0	106.21	811.48	259.19
MEAN	16.9	48.9	24.5	64.5	165	41.9	78.0	199	23.7	3.43	26.2	8.64
MAX	98	545	505	759	1750	384	651	2030	269	24	643	81
MIN	.91	6.7	2.0	13	21	14	16	12	1.5	.24	.00	.85
CFSM	.44	1.28	.64	1.69	4.34	1.10	2.05	5.22	.62	.09	.69	.23
IN.	.51	1.43	.74	1.95	4.52	1.27	2.28	6.01	.70	.10	.79	.25

CAL YR 1989 TOTAL 22791.13 MEAN 62.4 MAX 1180 MIN .11 CFSM 1.64 IN. 22.25
WTR YR 1990 TOTAL 21073.69 MEAN 57.7 MAX 2030 MIN .00 CFSM 1.52 IN. 20.58

03276700 SOUTH HOGAN CREEK NEAR DILLSBORO, IN
(Hydrologic bench-mark station)

WATER-QUALITY RECORDS

PERIOD OF RECORD -
CHEMICAL ANALYSES: October 1968 to current year.
SEDIMENT DISCHARGE: August 1969 to current year (partial-record station).

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM) (90095)	PH (STAND-ARD UNITS) (00400)	PH LAB (STAND-ARD UNITS) (00403)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	TUR-BID-ITY (NTU) (00076)
OCT												
04...	1830	1.3	537	534	8.2	8.2	14.0	15.0	753	8.6	86	1.6
FEB												
15...	1400	2270	168	165	7.4	7.9	15.5	8.5	740	11.2	99	310
JUN												
21...	1130	12	465	471	8.1	8.2	32.0	23.0	743	9.3	111	7.3
SEP												
06...	0930	1.3	456	441	7.9	8.0	29.0	24.5	746	7.1	87	2.5

DATE	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L) (39036)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)
OCT												
04...	68	40	260	50	80	14	12	4.1	200	207	204	253
FEB												
15...	2800	5800	51	--	16	2.7	1.8	3.3	--	--	79	--
JUN												
21...	770	380	240	48	74	13	10	3.3	190	190	185	232
SEP												
06...	83	200	210	49	66	10	9.1	4.9	150	157	171	192

DATE	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)
OCT												
04...	0	53	16	0.2	3.3	286	307	0.98	<0.01	<0.10	0.03	0.02
FEB												
15...	--	15	4.1	<0.1	4.3	99	97	607	<0.01	0.50	0.14	0.06
JUN												
21...	0	46	13	0.3	4.8	272	282	8.96	<0.01	0.80	0.03	0.02
SEP												
06...	0	46	14	0.2	5.0	261	250	0.92	<0.01	0.10	0.05	0.03

03276700 SOUTH HOGAN CREEK NEAR DILLSBORO, IN --Continued
(Hydrologic bench-mark station)

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOSPHORUS TOTAL (MG/L AS P) (00665)	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P) (00671)	ALUMINUM, DISSOLVED (UG/L AS AL) (01106)	ARSENIC DISSOLVED (UG/L AS AS) (01000)	BARIUM, DISSOLVED (UG/L AS BA) (01005)	BERYLLIUM, DISSOLVED (UG/L AS BE) (01010)	CADMIUM DISSOLVED (UG/L AS CD) (01025)	CHROMIUM, DISSOLVED (UG/L AS CR) (01030)	COBALT, DISSOLVED (UG/L AS CO) (01035)	COPPER, DISSOLVED (UG/L AS CU) (01040)
OCT												
04...	0.4	0.05	0.03	0.02	<10	1	44	<0.5	<1	<1	<3	1
FEB												
15...	1.6	0.37	0.09	0.10	40	1	11	<0.5	<1	<5	<3	<10
JUN												
21...	0.4	0.06	0.04	0.04	20	1	41	<0.5	<1	1	<3	7
SEP												
06...	0.5	0.04	0.03	0.03	20	1	44	<0.5	<1	<1	<3	6

DATE	IRON, DISSOLVED (UG/L AS FE) (01046)	LEAD, DISSOLVED (UG/L AS PB) (01049)	LITHIUM DISSOLVED (UG/L AS LI) (01130)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)	MERCURY DISSOLVED (UG/L AS HG) (71890)	MOLYBDENUM, DISSOLVED (UG/L AS MO) (01060)	NICKEL, DISSOLVED (UG/L AS NI) (01065)	SELENIUM, DISSOLVED (UG/L AS SE) (01145)	SILVER, DISSOLVED (UG/L AS AG) (01075)	STRONTIUM, DISSOLVED (UG/L AS SR) (01080)	VANADIUM, DISSOLVED (UG/L AS V) (01085)	ZINC, DISSOLVED (UG/L AS ZN) (01090)
OCT												
04...	12	<1	6	19	<0.1	<10	1	<1	<1	260	<6	6
FEB												
15...	56	<10	<4	11	0.1	<10	<10	<1	<1	46	<6	9
JUN												
21...	5	1	6	18	<0.1	<10	1	<1	<1	230	<6	3
SEP												
06...	6	1	7	16	<0.1	<10	1	<1	<1	210	<6	6

DATE	GROSS ALPHA, DISSOLVED (UG/L AS U-NAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT) (80040)	GROSS BETA, DISSOLVED (PCI/L AS CS-137) (03515)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137) (03516)	GROSS BETA, DISSOLVED (PCI/L AS SR/YT-90) (80050)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/YT-90) (80060)	RADIUM 226, DISSOLVED, RADON METHOD (PCI/L) (09511)	URANIUM NATURAL DISSOLVED (UG/L AS U) (22703)	SEDIMENT, SUSPENDED (MG/L) (80154)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT											
04...	--	--	--	--	--	--	--	--	23	0.08	64
FEB											
15...	0.6	0.6	4.4	<0.4	3.6	<0.4	0.08	<0.01	1030	6290	96
JUN											
21...	--	--	--	--	--	--	--	--	27	0.89	81
SEP											
06...	--	--	--	--	--	--	--	--	6	0.02	91

03291780 INDIAN-KENTUCK CREEK NEAR CANAAN, IN

LOCATION.--Lat 38°52'41", long 85°15'26", in SW¼NW¼ sec.13, T.5 N., R.11 E., Jefferson County, Hydrologic Unit 05140101, on downstream end of left pier of bridge on State Highway 62, 1,500 ft upstream from Wilson Fork, 2.0 mi northeast of Canaan, and at mile 16.7.

DRAINAGE AREA.--27.5 mi^2.

PERIOD OF RECORD.--October 1969 to current year

GAGE.--Water-stage recorder. Elevation of gage is 590 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Estimated daily discharges: Dec. 9-31, Aug. 8-12 and Aug. 16-20. Records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--21 years, 34.4 ft^3/s, 16.99 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,800 ft^3/s May 16, 1990, gage height, 11.34 ft; no flow for many days in many years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,800 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 15	1700	2,580	7.66	May 16	2245	*7,800	*11.34
Feb. 15	2130	3,700	8.65	June 14	1945	2,760	7.84

Minimum daily discharge, 0.08 ft^3/s Aug. 11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	8.9	6.4	77	33	21	67	42	8.9	3.1	.71	3.9
2	2.0	7.6	6.3	53	138	20	59	29	8.5	2.6	.52	3.0
3	1.9	6.8	5.5	31	103	17	40	23	77	2.0	.37	2.2
4	1.3	6.2	5.2	58	445	14	33	237	19	1.5	.23	1.5
5	1.1	6.1	5.9	37	107	13	27	182	14	5.1	.26	1.0
6	1.3	6.6	5.9	25	58	12	22	150	106	21	.19	.76
7	4.3	15	5.2	20	48	10	18	81	369	3.7	.17	.60
8	2.7	41	4.0	17	37	10	15	49	65	2.3	.15	.54
9	1.8	29	3.8	16	179	12	14	35	36	1.3	.13	.67
10	1.7	19	3.5	14	157	14	396	28	25	.74	.10	1.1
11	2.0	15	3.1	12	66	17	181	20	19	3.5	.08	.67
12	1.8	13	2.8	11	43	14	76	25	16	43	.09	.79
13	1.5	12	2.6	10	33	13	49	154	13	13	.18	.75
14	1.3	11	2.4	11	26	12	41	46	378	7.0	.33	.59
15	1.3	617	2.2	9.7	1400	19	33	371	106	4.1	.18	.49
16	3.8	255	2.0	8.4	454	299	26	1630	32	3.1	.16	.37
17	29	75	2.1	13	121	95	24	1060	21	2.3	.13	.27
18	12	42	3.0	52	75	51	18	102	16	1.4	.11	.19
19	70	28	5.0	28	53	39	16	57	12	.84	.09	.51
20	66	24	4.5	587	38	30	17	45	43	21	.10	.73
21	38	18	3.0	110	31	26	231	36	22	193	17	.54
22	23	15	2.0	53	31	23	72	44	45	22	12	.74
23	17	13	1.5	36	26	19	45	32	27	13	2.9	.78
24	14	11	1.4	27	22	22	33	27	19	6.5	1.3	.63
25	12	11	1.3	22	17	39	26	25	13	3.8	.65	.50
26	11	11	1.6	17	17	49	21	23	8.8	3.1	.42	.40
27	9.6	11	2.0	14	23	34	17	20	5.9	2.6	.21	.30
28	8.6	10	2.5	13	28	28	26	19	4.2	2.0	.15	.22
29	8.1	7.5	3.2	108	---	26	28	17	3.6	1.3	273	.31
30	7.5	6.8	10	56	---	28	18	13	3.2	.85	22	1.3
31	8.6	---	300	34	---	64	---	11	---	.92	9.0	---
TOTAL	366.0	1352.5	409.9	1580.1	3809	1090	1689	4633	1536.1	391.65	342.91	26.35
MEAN	11.8	45.1	13.2	51.0	136	35.2	56.3	149	51.2	12.6	11.1	.88
MAX	70	617	300	587	1400	299	396	1630	378	193	273	3.9
MIN	1.1	6.1	1.3	8.4	17	10	14	11	3.2	.74	.08	.19
CFSM	.43	1.64	.48	1.85	4.95	1.28	2.05	5.43	1.86	.46	.40	.03
IN.	.50	1.83	.55	2.14	5.15	1.47	2.28	6.27	2.08	.53	.46	.04

CAL YR 1989 TOTAL 16962.27 MEAN 46.5 MAX 735 MIN .05 CFSM 1.69 IN. 22.95
WTR YR 1990 TOTAL 17226.51 MEAN 47.2 MAX 1630 MIN .08 CFSM 1.72 IN. 23.30

03294000 SILVER CREEK NEAR SELLERSBURG, IN

LOCATION.--Lat 38°22'15", long 85°43'35", in lot 68, Clark Military Grant, Clark County, Hydrologic Unit 05140101, on downstream side of Straws Mill bridge on Watson Road, 0.3 mi downstream from Pleasant Run, 2.4 mi southeast of Sellersburg, and 12.2 mi upstream from mouth.

DRAINAGE AREA.--189 mi^2.

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

REVISED RECORDS.--WSP 1705: 1955-58. WDR IN-72-1: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 429.78 ft above National Geodetic Vertical Datum of 1929 (levels by State of Indiana, Department of Natural Resources). Prior to Oct. 6, 1976, and Feb. 15 to Sept. 20, 1984 nonrecording gage and crest-stage gage at same site and datum.

REMARKS.--Estimated daily discharges: Dec. 10-28. Records good except for estimated daily discharges, which are poor. Some regulation by Deam Lake.

AVERAGE DISCHARGE.--36 years, 219 ft^3/s, 15.74 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,600 ft^3/s Jan. 22, 1959, gage height, 30.89 ft, from floodmarks, from rating curve extended above 6,300 ft^3/s on basis of contracted-opening measurements of peak flow, at site 5.2 mi upstream, drainage area, 165 mi^2, adjusted to gage site; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 21	0300	4,970	19.45	June 3	1200	3,540	16.67
Feb. 16	1800	8,050	23.74	June 8	0600	4,070	17.79
May 17	2300	*8,660	*24.42				

Minimum daily discharge, 1.3 ft^3/s Sept. 6, 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.6	18	36	530	366	151	370	94	191	17	2.2	2.9
2	9.0	19	33	232	669	141	439	94	634	17	2.1	2.0
3	8.8	19	32	198	834	132	329	84	3020	15	2.8	4.7
4	8.2	27	27	172	1930	118	273	226	911	13	7.5	3.3
5	9.1	26	28	176	1140	108	229	602	416	12	16	1.8
6	9.9	18	30	145	553	101	183	309	376	11	16	1.3
7	8.3	20	30	115	438	91	153	249	3110	9.2	10	1.3
8	12	50	30	104	363	88	137	178	3230	6.8	6.7	22
9	8.9	67	27	96	529	89	119	135	702	5.5	5.0	88
10	8.2	44	25	90	1330	92	421	130	417	5.1	4.0	43
11	8.1	33	21	83	641	94	1040	118	319	17	3.5	20
12	8.1	29	18	76	423	89	418	98	258	38	4.1	13
13	7.6	23	16	64	336	87	305	480	200	40	6.5	38
14	6.6	21	14	59	281	86	263	308	143	28	12	33
15	4.6	35	12	59	1730	78	227	480	120	19	9.1	24
16	4.3	443	10	59	7120	478	185	2960	97	15	6.6	20
17	39	224	11	67	4810	427	164	7410	82	12	5.1	17
18	47	136	12	238	777	266	149	6670	76	8.9	4.4	13
19	94	100	12	187	475	219	127	1270	59	6.7	4.2	15
20	117	86	11	3170	359	219	120	488	51	4.8	4.5	16
21	75	75	11	3520	301	180	793	511	65	29	6.2	18
22	54	62	10	614	279	160	530	1290	83	57	10	31
23	39	57	7.0	405	260	151	338	555	83	25	17	37
24	32	50	7.3	326	217	143	265	386	60	15	12	22
25	28	47	7.6	273	172	220	204	304	45	11	7.9	17
26	25	51	7.9	218	139	269	166	268	37	8.3	6.9	14
27	23	50	10	180	135	221	140	244	36	7.9	6.6	15
28	19	49	12	158	159	180	123	491	29	7.2	6.5	15
29	24	44	16	753	---	162	121	839	22	5.1	18	14
30	17	38	65	929	---	168	106	382	19	3.8	14	16
31	16	---	678	457	---	447	---	263	---	3.2	5.3	---
TOTAL	780.3	1961	1266.8	13753	26766	5455	8437	27916	14891	473.5	242.7	578.3
MEAN	25.2	65.4	40.9	444	956	176	281	901	496	15.3	7.83	19.3
MAX	117	443	678	3520	7120	478	1040	7410	3230	57	18	88
MIN	4.3	18	7.0	59	135	78	106	84	19	3.2	2.1	1.3
CFSM	.13	.35	.22	2.35	5.06	.93	1.49	4.76	2.63	.08	.04	.10
IN.	.15	.39	.25	2.71	5.27	1.07	1.66	5.49	2.93	.09	.05	.11

CAL YR 1989 TOTAL 91925.7 MEAN 252 MAX 4280 MIN 4.3 CFSM 1.33 IN. 18.09
WTR YR 1990 TOTAL 102520.6 MEAN 281 MAX 7410 MIN 1.3 CFSM 1.49 IN. 20.18

03302220 BUCK CREEK NEAR NEW MIDDLETOWN, IN

LOCATION.--Lat 38°07'13", long 86°05'16", in SE¼NE¼ sec.32, T.4 S., R.4 E., Harrison County, Hydrologic Unit 05140104, on right bank at downstream side of bridge on State Highway 337 (revised), 0.6 mi downstream from South Fork Buck Creek, 3.6 mi southwest of New Middletown, and 14.4 mi upstream from mouth.

DRAINAGE AREA.--65.2 mi^2, of which 28.1 mi^2 does not contribute directly to surface runoff.

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

REVISED RECORDS.--WDR IN-72-1: 1971(P).

GAGE.--Water-stage recorder. Datum of gage is 501.63 ft above National Geodetic Vertical Datum of 1929 (levels by State of Indiana, Department of Natural Resources).

REMARKS.--Estimated daily discharges: Oct. 9-16 and Dec. 9-30. Records good except for estimated daily discharges and those below 10 ft^3/s, which are poor.

AVERAGE DISCHARGE.--21 years, 77.9 ft^3/s, 16.23 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,700 ft^3/s Apr. 2, 1970, gage height, 14.40 ft; minimum daily, 0.52 ft^3/s July 10, 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,600 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 20	0645	2,890	8.03	May 21	2115	2,350	7.30
Feb. 15	2030	5,950	10.68	May 28	0845	3,760	8.92
May 16	2230	4,120	9.24	June 7	1045	*10,000	*13.11

Minimum daily discharge, 1.7 ft^3/s Sept. 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.7	8.6	18	158	162	54	133	67	142	12	3.5	4.3
2	5.9	9.0	18	98	371	53	129	64	142	11	3.5	3.3
3	5.2	8.7	18	75	350	53	106	61	441	10	3.2	2.6
4	4.9	8.4	18	68	401	48	95	206	212	9.5	3.6	2.2
5	5.0	8.5	18	61	285	45	81	207	143	9.3	6.0	2.0
6	5.1	8.4	17	56	205	43	70	136	119	9.1	6.6	1.7
7	5.3	9.8	16	51	161	41	63	102	3230	8.4	4.5	2.0
8	5.2	86	17	49	132	39	58	83	734	7.5	3.9	2.0
9	4.8	70	14	46	343	36	54	72	384	7.3	3.6	2.0
10	4.5	38	12	41	464	38	367	68	242	7.1	3.2	1.9
11	4.1	30	10	38	260	36	310	60	154	7.5	3.5	2.0
12	3.8	25	8.2	34	180	34	176	58	110	12	3.6	4.7
13	3.6	21	6.8	30	145	33	131	64	85	9.1	5.2	4.9
14	3.4	19	5.7	28	117	34	119	57	68	8.0	5.9	5.7
15	3.2	35	5.0	27	2220	37	98	174	53	6.8	5.7	13
16	3.5	98	4.0	26	1520	144	84	1090	45	6.0	5.3	4.5
17	20	62	5.0	36	504	124	80	1690	41	5.4	5.1	2.8
18	15	50	6.5	85	316	91	73	456	43	5.6	5.2	2.4
19	37	42	8.0	75	207	79	68	260	37	5.4	4.6	8.5
20	40	38	8.0	1160	144	69	63	255	36	6.7	3.9	6.9
21	26	34	6.0	395	119	66	421	610	32	20	3.9	5.4
22	19	31	4.5	228	111	64	222	654	31	16	59	18
23	15	28	3.5	160	96	60	155	301	27	12	27	7.4
24	14	25	3.5	123	79	61	126	194	24	8.9	12	5.1
25	12	23	4.0	96	68	63	102	141	20	7.1	9.0	4.1
26	11	23	5.5	69	63	69	86	122	19	6.0	6.8	3.7
27	10	22	7.0	62	62	68	76	100	17	5.1	5.6	3.0
28	9.2	21	9.0	58	58	66	70	1560	15	4.7	4.4	2.4
29	8.4	19	11	307	---	65	63	708	14	4.4	14	2.1
30	7.7	18	15	269	---	83	58	321	13	4.2	9.4	2.5
31	8.0	---	231	169	---	147	---	179	---	4.2	5.9	---
TOTAL	325.5	919.4	533.2	4178	9143	1943	3737	10120	6673	256.3	246.6	133.1
MEAN	10.5	30.6	17.2	135	327	62.7	125	326	222	8.27	7.95	4.44
MAX	40	98	231	1160	2220	147	421	1690	3230	20	59	18
MIN	3.2	8.4	3.5	26	58	33	54	57	13	4.2	3.2	1.7
CFSM	.28	.83	.46	3.63	8.80	1.69	3.36	8.80	6.00	.22	.21	.12
IN.	.33	.92	.53	4.19	9.17	1.95	3.75	10.15	6.69	.26	.25	.13

CAL YR 1989 TOTAL 32495.9 MEAN 89.0 MAX 3010 MIN 3.2 CFSM 2.40 IN. 32.58
WTR YR 1990 TOTAL 38208.1 MEAN 105 MAX 3230 MIN 1.7 CFSM 2.82 IN. 38.31

03302300 LITTLE INDIAN CREEK NEAR GALENA, IN

LOCATION.--Lat 38°19'19", long 85°55'53", in NE¼SW¼ sec.23, T.2 S., R.5 E., Floyd County, Hydrologic Unit 05140104, on right bank at downstream side of county road bridge, 2 mi south of Galena, 3.6 mi upstream from mouth, and 7.0 mi northwest of New Albany.

DRAINAGE AREA.--16.1 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 703.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 9-16, Oct. 23, to Nov. 7, and Dec. 9-31. Records fair except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--22 years, 23.3 ft^3/s, 19.65 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,500 ft^3/s July 21, 1973, gage height, 9.30 ft; from rating curve extended above 3,100 ft^3/s on basis of contracted-opening measurement at 7.34 ft; no flow for many days in 1969, 1975, 1976, 1983, 1984, 1985, 1987, and 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 20	0430	2,180	6.61	May 21	1915	2,030	6.47
Feb. 15	1615	3,660	7.77	May 28	0800	1,630	6.05
May 16	1900	4,230	8.13	June 3	0145	1,510	5.91
May 16	2400	2,130	6.56	June 7	0700	*5,200	*8.69

Minimum daily discharge, 0.04 ft^3/s Aug. 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	2.8	5.2	119	53	18	58	12	29	1.1	.21	.56
2	1.5	2.5	5.0	19	103	17	51	9.7	301	.97	.05	.30
3	1.4	2.3	4.5	15	109	15	37	9.2	258	.84	.05	.21
4	1.3	2.2	4.4	15	183	12	28	61	63	.70	.04	.16
5	1.3	2.1	4.5	13	90	11	21	49	37	.62	.32	.13
6	1.5	2.3	4.5	12	58	10	15	38	50	.75	.36	.10
7	1.6	4.0	4.4	11	47	8.8	11	29	1160	.48	.23	28
8	1.7	48	4.4	9.8	38	8.8	9.1	22	117	.22	.15	73
9	1.4	15	4.0	9.1	78	9.8	7.7	16	60	.24	.13	9.4
10	1.2	9.7	3.5	8.4	111	9.6	96	21	37	.24	.09	4.1
11	1.1	7.8	3.1	7.9	61	9.8	89	13	26	22	.07	1.9
12	.98	6.8	2.8	7.4	44	9.4	53	19	19	8.0	.05	3.3
13	.90	6.1	2.5	7.0	37	8.2	37	70	14	2.9	.15	2.6
14	.82	6.1	2.2	6.7	31	7.5	32	38	11	2.0	.38	22
15	.78	15	1.9	6.6	1300	11	25	97	9.0	1.6	.18	9.0
16	3.0	23	1.7	6.3	279	77	20	767	7.4	1.3	.16	3.2
17	8.5	14	1.9	16	103	46	21	418	6.2	.97	.13	1.9
18	5.6	11	2.0	25	71	28	16	41	4.9	.82	.13	1.4
19	15	9.5	2.0	21	55	27	14	22	4.2	.70	.13	2.5
20	10	8.7	2.0	624	42	20	14	12	5.8	.61	.11	2.7
21	7.5	7.8	1.7	93	35	16	117	271	6.2	7.7	.17	2.4
22	6.0	7.4	1.4	57	34	14	67	105	7.3	2.2	.35	3.4
23	5.0	6.8	1.2	41	31	11	48	42	6.3	1.4	.36	2.3
24	4.2	6.3	1.2	32	27	16	36	28	4.0	1.1	.25	1.6
25	3.6	6.0	1.3	26	21	18	28	22	2.9	.84	.21	1.3
26	3.2	6.3	1.9	22	19	20	23	22	2.2	.67	.18	1.0
27	2.9	6.2	2.5	18	22	16	18	17	1.7	.55	.18	1.0
28	2.7	5.8	3.0	17	21	14	15	348	1.7	.55	.16	1.0
29	2.5	5.4	20	112	---	12	13	130	1.4	.47	3.3	.88
30	2.3	5.2	100	78	---	28	9.9	55	1.3	.38	2.3	.97
31	2.1	---	200	55	---	59	---	38	---	.32	.93	---
TOTAL	103.08	262.1	400.7	1510.2	3103	587.9	1029.7	2841.9	2254.5	63.24	11.51	182.31
MEAN	3.33	8.74	12.9	48.7	111	19.0	34.3	91.7	75.1	2.04	.37	6.08
MAX	15	48	200	624	1300	77	117	767	1160	22	3.3	73
MIN	.78	2.1	1.2	6.3	19	7.5	7.7	9.2	1.3	.22	.04	.10
CFSM	.21	.54	.80	3.03	6.88	1.18	2.13	5.69	4.67	.13	.02	.38
IN.	.24	.61	.93	3.49	7.17	1.36	2.38	6.57	5.21	.15	.03	.42

CAL YR 1989 TOTAL 9976.50 MEAN 27.3 MAX 732 MIN .29 CFSM 1.70 IN. 23.05
WTR YR 1990 TOTAL 12350.14 MEAN 33.8 MAX 1300 MIN .04 CFSM 2.10 IN. 28.54

03302500 INDIAN CREEK NEAR CORYDON, IN

LOCATION.--Lat 38°16'35", long 86°06'35", in SW¼SE¼ sec.6, T.3 S., R.4 E., Harrison County, Hydrologic Unit 05140104, on upstream side of bridge on State Highway 335, 0.6 mi upstream from Raccoon Branch, 4.5 mi north of Corydon, and at mile 33.7.

DRAINAGE AREA.--129 mi^2, of which 10.6 mi^2 does not contribute directly to surface runoff.

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

REVISED RECORDS.--WSP 1275: Drainage area. WSP 1385: 1951(M).

GAGE.--Water-stage recorder. Datum of gage is 577.12 ft above National Geodetic Vertical Datum of 1929. 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.

REMARKS.--Estimated daily discharges: Dec. 9-29, June 19-26, June 28 to July 11, and July 15 to Aug. 8. Records good except those for estimate daily discharges, which are poor.

AVERAGE DISCHARGE.--47 years, 168 ft^3/s, 17.69 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,700 ft^3/s Mar. 5, 1964, gage height, 22.64 ft; no flow at times during 1943-44, 1951-54, 1959, 1965, 1972-73, 1976, 1987, and 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 20	1500	5,750	14.86	June 3	1300	4,560	13.63
Feb. 16	0700	9,700	17.74	June 7	2000	*10,600	18.20
May 17	1000	10,300	18.07				

Minimum daily discharge, 2.4 ft^3/s Aug. 14, 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	16	37	365	305	103	265	84	238	24	5.7	11
2	13	16	36	194	569	97	315	86	1180	22	5.4	8.7
3	12	16	35	149	663	93	244	77	2900	20	5.0	6.4
4	10	16	33	132	1160	86	204	181	687	18	5.0	4.5
5	8.9	15	33	128	812	79	174	403	414	16	7.0	3.8
6	8.4	14	33	108	501	75	143	218	405	15	10	3.4
7	7.8	14	33	95	392	71	120	182	6850	13	6.0	3.7
8	7.5	65	34	87	301	69	104	142	2230	12	5.0	543
9	7.3	182	30	80	459	71	93	117	653	11	4.5	244
10	7.3	66	26	73	902	75	374	123	407	10	4.1	65
11	7.4	47	23	66	562	77	631	106	254	50	3.4	38
12	7.1	39	21	61	390	74	342	92	176	141	2.7	29
13	6.8	35	19	55	301	68	241	310	129	45	2.5	32
14	6.7	34	17	52	248	65	201	240	96	37	2.4	34
15	6.2	52	15	52	2700	64	175	295	79	27	2.6	186
16	6.6	276	14	51	5650	216	148	2380	65	18	2.4	59
17	11	172	15	58	884	263	135	7260	56	14	4.2	38
18	36	119	16	187	513	183	124	942	54	12	5.1	28
19	43	90	16	163	385	157	106	509	52	11	4.2	25
20	86	77	16	3260	284	146	100	365	50	10	3.2	33
21	59	69	14	854	228	130	501	626	52	30	3.2	30
22	44	61	12	462	211	122	379	1740	46	22	5.3	28
23	34	56	9.0	323	195	114	260	571	52	16	8.3	36
24	29	51	9.0	244	162	107	201	374	45	13	9.8	27
25	26	47	9.2	198	130	127	164	273	41	11	6.6	21
26	23	46	10	162	112	138	139	229	38	9.4	4.8	18
27	20	46	13	137	112	135	120	195	34	8.2	3.9	16
28	19	44	16	122	117	125	107	1060	31	7.5	3.1	14
29	18	41	20	459	---	118	103	1240	28	7.0	4.5	12
30	17	38	81	641	---	122	90	512	26	6.5	6.8	11
31	16	---	462	389	---	264	---	336	---	6.1	15	---
TOTAL	614.0	1860	1157.2	9407	19248	3634	6303	21268	17368	662.7	161.7	1608.5
MEAN	19.8	62.0	37.3	303	687	117	210	686	579	21.4	5.22	53.6
MAX	86	276	462	3260	5650	264	631	7260	6850	141	15	543
MIN	6.2	14	9.0	51	112	64	90	77	26	6.1	2.4	3.4
CFSM	.15	.48	.29	2.35	5.33	.91	1.63	5.32	4.49	.17	.04	.42
IN.	.18	.54	.33	2.71	5.55	1.05	1.82	6.13	5.01	.19	.05	.46

CAL YR 1989 TOTAL 64044.9 MEAN 175 MAX 6430 MIN 2.2 CFSM 1.36 IN. 18.47
WTR YR 1990 TOTAL 83292.1 MEAN 228 MAX 7260 MIN 2.4 CFSM 1.77 IN. 24.02

03302680 WEST FORK BLUE RIVER AT SALEM, IN

LOCATION.--Lat 38°36'19", long 86°05'40", in SW¼SE¼ sec.17, T.2 N., R.4 E., Washington County, Hydrologic Unit 05140104, on left bank at downstream side of bridge on East Market Street, 0.35 mi east of County Court House in Salem, 6.0 mi upstream from Hoggatt Branch, and 6.9 mi upstream from mouth.

DRAINAGE AREA.--19.0 mi^2.

PERIOD OF RECORD.--July 1970 to current year. Prior to December 10, 1970, nonrecording gage at site 0.55 mi downstream at datum 5.04 ft lower. Low-flow records not equivalent due to effluent from factory entering stream from right bank between sites.

GAGE.--Water-stage recorder. Datum of gage is 713.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 14-31. Records good except for estimated daily discharges and those below 1 ft^3/s, which are poor.

AVERAGE DISCHARGE.--20 years, 25.1 ft^3/s, 17.94 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,240 ft^3/s May 17, 1990, gage height, 15.58 ft from rating curve extended above 900 ft^3/s by a step-backwater analysis; minimum daily, 0.02 ft^3/s Sept. 24, 1970, and July 9, 10, 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 (revised) ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 20	0345	1,910	8.93	May 16	1530	1,580	8.29
Feb. 15	2115	1,770	8.67	May 17	0045	*9,240	*15.58
Apr. 21	0145	1,400	7.93	June 7	0945	1,340	7.81
May 16	0830	1,860	8.84				

Minimum daily discharge, 0.35 ft^3/s Sept. 5, 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	4.7	7.7	47	51	14	39	9.7	12	2.2	1.0	.68
2	1.8	4.0	7.2	30	98	14	41	8.3	11	1.9	1.0	.53
3	1.6	3.6	6.3	25	96	13	32	8.0	28	1.9	.96	.49
4	1.3	3.3	6.2	27	191	11	27	45	14	1.7	12	.42
5	1.0	3.1	6.7	23	105	10	23	30	11	1.5	24	.35
6	2.9	3.1	6.8	20	72	9.4	19	20	55	1.5	3.7	.35
7	3.1	5.4	6.0	17	58	8.3	16	16	308	1.4	2.2	.46
8	2.0	9.4	5.4	17	45	8.3	14	13	83	1.3	1.9	1.3
9	1.5	8.4	5.1	16	159	8.5	13	12	48	1.3	1.5	1.3
10	1.4	7.3	5.3	13	150	7.9	58	13	33	1.2	1.5	.92
11	1.3	6.3	5.3	12	84	7.6	58	9.5	24	13	1.3	.70
12	1.2	5.8	4.4	11	56	7.0	39	13	19	30	1.3	.63
13	1.1	5.3	4.0	9.7	44	6.8	30	27	15	7.0	1.7	.62
14	.86	5.8	3.5	9.5	36	6.6	27	17	13	5.1	1.5	.69
15	.82	128	3.0	9.4	669	8.0	22	66	11	3.7	1.3	.77
16	43	109	2.0	8.9	240	17	19	1100	9.5	2.8	1.1	.70
17	55	55	2.2	10	97	14	17	1350	8.2	2.1	1.0	.58
18	19	36	2.4	13	69	12	14	108	8.7	1.9	1.0	.52
19	39	28	2.3	16	53	12	13	64	6.5	1.7	.90	.79
20	42	25	2.2	581	40	10	15	47	10	2.9	.86	.74
21	28	19	2.0	129	33	9.7	282	41	7.6	12	1.1	.92
22	17	15	1.7	81	33	10	76	39	7.6	4.1	1.3	1.0
23	13	14	1.5	60	27	9.1	51	29	8.4	3.0	1.0	.99
24	10	13	1.8	46	22	11	37	24	6.0	2.1	.88	.82
25	8.6	12	2.0	38	17	13	26	21	4.7	1.8	.81	.79
26	7.4	12	2.3	29	15	20	20	20	3.5	1.5	.69	1.0
27	6.5	11	2.6	25	17	17	16	16	2.8	1.5	.61	.95
28	5.7	9.9	3.0	22	15	15	14	17	2.6	1.3	.52	.83
29	5.2	8.7	4.0	57	---	15	12	23	2.3	1.3	1.2	.79
30	4.8	8.1	20	61	---	19	10	17	2.4	1.2	1.2	.74
31	5.0	---	70	56	---	28	---	14	---	1.1	.89	---
TOTAL	332.78	579.2	204.9	1519.5	2592	372.2	1080	3237.5	775.8	117.0	71.92	22.37
MEAN	10.7	19.3	6.61	49.0	92.6	12.0	36.0	104	25.9	3.77	2.32	.75
MAX	55	128	70	581	669	28	282	1350	308	30	24	1.3
MIN	.82	3.1	1.5	8.9	15	6.6	10	8.0	2.3	1.1	.52	.35
CFSM	.56	1.02	.35	2.58	4.87	.63	1.89	5.50	1.36	.20	.12	.04
IN.	.65	1.13	.40	2.98	5.07	.73	2.11	6.34	1.52	.23	.14	.04

CAL YR 1989 TOTAL 14372.28 MEAN 39.4 MAX 577 MIN .82 CFSM 2.07 IN. 28.14
WTR YR 1990 TOTAL 10905.17 MEAN 29.9 MAX 1350 MIN .35 CFSM 1.57 IN. 21.35

03302800 BLUE RIVER AT FREDERICKSBURG, IN

LOCATION.--Lat 38°26'02", long 86°11'31", in NE¼NW¼ sec.16, T.1 S., R.3 E., Washington County, Hydrologic Unit 05140104, on downstream side of bridge on U.S. Highway 150 at Fredericksburg, 0.5 mi downstream from South Fork Blue River, and at mile 57.1.

DRAINAGE AREA.--283 mi^2, of which 76.9 mi^2 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 National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 12-31, June 25 to July 20, and July 23-30. Records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--22 years, 329 ft^3/s, 15.79 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,500 ft^3/s May 2, 1983, gage height, 24.37 ft; minimum daily, 2.9 ft^3/s Oct. 6, 1987.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 21, 1959, reached a stage of 29.20 ft, from floodmark, on left upstream wingwall.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 20	1800	9,510	20.42	May 17	1500	*12,700	*24.15
Feb. 16	0900	10,800	21.99	June 7	2100	9,470	20.37

Minimum daily discharge, 11 ft^3/s Sept. 28-30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	50	74	833	610	228	407	166	264	76	28	23
2	23	51	72	415	1000	218	585	155	325	71	26	18
3	22	48	69	315	1220	211	482	138	2180	66	24	16
4	21	43	64	275	2510	190	402	229	709	62	24	14
5	20	40	63	261	1640	175	340	775	440	58	72	13
6	21	36	67	221	989	164	276	396	689	54	76	12
7	30	39	64	193	765	151	230	310	6870	50	49	12
8	32	64	56	178	610	142	199	244	4460	46	35	184
9	26	112	53	166	1050	140	180	209	1360	43	31	98
10	23	103	51	154	2120	135	413	198	830	40	25	62
11	20	86	51	135	1150	130	1400	170	594	90	22	33
12	20	74	50	124	765	124	696	151	457	170	22	27
13	21	66	47	107	600	117	490	669	366	120	21	23
14	19	61	44	96	471	111	403	473	305	95	20	40
15	17	264	40	96	3110	110	349	541	266	70	21	47
16	19	1750	32	94	8750	184	294	5300	229	60	19	32
17	187	662	34	95	1880	288	260	11500	199	50	18	21
18	150	420	36	156	1100	222	225	3980	183	45	17	16
19	126	295	34	182	820	192	197	1330	174	41	17	18
20	256	244	33	6510	628	190	189	911	164	38	16	23
21	216	204	30	3180	513	176	1630	729	168	361	17	38
22	158	168	25	1130	473	172	993	987	147	166	20	50
23	119	145	20	786	433	164	634	691	168	100	28	38
24	99	123	21	611	359	156	467	547	143	72	20	26
25	84	112	22	486	296	177	364	449	128	58	18	20
26	78	109	25	387	254	223	301	408	108	47	17	16
27	67	105	27	318	246	241	257	376	100	42	15	13
28	61	97	30	270	257	222	231	358	94	38	15	11
29	56	87	40	516	---	213	210	573	88	36	22	11
30	51	78	100	980	---	213	183	415	82	33	36	11
31	51	---	700	727	---	391	---	323	---	30	30	---
TOTAL	2116	5736	2074	19997	34619	5770	13287	33701	22290	2329	821	966
MEAN	68.3	191	66.9	645	1236	186	443	1087	743	75.1	26.5	32.2
MAX	256	1750	700	6510	8750	391	1630	11500	6870	361	76	184
MIN	17	36	20	94	246	110	180	138	82	30	15	11
CFSM	.24	.68	.24	2.28	4.37	.66	1.57	3.84	2.63	.27	.09	.11
IN.	.28	.75	.27	2.63	4.55	.76	1.75	4.43	2.93	.31	.11	.13

CAL YR 1989 TOTAL 159719 MEAN 438 MAX 6920 MIN 17 CFSM 1.55 IN. 20.99
WTR YR 1990 TOTAL 143705 MEAN 394 MAX 11500 MIN 11 CFSM 1.39 IN. 18.89

03302849 WHISKEY RUN AT MARENGO, IN

LOCATION.--Lat 38°22'32", long 86°20'41", in SW¼NW¼ sec.6, T.2 S., R.2 E., Crawford County, Hydrologic Unit 05140104, on left (north) bank about 100 ft upstream from bridge and intersection of North Main Street and North Water Street in Marengo, known as Old Town.

DRAINAGE AREA.--7.02 mi^2.

PERIOD OF RECORD.--October 1986 to current year.

GAGE.--Water-stage recorder. Datum of gage is 561.446 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges: Records poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,920 ft^3/s June 7, 1990, gage height, 12.39 ft; no flow at times most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 26, 1979 appears to be highest known from reports of local residents, and reached a stage of 15.89 ft from levels of high-water mark located in Old Town grocery store just downstream and across bridge from gage.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft^3/s (revised) and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 20	0200	1,050	7.05	June 2	2345	682	5.69
Feb. 15	1445	644	5.54	June 6	1615	479	4.86
May 16	1900	1,330	7.97	June 7	0715	*2,920	12.39

Minimum daily discharge, no flow on many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.18	.22	.26	8.6	9.5	1.7	9.8	1.8	3.1	.23	.01	.01
2	.18	.17	.25	4.6	31	1.7	12	1.7	27	.19	.01	.00
3	.17	.16	.22	3.4	29	1.6	8.5	1.7	58	.17	.00	.00
4	.16	.16	.19	3.3	58	1.3	6.4	4.9	10	.16	.01	.00
5	.14	.14	.20	2.9	22	1.2	4.8	5.8	6.2	.16	.32	.00
6	.14	.14	.19	2.5	12	1.1	3.7	4.3	66	.14	.16	.00
7	.15	.17	.16	2.1	9.3	.93	2.9	3.4	855	.12	.09	.00
8	.13	.22	.14	1.9	6.5	.97	2.4	2.5	41	.10	.03	.03
9	.12	.21	.14	1.7	30	1.0	2.1	1.9	18	.04	.02	.02
10	.09	.27	.14	1.4	32	.96	26	1.9	8.9	.04	.02	.01
11	.04	.25	.13	1.3	13	.95	19	1.3	5.1	.04	.01	.00
12	.04	.21	.13	1.1	7.3	.88	10	2.4	3.5	.17	.00	.00
13	.04	.19	.11	.87	5.1	.82	6.7	18	2.4	.17	.00	.00
14	.03	.20	.10	.80	3.7	.79	5.6	7.2	1.7	.15	.01	.01
15	.04	15	.09	.83	258	1.2	4.8	25	1.3	.14	.00	.05
16	.13	17	.08	.77	60	6.7	3.9	392	.96	.09	.00	.03
17	.34	7.3	.07	1.2	15	4.3	3.7	216	.93	.07	.00	.01
18	.21	4.1	.06	2.6	8.5	3.1	3.3	13	2.1	.03	.00	.00
19	.75	2.7	.05	7.0	5.7	3.2	2.8	5.6	1.0	.02	.00	.08
20	1.5	2.1	.04	288	4.0	3.0	3.1	3.7	1.4	.12	.00	.10
21	1.1	1.6	.03	25	3.2	2.7	31	21	1.3	3.7	.00	.63
22	.71	1.3	.03	12	3.6	2.6	13	19	1.1	.58	.11	.37
23	.48	1.1	.03	7.6	3.1	2.4	8.1	7.6	1.4	.30	.10	.18
24	.37	.81	.03	5.4	2.5	2.8	5.7	4.3	.78	.21	.02	.13
25	.29	.74	.03	4.3	1.8	4.1	4.2	2.9	.49	.17	.01	.07
26	.21	.63	.03	3.3	1.5	5.3	3.2	3.0	.38	.15	.00	.04
27	.20	.55	.03	2.7	1.8	4.3	2.5	2.5	.33	.13	.00	.03
28	.18	.51	.04	2.3	1.9	3.6	2.2	25	.29	.08	.00	.03
29	.18	.36	.05	23	---	3.3	2.0	20	.28	.04	.11	.02
30	.17	.29	7.2	18	---	5.2	1.6	7.8	.26	.03	.13	.02
31	.19	---	26	11	---	8.9	---	4.6	---	.02	.03	---
TOTAL	8.66	58.80	36.25	451.47	639.0	82.60	215.0	831.8	1120.20	7.76	1.20	1.87
MEAN	.28	1.96	1.17	14.6	22.8	2.66	7.17	26.8	37.3	.25	.039	.062
MAX	1.5	17	26	288	258	8.9	31	392	855	3.7	.32	.63
MIN	.03	.14	.03	.77	1.5	.79	1.6	1.3	.26	.02	.00	.00
CFSM	.04	.28	.17	2.07	3.25	.38	1.02	3.82	5.32	.04	.01	.01
IN.	.05	.31	.19	2.39	3.39	.44	1.14	4.41	5.94	.04	.01	.01

CAL YR 1989 TOTAL 2348.16 MEAN 6.43 MAX 139 MIN .01 CFSM .92 IN. 12.44
WTR YR 1990 TOTAL 3454.61 MEAN 9.46 MAX 855 MIN .00 CFSM 1.35 IN. 18.31

03303000 BLUE RIVER NEAR WHITE CLOUD, IN

LOCATION.--Lat 38°14'15", long 86°13'42", in NW¼SE¼ sec.19, T.3 S., R.3 E., Harrison County, Hydrologic Unit 05140104, on left bank 400 ft downstream from Spring Creek, 600 ft upstream from bridge on Interstate 64, 0.2 mi upstream from bridge on State Highway 62, 0.8 mi north of White Cloud, and at mile 14.7.

DRAINAGE AREA.--476 mi^2, of which 192 mi^2 does not contribute directly to surface runoff. Also, part of flow from Indian Creek, downstream from Corydon, IN, enters Blue River via solution channel in Karst area through Harrison Spring.

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

REVISED RECORDS.--WSP 1335: 1921-32, 1933(M), 1935-38(M), 1944. WSP 1385: Drainage area. WSP 1555: 1953. WDR IN-75-1: 1973.

GAGE.--Water-stage recorder. Datum of gage is 434.26 ft above National Geodetic Vertical Datum of 1929 (levels by State of Indiana, Department of Natural Resources). Prior to Nov. 16, 1938, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records good.

AVERAGE DISCHARGE.--60 years, 639 ft^3/s, 18.23 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,500 ft^3/s Jan. 22, 1959, gage height, 23.07 ft; minimum daily, 9.6 ft^3/s Oct. 17, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 7,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 21	0700	11,800	13.82	May 18	0600	20,900	18.78
Feb. 16	2300	15,300	15.96	June 7	1600	*23,200	*20.09

Minimum daily discharge, 39 ft^3/s Sept. 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	113	127	188	1980	1480	611	1010	542	936	241	88	81
2	111	120	179	1070	1800	572	1190	506	1440	228	82	75
3	109	118	170	748	2590	553	1200	479	4330	209	77	60
4	108	116	163	648	3700	522	1040	823	2650	195	76	51
5	102	114	156	590	4300	484	908	1610	1440	183	101	45
6	99	110	152	536	2520	457	776	1240	1490	172	104	42
7	101	108	151	468	1910	431	660	922	16700	161	145	39
8	98	154	147	427	1580	411	579	779	13400	151	113	62
9	98	205	142	400	1650	400	527	677	4580	141	92	298
10	108	248	137	374	3730	396	877	630	2760	135	83	242
11	103	253	130	346	2960	401	2520	572	1910	204	74	195
12	95	230	126	319	2000	381	1850	525	1470	279	67	137
13	90	211	119	297	1570	363	1310	822	1200	399	67	117
14	88	192	119	273	1300	350	1080	1360	993	310	72	125
15	89	239	109	255	3880	347	964	1210	845	221	63	192
16	94	1100	92	252	13900	553	852	5540	735	182	58	196
17	142	1500	97	269	8200	679	772	19000	649	159	58	168
18	240	961	99	377	2950	648	703	15500	648	142	56	118
19	339	719	94	441	2140	560	638	3770	547	129	53	124
20	312	572	88	6540	1640	525	601	2530	521	121	53	119
21	439	487	85	9170	1330	508	1970	2160	495	357	51	103
22	387	418	77	2910	1170	490	2660	2860	480	700	57	141
23	312	359	65	1950	1090	473	1570	2050	485	342	64	174
24	249	322	60	1530	938	459	1210	1550	454	229	63	142
25	212	288	61	1230	795	474	995	1280	392	179	70	115
26	187	269	64	1020	686	545	852	1120	347	149	63	95
27	169	256	71	847	639	602	759	1030	315	131	52	80
28	158	244	77	739	629	589	694	1430	294	120	48	71
29	144	223	95	1130	---	562	644	2050	274	110	60	64
30	136	203	255	2130	---	575	585	1500	256	103	75	61
31	131	---	1070	1770	---	801	---	1120	---	96	74	---
TOTAL	5163	10466	4638	41036	73077	15722	31996	77187	63036	6478	2259	3532
MEAN	167	349	150	1324	2610	507	1067	2490	2101	209	72.9	118
MAX	439	1500	1070	9170	13900	801	2660	19000	16700	700	145	298
MIN	88	108	60	252	629	347	527	479	256	96	48	39
CFSM	.35	.73	.31	2.78	5.48	1.07	2.24	5.23	4.41	.44	.15	.25
IN.	.40	.82	.36	3.21	5.71	1.23	2.50	6.03	4.93	.51	.18	.28

CAL YR 1989 TOTAL 336620 MEAN 922 MAX 10000 MIN 60 CFSM 1.94 IN. 26.31
WTR YR 1990 TOTAL 334590 MEAN 917 MAX 19000 MIN 39 CFSM 1.93 IN. 26.15

03303300 MIDDLE FORK ANDERSON RIVER AT BRISTOW, IN

LOCATION.--Lat 38°08'19", long 86°43'16", in SW¼NE¼ sec.27, T.4 S., R.3 W., Perry County, Hydrologic Unit 05140201, on left bank at downstream side of bridge on State Highway 145 at Bristow, 2.0 mi downstream from Coon Branch, 5.8 mi upstream from Sulphur Fork Creek, and at mile 14.1.

DRAINAGE AREA.--39.8 mi^2.

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

REVISED RECORDS.--WDR IN-72-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 395.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 13-27 and Sept. 24-30. Records poor. Flow regulated by Forest Service and Middle Fork Anderson River Conservancy District control structures beginning June 1967.

AVERAGE DISCHARGE.--29 years, 57.6 ft^3/s, 19.65 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,360 ft^3/s Mar. 9, 1964; maximum gage height, 19.33 ft Mar. 4, 1964; no flow at times most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 21, 1959, reached a stage of 20.0 ft, from floodmark, discharge, 15,000 ft^3/s, from rating curve extended above 7,000 ft^3/s. This is the maximum flood since 1905, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,490 ft^3/s May 17, gage height, 15.39 ft; minimum daily, 0.02 ft^3/s Sept. 18.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.14	2.0	3.0	104	86	29	107	51	63	3.8	.59	.93
2	.36	1.9	2.9	52	238	26	105	60	53	3.5	.65	.68
3	.45	1.8	2.6	35	255	25	81	55	122	3.4	.60	.39
4	.44	1.9	2.5	30	335	23	63	105	85	3.1	.80	.45
5	.44	1.9	2.5	27	294	21	52	132	56	7.5	1.3	.38
6	.47	1.8	2.6	23	186	19	42	89	174	10	.84	.36
7	.51	2.0	2.6	20	127	18	35	70	361	6.7	.58	.30
8	.44	2.6	2.5	18	93	18	29	54	337	5.1	.54	.20
9	.35	3.4	2.5	16	204	18	26	43	252	4.6	.61	.17
10	.32	3.2	2.5	14	338	17	148	39	105	4.3	.81	.08
11	.23	3.2	2.6	13	238	17	255	34	60	4.0	.62	.26
12	.18	2.9	2.5	12	137	23	145	34	40	4.0	.84	.56
13	.23	2.7	2.3	11	86	24	91	63	29	3.8	1.2	.48
14	.26	2.6	2.0	10	57	16	75	69	23	3.7	1.0	.43
15	.17	9.6	1.6	9.8	651	16	68	152	19	3.1	.58	.28
16	.60	43	1.3	9.3	561	46	57	581	16	2.4	.33	.14
17	1.7	32	1.1	15	436	47	52	868	14	1.8	.92	.03
18	1.8	18	1.2	48	416	36	52	466	13	1.4	.88	.02
19	3.3	12	1.3	53	395	38	47	442	12	1.4	.73	.95
20	5.4	9.2	1.1	728	319	39	42	440	12	8.3	1.2	.73
21	5.7	7.5	.92	424	142	35	189	622	13	5.5	1.5	1.0
22	4.9	6.3	.83	393	74	31	173	609	13	5.3	.84	3.1
23	3.8	5.6	.78	345	62	28	112	452	11	3.6	.50	2.0
24	2.3	4.9	.88	191	51	33	80	411	8.9	2.9	.42	1.0
25	1.9	4.3	1.0	69	40	46	62	323	7.2	2.2	.57	.56
26	1.9	3.9	1.2	42	34	56	49	134	5.7	1.5	.65	.38
27	1.6	4.0	1.3	32	32	50	40	83	4.9	1.0	.69	.32
28	1.5	3.9	1.5	27	31	42	35	431	4.5	.95	.66	.27
29	1.6	3.7	3.3	133	---	38	42	403	4.2	.78	3.0	.25
30	2.2	3.2	27	172	---	53	38	255	4.0	.65	1.8	.22
31	2.2	---	123	113	---	106	---	104	---	.61	1.2	---
TOTAL	47.39	205.0	204.91	3189.1	5918	1034	2392	7674	1922.4	110.89	27.45	16.92
MEAN	1.53	6.83	6.61	103	211	33.4	79.7	248	64.1	3.58	.89	.56
MAX	5.7	43	123	728	651	106	255	868	361	10	3.0	3.1
MIN	.14	1.8	.78	9.3	31	16	26	34	4.0	.61	.33	.02
CFSM	.04	.17	.17	2.58	5.31	.84	2.00	6.22	1.61	.09	.02	.01
IN.	.04	.19	.19	2.98	5.53	.97	2.24	7.17	1.80	.10	.03	.02

CAL YR 1989 TOTAL 22531.40 MEAN 61.7 MAX 1170 MIN .00 CFSM 1.55 IN. 21.06
WTR YR 1990 TOTAL 22742.06 MEAN 62.3 MAX 868 MIN .02 CFSM 1.57 IN. 21.26

03303400 CROOKED CREEK NEAR SANTA CLAUS, IN

LOCATION.--Lat 38°07'05", long 86°53'24", in SW¼SE¼ sec.31, T.4 S., R.4 W., Spencer County, Hydrologic Unit 05140201, on right bank at upstream side of bridge on county road, 1.3 mi east of Santa Claus Post Office, and 1.8 mi upstream from unnamed right-bank tributary.

DRAINAGE AREA.--7.86 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 404.34 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 1-11, and Dec. 16-29. Records poor.

AVERAGE DISCHARGE.--21 years, 11.2 ft^3/s, 19.35 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,100 ft^3/s Apr. 28, 1970, gage height, 9.74 ft, from rating curve extended above 450 ft^3/s on basis of two indirect measurements of peak flow at site 1.6 mi downstream, drainage area, 16.0 mi^2, adjusted to gage site; maximum gage height, 10.13 ft, Apr. 3 1989; no flow many days most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 20	0330	*1,180	*9.20	May 17	0145	1,000	9.13
Feb. 15	1430	915	9.07	May 21	1915	915	9.07
May 15	1215	538	8.34	May 28	0530	959	9.10
May 16	1615	959	9.10	June 6	1700	522	8.26

Minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	.33	.04	3.7	22	2.9	21	14	7.4	.21	.09	.24
2	.03	.33	.05	1.6	75	2.9	14	7.3	10	.16	.09	.15
3	.02	.19	.04	1.0	66	2.4	8.0	9.1	17	.13	.08	.09
4	.02	.11	.03	1.9	106	1.8	6.2	19	5.8	.13	5.4	.08
5	.01	.06	.06	1.0	20	1.8	4.4	10	3.8	1.7	11	.06
6	.01	.03	.07	.76	10	1.5	3.2	7.1	78	.81	1.0	.05
7	.00	.03	.05	.58	12	1.3	2.3	5.5	30	.19	.48	.05
8	.00	.41	.04	.51	6.2	1.6	1.9	3.9	11	.13	.35	.06
9	.00	.31	.04	.45	129	1.6	1.7	2.2	6.8	.12	.29	.05
10	.00	.29	.05	.31	62	2.0	111	3.0	4.5	.10	.24	.04
11	.00	.25	.06	.32	14	2.2	28	1.5	3.1	.09	.19	.04
12	.00	.20	.04	.21	6.8	1.8	11	11	2.4	.09	.15	.04
13	.00	.15	.01	.11	4.2	1.3	7.1	37	2.0	.12	.17	.04
14	.00	.19	.01	.16	2.6	1.3	7.0	9.2	4.1	.13	.14	.04
15	.00	20	.01	.17	435	3.6	5.9	147	2.5	.11	.09	.05
16	.00	3.1	.00	.14	71	11	4.9	429	1.8	.09	.09	.04
17	.45	.35	.00	5.9	21	4.7	5.5	247	1.5	.08	.31	.03
18	.35	.19	.00	6.2	12	2.6	4.1	25	1.4	.06	.15	.01
19	4.3	.10	.00	25	7.4	7.2	3.4	14	1.0	.04	.10	2.7
20	1.2	.10	.00	371	5.2	5.2	3.4	9.4	2.5	25	3.4	.09
21	.50	.09	.00	26	4.4	3.7	30	172	.95	47	1.2	3.9
22	.38	.08	.00	12	8.0	4.1	10	61	.90	6.8	.43	1.6
23	.28	.07	.00	7.1	6.0	4.6	7.0	17	.61	1.3	.23	.15
24	.20	.05	.00	3.3	4.5	13	5.4	8.7	.50	.62	.13	.09
25	.15	.06	.00	2.1	2.8	12	4.1	6.2	.37	.40	.10	.07
26	.16	.07	.00	1.2	2.7	8.4	2.5	24	.32	.28	.09	.06
27	.17	.07	.00	.96	3.5	5.5	2.1	9.2	.29	.21	.08	.05
28	.12	.07	.00	.74	3.2	4.3	2.0	336	.26	.15	.07	.04
29	.07	.05	9.1	71	---	4.6	4.4	64	.22	.12	26	.04
30	.04	.04	8.1	17	---	26	2.3	19	.21	.20	1.5	.04
31	.03	---	20	6.9	---	19	---	11	---	.13	.46	---
TOTAL	8.52	27.37	37.80	569.32	1122.5	165.9	323.8	1739.3	201.23	86.70	54.10	9.99
MEAN	.27	.91	1.22	18.4	40.1	5.35	10.8	56.1	6.71	2.80	1.75	.33
MAX	4.3	20	20	371	435	26	111	429	78	47	26	3.9
MIN	.00	.03	.00	.11	2.6	1.3	1.7	1.5	.21	.04	.07	.01
CFSM	.03	.12	.16	2.34	5.10	.68	1.37	7.14	.85	.36	.22	.04
IN.	.04	.13	.18	2.69	5.31	.79	1.53	8.23	.95	.41	.26	.05

CAL YR 1989 TOTAL 4277.42 MEAN 11.7 MAX 399 MIN .00 CFSM 1.49 IN. 20.24
WTR YR 1990 TOTAL 4346.53 MEAN 11.9 MAX 435 MIN .00 CFSM 1.52 IN. 20.57

03322011 PIGEON CREEK NEAR FORT BRANCH, IN

LOCATION.--Lat 38°15'08", long 87°31'11", in NW¼SW¼ sec.15, T.3 S., R.10 W., Gibson County, Hydrologic Unit 05140202, on right bank 20 ft downstream from bridge on State Highway 168, 1.1 mi upstream from West Fork Pigeon Creek and 2.6 mi east of intersection of U.S. Highway 41 at Fort Branch.

DRAINAGE AREA.--35.4 mi^2.

PERIOD OF RECORD.--October 1986 to current year.

GAGE.--Water-stage recorder. Datum of gage is 400.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 3, 8-28, Jan. 13, June 26-29, July 3, 4, 7-9, 13-19, July 23 to Aug. 3, Aug. 6-16 and 22-28. Records fair except for estimated daily discharges, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,810 ft^3/s May 17, 1990, gage height, 16.10 ft; maximum gage height, 16.86 ft Apr. 4, 1989; minimum daily discharge, 0.64 ft^3/s Oct. 3, 1987.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft^3/s (revised) and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 15	1830	1,820	13.92	May 17	0045	*2,810	*16.10
Jan. 20	0630	2,690	15.86	May 28	0915	1,950	14.25
Feb. 15	1400	2,120	14.65	June 6	1830	1,650	13.45
Apr. 10	1230	1,520	13.09	Aug. 17	1845	2,080	14.54

Minimum daily discharge, 1.7 ft^3/s Oct. 11-15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	6.4	7.5	24	81	14	51	14	25	7.8	3.8	2.4
2	2.0	6.4	7.5	16	335	14	52	11	23	7.0	3.6	2.3
3	1.9	6.1	7.4	15	93	13	21	22	20	6.4	3.5	2.2
4	1.8	5.9	7.3	27	308	11	17	137	17	6.2	24	2.2
5	1.9	5.8	7.3	18	45	11	14	28	17	64	59	2.4
6	5.8	5.8	7.2	14	26	10	11	20	462	15	8.0	2.4
7	2.8	14	6.7	12	20	9.8	10	15	216	7.8	7.0	4.1
8	2.0	21	6.6	12	17	11	9.6	12	115	7.4	6.0	3.6
9	1.9	6.5	6.6	11	525	11	9.4	11	26	7.2	5.2	43
10	1.8	5.3	6.4	9.4	189	12	596	16	18	9.9	4.7	4.9
11	1.7	4.9	6.2	9.4	36	11	87	9.5	15	8.8	4.3	3.4
12	1.7	4.6	6.2	8.7	22	10	32	68	13	45	4.0	2.7
13	1.7	4.5	6.0	8.4	18	9.9	23	60	11	8.4	3.6	2.5
14	1.7	4.7	6.0	8.0	14	9.6	21	21	11	7.0	3.3	2.4
15	1.7	573	5.8	8.0	1150	12	19	274	10	6.2	3.1	2.2
16	193	87	5.8	7.9	213	19	17	1750	9.3	5.6	2.9	2.2
17	133	24	5.6	12	40	12	21	1650	8.8	5.0	1140	2.1
18	8.8	17	5.6	21	28	9.7	16	108	8.3	4.6	117	5.5
19	21	14	5.4	151	23	10	14	39	7.9	4.3	6.2	24
20	20	13	5.4	1640	18	9.1	14	33	93	30	12	3.1
21	8.4	12	5.0	135	17	9.0	92	203	16	276	8.3	174
22	6.5	11	4.9	56	40	9.5	26	85	11	27	4.0	12
23	6.1	10	4.9	44	25	11	19	35	9.1	10	3.5	4.0
24	6.4	9.2	4.9	34	19	15	15	29	8.1	7.0	3.1	3.5
25	6.1	9.0	5.2	33	13	21	13	27	7.3	5.8	2.8	3.4
26	6.0	8.9	5.4	25	13	16	11	324	7.0	5.0	2.7	3.2
27	6.0	8.8	8.0	25	15	12	11	41	6.4	4.7	2.6	3.1
28	6.2	8.3	20	21	15	11	11	1100	6.0	4.4	2.5	3.0
29	6.2	7.5	76	122	---	17	10	81	5.8	4.3	7.6	3.0
30	6.3	7.5	97	43	---	74	9.3	37	8.6	4.1	3.0	3.0
31	6.4	---	298	24	---	50	---	30	---	4.0	2.4	---
TOTAL	479.0	922.1	657.8	2594.8	3358	474.6	1272.3	6290.5	1211.6	615.9	1463.7	331.8
MEAN	15.5	30.7	21.2	83.7	120	15.3	42.4	203	40.4	19.9	47.2	11.1
MAX	193	573	298	1640	1150	74	596	1750	462	276	1140	174
MIN	1.7	4.5	4.9	7.9	13	9.0	9.3	9.5	5.8	4.0	2.4	2.1
CFSM	.44	.87	.60	2.36	3.39	.43	1.20	5.73	1.14	.56	1.33	.31
IN.	.50	.97	.69	2.73	3.53	.50	1.34	6.61	1.27	.65	1.54	.35

CAL YR 1989 TOTAL 22156.1 MEAN 60.7 MAX 1400 MIN 1.1 CFSM 1.71 IN. 23.28
WTR YR 1990 TOTAL 19672.1 MEAN 53.9 MAX 1750 MIN 1.7 CFSM 1.52 IN. 20.67

03322900 WABASH RIVER AT LINN GROVE, IN

LOCATION.--Lat 40°39'22", long 85°01'58", in SE¼SE¼ sec.34, T.26 N., R.13 E., Adams County, Hydrologic Unit 05120101, on right bank 10 ft downstream from bridge on State Highway 218, 800 ft downstream from Shoemaker ditch, 0.8 mi north of Linn Grove, and 2.2 mi upstream from Rice ditch.

DRAINAGE AREA.--453 mi^2.

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

REVISED RECORDS.--WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 808.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 7 to Jan. 5 and Jan. 14-16. Records good except for estimated daily discharges, which are poor. Occasional regulation of Grand Lake, diversion from or into St. Marys River basin, and into Miami and Erie Canals.

AVERAGE DISCHARGE.--26 years, 379 ft^3/s, 11.36 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,560 ft^3/s Mar. 17, 1978, gage height, 13.87 ft; minimum daily, 4.3 ft^3/s July 9, 1988.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in April 1964 reached a stage of 13.13 ft, from floodmark, discharge, 6,900 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,900 ft^3/s and maximum(*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 4	0900	3,210	10.26	June 10	1700	3,650	10.80
Feb. 17	1800	*4,600	*11.83	July 16	1600	2,430	9.20
Feb. 24	0300	2,360	9.07	July 24	1400	3,060	10.07
Apr. 12	2100	1,950	8.42	Aug. 19	2200	2,560	9.40
May 18	0700	3,660	10.82	Aug. 22	1800	2,160	8.74

Minimum daily discharge, 24 ft^3/s Oct. 9, 15, and 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	31	84	610	151	560	466	134	298	90	290	215
2	29	32	80	440	1530	486	726	115	283	79	279	155
3	30	58	71	375	2400	453	538	108	970	76	266	128
4	28	63	71	1040	3110	391	331	234	992	69	274	112
5	28	60	88	1470	3040	342	257	1190	544	62	436	102
6	27	61	164	953	2630	318	203	1210	390	58	324	92
7	34	66	160	563	1790	292	168	621	434	55	259	95
8	29	77	154	404	1160	284	135	330	1350	51	237	100
9	24	93	148	373	974	259	124	233	2610	50	231	1250
10	26	95	156	602	939	195	230	208	3530	54	222	1300
11	25	86	159	566	732	1250	1380	184	3170	282	211	596
12	25	73	142	335	561	1700	1830	181	2050	1090	206	265
13	25	66	130	195	456	1350	1700	1410	933	1720	632	178
14	25	60	120	142	447	649	983	2210	413	2020	749	188
15	24	96	112	126	1200	378	657	2550	269	2100	315	284
16	24	979	103	119	2680	466	518	2780	218	2370	151	231
17	30	1410	92	155	4370	775	452	3180	183	2030	98	168
18	150	820	98	325	4190	511	395	3560	161	950	1720	146
19	69	327	103	344	2990	293	368	2700	134	485	2460	146
20	59	199	105	363	1750	218	363	1480	122	356	2250	179
21	220	168	92	1140	1020	183	622	728	128	381	1940	159
22	267	139	78	1010	1490	166	723	512	124	1080	2100	173
23	131	116	86	566	2210	151	536	421	159	2250	1840	195
24	76	98	99	386	2260	130	439	378	136	2980	882	228
25	56	92	104	313	1630	115	387	372	110	2510	405	202
26	45	89	105	279	972	106	278	604	98	1260	242	151
27	40	87	107	219	709	98	190	530	92	598	188	129
28	38	109	111	166	634	96	173	417	116	420	255	118
29	33	128	117	148	---	98	166	365	162	362	1280	110
30	31	92	143	140	---	121	151	332	122	334	872	106
31	32	---	225	132	---	167	---	314	---	306	383	---
TOTAL	1711	5870	3607	13999	48025	12601	15489	29591	20301	26528	21977	7501
MEAN	55.2	196	116	452	1715	406	516	955	677	856	709	250
MAX	267	1410	225	1470	4370	1700	1830	3560	3530	2980	2460	1300
MIN	24	31	71	119	151	96	124	108	92	50	98	92
CFSM	.12	.43	.26	1.00	3.79	.90	1.14	2.11	1.49	1.89	1.56	.55
IN.	.14	.48	.30	1.15	3.94	1.03	1.27	2.43	1.67	2.18	1.80	.62

CAL YR 1989 TOTAL 173280 MEAN 475 MAX 5350 MIN 24 CFSM 1.05 IN. 14.23
WTR YR 1990 TOTAL 207200 MEAN 568 MAX 4370 MIN 24 CFSM 1.25 IN. 17.02

03323000 WABASH RIVER AT BLUFFTON, IN

LOCATION.--Lat 40°44'30", long 85°10'19", in NW¼NE¼ sec.4, T.26 N., R.12 E., Wells County, Hydrologic Unit 05120101, on downstream side of left abutment of Main Street (State Highway 1) bridge in Bluffton, 2 mi downstream from Sixmile Creek, and at mile 434.5.

DRAINAGE AREA.--532 mi^2.

PERIOD OF RECORD.--October 1930 to September 1971 (discharge). October 1987 to current year (stage only). Gage-height records collected at same site since December 1910 are contained in reports of National Weather Service.

GAGE.--Data-Collection Platform with Ultrasonic Ranger. Datum of gage is 793.01 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Gage-height accuracy to tenths of a foot for stage-only period. Estimated gage heights for Mar. 17, Apr. 27, May 8 and 13, June 22, July 1 and 6, and Sept. 9 are reasonable accurate.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 16.07 ft Feb. 15, 1950; minimum gage height, 0.61 ft July 21, 1932.

EXTREMES FOR CURRENT YEAR.--Maximum 2400 hr gage height, 11.1 ft May 16; minimum 2400 hr gage height, 1.2 ft Oct. 12.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	1.6	1.9	5.7	2.9	3.7	3.9	2.2	2.9	---	2.6	2.4
2	1.4	1.5	2.0	6.1	8.3	3.5	4.2	2.0	2.9	---	2.7	2.3
3	1.5	1.8	1.9	5.6	8.3	3.3	3.4	2.0	5.3	---	2.4	1.9
4	1.5	1.9	2.0	5.6	9.5	3.1	2.9	3.9	4.6	---	2.7	1.9
5	1.5	1.9	1.9	6.0	8.8	3.0	2.9	6.0	3.4	---	3.3	1.9
6	1.5	1.8	2.4	4.3	8.1	3.0	2.6	5.2	3.1	---	2.9	1.9
7	1.6	2.2	2.3	3.4	6.7	3.0	2.6	3.5	3.3	---	2.4	1.9
8	1.6	1.9	2.4	3.0	5.2	3.0	2.3	2.9	6.8	---	2.4	1.9
9	1.4	2.0	2.3	3.3	5.4	2.9	2.3	2.6	8.3	---	2.4	6.0
10	1.4	2.0	2.4	4.1	4.6	3.7	3.8	2.4	9.4	---	2.4	5.2
11	1.5	2.0	2.4	3.4	3.9	6.5	6.1	2.2	9.0	---	2.4	3.4
12	1.2	1.8	2.6	2.9	3.4	6.8	6.7	3.0	6.9	---	2.4	2.4
13	1.4	1.8	2.2	2.3	3.3	5.4	6.2	7.1	4.2	---	4.1	2.3
14	1.6	1.9	2.4	2.4	3.3	3.8	4.3	7.3	3.1	---	3.9	2.4
15	1.4	3.5	2.0	2.3	8.3	3.1	3.8	7.9	2.9	---	2.4	2.9
16	1.4	5.7	2.0	2.3	9.6	3.9	3.3	11.1	2.6	---	1.9	2.3
17	1.4	6.0	2.3	2.7	10.9	4.2	3.1	9.5	2.6	---	---	2.2
18	2.3	3.8	2.3	3.1	10.7	3.4	2.9	9.6	2.3	---	---	2.2
19	1.9	3.0	2.2	2.9	9.0	2.9	3.0	8.3	2.4	---	---	2.2
20	1.9	2.7	2.3	3.8	6.2	2.7	3.1	5.6	2.2	---	---	2.2
21	2.6	2.3	2.2	5.8	4.9	2.6	4.2	3.9	2.2	---	---	2.2
22	2.7	2.3	2.2	4.8	9.9	2.6	3.7	3.4	2.0	---	---	2.2
23	2.3	2.0	2.3	3.4	8.4	2.3	3.3	3.1	2.3	---	---	2.3
24	1.9	2.0	2.4	3.0	7.6	2.2	3.1	3.0	2.2	---	---	2.3
25	1.8	2.0	2.3	2.9	6.1	2.3	2.9	3.3	2.0	---	---	2.4
26	1.8	2.0	2.4	2.9	4.8	2.0	2.6	4.1	2.0	---	---	1.9
27	1.6	2.0	2.4	2.6	4.2	2.0	2.3	3.4	2.0	3.4	---	1.9
28	1.6	2.2	2.4	2.2	4.1	2.2	2.3	3.3	2.0	3.0	---	1.9
29	1.6	2.3	2.6	2.2	---	2.2	2.2	3.1	2.4	3.0	---	1.9
30	1.5	2.0	2.7	2.2	---	2.3	2.3	2.9	---	3.0	4.1	1.9
31	1.6	---	4.9	2.0	---	2.4	---	2.9	---	2.9	3.0	---
MEAN	1.7	2.4	2.4	3.5	6.7	3.2	3.4	4.5	---	---	---	2.4
MAX	2.7	6.0	4.9	6.1	10.9	6.8	6.7	11.1	---	---	---	6.0
MIN	1.2	1.5	1.9	2.0	2.9	2.0	2.2	2.0	---	---	---	1.9

03323500 WABASH RIVER AT HUNTINGTON, IN

LOCATION.--Lat 40°51'20", long 85°29'53", in SW¼NE¼ sec.27, T.28 N., R.9 E., Huntington County, Hydrologic Unit 05120101, on right bank at the Huntington Water and Light Plant, 2 mi south of Huntington, 2.4 mi downstream from Huntington Lake, 3.2 mi upstream from Little River, and at mile 409.0.

DRAINAGE AREA.--721 mi^2.

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

REVISED RECORDS.--WSP 1909: 1959. WSP 2109: Drainage area.

GAGE.--Data-Collection Platform. Datum of gage was 700.04 ft above National Geodetic Vertical Datum of 1929 (levels by State of Indiana, Department of Natural Resources). July 5, 1951, to Sept. 30, 1974, water-stage recorder at site described in "LOCATION" paragraph. Prior to July 5, 1951, nonrecording gage at same site and datum. Data-Collection Platform installed on June 13, 1986.

REMARKS.--Flow regulated by Huntington Lake since January 1969. Daily discharge computed from relation between discharge, head, and gate openings for Huntington Lake beginning Oct. 1, 1974.

COOPERATION.--Records of daily discharge provided by U.S. Army Corps of Engineers beginning Oct. 1, 1976.

AVERAGE DISCHARGE.--39 years, 596 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,900 ft^3/s Feb. 10, 1959; maximum gage height, 23.20 ft Feb. 10, 1959 (backwater from ice); minimum daily discharge, 0.0 ft^3/s Sept. 12, 1989.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1913 reached a stage of 22.7 ft, from high-water mark by U.S. Army Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 4,720 ft^3/s Feb. 19; minimum daily discharge, 37 ft^3/s Aug. 19.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	58	145	145	468	162	2010	256	56	336	97	422	1610
2	77	143	110	904	417	1110	594	43	382	122	218	529
3	109	110	70	1120	1270	847	809	90	458	126	176	517
4	99	93	87	1250	2090	682	708	135	1130	126	228	290
5	89	92	96	1820	3160	441	400	733	1270	97	420	145
6	88	78	96	1790	3600	384	285	1570	552	91	431	177
7	88	71	143	1130	3800	398	214	1830	456	94	304	188
8	99	72	150	691	3830	324	186	1770	739	89	252	187
9	119	117	92	445	3510	306	215	688	1570	83	236	400
10	114	166	88	408	3110	326	226	230	2340	83	221	768
11	103	163	160	614	2280	818	685	249	1680	102	221	1060
12	91	137	171	634	1240	1770	1500	296	1310	360	221	950
13	85	136	93	348	733	2230	1900	959	2900	1170	450	321
14	85	135	70	209	708	2230	2000	1420	3520	1850	597	182
15	84	137	95	169	725	1080	1430	1170	2060	2100	604	236
16	84	765	107	159	1360	549	661	727	675	2200	335	312
17	103	1490	112	176	2950	599	299	1580	292	2190	204	337
18	184	1670	109	308	4390	704	150	2170	232	1720	91	359
19	145	1450	113	620	4720	742	109	2210	253	859	37	426
20	109	722	132	604	4650	445	116	3330	252	426	1070	444
21	182	334	139	983	4400	283	173	4170	250	347	1540	307
22	293	300	133	1460	2030	239	265	4060	249	728	1570	241
23	331	261	127	1510	1430	200	277	3380	276	1640	2540	240
24	371	178	126	815	3320	191	230	2350	236	2110	3750	239
25	361	151	126	439	4080	187	236	2040	184	2560	3600	239
26	222	149	126	359	4560	165	239	1980	185	2690	2560	239
27	102	146	130	258	4690	144	241	1930	184	1800	1940	206
28	101	142	136	223	3550	136	198	1870	138	527	2130	190
29	101	148	136	198	---	141	145	1480	80	576	1450	190
30	133	142	141	169	---	173	95	741	75	595	2040	189
31	147	---	170	186	---	208	---	516	---	534	2700	---
TOTAL	4377	9843	3729	20467	76765	20062	14842	45773	24264	28092	32558	11718
MEAN	141	328	120	660	2742	647	495	1477	809	906	1050	391
MAX	381	1670	171	1820	4720	2230	2000	4170	3520	2690	3750	1610
MIN	58	71	70	159	162	136	95	43	75	83	37	145

CAL YR 1989 TOTAL 227234.00 MEAN 623 MAX 4390 MIN .00
WTR YR 1990 TOTAL 292490 MEAN 801 MAX 4720 MIN 37

03324000 LITTLE RIVER NEAR HUNTINGTON, IN

LOCATION.--Lat 40°54'14", long 85°24'22", in NE¼NW¼ sec.9, T.28 N., R.10 E., Huntington County, Hydrologic Unit 05120101, on right bank on upstream side of highway bridge, 5 mi east of Huntington, and at mile 7.5.

DRAINAGE AREA.--263 mi^2.

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.

REVISED RECORDS.--WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 728.10 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1948, nonrecording gage 4 mi downstream at datum 8.79 ft lower, and Oct. 1, 1948, to Sept. 5, 1950, nonrecording gage at present site and datum.

REMARKS.--Estimated daily discharges: Dec. 4, 5, Dec. 9 to Jan. 4. Records good except for estimated daily discharges, which are poor. During periods of extreme high water in the St. Marys River, some water leaves the St. Marys River basin through Junk ditch and flows into Little River basin via Graham McCulloch ditch.

AVERAGE DISCHARGE.--47 years, 228 ft^3/s, 11.77 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,990 ft^3/s Jan. 4, 1950; maximum gage height, 19.50 ft Feb. 25, 1985; minimum daily discharge, 1.1 ft^3/s Oct. 8, 1946, site then in use.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,800 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 23	1600	*4,340	*16.96	Aug. 18	1000	2,960	13.51
May 16	1200	2,810	13.12				

Minimum daily discharge, 21 ft^3/s Oct. 9, 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	50	64	200	123	418	343	97	100	137	50	143
2	25	46	62	150	1540	342	484	89	98	102	47	104
3	22	45	59	130	1710	303	319	84	102	83	44	83
4	27	41	54	900	1290	238	247	352	112	74	71	76
5	26	40	52	1190	856	197	203	1630	93	68	273	68
6	26	37	55	423	540	171	171	575	87	63	118	64
7	25	42	50	252	422	144	145	274	87	61	75	62
8	24	54	43	191	346	139	128	184	97	57	60	100
9	21	48	46	170	446	177	115	142	179	55	54	77
10	21	44	43	373	425	320	473	132	118	56	49	69
11	26	41	42	296	311	1920	1410	116	92	102	45	64
12	27	39	40	216	245	943	566	108	80	344	48	62
13	36	34	38	146	204	422	333	984	76	150	306	61
14	32	38	37	125	180	329	280	734	75	113	230	60
15	28	375	36	112	636	274	264	319	114	124	115	102
16	26	1330	34	106	2450	345	215	1920	97	94	78	86
17	43	642	33	228	2170	330	184	2290	80	75	73	70
18	63	282	32	1380	1070	248	153	1050	71	65	2510	62
19	50	176	31	802	654	218	131	431	64	60	2020	53
20	122	151	31	435	424	205	126	288	70	70	927	50
21	352	131	30	824	333	170	212	216	130	153	890	48
22	382	109	30	558	2510	156	252	176	169	582	470	45
23	196	94	30	332	4270	147	187	154	283	932	273	44
24	133	81	31	305	3840	125	153	139	156	330	190	44
25	102	80	33	315	2500	115	135	135	105	172	142	42
26	85	76	38	371	1210	108	125	232	86	116	110	40
27	73	72	42	222	697	98	120	195	222	89	88	38
28	65	85	47	190	586	93	116	150	400	76	258	36
29	58	77	51	168	---	93	114	132	261	68	1730	34
30	51	64	56	152	---	179	106	113	151	60	593	32
31	50	---	115	130	---	308	---	105	---	55	235	---
TOTAL	2243	4424	1385	11392	31988	9275	7810	13546	3855	4586	12172	1919
MEAN	72.4	147	44.7	367	1142	299	260	437	128	148	393	64.0
MAX	382	1330	115	1380	4270	1920	1410	2290	400	932	2510	143
MIN	21	34	30	106	123	93	106	84	64	55	44	32
CFSM	.28	.56	.17	1.40	4.34	1.14	.99	1.66	.49	.56	1.49	.24
IN.	.32	.63	.20	1.61	4.52	1.31	1.10	1.92	.55	.65	1.72	.27

CAL YR 1989 TOTAL 75426 MEAN 207 MAX 4890 MIN 21 CFSM .79 IN. 10.67
WTR YR 1990 TOTAL 104595 MEAN 287 MAX 4270 MIN 21 CFSM 1.09 IN. 14.79

03324200 SALAMONIE RIVER AT PORTLAND, IN

LOCATION.--Lat 40°25'40", long 85°02'20", in NE¼SE¼ sec.23, T.23 N., R.13 E., Jay County, Hydrologic Unit 05120102, on right bank at downstream side of county road bridge, 2.3 mi downstream from Butternut Creek, 3.2 mi west of Portland, 3.7 mi downstream from Little Salamonie River, and at mile 70.5.

DRAINAGE AREA.--85.6 mi^2.

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

REVISED RECORDS.--WSP 2109: Drainage area. WDR IN-72-1: 1971.

GAGE.--Water-stage recorder. Datum of gage is 877.59 ft above National Geodetic Vertical Datum of 1929 (levels by State of Indiana, Department of Natural Resources). Prior to Oct. 1, 1960, nonrecording gage at site 1.4 mi upstream at datum 6.43 ft higher.

REMARKS.--Estimated daily discharges: Dec. 12-29. Records good except for estimated daily discharges, which are poor. Natural flow partially affected by sewage effluent.

AVERAGE DISCHARGE.--31 years, 74.0 ft^3/s, 11.74 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,460 ft^3/s Mar. 5, 1963, gage height, 16.96 ft; minimum daily, 0.4 ft^3/s Sept. 27, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,400 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 16	0600	1,580	10.89	May 16	1500	1,960	12.30
Dec. 31	1000	1,580	10.89	June 8	2200	1,760	11.57
Feb. 2	1400	1,500	10.59	July 12	1500	1,650	11.18
Feb. 16	0100	2,130	12.88	July 22	2300	2,020	12.52
Apr. 10	2400	1,540	10.75	Aug. 18	1900	*2,290	*13.44
May 13	1300	1,570	10.86	Aug. 21	1500	1,950	12.25

Minimum daily discharge, 4.7 ft^3/s July 8.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.5	14	14	225	76	65	159	13	9.9	6.2	8.5	19
2	5.4	12	13	79	1230	58	173	11	12	5.8	7.6	14
3	5.8	11	13	56	418	55	79	13	31	5.4	6.8	11
4	5.8	11	11	299	838	39	54	213	18	5.1	8.9	9.8
5	5.0	9.9	12	208	268	34	44	400	11	5.3	11	8.4
6	5.9	9.9	12	93	157	31	34	118	10	5.0	7.6	7.8
7	6.1	15	11	60	131	24	27	55	10	4.9	6.5	11
8	5.3	36	8.9	50	99	24	22	35	1050	4.7	5.8	11
9	5.7	56	9.2	52	94	30	20	26	1230	6.0	5.3	27
10	6.2	31	8.8	120	104	88	456	29	198	7.4	5.1	20
11	6.8	20	9.2	74	67	907	756	27	68	64	5.1	11
12	6.6	16	8.4	52	49	228	153	132	41	955	5.2	8.2
13	7.5	13	8.0	33	42	106	82	1260	30	298	90	7.5
14	7.0	17	8.0	26	108	69	62	301	25	454	48	13
15	6.2	293	7.8	24	1140	53	50	138	23	179	16	28
16	19	1120	7.8	24	1810	184	40	1410	18	56	9.5	14
17	305	214	7.6	43	383	113	34	588	14	30	7.5	8.4
18	97	86	7.6	77	148	59	25	130	12	20	1670	6.9
19	65	51	7.4	52	104	41	22	65	11	16	813	22
20	205	47	7.4	216	71	32	34	45	13	14	373	18
21	278	39	7.2	295	55	28	196	33	12	16	1710	13
22	122	31	7.0	124	388	27	83	27	16	797	564	23
23	62	26	7.0	76	364	25	48	21	21	1030	134	32
24	43	21	7.0	65	178	20	36	18	14	168	71	36
25	33	19	7.0	56	88	18	29	25	9.6	63	44	18
26	29	19	7.2	48	63	17	24	36	8.1	34	29	11
27	23	18	7.4	35	56	15	21	29	7.7	23	21	8.3
28	20	23	8.0	30	89	14	20	22	7.2	17	33	6.7
29	17	16	10	30	---	16	20	18	6.9	13	218	7.7
30	16	14	104	29	---	29	15	14	6.4	11	77	5.8
31	15	---	1120	25	---	133	---	11	---	9.9	31	---
TOTAL	1439.8	2308.8	1483.9	2676	8618	2582	2818	5263	2943.8	4323.7	6042.4	437.5
MEAN	46.4	77.0	47.9	86.3	308	83.3	93.9	170	98.1	139	195	14.6
MAX	305	1120	1120	299	1810	907	756	1410	1230	1030	1710	36
MIN	5.0	9.9	7.0	24	42	14	15	11	6.4	4.7	5.1	5.8
CFSM	.54	.90	.56	1.01	3.60	.97	1.10	1.98	1.15	1.63	2.28	.17
IN.	.63	1.00	.64	1.16	3.75	1.12	1.22	2.29	1.28	1.88	2.63	.19

CAL YR 1989 TOTAL 37753.7 MEAN 103 MAX 3060 MIN 4.1 CFSM 1.21 IN. 16.41
WTR YR 1990 TOTAL 40936.9 MEAN 112 MAX 1810 MIN 4.7 CFSM 1.31 IN. 17.79

03324300 SALAMONIE RIVER NEAR WARREN, IN

LOCATION.--Lat 40°42'45", long 85°27'13", in SE¼SE¼ sec.12, T.26 N., R.9 E., Huntington County, Hydrologic Unit 05120102, on right bank at downstream side of bridge on County Road 800 South, 0.4 mi downstream from Detamore ditch, 0.4 mi downstream from Interstate 69, 0.8 mi upstream from concrete and stone dam, 2.4 mi northwest of Warren, and at mile 30.0.

DRAINAGE AREA.--425 mi^2.

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

REVISED RECORDS.--WSP 2109: Drainage area.

GAGE.--Water-stage recorder and concrete and stone control. Datum of gage is 784.65 ft above National Geodetic Vertical Datum of 1929 (levels by State of Indiana, Department of Natural Resources). Prior to July 28, 1960, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Dec. 13-18, 21-24, and Dec. 31 to Jan. 4. Records fair, except those for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--33 years, 388 ft^3/s, 12.40 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,200 ft^3/s Feb. 10, 1959, gage height, 17.05 ft; minimum daily, 5.1 ft^3/s Jan. 2, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 4	1630	ice jam	12.49a	May 13	2100	3,200	9.78
Feb. 3	0100	4,300	10.70	May 17	0100	5,900	11.95
Feb. 16	1900	5,600	11.72	June 10	2200	3,500	10.01
Feb. 23	0700	4,910	11.17	Aug. 19	0700	*6,840	*12.66
Mar. 11	1800	3,380	9.92				

Minimum daily discharge, 38 ft^3/s Dec. 23.

(a) Peak Stage indicator.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66	65	119	1500	134	458	354	114	86	97	58	134
2	70	64	110	500	2980	384	711	103	88	53	54	101
3	66	60	101	310	3930	352	549	100	592	46	50	84
4	65	56	93	1600	4000	286	313	556	655	44	57	73
5	62	56	102	2000	3140	230	241	2120	245	44	64	67
6	65	67	97	782	1670	201	195	1260	150	41	67	62
7	64	82	91	403	966	171	160	495	181	39	58	69
8	64	131	82	286	761	161	139	284	846	39	48	72
9	62	115	71	245	1030	172	126	202	2660	46	48	498
10	64	162	79	549	1130	316	228	176	3320	60	48	725
11	59	127	78	547	632	2810	2030	155	2640	196	48	233
12	59	92	68	324	417	2990	1950	160	544	1150	63	135
13	63	74	58	206	318	1300	636	2220	268	2320	119	95
14	62	74	51	152	280	610	384	2990	185	1820	341	96
15	60	378	49	133	2010	410	306	1820	142	1160	165	97
16	61	1960	45	120	5210	485	249	4440	115	451	79	128
17	68	2280	40	193	5320	771	210	5040	95	207	64	87
18	503	850	43	549	4000	420	171	3530	83	131	4670	65
19	177	375	52	413	1300	282	145	1100	73	95	6340	60
20	100	279	52	378	729	215	146	527	71	93	5150	99
21	384	244	44	1500	499	183	361	344	76	87	4240	101
22	659	202	39	968	2720	169	649	248	78	461	3140	73
23	316	169	38	480	4490	160	323	190	116	2160	2870	94
24	175	148	42	352	2630	141	230	155	132	2640	834	122
25	127	134	47	299	1020	128	192	138	90	952	415	101
26	101	127	51	265	617	122	162	311	70	273	283	79
27	86	123	51	204	448	112	146	305	75	159	207	63
28	77	130	52	164	466	104	138	203	109	113	161	54
29	69	148	58	148	---	107	137	158	71	89	285	51
30	68	133	69	139	---	138	129	123	76	77	465	48
31	67	---	255	128	---	185	---	101	---	66	221	---
TOTAL	3989	8905	2227	15837	52847	14573	11710	29668	13932	15209	30712	3766
MEAN	129	297	71.8	511	1887	470	390	957	464	491	991	126
MAX	659	2280	255	2000	5320	2990	2030	5040	3320	2640	6340	725
MIN	59	56	38	120	134	104	126	100	70	39	48	48
CFSM	.30	.70	.17	1.20	4.44	1.11	.92	2.25	1.09	1.15	2.33	.30
IN.	.35	.78	.19	1.39	4.63	1.28	1.02	2.60	1.22	1.33	2.69	.33

CAL YR 1989 TOTAL 171528 MEAN 470 MAX 7940 MIN 38 CFSM 1.11 IN. 15.01
WTR YR 1990 TOTAL 203375 MEAN 557 MAX 6340 MIN 38 CFSM 1.31 IN. 17.80

03324500 SALAMONIE RIVER AT DORA, IN

LOCATION.--Lat 40°48'42", long 85°41'02", in NE¼NE¼ sec.12, T.27 N., R.7 E., Wabash County, Hydrologic Unit 05120102, on right bank, 0.4 mi downstream from Salamonie Lake, 1.5 mi northwest of Dora, and 3.0 mi upstream from mouth.

DRAINAGE AREA.--557 mi^2.

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

REVISED RECORDS.--WSP 1275: 1931(M), 1932, 1933(M), 1935-36(M), 1938-40(M), 1941-42, 1945, 1952. WSP 1335: 1934(M). WSP 1555: 1952, 1955-56(M), 1957. WSP 2109: Drainage area.

GAGE.--Data-Collection Platform since May 1, 1986. Datum of gage is 673.96 ft above National Geodetic Vertical Datum of 1929 (levels by State of Indiana, Department of Natural Resources). Prior to Oct. 1, 1951, non-recording gage at site 1.5 mi upstream at datum 688.59 ft National Geodetic Vertical Datum of 1929 (levels by U.S. Army 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 National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Oct. 9, 1961, to Sept. 30, 1974, water-stage recorder at site described in "LOCATION" paragraph.

REMARKS.--Flow regulated by Salamonie Lake since April 1967. Daily discharge computed from relation between discharge, head, and gate openings for Salamonie Lake beginning Oct. 1, 1974.

COOPERATION.--Records of daily discharge provided by U.S. Army Corps of Engineers beginning Oct. 1, 1976.

AVERAGE DISCHARGE.--66 years (1924 to current year), 511 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,500 ft^3/s May 18, 1943, gage height, 14.75 ft, from graph based on gage readings, site and datum then in use; minimum daily, 0.70 ft^3/s Oct. 30, 1968, result of abnormal regulation.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 3,990 ft^3/s Mar. 6; minimum daily, 24 ft^3/s Apr. 20 to May 3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	423	424	263	622	202	2540	163	24	3330	224	86	1200
2	366	395	134	1140	284	3250	325	24	1580	262	45	2490
3	365	379	90	865	154	3470	342	24	289	130	35	2980
4	315	377	105	748	164	3410	166	25	608	65	35	3400
5	364	375	128	945	170	3720	108	25	779	60	35	3860
6	362	372	145	976	174	3990	78	26	529	60	35	3920
7	453	397	116	1120	591	2500	63	26	400	43	35	3480
8	360	408	105	1170	1000	1580	63	185	401	35	35	1260
9	379	405	112	773	1050	2600	63	244	1340	35	35	2020
10	387	429	113	704	1440	1740	63	244	2040	35	35	2970
11	405	478	128	751	1970	839	64	225	2670	190	35	2920
12	413	492	135	476	2730	1040	65	201	3130	410	113	2230
13	466	488	135	338	2880	1690	350	843	1740	1610	292	761
14	489	484	134	237	2780	1990	496	726	531	2440	456	228
15	487	480	126	183	1320	1700	473	1850	400	2280	341	273
16	457	491	82	183	113	1730	287	629	325	968	166	416
17	480	1050	52	183	118	1970	67	127	193	472	111	546
18	503	1480	52	423	660	1940	47	129	126	344	49	586
19	619	1560	52	721	1260	1900	49	130	92	178	26	584
20	669	1690	52	642	1430	1860	24	130	119	85	72	582
21	665	1630	52	904	1900	1820	24	130	135	80	103	528
22	1030	1240	52	1260	745	1770	24	130	135	281	104	503
23	1190	638	52	967	125	1720	24	509	182	770	105	502
24	945	513	65	480	127	1280	24	1430	231	1750	227	500
25	686	444	71	442	128	842	24	1990	211	2130	473	499
26	454	412	71	418	752	451	24	2250	133	1950	1150	497
27	476	505	71	307	1060	385	24	2350	87	1110	1970	495
28	501	452	71	265	1570	277	24	2620	285	188	1860	491
29	477	349	71	265	---	277	24	2880	438	188	847	487
30	444	318	99	240	---	277	24	3320	287	188	615	485
31	427	---	212	202	---	277	---	3600	---	160	916	---
TOTAL	16057	19155	3146	18950	26897	54835	3596	27046	22746	18721	10442	41693
MEAN	518	638	101	611	961	1769	120	872	758	604	337	1390
MAX	1190	1690	263	1260	2880	3990	496	3600	3330	2440	1970	3920
MIN	315	318	52	183	113	277	24	24	87	35	26	228

CAL YR 1989 TOTAL 209893 MEAN 575 MAX 4130 MIN 26
WTR YR 1990 TOTAL 263284 MEAN 721 MAX 3990 MIN 24

03325000 WABASH RIVER AT WABASH, IN

LOCATION.--Lat 40°47'25", long 85°49'13", in SE¼NW¼ sec.14, T.27 N., R.6 E., Wabash County, Hydrologic Unit 05120101, on right bank on upstream side of Wabash Street bridge in Wabash, 7.1 mi downstream from Salamonie River, and at mile 387.2.

DRAINAGE AREA.--1,768 mi^2.

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

REVISED RECORDS.--WSP 1275: 1931-37(M), 1938-39, 1940(M). WSP 1385: 1942. WSP 1505: 1955. WSP 2109: Drainage area. WRD IN-84-1: 1983.

GAGE.--Water-stage recorder. Datum of gage is 642.66 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 30, 1954, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Dec. 17 to Jan. 3. Records fair. Flow regulated by Huntington Lake and Salamonie Lake.

AVERAGE DISCHARGE.--67 years, 1,496 ft^3/s, 11.49 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 49,600 ft^3/s May 18, 1943; maximum gage height, 24.44 ft Feb. 11, 1959 (ice jam); minimum daily discharge, 19 ft^3/s July 21, 1936.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 28.7 ft Mar. 26, 1913, from floodmark, determined by U.S. Army Corps of Engineers, discharge, 90,000 ft^3/s, from rating curve extended above 49,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 16,000 ft^3/s Feb. 22, gage height, 17.23 ft; minimum daily, 185 ft^3/s July 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	561	725	660	1100	748	5390	1270	292	3760	424	725	3720
2	471	695	510	2760	3360	4860	1800	246	2460	521	478	2730
3	490	663	333	2500	4110	4820	2000	226	869	429	279	3350
4	491	614	297	4150	4190	4480	1610	645	1400	302	326	3540
5	509	608	354	4700	4610	4480	1210	3280	2420	282	565	3720
6	501	602	394	3760	4780	4570	873	2730	1470	220	815	3860
7	592	592	413	3020	4930	3720	783	2520	959	207	570	3790
8	498	613	415	2580	5460	2190	582	2390	1110	192	407	1580
9	523	615	394	2090	5360	3260	587	1870	2500	185	381	1920
10	564	685	329	1970	5260	3370	1000	695	4130	190	342	3630
11	553	764	331	2300	4950	5200	3170	625	4640	345	327	3750
12	556	745	436	1890	4360	4610	2670	657	4210	882	415	3650
13	569	727	401	1380	4110	4630	2770	3100	4190	2210	799	1570
14	608	742	306	963	4000	4830	3060	3640	4380	4190	1520	576
15	607	1160	312	775	4270	4100	2740	3500	3300	4350	1210	615
16	594	3450	329	730	6070	3030	1880	6120	1430	3510	887	814
17	682	3800	265	831	5950	3320	994	5040	848	2740	426	934
18	741	4050	250	2720	6400	3260	711	4390	452	2550	8220	964
19	1010	3810	245	3070	6990	3220	488	3260	470	1430	4470	1030
20	1070	3400	270	2550	6820	3080	472	3390	482	841	2790	1080
21	1520	2850	280	3160	6620	2660	661	4840	518	572	3640	1020
22	2270	2240	270	3920	11700	2590	822	4660	583	1030	2780	809
23	2280	1600	265	3530	9970	2450	799	4420	793	3620	2750	806
24	1960	1130	275	2480	7760	2000	630	4070	815	3780	4070	798
25	1430	1010	290	1790	7900	1500	586	4010	584	4790	4680	800
26	1270	848	300	1890	6730	955	555	4180	463	4630	3960	799
27	770	960	305	1330	6880	875	538	4320	410	4020	3670	781
28	791	1030	310	973	6200	669	514	4380	941	917	4030	718
29	748	831	315	963	---	674	434	4510	898	860	4740	701
30	718	750	345	824	---	902	368	4060	664	835	3500	699
31	729	---	500	764	---	1280	---	4140	---	830	3790	---
TOTAL	26676	42309	10699	67463	160488	96975	36577	96206	52149	51884	67562	54754
MEAN	861	1410	345	2176	5732	3128	1219	3103	1738	1674	2179	1825
MAX	2280	4050	660	4700	11700	5390	3170	6120	4640	4790	8220	3860
MIN	471	592	245	730	748	669	368	226	410	185	279	576
CFSM	.49	.80	.20	1.23	3.24	1.77	.69	1.76	.98	.95	1.23	1.03
IN.	.56	.89	.23	1.42	3.38	2.04	.77	2.02	1.10	1.09	1.42	1.15

CAL YR 1989 TOTAL 591825 MEAN 1621 MAX 11100 MIN 186 CFSM .92 IN. 12.45
WTR YR 1990 TOTAL 763742 MEAN 2092 MAX 11700 MIN 185 CFSM 1.18 IN. 16.07

03325311 LITTLE MISSISSINEWA RIVER AT UNION CITY, IN

LOCATION.--Lat 40°11'46", long 84°49'45", in SE¼SE¼ sec.26, T.18 N., R.1 W., Randolph County, Hydrologic Unit 05120103, on right bank 85 ft downstream from Westinghouse Road, 0.5 mi downstream from Little ditch, 0.8 mi upstream from City Drain, and 1.2 mi west of the Post Office in Union City.

DRAINAGE AREA.--9.67 mi^2.

PERIOD OF RECORD.--October 1982 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1075.50 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 12-28. Records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--8 years, 9.48 ft^3/s, 13.31 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 315 ft^3/s June 3, 1987, gage height, 8.67 ft; no flow at times in 1983, 1984, 1988, and 1989 water years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 140 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 15	2045	*267	*6.00	Aug. 21	2330	140	4.85
May 16	1330	160	5.05				

Minimum daily discharge, .20 ft^3/s Jan. 3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	1.8	2.4	8.2	16	12	29	2.7	2.5	1.3	1.5	6.8
2	1.9	1.8	2.5	5.3	73	11	26	2.6	5.4	1.2	1.3	3.9
3	1.6	1.6	2.2	.20	45	9.1	16	2.7	5.5	1.2	1.2	2.8
4	1.5	1.6	2.4	13	78	6.7	12	24	3.5	1.1	1.5	2.0
5	1.6	1.8	2.4	12	48	5.9	8.7	33	2.9	1.1	1.5	1.6
6	2.5	1.9	2.1	6.6	35	4.7	6.7	15	2.8	1.0	1.1	1.3
7	1.6	2.0	1.5	4.9	28	4.1	5.5	9.2	2.4	1.0	.93	1.3
8	1.6	4.8	1.5	4.5	21	4.3	4.7	6.8	24	1.1	.84	1.1
9	1.9	3.4	1.8	4.6	20	4.3	4.5	6.0	37	1.1	.75	3.9
10	3.2	2.2	1.8	7.9	19	5.0	47	5.9	18	1.1	.73	2.5
11	2.8	1.6	1.6	6.2	14	78	68	3.9	9.1	3.6	.67	1.6
12	2.6	1.3	1.4	4.0	10	53	34	29	6.4	35	.63	1.3
13	2.2	1.2	1.3	4.5	9.3	30	21	103	5.1	49	2.2	1.2
14	1.9	1.4	1.3	2.8	16	19	15	57	4.5	59	1.2	1.7
15	2.0	25	1.2	2.6	164	12	10	58	3.8	30	.83	2.5
16	1.9	52	1.2	2.3	149	33	8.4	135	3.3	15	.73	1.4
17	2.0	24	1.1	3.2	70	23	6.7	87	3.1	8.9	.64	.91
18	1.6	12	1.1	3.8	45	13	5.1	42	2.9	5.1	1.0	.83
19	2.1	8.6	1.1	3.1	33	8.9	5.0	26	2.6	3.7	.93	1.2
20	2.5	8.1	1.0	14	23	6.8	5.2	18	2.9	5.0	1.2	.80
21	3.1	5.9	1.0	20	16	6.1	5.5	12	2.3	9.9	40	1.6
22	2.0	5.3	.98	12	28	5.8	5.0	8.5	2.7	37	79	8.5
23	1.5	4.6	.96	8.7	31	4.2	4.7	6.0	2.7	36	35	4.4
24	1.5	4.0	.96	6.8	22	3.9	4.4	4.9	2.0	17	15	2.8
25	1.4	4.1	.96	6.5	30	3.7	4.1	4.9	1.7	9.1	8.2	2.5
26	1.4	3.7	.98	4.5	11	3.3	4.0	5.0	1.7	5.2	5.0	2.0
27	1.5	3.5	1.0	4.2	12	3.1	4.0	4.4	1.7	3.9	2.8	1.3
28	1.5	3.2	1.1	3.3	14	3.0	4.2	4.1	1.5	3.2	6.6	1.3
29	1.4	2.4	2.8	4.0	---	3.7	3.4	3.5	1.5	2.7	80	1.5
30	1.7	2.6	5.6	3.3	---	9.2	3.1	2.8	1.5	2.3	39	1.7
31	2.2	---	31	2.7	---	40	---	2.5	---	1.8	15	---
TOTAL	59.9	197.4	80.24	189.70	1080.3	429.8	380.9	725.4	167.0	353.6	346.98	68.24
MEAN	1.93	6.58	2.59	6.12	38.6	13.9	12.7	23.4	5.57	11.4	11.2	2.27
MAX	3.2	52	31	20	164	78	68	135	37	59	80	8.5
MIN	1.4	1.2	.96	.20	9.3	3.0	3.1	2.5	1.5	1.0	.63	.80
CFSM	.20	.68	.27	.63	3.99	1.43	1.31	2.42	.58	1.18	1.16	.24
IN.	.23	.76	.31	.73	4.16	1.65	1.47	2.79	.64	1.36	1.33	.26

CAL YR 1989 TOTAL 5067.95 MEAN 13.9 MAX 168 MIN .70 CFSM 1.44 IN. 19.50
WTR YR 1990 TOTAL 4079.46 MEAN 11.2 MAX 164 MIN .20 CFSM 1.16 IN. 15.69

03325500 MISSISSINEWA RIVER NEAR RIDGEVILLE, IN

LOCATION.--Lat 40°16'49", long 84°59'44", in SE¼SE¼ sec.7, T.21 N., R.14 E., Randolph County, Hydrologic Unit 05120103, on right bank 30 ft downstream from highway bridge, 0.8 mi downstream from Mud Creek, 2 mi east of Ridgeville, and at mile 99.5.

DRAINAGE AREA.--133 mi^2.

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

REVISED RECORDS.--WSP 1235: 1948. WSP 1335: 1953. WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 965.28 ft above National Geodetic Vertical Datum of 1929 (levels by State of Indiana, Department of Natural Resources). Prior to Oct. 5, 1950, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Dec. 12 to Jan. 3, Jan. 14-16, and Jan. 29 to Feb. 1. Records fair except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--44 years, 128 ft^3/s, 13.07 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,900 ft^3/s June 10, 1958, gage height, 16.25 ft, from rating curve extended above 5,000 ft^3/s on basis of contracted-opening measurement of peak flow; minimum daily, 0.1 ft^3/s Oct. 24, 1946.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,400 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 15	2100	5,190	13.32	June 8	1000	*5,650	*13.61
Apr. 10	2400	2,960	11.27	June 9	1300	2,640	10.73
May 13	0800	3,630	12.18	Aug. 21	2400	2,450	10.40
May 16	1300	3,200	11.63				

Minimum daily discharge, 9.4 ft^3/s, Dec. 23.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	21	28	96	50	138	258	40	36	19	18	59
2	24	19	28	62	1610	129	254	36	38	18	16	41
3	24	19	25	55	602	118	144	37	130	17	15	32
4	22	18	25	343	1470	88	111	484	65	16	17	27
5	22	18	28	225	530	79	93	656	46	14	22	24
6	24	20	26	106	342	70	77	242	42	13	16	22
7	24	26	23	76	265	57	65	125	39	13	14	23
8	22	63	20	66	194	60	57	87	3560	12	13	24
9	21	61	22	67	183	67	53	70	2050	12	12	52
10	24	37	22	126	182	98	1010	86	488	14	12	46
11	25	27	21	91	128	1450	1360	61	168	39	11	29
12	25	23	19	67	99	486	374	360	101	513	10	24
13	25	21	16	46	90	241	200	2530	74	464	119	22
14	26	23	14	39	196	156	142	613	60	927	43	48
15	26	422	12	35	2640	116	110	580	54	360	21	107
16	25	1070	12	32	3400	372	91	2500	46	127	16	44
17	28	241	11	62	756	232	78	915	41	63	14	29
18	29	114	13	92	377	131	62	326	38	43	541	23
19	30	76	16	65	263	98	59	175	34	33	250	26
20	36	73	15	228	177	80	76	125	36	35	771	25
21	45	58	12	337	140	74	208	95	35	59	1170	22
22	35	49	10	162	333	71	110	77	34	523	880	57
23	25	43	9.4	108	429	60	84	63	40	363	217	44
24	23	38	11	95	271	52	72	56	30	215	107	35
25	22	38	13	87	163	50	63	56	25	73	66	29
26	21	37	14	75	128	47	59	71	24	45	45	25
27	20	34	14	59	132	44	56	62	25	34	34	23
28	20	35	15	52	183	43	54	53	22	29	45	21
29	20	28	16	47	---	46	49	49	20	25	1280	43
30	20	28	19	44	---	69	43	41	19	23	273	57
31	21	---	350	41	---	337	---	37	---	21	109	---
TOTAL	777	2780	879.4	3086	15333	5159	5472	10708	7420	4162	6177	1083
MEAN	25.1	92.7	28.4	99.5	548	166	182	345	247	134	199	36.1
MAX	45	1070	350	343	3400	1450	1360	2530	3560	927	1280	107
MIN	20	18	9.4	32	50	43	43	36	19	12	10	21
CFSM	.19	.70	.21	.75	4.12	1.25	1.37	2.60	1.86	1.01	1.50	.27
IN.	.22	.78	.25	.86	4.29	1.44	1.53	3.00	2.08	1.16	1.73	.30

CAL YR 1989 TOTAL 70835.4 MEAN 194 MAX 3660 MIN 9.4 CFSM 1.46 IN. 19.81
WTR YR 1990 TOTAL 63036.4 MEAN 173 MAX 3560 MIN 9.4 CFSM 1.30 IN. 17.63

03326070 BIG LICK CREEK NEAR HARTFORD CITY, IN

LOCATION.--Lat 40°25'20", long 85°21'04", in SE¼SE¼ sec.23, T.23 N., R.10 E., Blackford County, Hydrologic Unit 05120103, on right bank 6 ft downstream from bridge on County Road 100 East, and 2.0 mi southeast of Hartford City.

DRAINAGE AREA.--29.2 mi^2.

PERIOD OF RECORD.--July 1971 to current year.

GAGE.--Water-stage recorder. Datum of gage is 865.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 1-26, and Dec. 13 to Jan. 4. Records fair except Oct. 1-26, and Dec. 13 to Jan. 5, which are poor.

AVERAGE DISCHARGE.--19 years, 27.7 ft^3/s, 12.88 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,940 ft^3/s June 6, 1981, gage height, 16.14 ft; minimum daily, 0.19 ft^3/s Oct. 4, 1983.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 450 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 2	1400	512	11.20	June 8	1000	620	12.02
Feb. 4	0900	474	10.84	June 9	0900	744	12.79
Feb. 15	1700	874	*13.39	July 12	1130	834	13.00
Feb. 22	1600	525	11.32	July 22	1900	*887	13.27
Mar. 11	0300	507	11.15	Aug. 18	1130	471	10.81
Mar. 13	0500	454	10.65	Aug. 21	0500	511	11.19
May 16	1100	620	12.02				

Minimum daily discharge, 1.1 ft^3/s Dec. 21-24.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	2.7	4.6	70	24	20	18	1.8	3.7	3.0	3.4	4.2
2	2.9	2.7	4.5	27	426	17	31	1.4	31	2.8	3.0	3.4
3	3.0	2.5	3.7	18	179	15	11	1.5	259	2.7	2.8	2.9
4	3.0	2.3	3.6	80	319	9.2	7.2	127	74	2.6	3.0	2.6
5	2.9	2.3	3.9	90	123	7.7	5.4	160	29	2.5	4.3	2.3
6	3.0	2.2	3.7	38	71	6.1	3.9	46	15	2.5	2.6	2.2
7	3.2	2.8	3.1	19	66	4.5	2.8	18	12	2.5	2.2	2.7
8	2.8	10	2.6	14	44	4.5	2.4	11	411	2.3	2.0	5.1
9	2.9	14	2.7	17	62	6.6	2.1	8.4	523	2.3	2.0	45
10	3.1	6.6	2.8	50	49	68	161	7.8	112	2.7	1.6	11
11	3.2	4.1	2.7	22	25	364	168	5.8	48	103	1.5	5.5
12	3.3	3.2	2.5	13	16	90	41	67	29	509	1.6	4.3
13	3.5	2.8	2.1	6.6	14	40	19	318	20	184	30	4.1
14	3.7	2.9	1.8	4.3	64	23	12	105	14	113	11	5.3
15	3.6	95	1.5	3.9	583	14	9.3	52	10	52	6.3	12
16	3.5	249	1.4	4.2	461	69	6.7	402	8.1	29	4.8	4.9
17	4.5	78	1.3	11	122	27	5.2	156	7.2	17	4.1	3.2
18	10	31	1.3	16	59	13	3.5	54	6.2	11	327	2.6
19	7.0	16	1.2	8.6	40	8.3	3.1	30	5.2	9.3	100	29
20	5.0	17	1.2	99	26	6.0	4.7	20	5.8	8.2	49	15
21	25	12	1.1	105	20	5.2	52	13	5.3	70	362	6.4
22	18	9.1	1.1	41	300	4.8	16	9.5	5.0	660	88	9.2
23	9.0	7.2	1.1	21	211	4.3	8.0	7.6	8.2	431	32	15
24	6.0	5.9	1.1	18	71	3.4	5.3	6.4	5.5	113	18	7.6
25	4.3	5.7	1.2	14	36	3.0	3.9	7.3	4.3	41	13	5.1
26	3.6	5.5	1.3	11	22	2.6	3.2	12	3.8	21	9.0	3.7
27	3.2	5.3	1.4	6.9	21	2.3	2.7	9.0	3.7	14	6.1	2.9
28	3.0	7.6	1.5	5.6	30	2.0	2.5	6.9	3.5	10	6.1	2.6
29	2.8	5.8	1.7	5.6	---	2.2	5.5	5.6	3.3	7.2	41	2.5
30	2.8	5.0	4.1	4.7	---	4.0	2.6	4.5	3.1	5.7	11	2.5
31	2.8	---	30	4.1	---	6.4	---	3.9	---	4.3	5.8	---
TOTAL	157.5	616.2	97.8	848.5	3484	853.1	619.0	1678.4	1668.9	2438.6	1154.2	224.8
MEAN	5.08	20.5	3.15	27.4	124	27.5	20.6	54.1	55.6	78.7	37.2	7.49
MAX	25	249	30	105	583	364	168	402	523	660	362	45
MIN	2.8	2.2	1.1	3.9	14	2.0	2.1	1.4	3.1	2.3	1.5	2.2
CFSM	.17	.70	.11	.94	4.26	.94	.71	1.85	1.91	2.69	1.28	.26
IN.	.20	.79	.12	1.08	4.44	1.09	.79	2.14	2.13	3.11	1.47	.29

CAL YR 1989 TOTAL 12533.7 MEAN 34.3 MAX 1120 MIN 1.1 CFSM 1.18 IN. 15.97
WTR YR 1990 TOTAL 13841.0 MEAN 37.9 MAX 660 MIN 1.1 CFSM 1.30 IN. 17.63

03326500 MISSISSINEWA RIVER AT MARION, IN

LOCATION.--Lat 40°34'34", long 85°39'34", in SE¼NE¼ sec.31, T.25 N., R.8 E., Grant County, Hydrologic Unit 05120103, on left bank 12 ft downstream from Highland Avenue bridge in Marion, 0.1 mi downstream from old mill dam, 1.0 mi upstream from Hummel Creek, 4.6 mi downstream from Lugar Creek, and at mile 35.8.

DRAINAGE AREA.--682 mi^2.

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

REVISED RECORDS.--WSP 1335: 1927(M). WSP 1385: 1948. WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 774.56 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 9, 1933, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Dec. 12 to Jan. 1. Records good except for estimated daily discharges, which are poor. Flow periodically regulated by dam 0.1 mi above station.

AVERAGE DISCHARGE.--67 years, 628 ft^3/s, 12.50 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,000 ft^3/s Mar. 21, 1927, gage height, 17.40 ft from graph based on gage readings, from rating curve extended above 18,000 ft^3/s; minimum daily, 3.4 ft^3/s Oct. 25, 1968.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1913 reached a stage of 19.20 ft from information by State of Indiana, Department of Natural Resources.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5,600 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 2	2100	6,180	7.93	May 16	1900	7,790	9.04
Feb. 16	2300	10,200	10.51	June 10	0400	*10,700	*10.81
Mar. 11	2200	5,660	7.55				

Minimum daily discharge, 23 ft^3/s Oct. 11 (regulated).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	171	166	234	2100	321	892	722	291	253	166	174	566
2	163	158	217	1740	3810	773	1070	256	244	155	160	372
3	157	150	206	731	5440	706	946	257	761	145	149	282
4	152	145	190	1480	4950	619	654	811	879	138	172	232
5	149	150	189	2360	4390	515	524	2490	383	130	157	342
6	145	141	190	1380	2550	453	441	2200	367	123	151	180
7	145	156	183	813	1660	400	375	1110	340	117	149	201
8	269	175	167	599	1370	371	328	700	2510	113	137	186
9	130	373	150	516	1450	377	298	513	8180	121	125	387
10	77	484	148	744	1400	590	608	440	9510	157	117	582
11	23	323	146	799	1080	4640	3550	385	3380	729	113	371
12	99	249	250	615	814	4930	3650	408	1030	3140	165	262
13	112	208	190	444	664	2480	1540	3170	749	4520	183	212
14	112	209	150	352	604	1360	980	4940	546	2380	452	205
15	114	473	135	306	3680	1000	759	3220	450	2130	405	217
16	113	3230	123	284	9660	972	612	5660	377	1520	219	360
17	252	3940	117	337	9660	1250	523	6640	326	739	166	275
18	856	1670	113	591	4350	973	439	4330	284	484	1310	202
19	452	802	108	552	1760	686	379	1640	252	353	2080	182
20	354	586	105	590	1300	532	370	1040	255	311	1250	253
21	633	516	100	1450	1010	459	638	763	246	256	3090	242
22	890	437	96	1420	2680	421	1110	588	268	576	4270	204
23	585	365	93	890	4550	396	711	480	370	2860	2480	203
24	398	315	90	666	2470	353	528	415	367	2200	1010	266
25	309	281	91	578	1510	318	443	411	290	1090	641	228
26	261	266	92	505	998	296	388	463	233	555	446	189
27	229	258	95	433	833	282	350	462	230	377	335	166
28	208	301	103	366	837	269	328	421	218	294	296	150
29	191	312	140	331	---	274	314	363	192	244	1090	140
30	178	264	210	320	---	326	340	316	180	213	2730	136
31	174	---	400	301	---	356	---	280	---	192	1330	---
TOTAL	8101	17103	4821	24593	75801	28269	23918	45463	33670	26528	25552	7793
MEAN	261	570	156	793	2707	912	797	1467	1122	856	824	260
MAX	890	3940	400	2360	9660	4930	3650	6640	9510	4520	4270	582
MIN	23	141	90	284	321	269	298	256	180	113	113	136
CFSM	.38	.84	.23	1.16	3.97	1.34	1.17	2.15	1.65	1.25	1.21	.38
IN.	.44	.93	.26	1.34	4.13	1.54	1.30	2.48	1.84	1.45	1.39	.43

CAL YR 1989 TOTAL 315735 MEAN 865 MAX 14500 MIN 23 CFSM 1.27 IN. 17.22
WTR YR 1990 TOTAL 321612 MEAN 881 MAX 9660 MIN 23 CFSM 1.29 IN. 17.54

03327000 MISSISSINEWA RIVER AT PEORIA, IN

LOCATION.--Lat 40°43'24", long 85°57'27", in SW¼SW¼ sec.3, T.26 N., R.5 E., Miami County, Hydrologic Unit 05120103, on right bank at Peoria, 0.6 mi downstream from Mississinewa Lake, 6.5 mi southeast of Peru, and 6.7 mi upstream from mouth.

DRAINAGE AREA.--808 mi^2.

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

REVISED RECORDS.--WSP 1335: 1953. WSP 2109: Drainage area.

GAGE.--Data-Collection Platform. Datum of gage was 660.00 ft above National Geodetic Vertical Datum of 1929. Oct. 1, 1962, to Sept. 30, 1974, water-stage recorder at site described in "LOCATION" paragraph. 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. Data-Collection Platform installed on Aug. 21, 1986.

REMARKS.--Flow regulated by Mississinewa Lake since April 1968. Daily discharge computed from relation between discharge, head, and gate openings for Mississinewa Lake beginning Oct. 1, 1974.

COOPERATION.--Records of daily discharge provided by U.S. Army Corps of Engineers beginning Oct. 1, 1976.

AVERAGE DISCHARGE.--38 years, 716 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,000 ft^3/s June 11, 1958, gage height, 19.26 ft, site then in use; zero flow, Sept. 11 to Oct. 2, 1985.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 5,350 ft^3/s Mar. 4; minimum daily, 50 ft^3/s May 3, 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	215	510	390	1000	360	3810	239	58	582	148	198	1020
2	281	494	216	1560	1030	4520	353	50	288	148	287	335
3	368	428	183	1560	1300	5100	300	50	288	148	132	519
4	337	365	183	1550	822	5350	93	120	864	148	101	389
5	367	364	183	1560	852	5210	53	1410	941	148	97	273
6	276	435	184	1690	1010	5150	53	2040	329	118	126	172
7	223	583	184	1880	1740	3200	54	1590	318	96	168	233
8	223	783	184	1340	2290	1930	54	1000	657	96	183	175
9	223	728	184	806	2630	3060	55	597	2180	96	183	300
10	244	688	217	683	2960	1870	55	466	3330	207	182	577
11	258	713	206	907	3080	1010	58	391	3480	485	197	540
12	219	760	174	711	3260	1560	1590	324	3470	1550	218	345
13	200	780	161	491	3350	2140	1930	1140	3610	2940	238	304
14	200	775	148	411	2940	2510	1150	1850	3700	3330	383	263
15	515	770	132	354	1530	1970	711	2380	2870	3310	467	233
16	632	1440	132	291	836	2310	445	1040	1500	2540	345	294
17	606	2440	132	355	508	3040	445	506	829	927	229	397
18	662	2730	132	640	386	3020	177	514	330	435	184	432
19	878	2700	110	526	1040	2990	63	518	254	452	187	356
20	888	2650	112	625	1820	2950	64	519	217	452	190	255
21	967	1630	125	1150	2350	2300	64	1460	279	452	192	272
22	966	1030	125	1420	882	1130	64	2630	324	491	197	303
23	964	1020	125	1320	290	536	65	3010	401	1500	409	260
24	962	887	125	879	502	536	58	2990	466	2610	956	219
25	958	753	125	625	505	409	66	3210	316	1820	1510	239
26	954	712	125	625	1160	300	66	3310	202	1020	1670	254
27	950	675	125	444	2290	301	66	3280	248	434	2740	254
28	818	634	125	355	2930	389	66	3240	328	345	3910	254
29	694	689	125	355	---	452	66	3210	252	284	3580	254
30	665	641	158	399	---	392	67	2480	171	238	3780	195
31	571	---	298	436	---	350	---	1460	---	238	3720	---
TOTAL	17484	29807	5128	26948	44653	69795	8590	46843	33024	27206	26959	9916
MEAN	564	994	165	869	1595	2251	286	1511	1101	878	870	331
MAX	967	2730	390	1880	3350	5350	1930	3310	3700	3330	3910	1020
MIN	200	364	110	291	290	300	53	50	171	96	97	172

CAL YR 1989 TOTAL 320640 MEAN 878 MAX 4340 MIN 35
WTR YR 1990 TOTAL 346353 MEAN 949 MAX 5350 MIN 50

03327500 WABASH RIVER AT PERU, IN

LOCATION.--Lat 40°44'35", long 86°05'45", in SE¼NE¼ sec.32, T.27 N., R.4 E., Miami County, Hydrologic Unit 05120101, on right bank at upstream side of bridge on U.S. Highway 31, 0.5 mi southwest of Peru, 4.4 mi downstream from Mississinewa River, and at mile 370.5.

DRAINAGE AREA.--2,686 mi^2.

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

REVISED RECORDS.--WSP 2109: Drainage area. WDR IN-74-1: 1973. WDR IN-81-1: 1979.

GAGE.--Water-stage recorder. Datum of gage is 617.94 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to June 20, 1961, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Dec. 13-31. Records fair. Flow regulated by Huntington Lake, Salamonie Lake and Mississinewa Lake.

AVERAGE DISCHARGE.--47 years, 2,378 ft^3/s, 12.02 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 68,000 ft^3/s May 18, 1943, gage height, 24.46 ft, from floodmark; minimum daily, 72 ft^3/s Oct. 5, 1946.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 26, 1913, reached a stage of 28.1 ft, discharge, 115,000 ft^3/s, from rating curve extended above 63,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 16,500 ft^3/s Feb. 22, gage height, 12.63 ft; minimum daily, 376 ft^3/s July 8.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	890	1390	1300	3760	1320	9870	1770	507	5220	739	1070	6160
2	786	1360	923	5030	3920	9770	2040	445	3710	737	782	3280
3	897	1290	696	4870	6480	10100	2640	407	1490	736	587	4430
4	866	1230	592	6150	5640	10100	2000	487	1940	586	541	4410
5	859	1210	597	7130	6070	9890	1500	3980	3930	535	623	4520
6	874	1240	618	6250	6360	9870	1110	5160	2560	498	987	4570
7	781	1390	683	5570	6910	8400	957	4460	1410	396	861	4650
8	812	1530	659	4720	8250	4470	804	3640	1960	376	721	2690
9	767	1560	649	3480	8500	6550	728	3060	4330	397	631	2010
10	846	1470	656	2860	8800	7060	916	1580	7810	498	612	4420
11	874	1600	624	3590	8700	7030	3110	1350	8690	917	583	4880
12	858	1660	630	3170	8040	7360	4180	1190	8400	2130	658	4870
13	807	1660	740	2270	8010	7310	5140	3650	8420	4880	961	2730
14	855	1680	680	1660	7500	7940	4480	5980	8700	7800	1990	1200
15	1090	2330	560	1240	6960	7110	4000	6120	7420	8100	1980	986
16	1450	4520	540	1070	8040	5300	2780	8690	4040	7090	1570	1160
17	1480	6250	570	1190	7540	6750	1810	6670	2390	4470	886	1440
18	1700	6980	550	3070	7450	6610	1260	5990	1150	3490	7570	1580
19	2030	6650	500	4580	8460	6450	722	4570	895	2440	6670	1580
20	2140	6400	440	3780	9370	6350	667	4160	840	1700	3290	1520
21	2580	4900	430	4350	9640	5380	786	6490	907	1230	4850	1490
22	3320	3510	470	5870	13900	4190	974	7780	1070	1460	3690	1320
23	3480	2890	500	5610	13100	3120	979	8110	1210	4600	3260	1230
24	3200	2150	480	4240	9400	2910	857	7720	1540	6810	5240	1130
25	2630	2020	500	2810	9500	2300	774	7750	1210	7350	6750	1140
26	2630	1710	515	3020	8560	1510	742	7990	870	6310	6290	1180
27	2000	1720	530	2290	10000	1360	715	8230	768	5450	6780	1150
28	1890	1830	535	1590	10100	1200	694	8210	1140	2000	8270	1090
29	1690	1720	540	1510	---	1260	638	8370	1430	1310	9060	1050
30	1610	1590	610	1450	---	1390	577	7470	1100	1260	7780	1000
31	1530	---	1400	1380	---	1720	---	6320	---	1130	8060	---
TOTAL	48222	77440	19717	109560	226520	180630	50350	156536	96550	87425	103603	74866
MEAN	1556	2581	636	3534	8090	5827	1678	5050	3218	2820	3342	2496
MAX	3480	6980	1400	7130	13900	10100	5140	8690	8700	8100	9060	6160
MIN	767	1210	430	1070	1320	1200	577	407	768	376	541	986
CFSM	.58	.96	.24	1.32	3.01	2.17	.62	1.88	1.20	1.05	1.24	.93
IN.	.67	1.07	.27	1.52	3.14	2.50	.70	2.17	1.34	1.21	1.43	1.04

CAL YR 1989 TOTAL 996162 MEAN 2729 MAX 15500 MIN 402 CFSM 1.02 IN. 13.80
WTR YR 1990 TOTAL 1231419 MEAN 3374 MAX 13900 MIN 376 CFSM 1.26 IN. 17.05

03327520 PIPE CREEK NEAR BUNKER HILL, IN

LOCATION.--Lat 40°40'06", long 86°05'44", in NE¼SE¼ sec.29, T.26 N., R.4 E., Miami County, Hydrologic Unit 05120101, on right bank 150 ft downstream from bridge on County Road 125 West, 0.5 mi northeast of Bunker Hill, and at mile 11.4.

DRAINAGE AREA.--159 mi^2.

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 National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 4, 9, 10, and Dec. 12 to Jan. 5. Records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--22 years, 145 ft^3/s, 12.38 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,390 ft^3/s Feb. 24, 1985, gage height, 16.59 ft; minimum daily, 3.3 ft^3/s Feb. 1, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 16	2100	1,500	9.32	Mar. 11	2400	1,420	9.04
Feb. 23	1700	2,140	11.23	May 17	1400	*2,320	11.75

Minimum daily discharge, 11 ft^3/s Sept. 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	27	36	120	77	304	149	65	81	40	28	36
2	15	25	35	86	600	275	233	60	79	35	26	30
3	15	24	33	70	871	245	229	58	81	31	24	26
4	14	23	31	320	808	195	175	125	73	29	29	23
5	14	22	33	360	707	166	149	445	67	27	34	22
6	13	23	33	185	531	139	121	322	72	24	28	21
7	13	29	31	120	455	116	102	207	130	23	25	23
8	13	35	27	97	405	112	91	152	106	21	22	26
9	13	37	26	91	417	127	82	122	188	49	20	22
10	13	34	25	124	456	356	124	117	187	151	19	20
11	13	29	26	148	347	1330	396	95	120	418	18	18
12	13	26	25	120	260	1240	342	90	88	561	30	18
13	12	24	24	83	220	735	232	422	75	470	138	20
14	13	24	24	75	184	497	194	479	66	382	71	24
15	12	64	23	68	519	376	162	340	61	273	40	37
16	13	348	21	62	1360	307	137	1300	55	176	30	22
17	16	331	18	69	1290	284	120	2140	51	117	27	18
18	17	203	19	200	741	222	98	1430	46	84	879	16
19	18	134	19	230	577	175	89	555	43	67	483	18
20	21	111	19	184	450	143	92	363	46	139	249	18
21	46	97	18	255	362	127	138	255	47	117	547	16
22	114	78	15	258	1240	120	148	191	44	109	440	16
23	120	67	15	194	2020	109	130	150	74	151	303	15
24	85	58	16	165	1400	91	116	126	103	98	184	14
25	61	53	17	147	679	86	103	117	85	68	121	13
26	47	51	18	143	473	82	94	166	61	52	84	13
27	39	47	17	123	365	75	90	185	52	44	60	12
28	34	45	20	108	341	72	88	147	46	39	48	12
29	30	40	33	97	---	74	83	123	43	36	60	11
30	29	38	40	95	---	97	73	102	40	34	58	12
31	28	---	110	83	---	130	---	88	---	31	45	---
TOTAL	919	2147	847	4480	18155	8407	4380	10537	2310	3896	4170	592
MEAN	29.6	71.6	27.3	145	648	271	146	340	77.0	126	135	19.7
MAX	120	348	110	360	2020	1330	396	2140	188	561	879	37
MIN	12	22	15	62	77	72	73	58	40	21	18	11
CFSM	.19	.45	.17	.91	4.08	1.71	.92	2.14	.48	.79	.85	.12
IN.	.22	.50	.20	1.05	4.25	1.97	1.02	2.47	.54	.91	.98	.14

CAL YR 1989 TOTAL 42605 MEAN 117 MAX 2840 MIN 10 CFSM .73 IN. 9.97
WTR YR 1990 TOTAL 60840 MEAN 167 MAX 2140 MIN 11 CFSM 1.05 IN. 14.23

03328000 EEL RIVER AT NORTH MANCHESTER, IN

LOCATION.--Lat 40°59'55", long 85°45'50", in NE¼NE¼ sec.5, T.29 N., R.7 E., Wabash County, Hydrologic Unit 05120104, on right bank 200 ft downstream from Main Street bridge in North Manchester, 1.3 mi upstream from Pony Creek, and at mile 52.7.

DRAINAGE AREA.--417 mi^2, 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 November 20, 1923 are available from the district office.

REVISED RECORDS.--WSP 1275: 1930-37, 1939, 1940(M), 1942, 1948. WSP 1909: 1957. WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 738.00 ft above National Geodetic Vertical Datum of 1929. Prior to July 24, 1953, nonrecording gage on downstream side of Second Street bridge, 700 ft upstream at same datum.

REMARKS.--Estimated daily discharges: Dec. 9 to Jan. 4. Records good except for estimated daily discharges, which are poor. Records include flow of Pony Creek.

AVERAGE DISCHARGE.--61 years, 369 ft^3/s, 12.02 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,240 ft^3/s Feb. 24, 1985, gage height, 13.76 ft; maximum gage height, 14.00 ft Feb. 27, 1936; minimum daily discharge, 16 ft^3/s Oct. 19, 1956.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 17	0200	2,200	6.48	July 23	0200	2,600	7.21
Feb. 23	0800	5,880	11.77	Aug. 13	1600	2,200	6.48
Mar. 11	1300	3,030	7.96	Aug. 18	2100	*6,320	*12.24
Apr. 11	0500	2,430	6.92	Aug. 29	1700	2,700	7.40
May 16	2200	2,880	7.70				

Minimum daily discharge, 58 ft^3/s Dec. 23, 24.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	86	109	135	270	269	1290	915	262	225	272	167	791
2	86	105	132	250	1320	1070	1000	253	223	194	148	584
3	83	103	127	230	1640	929	762	242	1100	156	136	464
4	82	101	123	1100	1220	764	583	301	891	138	251	386
5	81	99	124	1740	929	662	480	691	502	134	702	337
6	81	99	123	939	755	577	404	484	362	126	308	302
7	81	101	123	540	640	493	354	349	298	118	206	370
8	81	104	120	402	547	470	321	295	641	114	183	550
9	83	104	115	350	494	781	300	261	1790	109	157	372
10	81	103	105	543	445	1200	823	268	1050	109	137	305
11	81	100	96	462	384	2870	2220	258	596	159	131	265
12	82	100	86	367	337	2090	1470	249	419	466	128	245
13	83	96	76	291	311	1250	922	696	322	230	1560	229
14	82	97	72	256	298	920	785	840	266	185	1320	230
15	81	340	70	236	633	748	812	602	245	187	623	696
16	83	1030	68	226	1880	718	656	1950	216	164	377	498
17	86	725	65	336	1890	694	557	2700	196	140	284	361
18	89	418	63	1840	1310	566	471	2020	181	129	4600	290
19	91	288	61	1400	1280	513	414	1120	172	116	5150	264
20	110	239	60	810	963	463	409	751	171	274	2480	255
21	137	219	60	857	708	426	977	559	184	600	1560	235
22	209	198	59	735	2800	408	880	453	191	1470	1450	224
23	221	177	58	562	5600	397	610	377	370	2330	1120	217
24	178	165	58	508	4720	355	492	327	270	1310	819	221
25	152	157	72	546	3870	331	428	305	207	717	638	207
26	136	151	87	727	3010	314	380	478	177	454	517	195
27	129	144	105	507	2320	299	346	575	169	327	434	184
28	124	143	120	413	1700	282	326	413	203	252	390	176
29	118	145	140	357	---	282	336	331	286	212	2420	174
30	112	139	155	324	---	419	287	280	214	190	2300	173
31	110	---	165	286	---	823	---	243	---	179	1280	---
TOTAL	3319	6099	3023	18410	42273	23404	19720	18933	12137	11561	31976	9800
MEAN	107	203	97.5	594	1510	755	657	611	405	373	1031	327
MAX	221	1030	165	1840	5600	2870	2220	2700	1790	2330	5150	791
MIN	81	96	58	226	269	282	287	242	169	109	128	173
CFSM	.26	.49	.23	1.42	3.62	1.81	1.58	1.46	.97	.89	2.47	.78
IN.	.30	.54	.27	1.64	3.77	2.09	1.76	1.69	1.08	1.03	2.85	.87

CAL YR 1989 TOTAL 124288 MEAN 341 MAX 3810 MIN 58 CFSM .82 IN. 11.09
WTR YR 1990 TOTAL 200655 MEAN 550 MAX 5600 MIN 58 CFSM 1.32 IN. 17.90

03328430 WEESAU CREEK NEAR DEEDSVILLE, IN

LOCATION.--Lat 40°54'34", long 86°07'36", in NW¼NW¼ sec.6, T.28 N., R.4 E., Miami County, Hydrologic Unit 05120104, on left bank 100 ft downstream from bridge on County Road 1000 North, and 1.5 mi west of Deedsville.

DRAINAGE AREA.--8.87 mi^2.

PERIOD OF RECORD.--October 1970 to current year.

GAGE.--Water-stage recorder. Datum of gage is 785.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 25 to Nov. 14, Nov. 20 to Jan. 1, Jan. 13-15, Jan. 28 to Feb. 1, Feb. 11-14, Mar. 22-30, May 9-24, and May 27 to June 28. Records fair.

AVERAGE DISCHARGE.--20 years, 10.30 ft^3/s, 15.77 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 471 ft^3/s Feb. 23, 1985, gage height, 7.01 ft; maximum gage height, 7.37 ft Mar. 13, 1982; minimum daily discharge, 0.26 ft^3/s Feb. 1, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 150 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 22	1500	466	6.98	Aug. 13	0600	171	4.46
Mar. 10	2300	208	4.83	Aug. 18	1000	*518	*7.35
July 22	1000	250	5.23				

Minimum daily discharge, 0.46 ft^3/s Sept. 27-28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	4.7	3.8	2.0	9.0	23	23	5.4	3.2	33	2.4	8.1
2	2.7	4.5	3.6	7.5	64	19	22	5.1	4.5	8.0	2.2	5.7
3	2.5	4.2	3.6	13	28	17	16	4.9	8.0	4.3	1.9	4.4
4	2.4	4.0	3.6	81	33	13	13	7.6	15	3.0	50	3.4
5	2.3	3.8	3.4	35	21	12	14	10	12	2.3	55	2.6
6	2.2	4.0	3.3	14	18	11	11	7.6	9.4	2.0	18	2.1
7	2.1	4.2	3.2	8.5	14	9.5	9.9	6.3	7.2	1.8	9.0	3.5
8	2.0	3.8	3.0	7.5	12	12	9.2	5.4	27	1.6	5.7	2.7
9	1.8	3.5	2.8	8.8	11	45	8.8	5.1	29	2.2	4.2	2.0
10	1.8	3.2	2.7	14	9.2	60	52	4.4	24	14	3.4	1.6
11	1.8	3.0	2.6	9.1	8.4	134	56	4.6	18	86	2.9	1.4
12	1.8	2.9	2.4	7.6	7.7	59	26	6.0	11	62	8.8	1.3
13	1.8	2.9	2.3	6.5	6.9	32	17	13	6.8	23	123	1.1
14	1.8	3.0	2.1	5.8	8.6	21	30	15	5.0	19	43	1.3
15	1.9	32	2.0	5.4	46	15	22	35	4.2	12	18	1.2
16	2.0	56	1.9	6.6	82	15	16	54	3.5	7.8	10	1.0
17	2.2	23	1.8	16	43	13	14	36	2.8	5.6	8.1	.80
18	2.5	13	1.7	83	29	11	11	25	2.4	4.0	436	.72
19	2.7	9.0	1.6	27	28	11	10	17	2.1	3.2	218	.85
20	5.7	8.0	1.5	18	17	9.8	17	13	1.9	4.9	104	.75
21	15	7.4	1.4	21	13	9.5	34	10	1.8	4.1	81	.68
22	20	6.8	1.4	16	269	9.3	18	8.8	3.1	155	55	.69
23	14	6.2	1.3	12	162	8.9	13	7.6	8.0	79	42	.63
24	9.7	5.9	1.3	11	88	8.3	11	7.2	5.8	36	34	.56
25	8.2	5.5	1.3	21	57	7.8	9.2	7.4	4.8	19	27	.52
26	6.8	5.2	1.2	17	44	7.6	8.7	8.5	4.0	11	22	.50
27	5.8	4.9	1.2	11	34	7.6	8.0	7.8	3.5	7.9	18	.46
28	5.3	4.6	1.2	8.6	30	7.6	7.6	7.0	3.0	5.6	16	.46
29	5.2	4.3	1.2	8.2	---	8.6	7.0	5.6	2.3	4.1	15	.50
30	5.2	4.0	1.3	8.2	---	18	6.7	4.4	8.3	3.6	12	.49
31	5.0	---	1.5	6.7	---	20	---	3.7	---	2.9	10	---
TOTAL	147.1	247.5	67.2	517.2	1192.8	655.5	521.1	358.4	241.6	627.9	1455.6	52.01
MEAN	4.75	8.25	2.17	16.7	42.6	21.1	17.4	11.6	8.05	20.3	47.0	1.73
MAX	20	56	3.8	83	269	134	56	54	29	155	436	8.1
MIN	1.8	2.9	1.2	2.0	6.9	7.6	6.7	3.7	1.8	1.6	1.9	.46
CFSM	.53	.93	.24	1.88	4.80	2.38	1.96	1.30	.91	2.28	5.29	.20
IN.	.62	1.04	.28	2.17	5.00	2.75	2.19	1.50	1.01	2.63	6.10	.22

CAL YR 1989 TOTAL 3666.86 MEAN 10.0 MAX 205 MIN .81 CFSM 1.13 IN. 15.38
WTR YR 1990 TOTAL 6083.91 MEAN 16.7 MAX 436 MIN .46 CFSM 1.88 IN. 25.52

03328500 EEL RIVER NEAR LOGANSPORT, IN

LOCATION.--Lat 40°46'55", long 86°15'50", in NE¼SE¼ sec.14, T.27 N., R.2 E., Cass County, Hydrologic Unit 05120104, on right bank at downstream side of bridge on Adamsboro Road, 5.5 mi northeast of Logansport, and 7.4 mi upstream from mouth.

DRAINAGE AREA.--789 mi^2.

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

REVISED RECORDS.--WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 621.50 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 16, 1956, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Dec. 4, 11, Dec. 13 to Jan. 5, and Feb. 9-11. Records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--47 years, 751 ft^3/s, 12.93 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 17,700 ft^3/s Feb. 24, 1985, gage height, 12.68 ft; minimum daily, 70 ft^3/s Mar. 15, 1960, results of freezeup.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 18, 1943, reached a stage of 13.2 ft, from floodmark, discharge, 17,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 5,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 23	1800	10,100	10.11	Aug. 19	2200	*13,100	*11.22
Mar. 11	2000	5,660	8.10				

Minimum daily discharge, 120 ft^3/s Dec. 22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	187	239	282	740	569	2120	1280	510	462	572	347	1350
2	180	233	273	700	1450	1750	1460	480	448	493	319	1010
3	174	225	264	515	2940	1540	1300	474	882	379	296	828
4	170	221	256	1200	2360	1330	1020	524	1430	313	437	710
5	166	216	251	3110	2050	1160	875	920	962	279	1320	633
6	162	212	255	2120	1560	1050	785	1020	693	258	1100	580
7	162	220	246	1260	1340	945	689	745	588	244	630	555
8	161	224	237	850	1180	889	626	617	613	231	458	639
9	157	225	226	707	1050	1280	586	554	1420	228	378	720
10	162	217	223	791	940	1810	773	533	1680	276	332	584
11	164	209	218	966	830	4730	2900	543	1030	449	295	520
12	162	204	209	764	763	4680	2570	531	730	1110	318	482
13	167	198	150	622	685	2730	1690	723	595	945	1530	456
14	165	205	170	520	652	1880	1360	1440	514	631	2780	445
15	164	382	190	467	1010	1460	1350	1100	461	579	1580	454
16	161	2260	200	440	2970	1260	1180	2250	427	482	932	813
17	174	1840	170	467	3420	1200	993	4490	391	393	664	639
18	173	1100	140	1930	2410	1060	850	3490	362	329	5350	534
19	187	743	160	2660	2090	927	748	2210	338	287	11700	483
20	213	597	180	1700	1810	856	722	1420	332	285	11300	457
21	254	535	155	1510	1430	796	1050	1060	336	467	5040	439
22	441	472	120	1560	4360	761	1440	851	363	2150	3090	418
23	497	415	160	1200	9370	743	1100	727	444	3700	2490	401
24	452	376	185	1010	8740	694	875	647	581	2790	1950	392
25	378	347	190	1000	6190	644	756	609	460	1640	1530	391
26	325	333	195	1330	4380	610	696	621	372	1020	1250	377
27	293	320	205	1120	3320	581	633	748	337	732	1040	359
28	274	309	210	879	2730	557	599	735	401	584	904	346
29	260	301	220	753	---	555	573	617	577	493	1260	337
30	253	289	245	680	---	633	557	545	534	431	2770	336
31	245	---	290	611	---	965	---	495	---	381	2190	---
TOTAL	7083	13667	6475	34122	72599	42196	32036	32229	18763	23151	65580	16688
MEAN	228	456	209	1101	2593	1361	1068	1040	625	747	2115	556
MAX	497	2260	290	3110	9370	4730	2900	4490	1680	3700	11700	1350
MIN	157	198	120	440	569	555	557	474	332	228	295	336
CFSM	.29	.58	.26	1.40	3.29	1.73	1.35	1.32	.79	.95	2.68	.71
IN.	.33	.64	.31	1.61	3.42	1.99	1.51	1.52	.88	1.09	3.09	.79

CAL YR 1989 TOTAL 225244 MEAN 617 MAX 7710 MIN 120 CFSM .78 IN. 10.62
WTR YR 1990 TOTAL 364589 MEAN 999 MAX 11700 MIN 120 CFSM 1.27 IN. 17.19

03329000 WABASH RIVER AT LOGANSPORT, IN

LOCATION.--Lat 40°44'47", long 86°22'39", in SW¼NE¼ sec.35, T.27 N., R.1 E., Cass County, Hydrologic Unit 05120105, 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 mi^2.

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 National Weather Service.

REVISED RECORDS.--WSP 783: 1934. 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). WSP 2109: Drainage area. WDR IN-81-1: 1979.

GAGE.--Water-stage recorder. Datum of gage is 573.28 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). See WSP 1705 for history of changes prior to Oct. 1, 1927.

REMARKS.--Estimated daily discharges: Dec. 9, 10, and Dec. 14 to Jan.4. Records good except for estimated daily discharges, which are poor. Flow partially regulated by Huntington Lake, Salamonie Lake, and Mississinewa Lake.

AVERAGE DISCHARGE.--67 years (water years 1924 to current year), 3,329 ft^3/s, 11.96 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 89,800 ft^3/s May 18, 1943, gage height, 21.32 ft; minimum daily, 135 ft^3/s Sept. 26, 1941.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 25.3 ft Mar. 26, 1913, from floodmarks, discharge, 140,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 29,600 ft^3/s Feb. 22, gage height, 11.95 ft; minimum daily, 635 ft^3/s Dec. 22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1120	1650	1780	4460	2140	12400	3460	1180	5620	1470	1580	8130
2	1040	1610	1360	4650	4580	11900	3670	1070	4320	1210	1320	4410
3	1080	1550	1120	4470	10900	12000	4460	1030	2760	1190	1060	5090
4	1100	1480	1000	6910	8910	11800	3550	1170	3010	1030	1140	4980
5	1020	1430	900	10600	8970	11300	2890	4330	4530	896	1810	5040
6	1080	1420	943	8560	8380	11100	2420	7000	3640	844	2040	5030
7	953	1660	964	6910	8370	10200	2070	5720	2250	733	1650	5080
8	995	1770	953	5860	9730	5330	1870	4630	2480	663	1310	4040
9	915	1940	940	4400	9980	7430	1650	3990	4590	661	1110	2740
10	969	1750	925	3700	10400	9690	1940	2590	9090	935	1040	4280
11	1030	1870	915	4500	10000	13800	5860	2140	9690	1600	954	5300
12	1020	1930	899	4180	9130	14100	7020	1890	9000	3090	1100	5230
13	980	1970	868	3210	9050	10900	7270	3570	8850	5690	2430	3710
14	993	2000	940	2530	8500	10700	5840	8020	8870	8540	4350	2180
15	1050	3100	890	2000	8670	9670	5570	7420	8070	9050	3720	1690
16	1600	6780	835	1790	12600	6980	4120	12200	4730	8260	2740	1990
17	1710	8700	795	1790	13200	8550	3080	13700	3040	5170	1910	2160
18	1760	8670	820	4160	10900	8210	2390	11500	1820	3810	12200	2220
19	2290	7790	805	7560	11000	7890	1690	7500	1320	3060	19100	2200
20	2410	7300	750	5690	11900	7700	1510	5730	1270	2320	14400	2120
21	2830	6070	690	5530	11400	6830	1960	7040	1260	2010	10600	2050
22	3790	4300	635	7440	20500	5660	2520	8550	1460	3610	7710	1940
23	4200	3580	680	7030	26900	4280	2290	8900	1640	6890	6210	1770
24	3860	2810	715	5560	20700	4070	2000	8410	2170	9410	6960	1660
25	3240	2560	750	4050	17100	3370	1710	8260	1930	9070	8410	1620
26	3080	2220	770	4380	13700	2660	1580	8580	1400	7310	7850	1670
27	2500	2150	790	3740	13900	2320	1500	8990	1200	6220	7740	1630
28	2290	2260	820	2760	13400	2140	1450	8920	1320	3440	9220	1560
29	2050	2150	850	2460	---	2160	1390	8940	2130	1990	10300	1500
30	1910	2050	940	2340	---	2370	1300	8180	1740	1820	10600	1480
31	1870	---	1600	2200	---	2900	---	6790	---	1620	10300	---
TOTAL	56735	96520	28642	145420	324910	240410	90030	197940	115200	113612	172864	94500
MEAN	1830	3217	924	4691	11600	7755	3001	6385	3840	3665	5576	3150
MAX	4200	8700	1780	10600	26900	14100	7270	13700	9690	9410	19100	8130
MIN	915	1420	635	1790	2140	2140	1300	1030	1200	661	954	1480
CFSM	.48	.85	.24	1.24	3.07	2.05	.79	1.69	1.02	.97	1.48	.83
IN.	.56	.95	.28	1.43	3.20	2.37	.89	1.95	1.13	1.12	1.70	.93

CAL YR 1989 TOTAL 1275765 MEAN 3495 MAX 26400 MIN 632 CFSM .92 IN. 12.56
WTR YR 1990 TOTAL 1676783 MEAN 4594 MAX 26900 MIN 635 CFSM 1.22 IN. 16.51

03329400 RATTLESNAKE CREEK NEAR PATTON, IN

LOCATION.--Lat 40°42'46", long 86°41'49", in NW¼SW¼ sec.7, T.26 N., R.2 W., Carroll County, Hydrologic Unit 05120105, on left bank 5 ft downstream from bridge on County Road 900 West, and 2.5 mi northeast of Patton.

DRAINAGE AREA.--6.83 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 644.97 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 28, 1979, at datum 1.00 ft higher.

REMARKS.--Estimated daily discharges: Dec. 15-29. Records fair except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--22 years, 6.70 ft^3/s, 13.32 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 491 ft^3/s Aug. 21, 1990, gage height, 5.19 ft; maximum gage height, 5.30 ft June 14, 1975; minimum daily discharge, 0.06 ft^3/s Sept. 11-18, 27-30, 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 90 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 22	1200	335	4.84	June 2	2200	135	4.12
Mar. 10	2000	274	4.69	Aug. 19	1900	327	4.82
May 16	0800	160	4.25	Aug. 21	0900	*491	*5.19

Minimum daily discharge, 0.75 ft^3/s Dec. 23.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	1.8	1.8	1.9	5.3	14	5.2	4.4	4.4	2.7	1.5	3.4
2	1.4	1.8	1.8	1.4	40	12	5.4	4.1	21	2.3	1.4	3.0
3	1.3	1.5	1.6	2.8	22	10	5.0	4.2	23	2.1	1.3	2.7
4	1.2	1.4	1.8	17	22	8.9	5.0	6.6	9.1	2.0	18	2.5
5	1.3	1.5	1.8	6.8	19	8.2	4.7	7.6	6.8	1.9	12	2.3
6	1.4	1.4	1.7	4.2	15	7.4	4.3	5.9	5.9	1.8	3.7	2.1
7	1.3	2.0	1.4	3.4	12	6.8	4.0	5.3	5.1	1.7	2.4	2.4
8	1.3	1.8	1.5	3.2	10	8.1	3.9	4.8	7.0	1.6	2.0	2.2
9	1.3	1.6	1.5	3.3	9.2	15	4.0	4.7	5.5	1.6	1.7	2.1
10	1.6	1.4	1.5	3.5	7.8	77	13	4.8	4.5	2.1	1.4	1.9
11	1.5	1.4	1.5	3.5	6.9	142	16	3.9	4.1	2.4	1.3	1.9
12	1.5	1.3	1.3	2.9	6.0	48	11	5.0	4.0	2.1	14	1.9
13	1.4	1.4	1.3	2.4	5.8	33	8.8	8.5	3.8	2.9	46	1.8
14	1.4	1.6	1.4	2.5	5.2	26	13	6.9	3.8	4.6	13	2.0
15	1.5	10	1.2	2.3	30	21	11	6.1	3.6	4.6	5.5	1.9
16	1.5	15	1.0	2.3	43	16	9.3	71	3.5	3.7	3.6	1.8
17	1.9	7.5	.85	3.3	27	12	7.8	39	3.3	2.5	3.2	1.6
18	1.5	4.9	.85	13	22	9.5	6.8	23	3.1	2.1	25	1.6
19	1.8	4.2	.90	7.0	20	8.3	6.5	16	3.1	2.0	83	1.8
20	3.3	4.0	.95	6.3	14	7.5	11	11	3.4	2.3	67	1.6
21	6.4	3.1	.85	6.7	11	7.4	23	8.9	3.0	2.2	201	1.5
22	4.9	2.9	.78	5.9	200	7.0	14	7.5	4.6	7.8	64	1.5
23	3.7	2.6	.75	5.3	82	5.8	10	6.8	4.1	4.8	38	1.4
24	2.9	2.4	.80	4.6	45	5.6	8.6	6.2	3.0	3.1	27	1.3
25	2.5	2.4	.85	11	30	5.4	7.4	6.6	2.6	2.4	19	1.4
26	2.3	2.2	.90	8.7	22	5.1	6.7	6.6	2.6	2.1	13	1.3
27	2.2	2.3	.82	6.6	19	4.8	6.3	5.9	2.5	2.0	8.4	1.2
28	2.1	2.1	.90	5.1	17	4.8	6.1	5.5	2.4	1.9	6.5	1.3
29	2.1	1.8	1.1	5.0	---	5.0	5.3	5.0	2.6	1.8	5.7	1.4
30	2.1	1.9	1.4	4.4	---	5.2	4.9	4.6	2.5	1.8	4.8	1.5
31	2.0	---	3.4	3.7	---	5.0	---	4.4	---	1.6	4.1	---
TOTAL	64.0	91.2	40.20	160.0	768.2	551.8	248.0	310.8	157.9	80.5	698.5	56.3
MEAN	2.06	3.04	1.30	5.16	27.4	17.8	8.27	10.0	5.26	2.60	22.5	1.88
MAX	6.4	15	3.4	17	200	142	23	71	23	7.8	201	3.4
MIN	1.2	1.3	.75	1.4	5.2	4.8	3.9	3.9	2.4	1.6	1.3	1.2
CFSM	.30	.45	.19	.76	4.02	2.61	1.21	1.47	.77	.38	3.30	.27
IN.	.35	.50	.22	.87	4.18	3.01	1.35	1.69	.86	.44	3.80	.31

CAL YR 1989 TOTAL 2070.45 MEAN 5.67 MAX 193 MIN .75 CFSM .83 IN. 11.28
WTR YR 1990 TOTAL 3227.40 MEAN 8.84 MAX 201 MIN .75 CFSM 1.29 IN. 17.58

03329700 DEER CREEK NEAR DELPHI, IN

LOCATION.--Lat 40°35'25", long 86°37'15", in NE¼NE¼ sec.27, T.25 N., R.2 W., Carroll County, Hydrologic Unit 05120105, on downstream side of left wingwall of highway bridge, 2.6 mi northeast of Delphi Post Office, and 4.8 mi upstream from mouth.

DRAINAGE AREA.--274 mi^2.

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

REVISED RECORDS.--WSP 1275: 1944, 1947-48. WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 553.81 ft above National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark, levels by State of Indiana, Department of Natural Resources).

REMARKS.--Estimated daily discharges: Dec. 4, Dec. 13 to Jan. 4. Records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--47 years, 241 ft^3/s, 11.94 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,400 ft^3/s June 10, 1958, gage height, 18.26 ft; minimum daily, 6.2 ft^3/s Sept. 25-28, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1943 reached a stage of 19.8 ft, from floodmarks, discharge, 18,000 ft^3/s, from rating curve extended above 8,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 16	2015	2,230	6.57	May 17	1330	3,760	8.41
Feb. 23	0115	4,330	9.03	Aug. 21	0935	*4,770	*9.48
Mar. 11	1430	4,120	8.80				

Minimum daily discharge, 46 ft^3/s Aug. 11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	71	99	122	250	167	515	241	167	180	305	61	134
2	70	93	120	200	631	470	264	156	176	130	57	117
3	66	89	112	180	1160	423	284	156	178	98	53	105
4	63	84	108	500	1040	345	255	187	163	85	77	96
5	61	82	115	642	942	297	241	439	149	77	122	90
6	60	82	113	354	691	261	216	401	148	70	81	84
7	61	97	105	243	562	228	195	291	188	65	64	85
8	57	104	97	200	481	231	183	243	200	62	56	84
9	56	111	92	186	478	277	176	214	654	59	52	82
10	57	106	96	206	537	584	223	209	506	82	48	78
11	56	97	95	232	454	3740	480	196	282	207	46	74
12	54	88	83	208	366	2760	447	188	216	308	71	71
13	54	83	80	169	322	1400	346	450	186	272	243	67
14	53	91	82	158	294	981	333	618	168	233	228	69
15	52	425	78	146	739	747	319	434	155	248	128	64
16	51	1020	72	137	2070	598	289	2220	142	197	90	68
17	82	754	62	143	1890	523	273	3240	131	143	117	65
18	75	473	64	229	1100	430	236	1600	121	112	454	61
19	80	332	66	297	818	363	217	868	112	96	939	67
20	97	291	66	272	648	312	231	620	121	110	756	70
21	181	255	60	310	538	292	280	455	118	128	3550	67
22	341	220	50	359	2340	284	319	356	114	237	1820	66
23	317	196	50	308	4060	264	286	296	119	190	872	62
24	240	178	53	275	2290	233	261	261	136	157	566	59
25	185	170	56	253	1210	221	237	258	151	115	392	57
26	156	162	62	257	811	211	218	343	126	95	289	54
27	138	155	58	231	639	199	207	362	112	83	226	52
28	121	153	70	210	591	192	205	297	102	76	187	50
29	111	135	80	192	---	196	200	256	100	70	183	50
30	106	126	90	189	---	223	180	219	141	72	207	49
31	105	---	150	174	---	234	---	193	---	69	162	---
TOTAL	3277	6351	2607	7710	27869	18034	7842	16193	5395	4251	12197	2197
MEAN	106	212	84.1	249	995	582	261	522	180	137	393	73.2
MAX	341	1020	150	642	4060	3740	480	3240	654	308	3550	134
MIN	51	82	50	137	167	192	176	156	100	59	46	49
CFSM	.39	.77	.31	.91	3.63	2.12	.95	1.91	.66	.50	1.44	.27
IN.	.44	.86	.35	1.05	3.78	2.45	1.06	2.20	.73	.58	1.66	.30

CAL YR 1989 TOTAL 97931 MEAN 268 MAX 5740 MIN 37 CFSM .98 IN. 13.30
WTR YR 1990 TOTAL 113923 MEAN 312 MAX 4060 MIN 46 CFSM 1.14 IN. 15.47

03330241 TIPPECANOE RIVER AT NORTH WEBSTER, IN

LOCATION.--Lat 41°18'58", long 85°41'32", in SE¼NE¼ sec.15, T.33 N., R.7 E., Kosciusko County, Hydrologic Unit 05120106, on right upstream corner of State Road 13 bridge, at the intersection of State Road 13 and County Road 550 North, and 0.4 mi southeast of North Webster.

DRAINAGE AREA.--49.3 mi^2.

PERIOD OF RECORD.--May 1986 to current year.

GAGE.--Water-stage recorder. Datum of gage is 840.00 ft above National Geodetic Vertical Datum of 1929 (levels by State of Indiana, Department of Natural Resources).

REMARKS.--No estimated daily discharges. Records fair. Flow regulated at times by dams at Webster Lake, 0.25 mi upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 294 ft^3/s June 5, 1986, (gage height, 5.64 ft); maximum gage height, 5.93 ft, Feb. 26, 1990; minimum daily discharge, 0.06 ft^3/s Aug. 18, 1988, regulation.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 272 ft^3/s Feb. 26, gage height, 5.93 ft; minimum daily, 3.0 ft^3/s Oct. 8 and Dec. 24, (regulated).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	26	40	4.3	78	245	56	44	20	21	41	140
2	21	25	39	4.3	80	229	56	43	24	20	39	140
3	23	23	38	4.6	79	211	57	42	50	19	30	137
4	20	22	38	6.7	80	179	57	43	69	19	9.4	133
5	16	22	38	11	81	119	57	42	67	18	12	125
6	16	22	37	16	82	115	57	41	65	16	12	121
7	9.2	21	37	43	83	111	56	41	63	15	13	124
8	3.0	19	36	64	83	109	55	40	67	13	16	122
9	3.4	15	29	63	83	109	55	39	70	13	18	121
10	5.3	14	8.1	60	82	108	57	40	71	12	19	120
11	6.9	15	7.3	58	81	109	58	39	69	18	19	117
12	8.3	15	6.7	57	79	111	58	40	67	20	24	82
13	9.0	16	6.2	56	77	119	59	42	63	19	76	38
14	11	16	6.2	45	77	118	64	41	60	19	105	43
15	13	18	5.7	31	78	115	67	34	59	19	105	74
16	13	19	5.6	29	77	119	70	45	33	19	107	115
17	11	18	5.2	30	77	119	71	96	16	18	93	112
18	8.6	18	4.6	30	76	99	71	102	15	17	97	110
19	8.4	18	4.3	30	76	86	70	133	15	17	125	109
20	9.3	19	4.3	31	75	84	72	167	15	22	160	106
21	9.3	20	4.4	33	76	81	90	155	17	24	165	100
22	8.9	20	3.9	36	114	81	98	143	19	63	170	99
23	12	21	3.3	38	240	80	96	107	20	92	168	98
24	24	18	3.0	40	255	78	95	79	20	92	163	78
25	26	29	3.2	68	262	47	94	81	18	94	137	11
26	24	46	3.1	120	270	27	93	89	18	101	98	10
27	23	45	3.2	105	268	25	72	95	18	130	70	11
28	25	45	3.3	83	259	25	44	95	19	91	72	11
29	28	44	3.4	81	---	25	44	79	20	48	82	12
30	28	43	3.6	79	---	37	44	17	21	47	99	13
31	28	---	4.3	78	---	56	---	18	---	44	138	---
TOTAL	471.6	712	434.9	1434.9	3328	3176	1993	2112	1168	1180	2482.4	2632
MEAN	15.2	23.7	14.0	46.3	119	102	66.4	68.1	38.9	38.1	80.1	87.7
MAX	28	46	40	120	270	245	98	167	71	130	170	140
MIN	3.0	14	3.0	4.3	75	25	44	17	15	12	9.4	10
CFSM	.31	.48	.28	.94	2.41	2.08	1.35	1.38	.79	.77	1.62	1.78
IN.	.36	.54	.33	1.08	2.51	2.40	1.50	1.59	.88	.89	1.87	1.99

CAL YR 1989 TOTAL 13412.4 MEAN 36.7 MAX 239 MIN 3.0 CFSM .75 IN. 10.12
WTR YR 1990 TOTAL 21124.8 MEAN 57.9 MAX 270 MIN 3.0 CFSM 1.17 IN. 15.94

03330500 TIPPECANOE RIVER AT OSWEGO, IN

LOCATION.--Lat 41°19'14", long 85°47'21", in NE¼NE¼ sec.14, T.33 N., R.6 E., Kosciusko County, Hydrologic Unit 05120106, on left bank 25 ft downstream from dam at Tippecanoe Lake Outlet in Oswego, 3 mi east of Leesburg, and at mile 158.9.

DRAINAGE AREA.--113 mi^2.

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

REVISED RECORDS.--WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 830.00 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 12, 1953, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records good. Periodic regulation by gates at lake outlet.

AVERAGE DISCHARGE.--41 years, 104 ft^3/s, 12.50 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 950 ft^3/s Mar. 21, 1982, gage height, 9.25 ft; minimum daily, 0.08 ft^3/s Aug. 4, 5, 1967.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 400 ft^3/s Feb. 28, gage height, 7.99 ft; minimum daily, 16 ft^3/s Oct. 13-16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	41	64	28	149	397	137	157	185	95	180	275
2	22	40	61	28	155	383	97	126	171	84	168	276
3	22	39	62	29	155	371	90	49	112	56	157	276
4	22	38	61	33	156	358	94	99	88	35	147	271
5	22	79	62	35	156	336	93	107	128	26	95	265
6	22	109	61	31	159	316	90	116	128	28	21	254
7	34	100	61	37	159	306	91	115	128	46	21	263
8	37	90	61	46	159	295	126	114	150	52	28	261
9	35	80	61	56	160	289	131	115	173	49	39	258
10	34	74	58	64	160	285	151	113	170	49	66	253
11	32	67	54	103	157	287	176	114	170	76	64	248
12	28	64	48	134	152	287	174	116	167	103	66	241
13	16	59	44	136	149	291	173	141	162	83	125	226
14	16	58	42	135	150	291	176	160	159	61	147	215
15	16	67	41	132	157	288	179	161	148	43	156	209
16	16	75	39	131	154	282	182	173	126	29	174	208
17	18	76	38	134	154	274	181	202	83	30	196	208
18	17	75	37	137	153	263	180	235	24	49	215	207
19	17	74	36	138	153	244	178	252	40	75	224	208
20	18	72	35	142	154	232	179	273	45	104	251	207
21	18	72	34	143	154	220	191	290	61	103	284	204
22	18	70	33	145	189	210	195	296	94	134	313	198
23	18	67	32	147	249	199	198	292	114	170	325	195
24	19	65	31	149	299	187	199	278	98	187	332	189
25	19	63	30	152	339	173	199	266	31	197	330	176
26	20	65	30	161	350	158	197	260	33	205	318	161
27	21	67	29	161	366	146	195	251	48	214	298	130
28	32	66	28	161	400	141	186	244	72	220	282	25
29	44	64	27	161	---	138	177	236	73	213	278	26
30	43	63	27	158	---	140	167	220	87	203	271	27
31	42	---	28	153	---	141	---	202	---	192	272	---
TOTAL	760	2039	1355	3400	5447	7928	4782	5773	3268	3211	5843	6160
MEAN	24.5	68.0	43.7	110	195	256	159	186	109	104	188	205
MAX	44	109	64	161	400	397	199	296	185	220	332	276
MIN	16	38	27	28	149	138	90	49	24	26	21	25
CFSM	.22	.60	.39	.97	1.72	2.26	1.41	1.65	.96	.92	1.67	1.82
IN.	.25	.67	.45	1.12	1.79	2.61	1.57	1.90	1.08	1.06	1.92	2.03

CAL YR 1989 TOTAL 30502 MEAN 83.6 MAX 344 MIN 16 CFSM .74 IN. 10.04
WTR YR 1990 TOTAL 49966 MEAN 137 MAX 400 MIN 16 CFSM 1.21 IN. 16.45

03331110 WALNUT CREEK NEAR WARSAW, IN

LOCATION.--Lat 41°12'17", long 85°52'11", in NW¼NE¼ sec.30, T.32 N., R.6 E., Kosciusko County, Hydrologic Unit 05120106, on left bank 10 ft upstream from bridge on County Road 200 South, 0.3 mi downstream from small right-bank tributary, and 2.5 mi south of court house in Warsaw.

DRAINAGE AREA.--19.6 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 823.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 6 to Jan. 12, Jan. 18, 19 and Jan. 24 to Mar. 6. Records good except for estimated daily discharges and those below 2 ft^3/s, which are poor. Flow occasionally regulated by lakes upstream.

AVERAGE DISCHARGE.--21 years, 17.7 ft^3/s, 12.26 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 561 ft^3/s June 13, 1981, gage height, 5.38 ft; minimum daily, 0.40 ft^3/s Oct. 15, 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 75 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 11	2100	91	2.80	Aug. 18	0100	*265	*4.02

Minimum daily discharge, 1.7 ft^3/s Oct. 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	4.0	6.8	3.5	16	50	31	15	8.4	6.6	12	38
2	2.0	4.0	6.4	6.0	50	46	32	12	7.9	6.0	10	32
3	2.0	3.8	6.1	10	54	42	33	10	14	5.2	8.1	27
4	2.0	3.8	5.8	26	47	39	31	13	21	4.7	14	24
5	1.9	3.7	5.6	25	40	37	28	17	22	3.9	25	22
6	1.8	3.8	5.4	20	35	35	26	17	19	3.3	24	20
7	1.9	3.9	5.0	17	29	33	23	16	16	2.8	20	23
8	1.8	4.2	4.7	15	26	31	20	13	27	2.5	15	24
9	1.8	4.2	4.5	14	24	45	18	11	37	2.3	11	23
10	1.7	4.2	4.3	20	20	58	25	10	33	2.6	8.9	21
11	1.8	4.1	4.1	17	19	87	40	11	30	4.1	7.3	19
12	1.9	4.0	3.9	14	19	88	42	11	25	4.8	9.8	18
13	1.8	4.4	3.7	12	18	74	38	27	18	5.0	50	16
14	1.8	5.0	3.6	11	18	59	38	28	13	5.0	53	21
15	2.0	13	3.4	9.3	29	49	38	29	11	4.7	48	32
16	1.9	31	3.2	8.9	64	45	35	49	8.9	4.3	38	33
17	1.9	32	3.1	13	70	41	32	63	7.3	3.9	43	32
18	2.0	25	2.9	30	56	36	28	50	6.2	3.4	204	30
19	2.2	19	2.8	20	41	35	25	39	5.3	3.0	176	28
20	3.2	15	2.7	15	36	32	25	34	4.7	22	153	26
21	4.4	14	2.6	13	32	28	37	30	4.6	24	143	21
22	6.7	14	2.6	12	120	26	38	26	6.2	59	110	18
23	6.7	11	2.5	24	130	26	34	22	11	66	82	19
24	6.7	9.9	2.5	35	100	25	32	18	11	56	68	22
25	6.3	9.5	2.5	37	90	23	29	16	9.4	44	56	20
26	5.8	8.2	2.4	32	78	21	26	18	6.3	35	48	19
27	5.2	7.4	2.4	23	66	19	24	17	5.3	27	42	17
28	4.6	7.3	2.4	20	58	20	22	15	5.5	20	39	15
29	4.2	7.2	2.4	18	---	19	20	13	5.7	15	52	14
30	4.1	7.0	2.5	18	---	23	16	11	6.1	17	51	15
31	4.1	---	2.7	17	---	27	---	9.5	---	14	45	---
TOTAL	98.4	287.6	115.5	555.7	1385	1219	886	670.5	405.8	477.1	1666.1	689
MEAN	3.17	9.59	3.73	17.9	49.5	39.3	29.5	21.6	13.5	15.4	53.7	23.0
MAX	6.7	32	6.8	37	130	88	42	63	37	66	204	38
MIN	1.7	3.7	2.4	3.5	16	19	16	9.5	4.6	2.3	7.3	14
CFSM	.16	.49	.19	.91	2.52	2.01	1.51	1.10	.69	.79	2.74	1.17
IN.	.19	.55	.22	1.05	2.63	2.31	1.68	1.27	.77	.91	3.16	1.31

CAL YR 1989 TOTAL 3976.0 MEAN 10.9 MAX 89 MIN 1.5 CFSM .56 IN. 7.55
WTR YR 1990 TOTAL 8455.7 MEAN 23.2 MAX 204 MIN 1.7 CFSM 1.18 IN. 16.05

03331500 TIPPECANOE RIVER NEAR ORA, IN

LOCATION.--Lat 41°09'26", long 86°33'49", in SE¼SE¼ sec.6, T.31 N., R.1 W., Pulaski County, Hydrologic Unit 05120106, on right bank at downstream side of bridge on County Road 700 East, 1.0 mi upstream from Bartee ditch, 1.3 mi southwest of Ora, and at mile 78.5.

DRAINAGE AREA.--856 mi^2.

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

REVISED RECORDS.--WSP 1335: 1944(M). WSP 1505: 1949-50(P). WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 692.91 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to July 30, 1956, nonrecording gage on upstream side of old highway bridge, 120 ft downstream. 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. All gages at same datum.

REMARKS.--Estimated daily discharges: Dec. 9 to Jan. 9, and June 6-27. Records good below 1,000 ft^3/s and fair above except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--47 years, 840 ft^3/s, 13.33 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,660 ft^3/s June 15, 1981, gage height, 15.22 ft Aug. 20, 1990; minimum daily, 87 ft^3/s Sept. 13, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,300 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 24	2200	5,510	13.89	July 24	0900	2,500	10.57
Mar. 13	0100	4,240	12.67	Aug. 20	2300	*7,110	*15.22
May 19	0900	3,100	11.37				

Minimum daily discharge, 217 ft^3/s Oct. 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	246	348	444	365	820	3800	1340	963	971	733	948	2270
2	237	356	437	400	953	3490	1400	891	928	771	859	2040
3	234	348	427	450	1350	3190	1400	851	1020	673	784	1860
4	234	322	422	540	1350	2930	1350	886	1060	608	749	1710
5	232	302	418	830	1300	2690	1320	953	958	548	913	1570
6	230	288	412	1000	1240	2470	1260	909	860	490	903	1440
7	227	288	408	950	1200	2240	1180	874	800	445	829	1360
8	226	298	400	900	1150	2080	1100	826	860	412	763	1340
9	225	338	380	770	1100	2190	1030	775	1000	391	662	1270
10	226	348	360	715	1060	2600	1050	750	980	398	584	1210
11	236	336	330	696	994	3230	1420	721	950	512	537	1170
12	232	322	310	666	930	4020	1630	722	920	723	526	1130
13	232	312	305	625	883	4160	1560	969	870	723	1120	1080
14	228	315	300	597	852	3790	1590	1340	800	722	2010	1040
15	223	353	295	589	882	3410	1760	1330	740	951	1900	1120
16	217	743	285	586	1100	3060	1770	1440	680	820	1500	1170
17	227	946	280	606	1320	2730	1660	2050	620	707	1330	1110
18	241	894	277	794	1340	2430	1540	2770	540	599	2130	1060
19	237	819	272	1050	1350	2170	1430	3070	540	520	4900	1030
20	255	758	267	1010	1380	1970	1380	2930	550	692	6950	1020
21	270	699	262	1020	1300	1810	1500	2730	560	1670	6970	987
22	297	639	258	1060	1690	1710	1620	2410	580	1750	6800	956
23	336	589	255	1010	3280	1660	1570	2040	630	2150	6520	927
24	336	547	252	958	5190	1560	1500	1760	580	2460	5890	907
25	317	518	250	965	5370	1470	1430	1580	550	2180	5240	890
26	301	496	253	1050	4920	1370	1360	1480	560	1850	4680	863
27	289	483	265	1020	4510	1290	1270	1390	600	1650	4160	827
28	278	476	285	967	4120	1220	1200	1290	853	1440	3710	783
29	271	467	310	921	---	1180	1150	1210	930	1230	3320	750
30	279	455	340	889	---	1240	1050	1120	745	1170	2920	717
31	315	---	355	847	---	1310	---	1040	---	1110	2550	---
TOTAL	7934	14403	10114	24846	52934	74470	41820	44070	23235	31098	83657	35607
MEAN	256	480	326	801	1890	2402	1394	1422	774	1003	2699	1187
MAX	336	946	444	1060	5370	4160	1770	3070	1060	2460	6970	2270
MIN	217	288	250	365	820	1180	1030	721	540	391	526	717
CFSM	.30	.56	.38	.94	2.21	2.81	1.63	1.66	.90	1.17	3.15	1.39
IN.	.34	.63	.44	1.08	2.30	3.24	1.82	1.92	1.01	1.35	3.64	1.55

CAL YR 1989 TOTAL 206335 MEAN 565 MAX 2000 MIN 194 CFSM .66 IN. 8.97
WTR YR 1990 TOTAL 444188 MEAN 1217 MAX 6970 MIN 217 CFSM 1.42 IN. 19.30

03332345 TIPPECANOE RIVER AT BUFFALO, IN

LOCATION.--Lat 40°53'05", long 86°44'49", in SE¼SE¼ sec.10, T.28 N., R.3 W., White County, Hydrologic Unit 05120106, on right bank approximately 30 ft upstream from State Road 16 bridge at Buffalo, 0.2 mi downstream from Harp ditch, 10.8 mi upstream from Norway dam.

DRAINAGE AREA.--1,284 mi^2.

PERIOD OF RECORD.--April 1986 to current year.

GAGE.--Water-stage recorder. Datum of gage is 640.000 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated midnight gage heights: Feb. 14, Sept. 7 and 8. Stage possibly affected by backwater from Norway dam.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 15.46 ft Aug. 21, 1990; minimum gage height, 6.98 ft Sept. 30, 1986.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 15.46 ft Aug. 21, 1990; minimum gage height, 7.83 ft Oct. 17.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.08	8.00	8.15	8.24	8.63	11.62	9.31	8.75	8.73	8.43	8.67	9.94
2	7.97	7.99	8.08	8.38	9.20	11.32	9.30	8.64	8.72	8.41	8.62	9.67
3	7.97	8.14	8.10	8.40	9.24	10.96	9.27	8.65	8.87	8.41	8.49	9.47
4	7.97	8.11	8.16	9.00	9.28	10.65	9.25	8.82	8.81	8.25	8.72	9.32
5	8.03	8.09	8.11	8.85	9.17	10.44	9.21	8.80	8.73	8.22	8.73	9.19
6	7.94	8.03	8.02	9.11	9.05	10.24	9.07	8.75	8.66	8.23	8.70	9.06
7	8.04	8.05	8.16	9.06	9.01	10.05	9.03	8.73	8.59	8.16	8.56	9.04
8	7.89	7.96	8.14	8.97	9.02	10.09	8.96	8.65	8.70	8.09	8.49	8.99
9	7.93	8.10	8.52	8.67	8.91	10.77	8.88	8.72	8.92	8.13	8.38	8.90
10	7.98	8.06	8.54	8.54	8.80	12.20	9.29	8.58	9.05	8.11	8.32	8.89
11	8.04	8.00	8.12	8.47	8.76	12.95	9.57	8.53	8.88	8.39	8.74	8.86
12	7.89	8.09	8.12	8.33	8.76	12.33	9.61	8.62	8.79	8.41	8.88	8.83
13	7.97	8.10	8.01	8.57	8.60	12.25	9.55	9.00	8.69	8.43	10.40	8.75
14	7.99	8.12	7.91	8.36	8.63	11.89	9.91	9.14	8.63	8.49	10.22	8.77
15	8.05	8.25	8.09	8.21	8.95	11.39	9.78	9.18	8.54	8.71	10.02	8.75
16	7.93	8.61	8.09	8.36	9.33	10.97	9.72	10.15	8.49	8.64	9.54	8.81
17	7.83	8.68	8.13	8.33	9.35	10.61	9.59	10.55	8.43	8.47	9.26	8.76
18	7.87	8.60	8.22	8.65	9.39	10.29	9.43	10.35	8.27	8.31	13.82	8.75
19	8.01	8.61	8.25	8.71	9.37	10.03	9.33	10.53	8.27	8.27	13.30	8.70
20	8.10	8.44	8.21	8.73	9.30	9.84	9.41	10.52	8.37	9.05	14.19	8.67
21	8.11	8.44	8.17	8.83	9.19	9.71	9.55	10.32	8.30	9.29	15.46	8.65
22	8.07	8.34	8.17	8.79	13.28	9.63	9.52	10.10	8.32	10.05	15.34	8.61
23	8.09	8.26	8.14	8.84	13.26	9.51	9.44	9.83	8.32	9.80	14.93	8.58
24	7.98	8.36	8.11	8.60	12.93	9.43	9.33	9.57	8.39	9.87	14.32	8.59
25	8.09	8.30	8.19	8.81	13.45	9.36	9.21	9.43	8.36	9.82	13.38	8.55
26	8.01	8.20	8.12	8.87	13.05	9.24	9.17	9.30	8.32	9.52	12.54	8.50
27	8.04	8.24	8.12	8.80	12.55	9.15	9.08	9.17	8.29	9.26	11.88	8.49
28	7.96	8.10	8.13	8.72	12.07	9.09	9.00	9.01	8.69	9.06	11.46	8.46
29	8.03	8.24	8.18	8.60	---	9.12	8.96	8.93	8.79	9.33	11.14	8.38
30	7.98	8.16	8.26	8.60	---	9.17	8.87	8.88	8.52	9.09	10.68	8.37
31	8.03	---	8.30	8.55	---	9.26	---	8.79	---	8.94	10.28	---
MEAN	8.00	8.22	8.16	8.64	10.02	10.44	9.32	9.26	8.58	8.76	10.82	8.84
MAX	8.11	8.68	8.54	9.11	13.45	12.95	9.91	10.55	9.05	10.05	15.46	9.94
MIN	7.83	7.96	7.91	8.21	8.60	9.09	8.87	8.53	8.27	8.09	8.32	8.37

CAL YR 1989 MEAN 8.44 MAX 11.48 MIN 7.83
WTR YR 1990 MEAN 9.09 MAX 15.46 MIN 7.83

03333050 TIPPECANOE RIVER NEAR DELPHI, IN

LOCATION.--Lat 40°35'38", long 86°46'12", in SW¼SW¼ sec.21, T.25 N., R.3 W., Carroll County, Hydrologic Unit 05120106, on left bank 20 ft upstream from bridge on State Highway 18, 1,400 ft east of Springboro, 8.1 mi downstream from Big Creek, 5 mi west of Delphi, and at mile 8.7.

DRAINAGE AREA.--1,869 mi^2.

PERIOD OF RECORD.--March to December 1903, March to December 1904, March 1905 to July 1906, November and December 1908, July 1939 to September 1987, October 1987 to current year. Published as "at Springboro" 1903-08.

REVISED RECORDS.--WSP 973: 1942. WSP 1335: 1905-6. WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 535.00 ft above National Geodetic Vertical Datum of 1929. Mar. 14, 1903, to July 20, 1906, and Nov. 2 to Dec. 31, 1908, nonrecording gage at present site at different datum. July 1939 to Sept. 30, 1987, at site 6.4 mi upstream at datum 17.01 ft higher.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by upstream reservoirs.

AVERAGE DISCHARGE.--51 years (water years 1940 to current year), 1,696 ft^3/s, 12.32 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,600 ft^3/s Feb. 10, 1959, gage height, 15.10 ft at site then in use; minimum daily, 1.0 ft^3/s Nov. 2, 3, 1954, caused by repair work at Oakdale Dam, 10.2 mi upstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 17,600 ft^3/s Feb. 23, gage height, 11.23 ft; minimum daily, 443 ft^3/s Dec. 13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	850	836	1080	791	1920	6650	2720	2020	1780	1640	2040	3350
2	985	830	924	784	3440	5990	2970	2030	1940	1230	1610	3070
3	755	613	802	971	4020	5630	2780	1760	2400	1220	1530	2670
4	650	900	818	1110	3650	4820	2620	2100	2020	1040	1930	2540
5	793	805	993	1940	3430	4580	2660	2650	1680	1020	2700	2270
6	908	909	1010	1650	3010	4100	2560	2280	1800	951	1950	2260
7	719	716	947	1630	2710	3720	2190	2140	1610	751	1920	2170
8	805	979	745	1680	2580	3610	2210	1940	1740	642	1570	2100
9	794	661	791	1700	2580	5230	2210	1870	2100	808	1390	1970
10	642	936	795	1720	2490	6610	2530	2030	2380	809	1310	1830
11	754	765	1080	1510	2040	15000	3800	1650	2080	1110	964	1810
12	870	772	684	1300	2030	12400	3520	2020	1860	1180	2370	1930
13	530	827	443	1210	2030	9460	3520	2500	1790	1440	4630	1660
14	884	801	921	1310	1900	7950	3570	3440	1520	1490	4720	1910
15	646	1350	515	1150	2400	6630	4420	3010	1440	1500	3950	1520
16	766	1990	640	1200	3660	5880	3640	6830	1470	1730	3280	1910
17	844	2200	700	1250	3840	5060	3580	7160	1260	1500	2880	1680
18	716	2160	740	1840	3570	4520	3120	5560	1250	1400	5640	1680
19	716	1760	780	2070	3960	4060	2940	4740	1110	1060	9390	1600
20	890	1660	800	2070	3480	3600	2920	4800	1120	1320	8840	1610
21	920	1630	820	2160	3280	3430	3600	4250	1170	3210	13600	1600
22	1080	1460	800	2130	9160	3300	3630	3940	1120	3390	14100	1590
23	1110	1260	800	1920	15900	3120	3490	3450	1350	3840	11800	1590
24	1040	1260	800	2080	12400	3010	3080	3220	1070	3350	10400	1370
25	947	1280	800	2220	10100	2730	2870	3060	1330	3390	8850	1400
26	936	1120	800	2500	9510	2690	2620	3010	1030	3000	7330	1330
27	921	1090	800	2340	8180	2530	2670	2780	1220	2520	6180	1370
28	936	1240	800	2120	7470	2450	2370	2570	1200	2370	5350	1230
29	836	922	800	2040	---	2430	2300	2250	1760	2230	4840	1300
30	836	973	796	1820	---	2570	2250	1910	1870	2800	4390	1270
31	837	---	881	1860	---	2610	---	1820	---	2450	3810	---
TOTAL	25916	34705	25105	52076	134740	156370	89360	94790	47470	56391	155264	55590
MEAN	836	1157	810	1680	4812	5044	2979	3058	1582	1819	5009	1853
MAX	1110	2200	1080	2500	15900	15000	4420	7160	2400	3840	14100	3350
MIN	530	613	443	784	1900	2430	2190	1650	1030	642	964	1230
CFSM	.45	.62	.43	.90	2.57	2.70	1.59	1.64	.85	.97	2.68	.99
IN.	.52	.69	.50	1.04	2.68	3.11	1.78	1.89	.94	1.12	3.09	1.11

CAL YR 1989 TOTAL 554397 MEAN 1519 MAX 10000 MIN 310 CFSM .81 IN. 11.03
WTR YR 1990 TOTAL 927777 MEAN 2542 MAX 15900 MIN 443 CFSM 1.36 IN. 18.47

03333450 WILDCAT CREEK NEAR JEROME, IN

LOCATION.--Lat 40°26'29", long 85°55'08", in NE¼SE¼ sec.14, T.23 N., R.5 E., Howard County, Hydrologic Unit 05120107, on right bank at downstream side of bridge on County Road 1100 East, 0.5 mi downstream from Mud Creek, 1.5 mi southeast of Jerome, and at mile 79.9.

DRAINAGE AREA.--146 mi^2.

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

REVISED RECORDS.--WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 820.04 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 9-29. Records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--29 years, 131 ft^3/s, 12.18 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,140 ft^3/s June 3, 1980, gage height, 13.34 ft; minimum daily, 0.89 ft^3/s Jan. 24-26, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1913 reached a stage of about 18 ft, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft^3/s and maximum(*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 2	2200	1,220	6.89	May 16	1845	*2,240	*9.41
Feb. 16	0615	2,100	9.12	June 9	2130	1,910	8.72
Feb. 23	0230	1,620	8.06	Aug. 21	1900	1,220	6.90
Mar. 11	1700	1,990	8.89				

Minimum daily discharge, 9.7 ft^3/s Aug. 11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	51	86	149	79	237	91	74	93	60	16	49
2	41	45	79	89	799	221	150	66	90	51	14	36
3	39	43	69	78	1000	199	140	66	104	45	13	29
4	36	40	66	309	942	155	125	164	94	41	17	24
5	33	40	72	417	800	132	114	564	78	38	18	21
6	34	41	65	223	559	113	98	358	76	34	16	19
7	35	42	55	144	484	95	86	230	81	30	14	20
8	33	52	45	115	428	96	79	172	464	28	12	20
9	31	62	41	105	493	100	75	140	1350	27	11	19
10	29	60	43	188	526	158	178	134	1370	35	10	18
11	30	51	41	180	378	1600	689	109	629	110	9.7	16
12	31	46	40	130	280	1360	453	101	365	270	11	15
13	30	42	37	87	234	735	298	630	243	269	22	27
14	28	42	35	83	196	501	237	610	176	163	19	23
15	27	99	34	76	784	367	193	378	138	122	15	24
16	29	567	32	66	1940	332	161	1580	113	89	12	21
17	32	420	30	88	1210	304	142	1690	97	64	10	17
18	32	251	30	230	710	232	115	903	86	49	190	15
19	36	167	30	188	530	187	106	516	75	41	129	18
20	43	148	29	193	399	153	109	351	78	44	233	20
21	59	125	29	374	314	140	134	249	78	43	1070	18
22	181	104	27	305	810	135	156	189	118	48	713	18
23	142	93	26	219	1410	119	139	151	304	59	370	21
24	103	82	24	184	833	100	127	129	304	56	217	18
25	83	78	25	157	517	96	116	127	174	37	134	16
26	71	76	27	138	347	90	108	181	120	28	90	15
27	63	68	26	116	268	83	104	225	100	24	63	14
28	58	101	30	102	267	79	101	179	85	22	49	13
29	55	108	40	96	---	82	95	145	75	21	184	14
30	53	94	53	94	---	88	82	116	68	19	131	15
31	54	---	117	79	---	87	---	101	---	17	77	---
TOTAL	1592	3238	1383	5002	17537	8376	4801	10628	7226	1984	3889.7	613
MEAN	51.4	108	44.6	161	626	270	160	343	241	64.0	125	20.4
MAX	181	567	117	417	1940	1600	689	1690	1370	270	1070	49
MIN	27	40	24	66	79	79	75	66	68	17	9.7	13
CFSM	.35	.74	.31	1.11	4.29	1.85	1.10	2.35	1.65	.44	.86	.14
IN.	.41	.83	.35	1.27	4.47	2.13	1.22	2.71	1.84	.51	.99	.16

CAL YR 1989 TOTAL 61715.8 MEAN 169 MAX 4650 MIN 7.4 CFSM 1.16 IN. 15.72
WTR YR 1990 TOTAL 66269.7 MEAN 182 MAX 1940 MIN 9.7 CFSM 1.24 IN. 16.89

03333600 KOKOMO CREEK NEAR KOKOMO, IN

LOCATION.--Lat 40°26'28", long 86°05'20", in NW¼SW¼ sec.16, T.23 N., R.4 E., Howard County, Hydrologic Unit 05120107, on left bank at upstream side of bridge on County Road 200 East, 2.6 mi southeast of intersection of U.S. Highways 31 and 35 in Kokomo, and 4.2 mi upstream from mouth.

DRAINAGE AREA.--24.7 mi^2.

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

REVISED RECORDS.--WSP 2109: Drainage area. WDR IN-72-1: 1970-71(P).

GAGE.--Water-stage recorder. Datum of gage is 807.68 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 2-20, Dec. 19-29, Aug. 31 to Sept. 13, and Sept. 15-30. Records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--31 years, 21.9 ft^3/s, 12.04 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,040 ft^3/s Apr. 20, 1964, gage height, 9.88 ft; minimum daily, 0.07 ft^3/s Sept. 18, 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 260 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 2	1130	276	4.54	May 16	1015	*708	*8.53
Feb. 15	2315	410	5.84	June 9	0800	501	6.68
Feb. 22	1545	477	6.46	Aug. 20	1930	607	7.64
Mar. 11	0515	568	7.27				

Minimum daily discharge, 2.3 ft^3/s Sept. 11, 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.1	7.8	8.4	13	15	46	25	13	16	7.8	3.3	7.0
2	4.9	7.0	8.2	9.0	223	43	40	11	16	6.8	3.0	5.0
3	4.8	6.6	8.0	9.8	163	37	32	12	17	6.2	2.9	4.1
4	4.6	6.3	7.5	57	186	29	29	56	18	5.6	4.0	3.5
5	4.5	7.5	8.9	50	129	25	25	126	16	5.1	3.9	3.0
6	4.4	9.2	8.1	26	93	21	21	57	18	4.7	3.4	2.5
7	4.3	9.9	7.1	18	83	18	18	39	18	4.3	3.0	3.0
8	4.2	11	5.8	16	71	18	16	30	129	4.1	2.9	3.3
9	4.2	11	6.0	16	90	19	15	26	360	4.2	2.9	3.0
10	4.4	11	6.4	26	84	48	61	25	173	11	2.7	2.7
11	4.2	9.0	6.3	24	60	498	136	19	82	60	2.6	2.3
12	4.1	8.2	5.6	18	45	271	70	21	51	60	5.5	2.5
13	4.0	9.1	5.2	12	39	156	49	188	36	38	12	2.6
14	3.8	11	5.2	12	32	102	43	105	29	30	4.8	3.0
15	3.7	27	5.0	11	232	69	36	65	22	21	3.6	3.6
16	3.7	82	4.5	9.5	383	68	31	520	17	15	3.2	3.3
17	4.7	48	4.1	13	219	57	27	401	15	11	3.4	2.8
18	5.4	29	4.0	31	130	42	22	169	13	8.7	49	2.5
19	6.2	20	4.1	26	98	36	20	112	11	7.5	24	3.1
20	7.0	19	4.1	32	72	30	21	77	13	11	227	3.0
21	15	16	3.8	56	57	28	27	56	12	10	284	2.8
22	31	13	3.3	45	311	27	28	43	11	8.4	154	2.9
23	20	12	3.3	33	335	22	25	35	23	8.6	83	3.2
24	14	10	3.3	28	176	20	23	29	30	11	48	3.0
25	11	10	3.5	26	102	18	20	29	18	7.5	32	2.9
26	9.9	9.8	3.8	23	67	17	19	35	14	5.9	22	2.7
27	8.6	9.3	3.6	20	52	15	18	31	12	4.9	15	2.5
28	8.1	12	4.0	16	53	15	18	28	10	4.4	11	2.4
29	7.9	8.9	4.4	17	---	16	16	23	9.2	4.1	30	2.4
30	7.9	8.3	5.6	16	---	19	14	19	8.6	3.9	18	2.3
31	8.2	---	15	13	---	20	---	17	---	3.8	11	---
TOTAL	233.8	458.9	176.1	722.3	3600	1850	945	2417	1217.8	394.5	1075.1	92.9
MEAN	7.54	15.3	5.68	23.3	129	59.7	31.5	78.0	40.6	12.7	34.7	3.10
MAX	31	82	15	57	383	498	136	520	360	60	284	7.0
MIN	3.7	6.3	3.3	9.0	15	15	14	11	8.6	3.8	2.6	2.3
CFSM	.31	.62	.23	.94	5.21	2.42	1.28	3.16	1.64	.52	1.40	.13
IN.	.35	.69	.27	1.09	5.42	2.79	1.42	3.64	1.83	.59	1.62	.14

CAL YR 1989 TOTAL 8477.7 MEAN 23.2 MAX 601 MIN 1.2 CFSM .94 IN. 12.77
WTR YR 1990 TOTAL 13183.4 MEAN 36.1 MAX 520 MIN 2.3 CFSM 1.46 IN. 19.86

03333700 WILDCAT CREEK AT KOKOMO, IN

LOCATION.--Lat 40°28'15", long 86°09'11", in SW¼NE¼ sec.2, T.23 N., R.3 E., Howard County, Hydrologic Unit 05120107, on right bank on property of Kokomo Sewage Treatment Plant in Kokomo, 250 ft downstream from Kokomo Creek, 1.0 mi upstream from Dixon Road bridge, and at mile 62.9.

DRAINAGE AREA.--242 mi^2.

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

REVISED RECORDS.--WSP 2109: Drainage area. WDR-IN-83: 1980, 1981(P), 1982. WRD-IN-88: 1986(P), 1987 (M).

GAGE.--Water-stage recorder. Datum of gage is 775.62 ft above National Geodetic Vertical Datum of 1929 (levels by State of Indiana, Department of Natural Resources). Prior to May 9, 1986, recording gage at site 0.4 mi downstream at present datum.

REMARKS.--Estimated daily discharges: Aug. 22 to Sept. 13. Records good except for estimated daily discharges, which are poor. Some regulation of Kokomo Reservoirs No. 1 and No. 2, combined capacity, 4,170 acre-ft, for municipal water supply and by Kokomo Sewage Treatment Plant.

AVERAGE DISCHARGE.--35 years, 230 ft^3/s, 12.91 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,100 ft^3/s Feb. 10, 1959; maximum gage height, 12.59 ft Feb. 24, 1985, at former site; minimum daily discharge, 7.2 ft^3/s Sept. 30, 1956.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,100 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 16	1930	3,420	10.03	May 16	1700	*4,180	*11.32
Feb. 23	0845	2,820	9.03	June 10	0800	2,380	8.24
Mar. 12	0130	3,130	9.57	Aug. 20	2245	2,160	7.86

Minimum daily discharge, 35 ft^3/s Sept. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	57	72	115	133	171	388	179	124	150	103	46	100
2	56	68	91	116	997	354	223	115	148	88	46	80
3	56	62	95	100	1680	330	244	140	146	81	45	70
4	50	58	89	257	1580	281	217	236	155	68	83	62
5	46	67	96	556	1430	243	194	687	132	64	47	56
6	43	70	88	380	959	226	166	581	144	67	46	50
7	42	90	80	243	754	186	141	368	138	63	45	52
8	42	73	70	192	658	182	128	278	381	57	44	52
9	43	67	62	177	694	191	120	232	1750	53	43	51
10	43	73	59	207	807	408	259	212	2230	91	43	50
11	39	72	63	256	605	2760	888	202	1120	123	42	49
12	39	65	61	220	444	2800	771	226	550	448	93	48
13	39	61	56	164	351	1580	481	783	362	455	114	47
14	38	96	57	133	344	942	383	1020	270	404	54	68
15	36	191	54	123	1170	655	321	621	218	271	47	45
16	36	548	51	114	3010	541	271	3140	175	198	45	41
17	48	662	46	127	2670	477	246	3450	149	149	54	41
18	44	396	44	231	1430	395	207	1950	127	112	258	42
19	61	260	44	283	937	328	180	999	119	92	285	55
20	68	204	43	277	695	283	194	620	158	85	917	42
21	75	193	44	404	522	213	213	441	124	139	1310	43
22	137	156	41	444	1740	104	229	330	139	96	1100	51
23	200	126	40	341	2700	94	222	269	350	95	700	42
24	159	117	36	274	1810	86	204	234	405	93	450	39
25	124	107	36	239	1040	85	187	261	284	83	320	39
26	105	106	39	236	637	85	171	259	210	70	200	38
27	92	99	38	195	463	119	166	300	163	63	160	38
28	90	95	41	175	420	123	159	275	135	53	125	37
29	87	123	54	158	---	144	149	232	118	50	160	38
30	83	117	75	155	---	163	132	194	110	50	190	35
31	77	---	125	139	---	154	---	163	---	48	140	---
TOTAL	2155	4494	1933	7049	30718	14920	7645	18942	10660	3912	7252	1501
MEAN	69.5	150	62.4	227	1097	481	255	611	355	126	234	50.0
MAX	200	662	125	556	3010	2800	888	3450	2230	455	1310	100
MIN	36	58	36	100	171	85	120	115	110	48	42	35
CFSM	.29	.62	.26	.94	4.53	1.99	1.05	2.52	1.47	.52	.97	.21
IN.	.33	.69	.30	1.08	4.72	2.29	1.18	2.91	1.64	.60	1.11	.23

CAL YR 1989 TOTAL 95623 MEAN 262 MAX 5590 MIN 33 CFSM 1.08 IN. 14.70
WTR YR 1990 TOTAL 111181 MEAN 305 MAX 3450 MIN 35 CFSM 1.26 IN. 17.09

03334000 WILDCAT CREEK AT OWASCO, IN

LOCATION.--Lat 40°27'50", long 86°38'15", in SE¼SE¼ sec.4, T.23 N., R.2 W., Carroll County, on left bank 200 ft (corrected) downstream from bridge on State Highway 39, 0.5 mi northwest of Owasco, and 15 mi upstream from South Fork Wildcat Creek.

DRAINAGE AREA.--396 mi^2.

PERIOD OF RECORD.--October 1943 to September 1973. Annual maximum, water years 1975-81. October 1988 to current year. Prior to March 1944 monthly discharge only, published in WSP 1305.

REVISED RECORDS.--WSP 1625: 1958. WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 624.63 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1950, nonrecording gage at site 500 ft upstream at same datum.

REMARKS.--Estimated daily discharges: Dec. 16-29, and Jan. 6. Records good except for estimated daily discharges, which are poor. Some regulation at low stages for municipal water supply by Kokomo Water Company 1955.

AVERAGE DISCHARGE.--32 years (1944-73, 1989 to current year), 362 ft^3/s, 12.41 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,200 ft^3/s Jan. 5, 1950, gage height, 13.30 ft, from rating curve extended above 6,700 ft^3/s; minimum daily, 11 ft^3/s Sept. 25, 1944.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 18, 1943, reached a stage of 14.00 ft, from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 17	2100	3,760	7.55	Mar. 12	0800	4,640	8.59
Feb. 23	1800	3,860	7.69	May 17	2000	*5,530	*9.37

Minimum daily discharge, 69 ft^3/s Sept. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	148	161	211	300	235	717	311	247	287	294	98	219
2	144	151	209	257	776	655	371	232	268	190	93	175
3	137	144	187	241	1730	605	412	227	259	162	89	149
4	133	139	177	325	2040	535	406	290	250	149	105	131
5	126	133	180	637	1940	464	376	588	247	135	147	121
6	118	135	183	750	1530	411	337	897	234	122	112	109
7	113	164	175	467	1120	370	299	707	287	118	93	109
8	109	182	162	351	966	330	272	516	323	113	87	113
9	106	170	150	300	938	345	256	410	1090	110	87	117
10	106	155	143	294	1050	439	285	375	2280	119	84	110
11	106	150	138	330	974	2870	734	334	2180	201	82	102
12	101	151	136	346	759	4300	1120	326	1150	658	94	99
13	97	142	131	296	616	3400	881	698	751	688	320	93
14	95	141	135	248	530	1890	714	1190	543	627	256	91
15	95	230	118	219	1080	1230	608	1100	424	468	140	108
16	92	561	110	204	2760	991	517	1970	352	343	113	107
17	96	859	100	198	3580	872	457	4640	297	258	105	89
18	102	766	90	230	3100	770	401	4490	258	207	182	83
19	119	533	90	335	1630	675	352	2370	225	176	441	87
20	128	409	94	373	1150	565	334	1270	221	181	856	100
21	167	352	94	422	923	518	384	922	263	283	2170	95
22	214	324	90	587	1850	407	413	735	219	249	2150	88
23	281	284	82	522	3600	310	411	577	241	201	1530	87
24	314	251	78	426	3410	275	381	476	493	175	893	96
25	268	236	78	383	2090	255	355	436	511	166	612	81
26	228	223	85	347	1230	244	327	535	370	153	420	76
27	202	216	82	329	903	235	306	494	297	136	306	74
28	183	207	90	285	780	260	298	506	244	125	238	72
29	176	193	100	268	---	266	288	439	213	116	205	70
30	171	214	129	252	---	309	269	373	195	111	281	69
31	169	---	198	240	---	320	---	324	---	103	304	---
TOTAL	4644	7976	4025	10762	43290	25833	12875	28694	14972	7137	12693	3120
MEAN	150	266	130	347	1546	833	429	926	499	230	409	104
MAX	314	859	211	750	3600	4300	1120	4640	2280	688	2170	219
MIN	92	133	78	198	235	235	256	227	195	103	82	69
CFSM	.38	.67	.33	.88	3.90	2.10	1.08	2.34	1.26	.58	1.03	.26
IN.	.44	.75	.38	1.01	4.07	2.43	1.21	2.70	1.41	.67	1.19	.29

CAL YR 1989 TOTAL 152480 MEAN 418 MAX 6980 MIN 65 CFSM 1.05 IN. 14.32
WTR YR 1990 TOTAL 176021 MEAN 482 MAX 4640 MIN 69 CFSM 1.22 IN. 16.54

03334500 SOUTH FORK WILDCAT CREEK NEAR LAFAYETTE, IN

LOCATION.--Lat 40°25'04", long 86°46'05", in SW¼SW¼ sec.21, T.23 N., R.3 W., Tippecanoe County, Hydrologic Unit 05120107, on right bank 40 ft upstream from bridge on State Highway 26, 0.5 mi upstream from Middle Fork, 4.4 mi upstream from mouth, and 5 mi east of Lafayette.

DRAINAGE AREA.--243 mi^2.

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

REVISED RECORDS.--WSP 1335: 1948(M). WSP 1505: 1947. WSP 1725: 1951-53(M), 1955(M). WSP 1909: 1955(P). WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 566.60 ft above National Geodetic Vertical Datum of 1929 (Indiana Department of Highways bench mark). Prior to July 29, 1954, nonrecording gage at site 40 ft downstream at same datum.

REMARKS.--Estimated daily discharges: Dec. 12-30. Records good except for estimated daily discharges, which are poor. Backwater from Middle Fork at times on peaks.

AVERAGE DISCHARGE.--47 years, 239 ft^3/s, 13.36 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,100 ft^3/s May 2, 1983, gage height, 15.68 ft, from rating curve extended above 6,000 ft^3/s on basis of contracted-opening measurement at 16.8 ft; minimum daily, 15 ft^3/s Sept. 19, 22, 1944, Aug. 30, 31, Sept. 1, 14, 15, 1969.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1943 reached a stage of 16.8 ft, from floodmarks, discharge, 17,900 ft^3/s by contracted-opening measurement.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 16	0300	3,080	8.05	Mar. 11	1300	*9,230	*12.85
Feb. 22	2300	4,610	9.62	May 17	0600	5,830	10.68

Minimum daily discharge, 45 ft^3/s Sept. 27, 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	121	117	142	224	161	362	243	194	229	272	79	69
2	118	112	141	179	525	333	281	184	220	185	75	64
3	113	107	134	150	942	309	280	182	220	134	72	61
4	109	104	127	242	898	274	263	221	209	115	93	58
5	106	102	137	461	879	249	256	357	194	104	124	56
6	106	103	137	327	641	231	240	335	191	95	90	55
7	106	107	132	228	517	211	225	282	201	88	77	60
8	102	118	123	197	442	205	214	249	425	83	71	70
9	96	112	112	183	505	214	207	228	1310	93	68	61
10	96	109	119	195	575	303	260	234	1050	158	65	57
11	94	107	121	228	445	6580	649	227	611	224	63	55
12	92	102	105	208	357	3340	546	225	396	347	70	55
13	90	100	95	173	314	1480	424	944	313	493	169	54
14	87	97	100	165	292	1030	387	844	263	495	132	55
15	85	130	90	159	1200	781	362	582	228	393	91	58
16	84	448	80	152	2750	604	330	3260	200	285	76	56
17	90	528	62	152	1780	510	314	4500	181	214	82	52
18	94	368	62	172	1020	438	282	1820	166	173	100	50
19	95	276	67	195	672	392	261	1110	152	151	79	58
20	111	240	70	191	496	348	268	774	159	200	70	60
21	124	223	63	227	406	324	309	571	179	165	1380	57
22	191	200	55	262	2010	313	300	449	155	189	535	55
23	226	185	53	240	2750	298	279	372	165	159	276	52
24	187	173	57	222	1420	271	264	334	176	133	191	50
25	161	166	60	208	824	259	249	332	155	118	145	48
26	147	164	64	210	553	250	234	391	136	105	118	46
27	139	156	60	189	433	241	224	363	136	96	100	45
28	130	154	62	183	397	233	220	329	125	92	89	45
29	122	151	80	172	---	235	224	299	119	91	85	46
30	117	145	150	172	---	250	204	269	120	90	85	46
31	119	---	250	165	---	244	---	244	---	85	76	---
TOTAL	3658	5204	3110	6431	24204	21112	8799	20705	8384	5625	4826	1654
MEAN	118	173	100	207	864	681	293	668	279	181	156	55.1
MAX	226	528	250	461	2750	6580	649	4500	1310	495	1380	70
MIN	84	97	53	150	161	205	204	182	119	83	63	45
CFSM	.49	.71	.41	.85	3.56	2.80	1.21	2.75	1.15	.75	.64	.23
IN.	.56	.80	.48	.98	3.71	3.23	1.35	3.17	1.28	.86	.74	.25

CAL YR 1989 TOTAL 106726 MEAN 292 MAX 9700 MIN 48 CFSM 1.20 IN. 16.34
WTR YR 1990 TOTAL 113712 MEAN 312 MAX 6580 MIN 45 CFSM 1.28 IN. 17.41

03335000 WILDCAT CREEK NEAR LAFAYETTE, IN

LOCATION.--Lat 40°26'26", long 86°49'45", in SW¼NW¼ sec.13, T.23 N., R.4 W., Tippecanoe County, Hydrologic Unit 05120107, on right bank about 200 ft downstream of bridge on County Road 2A East, 2.8 mi downstream from South Fork Wildcat Creek, 3.7 mi northeast of courthouse in Lafayette, and 4.8 mi upstream from mouth.

DRAINAGE AREA.--794 mi^2.

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

REVISED RECORDS.--WSP 1555: 1955, 1957(M). WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 527.66 ft above National Geodetic Vertical Datum of 1929 (Indiana Flood Control and Water Resources Commission bench mark). Nonrecording gage prior to June 13, 1957, and August 31, 1974, to May 20, 1976, at present site and datum.

REMARKS.--Estimated daily discharges: Dec. 16 to Feb. 7. Records fair.

AVERAGE DISCHARGE.--36 years, 758 ft^3/s, 12.96 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 25,000 ft^3/s June 10, 1958, gage height, 21.52 ft, from rating curve extended above 18,000 ft^3/s; minimum daily, 46 ft^3/s Sept. 28, 29, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 1913 reached a stage of about 25.4 ft, from profile by State of Indiana, Department of Natural Resources.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 6,300 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 23	1530	6,950	11.78	May 17	0800	9,800	14.07
Mar. 11	1600	*13,500	*16.69				

Minimum daily discharge, 149 ft^3/s Sept. 27-30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	342	325	423	650	505	1480	657	563	624	825	246	347
2	335	314	420	570	1110	1370	743	522	591	515	237	288
3	316	299	400	520	2740	1280	806	517	577	380	231	257
4	302	287	368	620	3050	1150	795	604	550	332	279	236
5	299	274	387	1300	3110	1020	750	1120	518	303	338	217
6	294	274	386	1500	2580	922	688	1390	524	283	302	209
7	282	323	373	1000	2020	835	626	1190	574	262	236	208
8	277	350	351	694	1720	792	580	929	735	253	222	217
9	266	339	325	595	1690	804	550	796	2340	275	212	223
10	265	314	319	573	1890	1050	625	731	3480	466	208	206
11	259	298	321	639	1760	10400	1480	702	3200	688	208	196
12	260	290	299	671	1440	8900	1890	690	2050	1280	233	187
13	253	286	277	591	1220	5880	1560	1800	1270	1480	840	183
14	246	271	295	520	1150	3650	1300	2370	965	1490	653	186
15	237	405	262	493	2520	2470	1180	2040	787	1210	364	182
16	231	1120	230	453	5400	1970	1040	5670	669	864	283	205
17	250	1530	210	446	5430	1680	950	9270	575	640	286	176
18	247	1380	200	470	4140	1440	846	7550	511	508	382	170
19	269	1010	190	586	3030	1270	756	4600	456	428	486	190
20	302	813	195	685	2230	1110	749	2590	476	761	712	186
21	347	707	200	785	1780	1020	858	1900	509	765	3780	190
22	522	636	190	880	4510	944	901	1490	455	840	3010	181
23	639	575	170	906	6630	783	850	1210	456	601	2100	169
24	627	520	160	821	5070	694	809	1030	640	454	1280	167
25	540	488	160	763	3520	641	751	975	722	389	886	163
26	474	473	180	721	2360	609	703	1120	603	353	646	154
27	429	452	175	655	1830	578	664	1050	498	319	493	149
28	386	441	190	622	1610	578	648	996	444	296	399	149
29	357	423	220	563	---	595	651	902	397	289	356	149
30	341	414	270	547	---	637	599	782	378	279	359	149
31	326	---	400	529	---	674	---	691	---	262	418	---
TOTAL	10520	15631	8546	21368	76045	57226	26005	57790	26574	18090	20685	5889
MEAN	339	521	276	689	2716	1846	867	1864	886	584	667	196
MAX	639	1530	423	1500	6630	10400	1890	9270	3480	1490	3780	347
MIN	231	271	160	446	505	578	550	517	378	253	208	149
CFSM	.43	.66	.35	.87	3.42	2.32	1.09	2.35	1.12	.73	.84	.25
IN.	.49	.73	.40	1.00	3.56	2.68	1.22	2.71	1.25	.85	.97	.28

CAL YR 1989 TOTAL 322766 MEAN 884 MAX 16100 MIN 139 CFSM 1.11 IN. 15.12
WTR YR 1990 TOTAL 344369 MEAN 943 MAX 10400 MIN 149 CFSM 1.19 IN. 16.13

03335500 WABASH RIVER AT LAFAYETTE, IN

LOCATION.--Lat 40°25'19", long 86°53'49", in NE¼SW¼ sec.20, T.23 N., R.4 W., Tippecanoe County, Hydrologic Unit 05120108, on right bank 20 ft downstream from Brown Street in Lafayette, 0.2 mi upstream from Main Street bridge, 0.3 mi downstream from Harrison Memorial Bridge, 5.1 mi downstream from Wildcat Creek, and at mile 311.9.

DRAINAGE AREA.--7,267 mi^2.

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 National Weather Service.

REVISED RECORDS.--WSP 1335: 1929, 1932-33, 1936. WSP 1505: 1950. WSP 1555: 1928(M). WSP 2109: Drainage area. WDR IN-81-1: 1979.

GAGE.--Water-stage recorder. Datum of gage is 504.14 ft above National Geodetic Vertical Datum of 1929. Prior to May 2, 1903, nonrecording gage 0.5 mi upstream at different datum. Oct. 7, 1923, to Nov. 20, 1933, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Dec. 13 to Jan. 2. Records good except for estimated daily discharges which are poor. Flow partially regulated by upstream reservoirs and power development.

AVERAGE DISCHARGE.--67 years (1923 to current year), 6,499 ft^3/s, 12.15 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 131,000 ft^3/s May 19, 1943, gage height, 28.47 ft; minimum daily, 399 ft^3/s Sept. 26, 1941.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 26, 1913, reached a stage of 32.9 ft, from floodmark determined by National Weather Service, discharge, 190,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 53,300 ft^3/s Feb. 24, gage height, 20.68 ft; minimum daily, 1,700 ft^3/s Dec. 13, result of freezeup.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2940	3590	4150	2500	4990	23000	7450	4850	10000	6420	4720	14000
2	2760	3420	3960	3800	6870	21200	8140	4580	8730	4740	4340	10600
3	2700	3260	3330	8640	15500	20200	8540	4390	8170	4020	3820	8030
4	2710	3190	2990	8280	17700	19300	8470	4660	6800	3700	3740	8380
5	2710	3220	3100	12500	16900	18200	7730	5960	6950	3350	5220	8110
6	2620	3170	3030	12900	15400	17200	6870	10400	7990	3120	5300	7800
7	3010	3250	2860	10500	13900	16400	6280	10600	6610	2760	4980	7960
8	3040	3460	2840	9120	13700	13800	5780	9070	5790	2600	4220	7780
9	2750	3640	2700	7910	14400	12500	5510	8030	8780	2570	3700	6230
10	2490	3490	2720	6860	14900	16700	5630	7270	13700	2670	3320	5570
11	2270	3490	2800	6630	14500	35800	8590	5940	15500	3720	3080	7340
12	2660	3470	2730	7060	13500	45200	13100	5690	14500	5450	3550	7520
13	2480	3550	1700	6200	12500	37000	13200	6860	12800	8070	7180	7310
14	2360	3510	1850	5430	12200	28000	12500	12500	12200	10900	9830	5640
15	2310	4380	1980	4670	13600	23400	12500	13900	12000	12300	9560	4420
16	2690	8870	2000	4260	21800	19400	11200	20100	10100	12200	7810	4300
17	2990	12800	2100	4040	25700	16600	9770	33100	7140	10300	6520	4410
18	3320	12700	2200	5010	23600	16000	8140	32100	5580	7570	8440	4420
19	3130	11500	2200	9110	20000	14900	7270	24400	4460	6290	24600	4490
20	3940	10400	2100	9830	18700	13900	6470	17000	4160	5950	27200	4400
21	4150	9890	1990	8610	17500	13000	7310	13900	4120	6630	29700	4310
22	5010	7870	1950	9670	23100	11900	8260	14500	3860	7270	34000	4250
23	6210	6670	1850	10600	47600	10300	8200	14600	4400	9820	26400	4050
24	6150	5930	1800	9640	50800	9090	7520	14100	4620	13000	20800	3800
25	5680	5240	1800	8220	41000	8430	6820	13300	5060	13400	18900	3620
26	5060	5050	1830	7910	32300	7640	6360	13800	4670	12300	17600	3600
27	4730	4480	1920	7780	26300	6860	5920	13700	4020	10600	15200	3610
28	4320	4530	1950	6860	24500	6470	5620	13700	3900	9150	14700	3460
29	3990	4400	1950	5740	---	6270	5600	13200	4290	6110	15300	3510
30	3770	4120	2050	5440	---	6490	5220	12700	5220	5700	15800	3250
31	3670	---	2200	5350	---	6810	---	11300	---	5420	15200	---
TOTAL	108620	166540	74630	231070	573460	521960	239970	390200	226120	218100	374730	176170
MEAN	3504	5551	2407	7454	20480	16840	7999	12590	7537	7035	12090	5872
MAX	6210	12800	4150	12900	50800	45200	13200	33100	15500	13400	34000	14000
MIN	2270	3170	1700	2500	4990	6270	5220	4390	3860	2570	3080	3250
CFSM	.48	.76	.33	1.03	2.82	2.32	1.10	1.73	1.04	.97	1.66	.81
IN.	.56	.85	.38	1.18	2.94	2.67	1.23	2.00	1.16	1.12	1.92	.90

CAL YR 1989 TOTAL 2415580 MEAN 6618 MAX 39500 MIN 1500 CFSM .91 IN. 12.37
WTR YR 1990 TOTAL 3301570 MEAN 9045 MAX 50800 MIN 1700 CFSM 1.24 IN. 16.90

03335690 MUD PINE CREEK NEAR OXFORD, IN

LOCATION.--Lat 40°31'24", long 87°20'30", in NE¼SE¼ sec.17, T.24 N., R.8 W., Benton County, Hydrologic Unit 05120108, on right bank 5 ft downstream from county road bridge, 0.3 mi north of Chase, 2 mi east of Boswell, and 5 mi west of Oxford.

DRAINAGE AREA.--39.4 mi^2.

PERIOD OF RECORD.--June 1971 to current year.

REVISED RECORDS.--WDR IN-80-1: 1971-79 (P).

GAGE.--Water-stage recorder. Datum of gage is 718.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 13 to Jan. 2, Jan. 5-10, and Jan. 13. Records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--19 years (1972 to current year), 38.9 ft^3/s, 13.41 in/yr..

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,710 ft^3/s May 16, 1990, gage height, 13.22 ft; minimum daily, 0.10 ft^3/s Sept. 18, 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 800 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 22	1615	2,450	10.85	May 16	0730	*5,710	*13.22
Mar. 11	0245	3,260	11.58	June 9	0800	2,060	10.43

Minimum daily discharge, 1.3 ft^3/s Sept. 24, 25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	3.7	4.5	5.0	13	86	29	24	33	20	15	2.1
2	2.7	3.4	5.4	3.5	149	79	31	23	90	17	12	1.9
3	2.5	3.3	5.1	8.0	100	70	27	23	69	15	11	1.8
4	2.1	3.3	4.4	31	90	60	27	113	42	14	56	1.7
5	2.0	3.4	5.3	20	84	53	26	166	35	13	51	1.7
6	2.4	3.5	4.7	10	66	47	22	88	33	12	20	1.6
7	2.3	4.0	3.3	8.5	54	42	20	63	29	11	14	2.3
8	2.0	4.6	3.1	7.0	49	51	19	51	39	10	11	2.6
9	1.9	3.9	3.4	7.2	44	128	19	45	919	9.5	8.5	1.8
10	1.9	3.7	3.9	7.5	37	601	57	44	162	44	7.4	1.6
11	1.9	3.3	3.4	7.0	33	1750	93	33	95	50	6.4	1.5
12	1.9	3.2	3.2	6.5	28	332	61	57	73	35	7.2	1.5
13	1.9	3.0	3.0	6.2	29	196	49	145	57	22	20	5.0
14	1.8	3.3	2.7	5.7	23	149	62	91	48	46	9.5	2.2
15	1.9	7.0	2.5	5.9	101	115	62	70	41	99	7.1	1.9
16	1.9	31	2.3	5.3	166	96	53	2100	35	70	6.2	1.6
17	2.6	19	2.1	6.8	121	82	44	410	33	39	6.0	1.4
18	3.1	14	2.1	15	102	66	37	206	28	26	6.2	1.4
19	2.4	9.6	2.3	12	128	56	36	150	23	26	5.0	1.8
20	4.7	10	2.4	12	86	49	40	115	29	84	7.6	1.7
21	11	7.8	2.1	14	71	46	130	90	23	58	6.6	1.5
22	21	6.9	1.9	14	1250	44	90	75	32	45	6.2	1.6
23	11	6.4	1.8	13	822	37	68	65	36	38	5.1	1.5
24	8.0	6.0	2.0	13	292	34	56	56	24	26	4.3	1.3
25	6.6	6.2	2.1	18	169	32	46	67	20	20	3.5	1.3
26	5.7	6.0	2.2	25	123	28	42	75	18	16	3.1	1.4
27	5.1	5.6	2.0	18	100	25	38	62	18	14	2.9	1.4
28	4.7	6.0	2.1	14	98	25	36	53	16	13	2.6	1.5
29	4.5	4.8	2.8	14	---	26	32	44	27	32	3.8	1.6
30	4.3	6.6	3.5	14	---	28	28	38	27	62	2.8	1.5
31	4.3	---	8.5	11	---	28	---	35	---	24	2.2	---
TOTAL	132.6	202.5	100.1	358.1	4428	4461	1380	4677	2154	1010.5	330.2	53.7
MEAN	4.28	6.75	3.23	11.6	158	144	46.0	151	71.8	32.6	10.7	1.79
MAX	21	31	8.5	31	1250	1750	130	2100	919	99	56	5.0
MIN	1.8	3.0	1.8	3.5	13	25	19	23	16	9.5	2.2	1.3
CFSM	.11	.17	.08	.29	4.01	3.65	1.17	3.83	1.82	.83	.27	.05
IN.	.13	.19	.09	.34	4.18	4.21	1.30	4.42	2.03	.95	.31	.05

CAL YR 1989 TOTAL 7301.08 MEAN 20.0 MAX 450 MIN .65 CFSM .51 IN. 6.89
WTR YR 1990 TOTAL 19287.7 MEAN 52.8 MAX 2100 MIN 1.3 CFSM 1.34 IN. 18.21

03336000 WABASH RIVER AT COVINGTON, IN

LOCATION.--Lat 40°08'24", long 87°24'24", in NE¼NW¼ sec.35, T.20 N., R.9 W., Warren County, Hydrologic Unit 05120108, on right approach to old U.S. Highway 136 bridge at Covington, 2.9 mi downstream from Oppossum Run, 3.6 mi upstream from Spring Creek, and at mile 271.1.

DRAINAGE AREA.--8,218 mi^2.

PERIOD OF RECORD.--October 1939 to current year. Gage-height records collected at site 0.4 mi downstream January 1927 to December 1930, and at present site since January 1931 are contained in reports of National Weather Service.

REVISED RECORDS.--WDR IN-73-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 473.97 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1979, nonrecording gage on old bridge.

REMARKS.--Estimated daily discharges: Dec. 14-Jan. 5. Records good. Flow partially regulated by upstream reservoirs and power development.

AVERAGE DISCHARGE.--51 years, 7,426 ft^3/s, 12.28 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 147,000 ft^3/s May 20, 1943, gage height, 32.44 ft; minimum daily, 487 ft^3/s Sept. 29, 1941.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1913 reached a stage of 35.1 ft, from floodmark determined by National Weather Service, discharge, 200,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 51,800 ft^3/s Feb. 25, gage height, 24.71 ft; minimum daily, 1,750 ft^3/s Dec. 14, result of freezeup.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3300	3930	4240	3100	5600	28800	7770	5820	12300	6270	6120	15600
2	3350	3810	4240	4000	6620	26700	8530	5440	10900	6720	5310	13800
3	3190	3660	3930	5400	11700	24600	9050	5230	10300	5210	4760	10100
4	3030	3500	3430	7000	19100	23000	9600	5180	9180	4510	4310	8620
5	2990	3460	3150	9500	19800	21500	9110	5930	7760	4090	4760	8680
6	3080	3390	3240	14000	19000	20200	8250	8370	8320	3710	5950	8360
7	3000	3450	3240	12600	17200	19100	7390	12100	8800	3460	5680	8240
8	2990	3540	3130	10500	15800	18000	6670	11300	8950	3150	5280	8350
9	2760	3750	3040	9160	16200	14800	6310	9710	8920	2990	4600	7820
10	2840	3810	2980	7780	16800	17100	6460	8690	14300	3750	4090	6310
11	2650	3760	3000	6940	17000	31800	7830	7620	17700	4620	3740	6260
12	2550	3690	3030	6950	16400	43700	12500	6620	17700	5750	3420	7680
13	2740	3690	2790	6940	15100	48400	15200	7800	16100	7200	4920	7820
14	2590	3740	1750	6120	14200	42500	15300	10800	14600	10900	8460	7120
15	2530	4360	1900	5540	16800	35400	14500	16000	13900	13400	9870	5780
16	2450	6730	2100	4970	21900	30100	14300	21700	13000	13800	9110	4700
17	2750	11500	2200	4720	25100	25000	12300	28800	10300	12900	7520	4670
18	3080	14000	2280	4550	27400	21300	10500	34100	7510	9960	6560	4750
19	3300	13400	2300	6190	26800	19100	8900	35800	6090	7610	13600	4860
20	3450	11900	2300	10300	24100	17200	8000	31800	6080	7540	22600	4830
21	4150	11000	2270	9710	22000	16000	7920	24800	5620	6990	25000	4690
22	4550	9930	2200	9140	23700	14900	9150	19400	5210	7810	27100	4600
23	5570	7910	2100	10800	31100	13200	9760	17800	4940	8750	29400	4480
24	6350	6730	2030	10800	44000	11200	9390	17100	5290	11300	28800	4330
25	6200	5960	2000	9710	50500	10100	8450	16400	5430	13700	24700	4140
26	5700	5370	2080	8410	44200	9120	7610	16300	5710	13600	20900	3990
27	5260	5070	2150	8320	37000	8250	7030	16500	5220	11900	18100	3920
28	4970	4650	2210	7850	31800	7430	6700	16300	4680	10400	15900	3910
29	4520	4660	2250	6750	---	7150	6400	15800	4550	8650	15900	3790
30	4200	4410	2350	6110	---	7140	6180	15100	5190	9540	16300	3730
31	4020	---	2550	5760	---	7370	---	14100	---	7340	16300	---
TOTAL	114110	178760	82460	239620	636920	640160	277060	468410	274550	247520	379060	195930
MEAN	3681	5959	2660	7730	22750	20650	9235	15110	9152	7985	12230	6531
MAX	6350	14000	4240	14000	50500	48400	15300	35800	17700	13800	29400	15600
MIN	2450	3390	1750	3100	5600	7140	6180	5180	4550	2990	3420	3730
CFSM	.45	.73	.32	.94	2.77	2.51	1.12	1.84	1.11	.97	1.49	.79
IN.	.52	.81	.37	1.08	2.88	2.90	1.25	2.12	1.24	1.12	1.72	.89

CAL YR 1989 TOTAL 2697490 MEAN 7390 MAX 34900 MIN 1750 CFSM .90 IN. 12.21
WTR YR 1990 TOTAL 3734560 MEAN 10230 MAX 50500 MIN 1750 CFSM 1.25 IN. 16.91

03339108 EAST FORK COAL CREEK NEAR HILLSBORO, IN

LOCATION.--Lat 40°06'06", long 87°07'54", in NW¼SW¼ sec.8, T.19 N., R.6 W., Fountain County, Hydrologic Unit 05120108, at center pier on downstream side of bridge on County Road 700 East, 1.5 mi east of Hillsboro, 3.7 mi northwest of Waynetown, and 9.6 mi upstream from mouth.

DRAINAGE AREA.--33.4 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 673.76 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 15 to Jan. 4, Feb. 25-27, and Mar. 23 to June 6. Records good except for Dec. 15 to Jan. 4, and Mar. 23 to June 6, which are poor.

AVERAGE DISCHARGE.--22 years, 37.1 ft^3/s, 15.08 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,680 ft^3/s May 1, 1983, gage height, 10.47 ft; minimum daily, 2.1 ft^3/s Aug. 25, 26, 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 22	1600	856	6.09	July 12	0745	850	6.07
Mar. 11	0345	*1,530	*7.92	July 29	2245	887	6.18
June 20	0800	823	5.99				

Minimum daily discharge, 8.4 ft^3/s Dec. 24.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	16	14	28	23	46	45	24	36	36	32	12
2	14	15	13	17	88	44	65	22	37	25	26	12
3	13	15	12	19	61	41	45	35	63	22	22	11
4	12	14	13	60	75	37	37	90	47	21	157	11
5	13	14	14	45	59	35	33	66	40	19	56	11
6	14	14	14	32	49	33	31	47	36	19	31	11
7	13	18	12	27	45	31	29	36	35	18	23	12
8	12	17	11	24	42	33	28	33	273	17	20	13
9	12	16	12	25	49	33	28	31	152	17	18	12
10	14	14	12	30	47	176	40	31	51	165	17	12
11	13	13	12	27	41	812	200	31	40	294	16	11
12	12	13	12	24	36	138	90	60	35	402	16	15
13	12	13	11	21	35	92	60	250	32	105	21	23
14	12	18	10	19	37	74	49	100	27	87	16	20
15	12	49	9.5	19	355	63	42	70	25	76	15	17
16	13	66	9.3	18	174	55	37	250	23	67	15	13
17	15	41	9.1	23	79	49	36	130	22	43	14	12
18	14	30	9.2	24	61	44	35	100	20	37	14	13
19	18	24	9.4	21	52	44	35	75	20	32	13	21
20	30	24	9.5	26	45	39	37	61	309	29	13	15
21	38	21	9.2	32	41	37	54	55	66	28	17	14
22	35	19	8.7	28	439	36	44	50	65	51	18	14
23	26	18	8.5	25	184	35	39	42	47	37	15	13
24	22	16	8.4	24	90	33	37	43	37	30	14	13
25	21	16	8.5	27	56	32	35	45	31	26	13	13
26	20	16	9.0	26	48	31	32	74	28	24	13	13
27	18	16	9.3	27	48	29	30	56	26	23	12	12
28	17	15	9.4	24	51	28	29	48	24	22	12	13
29	16	13	9.4	24	---	27	29	45	25	184	16	14
30	16	13	11	22	---	29	26	41	49	193	13	14
31	17	---	45	20	---	32	---	37	---	43	12	---
TOTAL	528	607	364.4	808	2410	2268	1357	2078	1721	2192	710	410
MEAN	17.0	20.2	11.8	26.1	86.1	73.2	45.2	67.0	57.4	70.7	22.9	13.7
MAX	38	66	45	60	439	812	200	250	309	402	157	23
MIN	12	13	8.4	17	23	27	26	22	20	17	12	11
CFSM	.51	.61	.35	.78	2.58	2.19	1.35	2.01	1.72	2.12	.69	.41
IN.	.59	.68	.41	.90	2.68	2.53	1.51	2.31	1.92	2.44	.79	.46

CAL YR 1989 TOTAL 14675.0 MEAN 40.2 MAX 883 MIN 5.6 CFSM 1.20 IN. 16.34
WTR YR 1990 TOTAL 15453.4 MEAN 42.3 MAX 812 MIN 8.4 CFSM 1.27 IN. 17.21

03339280 PRAIRIE CREEK NEAR LEBANON, IN

LOCATION.--Lat 40°06'16", long 86°31'32", in NW¼SW¼ sec.10, T.19 N., R.1 W., Boone County, Hydrologic Unit 05120110, on right bank 50 ft upstream from bridge on County Road 450 North, 4.0 mi upstream from Deer Creek, 4.9 mi northwest of Lebanon, and 7.7 mi upstream from mouth.

DRAINAGE AREA.--33.2 mi^2.

PERIOD OF RECORD.--October 1987 to current year.

GAGE.--Water-stage recorder. Datum of gage is 860.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Nov. 25, 26, Dec. 1-4, 8-10, Dec. 13 to Jan. 4, Jan. 14, 15, and 27-29. Records good except those for estimated daily discharges, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,710 ft^3/s Mar. 11, 1990, gage height, 13.99 ft; minimum daily, 1.9 ft^3/s Sept. 1, 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 600 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 15	1530	859	9.18	June 8	0500	1,720	11.98
Mar. 11	0530	*2,710	*13.99				

Minimum daily discharge, 3.4 ft^3/s Sept. 17 and 27.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	10	12	63	34	47	42	15	22	22	7.9	3.8
2	11	9.5	11	51	277	44	55	14	24	17	7.6	3.8
3	9.7	9.2	11	36	173	35	37	19	47	15	7.0	3.5
4	9.1	9.0	10	120	259	27	31	64	27	14	17	3.8
5	9.2	9.4	13	80	151	24	28	76	21	13	8.5	4.0
6	10	9.4	12	44	102	20	24	43	23	12	7.2	3.7
7	9.3	20	9.7	31	88	18	21	33	20	11	6.7	6.2
8	8.7	46	9.1	27	75	18	19	28	895	11	6.5	5.1
9	8.8	34	8.7	27	99	19	19	24	282	56	6.5	6.4
10	9.3	23	8.4	41	84	67	136	27	139	90	6.1	4.1
11	8.7	21	9.8	36	64	1650	169	20	72	221	5.9	3.9
12	7.9	19	10	27	49	433	86	66	48	189	5.8	3.9
13	8.1	16	9.4	21	42	222	57	310	37	101	33	4.7
14	7.8	18	8.5	18	69	142	52	157	31	61	9.0	12
15	7.8	101	7.5	17	588	94	42	97	25	40	6.1	6.0
16	8.7	174	6.2	17	403	82	36	439	21	36	5.2	3.6
17	10	84	7.0	27	183	63	33	299	19	23	5.5	3.4
18	8.9	51	7.6	36	114	46	26	160	17	19	5.3	3.6
19	11	34	8.1	28	79	39	25	100	15	18	5.1	9.9
20	17	32	8.2	68	54	32	27	69	65	16	5.2	4.2
21	23	25	6.8	88	46	30	27	48	43	16	7.5	4.2
22	32	21	5.6	62	260	28	23	38	107	18	4.9	6.6
23	19	18	5.2	45	249	24	22	32	112	15	4.4	4.2
24	15	16	6.4	38	131	23	21	29	72	13	4.8	3.7
25	13	15	8.0	39	71	21	19	42	40	11	4.2	3.7
26	12	13	9.4	31	51	20	19	51	42	10	4.3	3.6
27	12	14	10	25	50	19	18	39	55	9.8	4.2	3.4
28	11	16	9.7	22	56	18	21	33	28	9.5	4.0	4.0
29	11	12	11	20	---	21	18	29	24	9.2	8.2	4.6
30	11	13	15	25	---	22	17	25	26	9.9	4.4	4.1
31	12	---	29	21	---	22	---	23	---	8.5	4.1	---
TOTAL	363.0	892.5	303.3	1231	3901	3370	1170	2449	2399	1114.9	222.1	141.7
MEAN	11.7	29.7	9.78	39.7	139	109	39.0	79.0	80.0	36.0	7.16	4.72
MAX	32	174	29	120	588	1650	169	439	895	221	33	12
MIN	7.8	9.0	5.2	17	34	18	17	14	15	8.5	4.0	3.4
CFSM	.35	.90	.29	1.20	4.20	3.27	1.17	2.38	2.41	1.08	.22	.14
IN.	.41	1.00	.34	1.38	4.37	3.78	1.31	2.74	2.69	1.25	.25	.16

CAL YR 1989 TOTAL 17274.7 MEAN 47.3 MAX 835 MIN 3.4 CFSM 1.43 IN. 19.36
WTR YR 1990 TOTAL 17557.5 MEAN 48.1 MAX 1650 MIN 3.4 CFSM 1.45 IN. 19.67

03339500 SUGAR CREEK AT CRAWFORDSVILLE, IN

LOCATION.--Lat 40°02'56", long 86°53'58", in SW¼NW¼ sec.32, T.19 N., R.4 W., Montgomery County, Hydrologic Unit 05120110, on left bank 327 ft upstream from Crawfordsville Electric Light and Power Co.'s dam at Crawfordsville, 0.5 mi upstream from bridge on U.S. Highway 231, 1.0 mi downstream from Walnut Fork Sugar Creek, and at mile 40.4.

DRAINAGE AREA.--509 mi^2.

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

REVISED RECORDS.--WSP 973: 1939(M). WSP 1275: Drainage area. WSP 1335: 1949.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 657.77 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 14 to Jan. 1, Jan. 4-8, and July 6-8. Records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--52 years, 488 ft^3/s, 13.02 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,300 ft^3/s June 28, 1957, gage height, 14.48 ft; minimum daily, 2.4 ft^3/s Sept. 24-27, 1941.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1913 reached a stage of 17.3 ft from information by local resident, discharge, about 36,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 15	2200	6,640	5.69	June 9	0200	9,180	7.37
Feb. 22	2300	4,680	4.61	July 10	0500	5,260	4.90
Mar. 12	0500	*12,400	*9.51	July 12	1700	5,910	5.26
May 16	1800	6,070	5.35				

Minimum daily discharge, 45 ft^3/s Sept. 6, 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	222	180	205	340	283	823	476	247	309	559	109	59
2	222	169	200	279	1860	770	818	224	323	299	98	53
3	211	159	175	235	2480	714	748	230	490	199	92	49
4	194	151	180	600	2460	583	642	305	398	150	405	47
5	183	154	197	1100	2150	514	590	751	292	120	465	46
6	185	159	193	650	1450	451	536	677	273	110	207	45
7	183	169	172	440	1180	386	466	492	303	104	145	48
8	181	205	149	370	1050	383	428	387	5850	100	120	65
9	176	318	133	342	1080	409	397	334	7300	191	107	65
10	169	321	154	434	1180	576	939	355	2300	3500	97	58
11	162	247	155	521	905	10000	2560	312	780	2430	91	54
12	158	210	111	417	691	9990	1750	410	969	5150	88	87
13	152	186	112	271	587	3190	1260	2800	725	3640	166	87
14	149	172	125	280	582	1230	1070	2080	551	2410	149	68
15	145	272	120	255	4240	748	920	1290	434	1530	106	78
16	152	1550	112	230	5970	723	767	3860	330	1120	92	68
17	149	1370	103	238	3330	1020	656	5420	276	794	82	54
18	145	883	100	340	1820	812	520	2990	227	541	79	51
19	150	585	98	368	1400	688	453	1770	207	406	78	73
20	176	501	99	407	1070	566	454	1290	1090	329	75	89
21	223	442	97	864	865	512	515	965	762	313	113	68
22	364	356	93	787	2470	475	472	723	676	409	158	65
23	418	314	86	593	3850	435	431	568	1150	329	99	61
24	320	275	82	511	1860	381	402	480	714	251	80	55
25	270	262	83	449	1280	401	365	518	460	204	71	50
26	238	257	86	436	978	383	330	745	299	174	67	49
27	221	236	88	373	845	352	318	757	465	155	63	48
28	209	261	95	350	894	339	319	596	393	145	59	46
29	198	250	102	319	---	330	320	493	259	141	67	47
30	188	212	110	331	---	353	275	397	217	180	82	45
31	187	---	160	293	---	393	---	338	---	132	73	---
TOTAL	6300	10826	3975	13423	48810	38930	20197	32804	28822	26115	3783	1778
MEAN	203	361	128	433	1743	1256	673	1058	961	842	122	59.3
MAX	418	1550	205	1100	5970	10000	2560	5420	7300	5150	465	89
MIN	145	151	82	230	283	330	275	224	207	100	59	45
CFSM	.40	.71	.25	.85	3.42	2.47	1.32	2.08	1.89	1.66	.24	.12
IN.	.46	.79	.29	.98	3.57	2.85	1.48	2.40	2.11	1.91	.28	.13

CAL YR 1989 TOTAL 237902 MEAN 652 MAX 8400 MIN 65 CFSM 1.28 IN. 17.39
WTR YR 1990 TOTAL 235763 MEAN 646 MAX 10000 MIN 45 CFSM 1.27 IN. 17.23

03340500 WABASH RIVER AT MONTEZUMA, IN

LOCATION.--Lat 39°47'33", long 87°22'26", in SE¼NE¼ sec.35, T.16 N., R.9 W., Parke County, Hydrologic Unit 05120108, on left bank 20 ft upstream from bridge on U.S. Highway 36 at Montezuma, 2.0 mi upstream from Big Raccoon Creek, 4.9 mi downstream from Sugar Creek, and at mile 240.0.

DRAINAGE AREA.--11,118 mi^2.

PERIOD OF RECORD.--October 1927 to current year. July 1924 to September 1927 (gage height only) in reports of State of Indiana, Department of Natural Resources.

REVISED RECORDS.--WSP 1335: 1929, 1931(M). WSP 1505: 1954. WSP 1915: 1954(m). WSP 2109: Drainage area. WDR IN-74-1: 1973.

GAGE.--Water-stage recorder. Datum of gage is 457.75 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Oct. 1, 1927, to July 12, 1950, nonrecording gage on downstream side of bridge and at same datum. July 12, 1950, to July 27, 1988, recording gage in downstream side of first pier from left bank at same datum.

REMARKS.--Estimated daily discharges: Dec. 16-29. Records good except those for estimated daily discharges, which are poor. Flow partially regulated by upstream reservoirs.

AVERAGE DISCHARGE.--63 years, 9,837 ft^3/s, 12.01 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 184,000 ft^3/s May 20, 1943, gage height, 32.83 ft; minimum daily, 571 ft^3/s Sept. 24, 1941.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 27, 1913, reached a stage of 34.0 ft, from floodmarks, discharge, 230,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 72,900 ft^3/s Mar. 13, gage height, 26.28 ft; minimum daily, 1,770 ft^3/s Dec. 15, result of freezeup.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4640	4300	4900	3600	6510	43400	10300	7970	15800	11500	9800	15700
2	4460	4200	4710	3780	8420	37600	11200	7480	14400	11500	7980	14700
3	4250	3970	4550	4330	14900	33300	11600	7110	13900	9250	6980	12200
4	4140	3940	4170	6200	21800	29900	11800	7190	13800	7480	6330	9540
5	3930	3720	3950	11700	25200	27400	11700	7890	11800	6650	7110	9110
6	3850	3760	3840	13700	24000	25200	10900	9850	10800	6030	7240	8860
7	3770	3740	3720	13800	21700	23300	9880	12700	11800	5560	7180	8560
8	3750	3890	3620	11800	19300	21800	9110	13400	15700	5210	6600	8680
9	3580	3980	3450	10300	18500	19800	8460	12000	23500	4880	5980	8510
10	3480	4250	3370	9000	19700	19300	9230	11100	22100	6300	5370	7580
11	3400	4200	3390	8050	19500	36600	14800	10300	21000	9160	4930	6580
12	3230	4140	3260	7530	18600	56000	16500	9760	20200	15000	4670	7320
13	3250	4020	3140	7440	17300	69200	18000	19800	18600	16600	5500	8050
14	3340	4090	2510	6950	16200	70900	18000	22100	16600	15300	7710	7990
15	3020	4390	1770	6260	22100	62200	17900	21900	15500	16500	10200	6910
16	3070	7080	1900	5690	33600	51700	17400	30800	15000	16700	10100	5860
17	3000	11000	2050	5220	34500	42100	16000	45900	13700	15800	8850	5240
18	3270	13400	2200	5030	33600	33800	14000	55200	11100	13700	7610	5250
19	3600	14400	2300	5400	32900	27800	12100	56500	9220	10700	8620	5350
20	3780	13300	2280	8670	31200	23300	11300	53000	12100	9160	17800	5470
21	4290	12100	2230	10700	28600	21100	11600	44000	17300	10100	21300	5370
22	4810	11000	2150	10300	28200	19400	12000	32900	14700	12500	23300	5270
23	5580	9560	2080	10800	39200	17700	12400	25400	13200	13200	25000	5110
24	6710	8150	2000	11600	49300	16100	12200	22200	11300	14100	26200	4960
25	6920	7220	2000	11000	57900	14400	11400	20500	10100	15400	25900	4750
26	6560	6490	2040	10100	61500	13500	10300	20100	9370	15100	22900	4560
27	5970	6110	2100	9500	57800	12500	9630	20100	8810	13900	19500	4470
28	5540	5600	2200	9270	50500	11500	9110	19600	8020	12200	16700	4430
29	5160	5310	2400	8440	---	10600	8820	18700	7410	11100	15700	4420
30	4780	5170	2690	7340	---	10200	8480	17900	8360	16500	16300	4330
31	4490	---	3020	6820	---	9970	---	17200	---	13900	16200	---
TOTAL	133620	196480	89990	260320	812530	911570	366120	680550	415190	360980	385560	215130
MEAN	4310	6549	2903	8397	29020	29410	12200	21950	13840	11640	12440	7171
MAX	6920	14400	4900	13800	61500	70900	18000	56500	23500	16700	26200	15700
MIN	3000	3720	1770	3600	6510	9970	8460	7110	7410	4880	4670	4330
CFSM	.39	.59	.26	.76	2.61	2.64	1.10	1.97	1.24	1.05	1.12	.64
IN.	.45	.66	.30	.87	2.72	3.05	1.23	2.28	1.39	1.21	1.29	.72

CAL YR 1989 TOTAL 3525030 MEAN 9658 MAX 50200 MIN 1770 CFSM .87 IN. 11.79
WTR YR 1990 TOTAL 4828040 MEAN 13230 MAX 70900 MIN 1770 CFSM 1.19 IN. 16.15

03340800 BIG RACCOON CREEK NEAR FINCASTLE, IN

LOCATION.--Lat 39°48'45", long 86°57'14", in NW¼SW¼ sec.22, T.16 N., R.5 W., Putnam County, Hydrologic Unit 05120108, on left bank at downstream side of county road bridge, 1.6 mi upstream from Ramp Creek, 3.1 mi west of Fincastle, and at mile 48.8.

DRAINAGE AREA.--139 mi^2.

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

REVISED RECORDS.--WSP 1909: 1958. WSP 2109: Drainage area. WDR IN-79-1: 1978.

GAGE.--Water-stage recorder. Datum of gage is 686.03 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 12-21, Dec. 4, Dec. 9, to Jan. 8, Jan. 13-15, and Feb. 25-28. Records fair except Oct. 12-21, and Dec. 9 to Jan. 8, which are poor.

AVERAGE DISCHARGE.--33 years, 143 ft^3/s, 13.97 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,100 ft^3/s Jan. 26, 1962; maximum gage height, 15.68 ft Jan. 26, 1962 (ice jam); minimum daily discharge, 1.0 ft^3/s Oct. 11, 1988.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 28, 1957, reached a stage of 19.10 ft, discharge, 39,900 ft^3/s, from slope-area measurement.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,900 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 15	2200	3,210	10.54	May 16	1600	4,060	11.55
Mar. 11	1700	*5,290	*12.49				

Minimum daily discharge, 19 ft^3/s Sept. 27.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	45	51	110	85	177	111	66	90	106	37	33
2	48	44	51	74	713	163	194	60	92	74	34	30
3	46	43	48	64	650	145	150	62	162	65	31	27
4	43	41	48	170	877	118	125	86	131	59	37	25
5	42	40	49	230	594	105	113	231	99	53	41	24
6	42	42	50	130	382	92	98	170	90	49	33	23
7	43	47	46	100	306	80	87	133	87	46	28	25
8	41	61	41	84	254	77	79	110	220	43	26	27
9	39	103	42	78	259	81	76	95	925	43	24	29
10	37	83	41	100	267	212	158	98	344	66	23	26
11	36	68	40	105	205	3860	424	85	189	114	22	24
12	36	59	38	87	165	1370	266	168	138	673	21	23
13	35	53	37	72	150	563	202	1330	112	377	459	23
14	34	50	37	67	188	385	192	563	95	334	168	23
15	34	77	36	65	2010	283	175	470	85	251	83	22
16	33	369	35	62	1670	220	155	3160	77	153	61	21
17	33	257	35	69	672	190	141	1490	71	103	51	21
18	33	161	35	84	426	159	118	597	68	76	46	21
19	35	117	35	80	325	138	109	382	61	64	42	26
20	38	107	34	106	244	118	112	290	796	59	39	25
21	46	94	31	198	199	112	120	231	500	135	41	24
22	76	81	29	158	647	110	108	190	559	131	45	24
23	75	75	28	125	903	101	102	161	576	139	37	23
24	62	68	28	113	468	93	96	146	257	86	36	21
25	55	66	29	107	250	90	89	143	177	64	34	20
26	52	65	31	102	190	84	83	151	131	53	32	20
27	50	61	32	95	180	79	80	138	111	46	30	19
28	48	61	34	90	185	75	80	126	93	41	29	20
29	47	56	35	87	---	82	81	116	85	46	109	21
30	46	51	37	87	---	88	72	103	111	71	68	21
31	46	---	120	79	---	88	---	95	---	45	40	---
TOTAL	1379	2545	1263	3178	13464	9538	3996	11246	6532	3665	1807	711
MEAN	44.5	84.8	40.7	103	481	308	133	363	218	118	58.3	23.7
MAX	76	369	120	230	2010	3860	424	3160	925	673	459	33
MIN	33	40	28	62	85	75	72	60	61	41	21	19
CFSM	.32	.61	.29	.74	3.46	2.21	.96	2.61	1.57	.85	.42	.17
IN.	.37	.68	.34	.85	3.60	2.55	1.07	3.01	1.75	.98	.48	.19

CAL YR 1989 TOTAL 73036 MEAN 200 MAX 8420 MIN 11 CFSM 1.44 IN. 19.55
WTR YR 1990 TOTAL 59324 MEAN 163 MAX 3860 MIN 19 CFSM 1.17 IN. 15.88

03340900 BIG RACCOON CREEK AT FERNDALE, IN

LOCATION.--Lat 39°42'40", long 87°04'15", in SE¼SE¼ sec.28, T.15 N., R.6 W., Parke County, Hydrologic Unit 05120108, on right bank at upstream side of bridge on New Discovery Road, 0.5 mi downstream from Cecil M. Harden Lake, 3.7 mi upstream from Rocky Fork Creek, and at mile 33.3.

DRAINAGE AREA.--222 mi^2.

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

REVISED RECORDS.--WSP 2109: Drainage area.

GAGE.--Data-Collection Platform. Datum of gage is 590.00 ft above National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark). Prior to Oct. 1, 1974, water-stage recorder at site 1.7 mi downstream and at datum 7.64 ft lower. Data-Collection Platform installed on June 27, 1986.

REMARKS.--Flow regulated by Cecil M. Harden Lake since December 1960. Daily discharge computed from relation between discharge, head, and gate openings for Cecil M. Harden Lake beginning Oct. 1, 1974.

COOPERATION.--Records of daily discharge provided by U.S. Army Corps of Engineers beginning Oct. 1, 1976.

AVERAGE DISCHARGE.--34 years, 231 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,500 ft^3/s June 28, 1957, gage height, 19.87 ft, from rating curve extended above 5,000 ft^3/s on basis of records for station at Big Raccoon Creek at Mansfield; minimum daily, 2.7 ft^3/s Oct. 11, 1956; no flow, Aug. 23, 24, 1977, July 26, 1986, Mar. 11, 12, 18, 19, 1987, due to regulation.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 1,530 ft^3/s, Mar. 24; minimum daily, 17 ft^3/s, many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1080	493	150	151	85	495	148	17	1180	107	506	199
2	1070	491	109	227	87	495	149	17	967	131	804	176
3	1070	489	80	271	90	494	149	17	940	131	305	82
4	1060	486	76	200	93	492	149	17	1080	131	82	82
5	1050	484	95	211	96	491	150	17	1200	107	82	82
6	1050	482	113	272	98	490	89	17	931	82	82	42
7	1040	480	98	271	100	488	53	17	498	68	55	17
8	1070	477	81	270	101	487	53	17	497	36	29	17
9	1080	493	76	154	272	825	53	17	237	23	17	17
10	1070	498	76	107	486	694	53	17	108	23	17	17
11	1070	495	76	107	485	128	53	17	108	23	17	17
12	1060	492	76	169	643	135	54	17	109	322	17	17
13	1050	685	51	231	777	137	54	18	109	496	375	17
14	787	777	26	231	413	138	54	238	244	496	870	17
15	820	768	26	231	128	139	54	247	532	496	441	60
16	949	763	26	231	141	139	55	107	1050	495	49	82
17	770	760	26	231	146	139	55	111	1120	382	49	82
18	613	753	26	231	148	139	55	112	1090	160	49	82
19	519	746	26	231	148	384	55	112	901	111	49	55
20	516	737	26	232	149	842	55	113	337	82	72	28
21	515	729	26	403	150	1080	55	113	339	83	83	28
22	513	721	26	487	151	1080	55	113	312	83	83	28
23	512	711	26	418	154	1350	55	113	714	303	82	36
24	510	595	26	173	156	1530	56	113	1170	354	60	46
25	508	526	26	85	157	1510	56	113	1250	324	39	48
26	506	520	26	219	158	1490	32	113	1240	345	29	48
27	504	514	26	229	158	1470	17	113	1230	111	29	56
28	502	280	26	107	334	1270	17	113	994	70	29	69
29	500	151	26	107	---	979	17	562	503	49	29	79
30	498	150	26	255	---	594	17	1070	103	50	29	81
31	496	---	109	166	---	148	---	1190	---	50	20	---
TOTAL	24358	16746	1708	6908	6104	20272	1967	4988	21093	5724	4479	1707
MEAN	786	558	55.1	223	218	654	65.6	161	703	185	144	56.9
MAX	1080	777	150	487	777	1530	150	1190	1250	496	870	199
MIN	496	150	26	85	85	128	17	17	103	23	17	17

CAL YR 1989 TOTAL 109700 MEAN 301 MAX 1500 MIN 17
WTR YR 1990 TOTAL 116054 MEAN 318 MAX 1530 MIN 17

03341300 BIG RACCOON CREEK AT COXVILLE, IN

LOCATION.--Lat 39°39'09", long 87°17'37", in SW¼SW¼ sec.15, T.14 N., R.8 W., Parke County, Hydrologic Unit 05120108, on right bank at downstream side of covered bridge on county road at Coxville, 0.8 mi upstream from Rock Run, 1.5 mi downstream from Little Raccoon Creek, 2.1 mi northwest of Rosedale, and at mile 13.1.

DRAINAGE AREA.--448 mi^2.

PERIOD OF RECORD.--October 1956 to September 1988 (Discharge). October 1988 to current year (gage height only). Prior to October 1963, published as Raccoon Creek at Coxville.

REVISED RECORDS.--WSP 2109: Drainage area. WDR IN-74-1: 1973.

GAGE.--Water-stage recorder. Datum of gage is 494.00 ft above National Geodetic Vertical Datum of 1929 (Indiana Flood Control and Water Resources Commission bench mark).

REMARKS.--Gage heights May through July doubtful due to lagging intakes. Flow regulated by Cecil M. Harden Lake.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 108,000 ft^3/s June 28, 1957, gage height, 21.23 ft, from rating curve extended above 35,000 ft^3/s on basis of an estimate made by slope-area study; minimum daily, 6.5 ft^3/s Oct. 10, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 13.39 ft May 16, mimimum gage height, 3.69 ft Sept. 23, 24.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.81	5.90	4.68	4.67	4.74	6.71	7.20	4.24	8.30	4.96	7.32	4.74
2	7.80	5.88	4.47	5.00	7.50	6.68	6.23	4.18	8.15	4.75	7.83	4.91
3	7.76	5.86	4.31	5.05	6.29	6.58	5.88	4.29	8.21	4.62	6.06	4.32
4	7.74	5.85	4.22	5.58	7.59	6.50	5.71	4.60	8.07	4.51	5.46	4.23
5	7.72	5.85	4.20	5.32	6.41	6.45	5.54	4.68	8.36	4.43	5.18	4.17
6	7.72	5.83	4.34	5.32	5.97	6.38	5.21	4.70	8.00	4.35	4.95	4.13
7	7.70	5.95	4.31	5.17	5.70	6.32	4.92	4.52	6.47	4.30	4.79	3.94
8	7.77	6.08	4.16	5.08	5.50	6.36	4.81	4.37	6.48	4.10	4.53	3.89
9	7.77	6.02	4.01	4.66	6.12	7.65	4.74	4.29	5.68	3.95	4.38	3.89
10	7.75	5.98	4.01	4.55	6.74	10.08	8.24	4.44	4.97	3.90	4.29	3.85
11	7.72	5.95	4.01	4.50	6.61	12.25	6.38	4.27	4.79	3.98	4.22	3.82
12	7.70	5.92	3.94	4.43	7.08	9.60	5.79	6.81	4.68	5.52	4.16	3.78
13	7.68	6.74	3.99	4.40	7.24	8.30	5.54	8.05	4.59	6.34	7.09	3.75
14	6.67	6.87	3.87	4.33	7.10	7.36	5.62	6.64	5.08	6.25	7.76	3.72
15	6.94	7.56	3.95	4.32	12.47	6.95	5.42	8.61	6.12	6.17	6.14	3.70
16	7.67	7.56	4.85	4.31	9.27	6.42	5.28	13.39	7.72	6.11	4.82	3.93
17	6.91	7.30	4.62	4.47	7.75	6.02	5.16	10.99	8.02	6.04	4.60	3.95
18	6.18	7.15	4.38	4.47	7.09	5.75	4.99	8.56	7.94	---	4.47	3.97
19	6.11	7.07	4.23	4.43	6.45	6.60	4.92	7.80	8.02	---	4.38	4.18
20	6.12	7.01	4.28	4.74	6.05	7.92	5.10	7.28	8.35	---	4.42	3.92
21	6.09	6.93	4.20	5.50	5.85	8.19	5.17	6.54	6.80	---	4.45	3.80
22	6.03	6.87	4.20	5.66	9.39	8.20	4.99	6.02	7.79	---	4.40	3.74
23	5.98	6.81	4.20	5.64	7.43	8.68	4.89	5.72	7.40	---	4.36	3.69
24	5.95	6.36	4.22	4.82	6.70	9.38	4.81	5.52	8.48	---	4.31	3.69
25	5.92	6.18	4.25	4.78	6.19	9.35	4.72	5.60	8.56	---	4.15	3.73
26	5.90	6.14	4.21	4.98	5.95	9.26	4.63	5.54	8.52	5.92	4.07	3.74
27	5.88	6.11	4.22	5.26	5.88	9.21	4.47	5.33	8.47	4.67	4.02	3.73
28	5.88	5.25	4.28	4.66	6.38	8.91	4.45	5.20	7.78	4.44	3.97	3.91
29	5.90	4.91	4.35	4.65	---	8.12	4.40	6.97	7.11	5.53	5.46	4.04
30	5.91	4.74	3.85	5.27	---	7.00	4.31	8.12	5.31	10.40	4.36	4.01
31	5.91	---	4.80	4.65	---	5.77	---	8.30	---	8.29	4.52	---
MEAN	6.86	6.29	4.25	4.86	6.91	7.71	5.32	6.31	7.14	---	5.00	3.96
MAX	7.81	7.56	4.85	5.66	12.47	12.25	8.24	13.39	8.56	---	7.83	4.91
MIN	5.88	4.74	3.85	4.31	4.74	5.75	4.31	4.18	4.59	---	3.97	3.69

03341315 BIG RACCOON CREEK NEAR MECCA, IN

LOCATION.--Lat 39°42'33", long 87°19'23", in NW¼NE¼ sec.32, T.15N., R.8W., Parke County, Hydrologic Unit 05120108, on left bank at downstream side of bridge on U.S. Highway 41, 1.2 mi southeast of Mecca, 4.8 mi downstream from Rock Run, 6.5 mi south of Rockville, and at river mile 7.4.

DRAINAGE AREA.--473 mi^2.

PERIOD OF RECORD.--October 1988 to current year.

GAGE.--Water-stage recorder. Datum of gage is 475.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 18-31, Dec. 15 to Jan. 3, and Feb. 2-12. Records fair except those for estimated daily discharges, which are poor. Flow regulated by Cecil M. Harden Lake.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,700 ft^3/s, May 26, 1989, gage height, 19.79 ft; minimum daily, 30 ft^3/s Oct. 1, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,410 ft^3/s, May 16, gage height, 19.01 ft; minimum daily 85 ft^3/s Sept. 24.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1260	504	250	459	290	843	699	223	1440	341	1040	200
2	1240	502	241	405	1020	866	853	213	1440	295	1400	263
3	1240	495	202	415	890	843	641	213	1110	266	1150	183
4	1230	491	185	445	1130	804	565	251	1210	251	523	149
5	1220	489	178	405	982	778	522	321	1430	238	464	146
6	1220	489	191	424	738	751	476	296	1460	226	382	140
7	1200	502	195	407	632	723	376	280	837	217	342	117
8	1200	540	182	365	566	721	337	247	698	202	286	110
9	1240	540	160	357	574	815	317	227	690	177	247	112
10	1240	530	153	271	934	1350	644	246	391	166	227	105
11	1220	520	153	257	898	4910	1140	227	316	169	210	97
12	1210	511	150	248	876	2770	666	454	286	283	200	96
13	1200	530	142	232	1050	1840	524	2090	270	674	749	91
14	1130	787	138	231	1080	1440	510	1010	263	673	979	89
15	795	851	132	226	2520	1090	484	1150	415	655	1150	87
16	1040	1130	122	225	3070	874	441	5570	776	628	366	107
17	919	1020	114	235	1560	690	414	4600	1310	613	253	119
18	768	937	120	257	1120	579	371	1990	1110	405	226	119
19	572	891	127	245	884	548	344	1490	1350	302	207	145
20	564	872	127	262	691	824	350	1190	1290	234	209	124
21	558	844	116	325	596	1360	424	915	1050	228	220	96
22	552	821	102	502	1190	1400	384	711	1030	923	211	92
23	540	799	96	495	1540	1440	357	548	905	537	201	86
24	534	765	104	481	1020	1810	331	467	1360	605	192	85
25	524	607	109	301	779	1820	313	432	1600	451	155	89
26	518	589	113	293	704	1810	296	473	1570	553	140	90
27	512	575	112	436	642	1800	272	422	1550	352	129	90
28	508	542	110	329	604	1780	254	387	1450	251	125	96
29	502	311	112	279	---	1450	249	405	1030	352	207	126
30	514	266	125	279	---	1360	234	994	487	3200	222	126
31	518	---	330	413	---	648	---	1400	---	1890	139	---
TOTAL	27488	19250	4691	10504	28580	40737	13788	29442	30124	16357	12551	3575
MEAN	887	642	151	339	1021	1314	460	950	1004	528	405	119
MAX	1260	1130	330	502	3070	4910	1140	5570	1600	3200	1400	263
MIN	502	266	96	225	290	548	234	213	263	166	125	85
CFSM	1.87	1.36	.32	.72	2.16	2.78	.97	2.01	2.12	1.12	.86	.25
IN.	2.16	1.51	.37	.83	2.25	3.20	1.08	2.32	2.37	1.29	.99	.28

CAL YR 1989 TOTAL 229571 MEAN 629 MAX 6280 MIN 96 CFSM 1.33 IN. 18.06
WTR YR 1990 TOTAL 237087 MEAN 650 MAX 5570 MIN 85 CFSM 1.37 IN. 18.65

03341500 WABASH RIVER AT TERRE HAUTE, IN

LOCATION.--Lat 39°28'33", long 87°25'07", in NE¼NW¼ sec.21, T.12 N., R.9 W., Vigo County, Hydrologic Unit 05120111, on left bank at Indiana America Water Company, Inc., 1st and Elm Streets in Terre Haute, 3.0 mi upstream from Sugar Creek, and 3.6 mi downstream from Lost Creek and at mile 215.

DRAINAGE AREA.--12,263 mi^2 (revised).

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 100 ft downstream June 1891 to June 1897 and since December 1904 are contained in reports of National Weather Service.

REVISED RECORDS.--WSP 205: 1905. WSP 1335: 1944. WDR IN-73-1: Drainage area. WDR IN-84-1: 1983. WDR IN-86-1: 1913 (Gage height).

GAGE.--Water-stage recorder. Datum of gage is 445.78 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 17, 1984, water-stage recorder at Wabash Avenue bridge 3,400 ft downstream at datum 2.88 ft lower. See WSP 1725 for history of changes prior to Oct. 27, 1928.

REMARKS.--Estimated daily discharges: Dec. 17-29, June 20-26, and Aug. 19-31. Records good except for Dec. 17-29, and June 20-26, which are poor. Flow partially regulated by upstream reservoirs.

AVERAGE DISCHARGE.--63 years, 10,850 ft^3/s, 12.02 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 189,000 ft^3/s May 20, 1943, gage height, 30.50 ft; minimum daily, 701 ft^3/s Aug. 3, 1934.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 27, 1913, reached a stage of 31.3 ft, present site and datum, discharge, 245,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 68,900 ft^3/s Mar. 14, gage height, 22.01 ft; minimum daily, 1,940 ft^3/s Dec. 16, result of freezeup.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6060	5110	5750	3980	7640	52800	11400	8620	17900	10700	12200	16500
2	5870	4970	5510	4240	8880	47900	12700	8100	16200	12600	9430	15700
3	5670	4840	5320	4550	14000	43400	13200	7660	15200	10800	8190	13900
4	5470	4690	4990	5590	21100	39600	13200	7670	15200	8620	7220	10900
5	5310	4490	4580	10200	27000	35700	13100	8210	13700	7400	7190	9500
6	5160	4360	4390	13600	27400	32100	12300	9590	12100	6620	7360	9270
7	5100	4430	4340	14400	25300	28800	11400	12000	12300	6020	7550	8920
8	5000	4550	4220	13100	22500	26000	10200	13900	13600	5580	7090	8860
9	4960	4720	4030	11500	20700	23900	9550	13000	22700	5140	6480	8880
10	4790	4850	3850	10400	20800	21300	9770	11900	24500	5000	5760	8350
11	4720	5010	3800	9350	21200	29700	15200	11100	22700	8410	5200	7200
12	4570	4870	3760	8510	20600	43600	17900	10900	21800	12400	4810	7010
13	4420	4760	3570	8250	19300	58300	19200	22300	20400	16800	6990	7960
14	4500	4770	3400	8030	18000	67800	19700	27300	18100	15900	8130	8290
15	4230	5130	2560	7330	22300	67300	19700	25300	16500	16400	9830	7640
16	4010	6730	1940	6740	35300	61100	19100	35100	15800	17100	10600	6540
17	4150	10500	2200	6190	38900	53900	18100	48100	15100	16600	9600	5580
18	4100	14000	2350	5860	39500	47200	15800	56500	13900	15100	8330	5350
19	4350	15200	2450	5780	39200	40200	13700	59300	11300	12200	7610	5500
20	4590	14500	2550	7500	38400	33600	12300	58900	13000	9910	14300	5610
21	4810	13300	2520	10700	36800	27700	12500	54400	16000	10100	20900	5550
22	5430	12300	2450	11100	34700	24100	12900	47900	19000	13500	23700	5420
23	5950	11200	2400	11000	37700	21700	13100	39100	16000	15400	25700	5270
24	6890	9700	2350	11900	44700	19600	13100	30500	14000	14600	27600	5110
25	7480	8580	2330	11900	52500	17500	12400	25600	12400	15700	28300	4920
26	7390	7760	2380	11300	60000	16000	11300	24900	10800	15900	26300	4690
27	6960	7220	2450	10400	64500	14800	10300	23500	10200	15100	22300	4520
28	6490	6810	2550	10200	59100	13600	9760	22500	9390	13300	18700	4490
29	6140	6290	2700	9670	---	12700	9480	21200	8600	11800	17200	4580
30	5730	6020	2930	8600	---	12000	9080	20000	8500	16400	17500	4410
31	5390	---	3260	7960	---	11400	---	19100	---	17400	17400	---
TOTAL	165690	221660	103880	279830	878020	1045300	401440	784150	456890	378500	409470	226420
MEAN	5345	7389	3351	9027	31360	33720	13380	25300	15230	12210	13210	7547
MAX	7480	15200	5750	14400	64500	67800	19700	59300	24500	17400	28300	16500
MIN	4010	4360	1940	3980	7640	11400	9080	7660	8500	5000	4810	4410
CFSM	.44	.60	.27	.74	2.56	2.75	1.09	2.06	1.24	1.00	1.08	.62
IN.	.50	.67	.32	.85	2.66	3.17	1.22	2.38	1.39	1.15	1.24	.69

CAL YR 1989 TOTAL 3948080 MEAN 10820 MAX 53200 MIN 1940 CFSM .88 IN. 11.97
WTR YR 1990 TOTAL 5351250 MEAN 14660 MAX 67800 MIN 1940 CFSM 1.20 IN. 16.23

03342000 WABASH RIVER AT RIVERTON, IN

LOCATION.--Lat 39°01'13", long 87°34'07", in NE¼SW¼ sec.30, T.7 N., R.10 W., Sullivan County, Hydrologic Unit 05120111, on left bank at downstream side of Illinois Central Railroad bridge at Riverton, 0.5 mi downstream from Turtle Creek, and at mile 162.0.

DRAINAGE AREA.--13,161 mi^2.

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 U.S. Army Corps of Engineers office, Louisville, Ky.

REVISED RECORDS.--WSP 1335: 1939, 1950. WDR IN-73-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 414.65 ft above National Geodetic Vertical Datum of 1929. Prior to July 17, 1951, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Dec. 18-28. Records good. Flow partially regulated by upstream reservoirs.

AVERAGE DISCHARGE.--52 years, 11,900 ft^3/s, 12.28 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 201,000 ft^3/s May 21, 1943, gage height, 29.36 ft; minimum daily, 858 ft^3/s Sept. 27-30, 1941.

EXTREMES OUTSIDE PERIOD OF RECORD.--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 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 63,500 ft^3/s Mar. 17, gage height, 20.91 ft; minimum daily, 2,210 ft^3/s Dec. 17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6830	5480	5970	3470	7990	58700	14100	9990	20800	9910	17000	17100
2	6570	5240	5670	3920	10400	58400	15600	9390	19200	12100	12800	16600
3	6300	5100	5420	4110	13400	55400	15200	8920	17800	12900	10300	15800
4	6050	4950	5220	4550	19500	51300	14700	9120	16800	11200	9570	14000
5	5820	4810	4890	6240	25700	47200	14400	9560	16200	9310	9440	11400
6	5630	4660	4560	11000	27600	43200	14000	9850	14700	8170	8490	10200
7	5470	4690	4360	13900	27800	38900	13100	11300	15400	7400	8250	9780
8	5380	5000	4270	14200	26600	35000	11900	13400	15100	6810	8190	9430
9	5300	5000	4130	12900	23900	32400	10900	14400	17000	6380	7690	9770
10	5200	4990	3960	11400	21900	29100	11000	13700	22600	5970	7060	9400
11	5040	5070	3810	10200	21800	26400	14800	12800	23600	6400	6400	8700
12	4960	5120	3750	9090	21700	28800	18000	13800	22900	9830	5880	7660
13	4840	5010	3670	8390	20900	31600	19200	23700	21900	14400	6490	7550
14	4730	4910	3550	8180	19800	36100	20100	28700	20500	16800	8860	8260
15	4770	5100	3410	7820	22800	46400	20500	29000	18700	16300	9110	8480
16	4590	5680	2690	7110	31200	57500	20300	32700	17400	16900	10600	7820
17	4740	7660	2210	6560	32600	62800	19700	40800	16600	17200	11000	6820
18	4590	11500	2250	6140	33400	61500	18400	45600	16500	16600	10000	6040
19	4540	14400	2300	5880	34500	56600	16500	50100	14900	15000	8830	5880
20	4730	15100	2380	6520	35500	50700	14700	55800	14400	12400	8990	6000
21	4870	14400	2500	9070	36400	44600	15200	59900	19100	11000	15800	5980
22	5120	13400	2580	11500	37100	37900	15000	60300	21500	13800	20100	5870
23	5580	12500	2620	11600	37600	32500	14500	57400	20500	17600	22100	5710
24	6110	11200	2660	11700	37100	27600	14500	51900	17400	16400	23400	5530
25	7010	9720	2640	12500	37600	23100	14200	45300	14800	15700	24500	5370
26	7500	8600	2620	12300	41200	20000	13300	38000	13100	16400	24900	5170
27	7380	7770	2600	11400	47900	17900	12200	33400	11900	16300	24200	4970
28	6930	7210	2650	10700	55200	16200	11300	30400	11100	15300	22000	4800
29	6490	6740	2710	10400	---	15200	11000	27200	10300	13800	19100	4820
30	6130	6270	2780	9660	---	14700	10500	24400	9570	15300	17800	4850
31	5790	---	3020	8640	---	14700	---	22300	---	19000	17400	---
TOTAL	174990	227280	107850	281050	809090	1172400	448800	893130	512270	402580	416250	249760
MEAN	5645	7576	3479	9066	28900	37820	14960	28810	17080	12990	13430	8325
MAX	7500	15100	5970	14200	55200	62800	20500	60300	23600	19000	24900	17100
MIN	4540	4660	2210	3470	7990	14700	10500	8920	9570	5970	5880	4800
CFSM	.43	.58	.26	.69	2.20	2.87	1.14	2.19	1.30	.99	1.02	.63
IN.	.49	.64	.30	.79	2.29	3.31	1.27	2.52	1.45	1.14	1.18	.71

CAL YR 1989 TOTAL 4423270 MEAN 12120 MAX 45900 MIN 2210 CFSM .92 IN. 12.50
WTR YR 1990 TOTAL 5695450 MEAN 15600 MAX 62800 MIN 2210 CFSM 1.19 IN. 16.10

03342100 BUSSERON CREEK NEAR HYMERA, IN

LOCATION.--Lat 39°12'54", long 87°18'41", in NW¼NW¼ sec.21, T.9 N., R.8 W., Sullivan County, Hydrologic Unit 05120111, on right bank at downstream side of bridge on County Road 900 North, 1.3 mi upstream from East Fork Busseron Creek, 1.9 mi northwest of Hymera, 4.1 mi upstream from West Fork Busseron Creek, and at mile 30.3.

DRAINAGE AREA.--16.7 mi^2.

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

REVISED RECORDS.--WDR IN-72-1: 1971. WDR IN-87-1: 1982-86.

GAGE.--Water-stage recorder. Datum of gage is 480.00 ft above National Geodetic Vertical Datum of 1929 (U.S. Soil Conservation Service benchmark).

REMARKS.--Estimated daily discharges: Oct. 1-10, Oct. 28 to Nov. 6, Nov. 23-25, Nov. 27 to Dec. 30, Feb. 28, Mar. 3-9, 22, 23, Apr. 7-9, May 1, 2, 22-30, July 7-10, Aug. 25-27, and Sept. 24-26. Records Poor. Flow affected by U.S. Soil Conservation Service floodwater-retarding structures.

AVERAGE DISCHARGE.--24 years, 18.4 ft^3/s, 14.99 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,890 ft^3/s Sept. 12, 1974, gage height, 18.58 ft; maximum gage height, 19.16 ft July 8, 1982; no flow at times most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 647 ft^3/s May 16, gage height, 18.35 ft; minimum daily discharge, .17 ft^3/s Sept. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	.83	2.0	30	47	15	81	6.9	1.4	.62	4.0	1.6
2	2.0	.77	1.7	27	181	13	42	6.6	1.4	.49	2.4	1.0
3	1.8	.73	1.4	23	48	11	22	15	1.1	.55	1.8	.86
4	1.6	.71	1.3	31	184	9.0	14	121	.99	2.2	120	.62
5	1.5	.69	1.4	16	45	7.4	9.8	53	.96	1.6	29	.52
6	1.4	.68	1.5	10	28	6.1	8.5	50	1.5	1.1	11	.43
7	1.4	3.7	1.3	6.6	27	5.2	8.0	26	12	.89	4.6	.38
8	1.3	6.0	1.1	5.1	25	5.1	7.2	13	4.7	.85	2.5	.80
9	1.3	3.0	1.0	4.2	21	5.0	6.8	9.7	2.9	.81	1.8	3.9
10	1.2	1.9	1.1	4.3	17	19	140	24	1.9	.77	1.5	1.4
11	1.0	1.7	1.2	3.6	12	17	65	13	2.9	1.8	1.3	.75
12	.98	1.4	.92	2.4	10	9.2	31	268	3.0	233	2.6	.49
13	.93	1.4	.84	2.0	13	6.8	23	305	1.8	34	2.8	.37
14	.87	1.7	.80	2.0	16	6.5	21	51	2.9	17	1.6	.32
15	.93	6.7	.77	2.1	336	7.3	16	102	2.0	11	.95	.83
16	11	12	.74	3.8	112	8.3	12	496	.91	6.3	.81	1.2
17	6.9	6.6	.72	7.9	45	6.4	11	316	.68	3.0	.79	1.1
18	2.6	4.1	.68	9.0	35	5.0	10	61	1.1	1.9	.68	.56
19	2.7	3.3	.64	8.3	30	4.3	10	31	.52	1.5	.57	2.1
20	3.7	3.3	.61	64	25	3.7	28	23	17	2.1	.53	1.1
21	2.1	2.8	.59	35	22	3.3	54	17	7.7	9.3	1.2	.47
22	1.8	2.6	.59	20	79	3.1	27	14	13	140	1.2	.32
23	1.8	2.5	.60	15	46	3.0	17	10	8.5	22	.61	.25
24	1.7	2.3	.61	12	22	5.2	11	8.0	3.4	9.8	.47	.23
25	1.4	2.2	.64	14	16	7.7	8.8	6.4	1.8	5.8	.38	.21
26	1.3	2.0	.70	13	14	7.9	7.7	4.7	1.3	4.4	.32	.19
27	1.1	2.1	.75	11	16	6.4	7.4	3.8	.86	3.0	.28	.18
28	1.0	2.2	.85	10	17	5.6	8.3	3.1	.68	2.0	.25	.20
29	.97	1.9	1.1	11	---	29	9.1	2.5	.65	11	6.7	.20
30	.92	1.8	7.0	12	---	46	7.3	2.0	.60	28	5.5	.17
31	.87	---	45	11	---	48	---	1.6	---	8.2	2.6	---
TOTAL	62.17	83.61	80.15	426.3	1489	335.5	723.9	2064.3	100.15	564.98	210.74	22.75
MEAN	2.01	2.79	2.59	13.8	53.2	10.8	24.1	66.6	3.34	18.2	6.80	.76
MAX	11	12	45	64	336	48	140	496	17	233	120	3.9
MIN	.87	.68	.59	2.0	10	3.0	6.8	1.6	.52	.49	.25	.17
CFSM	.12	.17	.15	.82	3.18	.65	1.44	3.99	.20	1.09	.41	.05
IN.	.14	.19	.18	.95	3.32	.75	1.61	4.60	.22	1.26	.47	.05

CAL YR 1989 TOTAL 7441.15 MEAN 20.4 MAX 543 MIN .28 CFSM 1.22 IN. 16.58
WTR YR 1990 TOTAL 6163.55 MEAN 16.9 MAX 496 MIN .17 CFSM 1.01 IN. 13.73

03342244 MUD CREEK NEAR CASS, IN

LOCATION.--Lat 39°05'55", long 87°15'46", in NE¼NE¼ sec.35, T.8 N., R.8 W., Sullivan County, Hydrologic Unit 05120111, on left upstream wingwall of bridge on County Road 100 North, 1.0 mi northeast of Cass, and 2.9 mi above mouth.

DRAINAGE AREA.--9.16 mi^2.

PERIOD OF RECORD.--October 1981 to current year.

GAGE.--Water-stage recorder. Datum of gage is 474.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Nov. 20, Nov. 22 to Dec. 30, Jan. 8-16, 25-30, Feb. 28 to Mar. 14, Mar. 16-28, April 3-9, 12-21, 25-27, 29, May 1-2, May 22 to June 1, June 22 to July 4, July 6-9, 11-26, 28, Aug. 2-3, 8-12, 15-21, 24-27, Aug. 31 to Sept. 6, Sept. 13-14, 16-18, 21-28. Records poor. Flow affected by surface-mined areas.

AVERAGE DISCHARGE.--9 years, 13.9 ft^3/s, 20.61 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge recorded, 996 ft^3/s May 29, 1986 and July 12, 1989, gage height, 12.16ft but may have been greater during period of no gage-height record Nov. 14 to Dec. 18, 1985; minimum daily, 0.20 ft^3/s Sept. 18, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 603 ft^3/s May 16, gage height, 10.27 ft; minimum daily, 1.6 ft^3/s Sept. 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	5.7	8.0	17	48	25	46	9.8	9.2	4.2	2.9	2.8
2	6.1	5.3	7.6	14	76	20	34	9.4	8.7	3.7	2.5	2.5
3	6.1	5.1	7.6	14	34	16	27	15	8.4	4.0	2.2	2.2
4	6.7	5.1	7.0	26	80	13	23	35	7.5	8.2	6.1	2.0
5	6.9	5.7	6.6	15	30	11	20	17	7.4	12	3.6	1.8
6	7.0	6.4	6.5	13	22	10	16	18	11	5.0	2.6	1.7
7	6.8	13	6.6	12	19	8.8	15	13	33	4.5	2.5	1.6
8	6.8	58	5.8	11	17	8.0	14	11	8.8	4.1	2.4	6.5
9	5.3	15	5.5	10	18	8.0	12	11	6.7	7.0	2.3	7.2
10	4.5	9.7	5.4	9.8	17	15	194	11	6.1	14	2.2	2.7
11	4.1	7.7	5.4	9.4	16	14	63	10	6.3	9.4	2.1	7.8
12	4.3	6.8	4.7	9.2	15	11	40	109	6.6	250	2.0	3.5
13	4.0	6.4	4.1	9.0	15	9.6	30	69	5.9	65	3.1	2.6
14	4.0	7.8	3.7	9.2	16	9.0	23	27	6.1	30	2.2	2.4
15	3.9	86	3.6	9.4	198	13	19	76	6.4	17	2.1	2.2
16	88	47	3.5	10	67	15	16	297	6.4	9.5	2.0	2.0
17	38	23	3.4	14	47	12	15	100	7.9	6.4	1.9	1.9
18	13	17	3.2	12	40	9.0	13	39	18	4.5	1.9	1.8
19	13	14	3.0	23	37	8.0	12	31	6.8	3.6	1.8	3.9
20	13	13	2.9	45	34	7.2	22	25	24	13	1.8	2.6
21	8.7	12	2.8	20	33	6.6	40	21	7.6	210	1.9	2.3
22	7.2	11	2.7	15	57	6.4	13	18	6.0	90	7.6	2.1
23	6.7	10	2.8	13	48	6.2	11	17	5.4	40	3.4	1.9
24	6.2	9.8	2.9	12	38	10	10	15	5.0	16	2.9	1.8
25	5.9	9.6	3.0	11	33	18	9.8	14	4.7	10	2.3	1.7
26	5.8	9.2	3.1	10	31	23	9.4	13	4.5	3.5	2.0	1.8
27	5.7	8.8	3.3	9.6	38	17	9.1	12	4.5	2.0	1.8	2.1
28	5.7	8.8	3.8	9.2	33	11	11	11	4.3	1.8	3.9	2.5
29	5.6	8.6	6.6	10	---	22	12	10	4.2	9.6	5.6	2.9
30	5.6	8.4	27	11	---	30	10	10	4.1	7.0	3.5	2.8
31	5.7	---	35	13	---	30	---	9.6	---	3.5	3.2	---
TOTAL	316.3	453.9	197.1	425.8	1157	422.8	789.3	1083.8	251.5	868.5	88.3	83.6
MEAN	10.2	15.1	6.36	13.7	41.3	13.6	26.3	35.0	8.38	28.0	2.85	2.79
MAX	88	86	35	45	198	30	194	297	33	250	7.6	7.8
MIN	3.9	5.1	2.7	9.0	15	6.2	9.1	9.4	4.1	1.8	1.8	1.6
CFSM	1.11	1.65	.69	1.50	4.51	1.49	2.87	3.82	.92	3.06	.31	.30
IN.	1.28	1.84	.80	1.73	4.70	1.72	3.21	4.40	1.02	3.53	.36	.34

CAL YR 1989 TOTAL 6066.6 MEAN 16.6 MAX 398 MIN 1.5 CFSM 1.81 IN. 24.64
WTR YR 1990 TOTAL 6137.9 MEAN 16.8 MAX 297 MIN 1.6 CFSM 1.84 IN. 24.93

03342500 BUSSERON CREEK NEAR CARLISLE, IN

LOCATION.--Lat 38°58'26", long 87°25'33", in NW¼ survey 17, Vincennes Tract, Sullivan County, Hydrologic Unit 05120111, on left bank 10 ft downstream from bridge on State Highway 58, 1.5 mi northwest of Carlisle, and 6.9 mi (revised) upstream from mouth.

DRAINAGE AREA.--228 mi^2.

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

REVISED RECORDS.--WSP 1335: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 425.36 ft above National Geodetic Vertical Datum of 1929 (Indiana Department of Highways bench mark). Prior to Nov. 8, 1950, nonrecording gage at same site and datum. Nov. 8, 1950, to Oct. 31, 1969, at site 200 ft upstream at same datum.

REMARKS.--Estimated daily discharges: Dec. 3-5, 8-28, Jan. 13-15. Records good except for estimated daily discharges discharges, which are poor. Flow affected by U.S. Soil Conservation Service floodwater-retarding structures and surface-mined areas.

AVERAGE DISCHARGE.--47 years, 230 ft^3/s, 13.70 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,800 ft^3/s Jan. 5, 1950, gage height, 20.05 ft; maximum gage height, 20.30 ft May 9, 1961; no flow many days in 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,200 ft^3/s and maximum(*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 17	0400	2,470	13.94	May 16	1900	*4,650	*17.31

Minimum daily discharge, 14 ft^3/s Dec. 21-23.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	61	73	623	293	326	647	106	131	59	199	25
2	48	59	71	382	1260	303	776	102	128	53	140	20
3	45	56	57	272	1230	264	526	118	142	45	113	19
4	40	53	50	475	1680	211	345	307	106	40	111	18
5	38	56	56	438	1510	176	271	646	91	36	405	17
6	37	113	65	275	1270	153	215	448	104	32	184	16
7	36	154	63	204	833	134	178	420	1400	28	109	15
8	37	530	56	173	529	126	147	269	726	25	75	44
9	36	530	48	159	416	142	129	202	316	23	58	1230
10	33	257	40	153	374	150	548	226	214	22	48	577
11	31	181	35	139	300	250	1060	205	159	25	40	147
12	28	149	33	121	241	206	984	715	126	111	35	110
13	27	129	30	90	208	171	565	1730	104	447	32	75
14	26	124	27	82	208	152	390	1650	87	180	33	60
15	26	500	22	86	1290	144	336	1880	77	125	29	48
16	483	826	18	90	1940	194	277	3520	70	89	27	37
17	2030	513	17	97	1870	244	239	4410	62	61	26	29
18	936	292	16	129	1870	238	201	4260	422	44	24	25
19	404	213	16	122	1220	191	172	4030	168	38	22	29
20	335	181	15	650	654	136	170	3130	747	32	21	33
21	240	153	14	773	394	108	555	2100	514	131	25	27
22	169	131	14	499	600	97	533	1280	277	181	35	27
23	134	116	14	327	872	94	321	745	253	345	49	22
24	115	104	15	262	679	100	245	470	170	130	32	19
25	104	101	18	224	390	149	200	356	125	91	25	17
26	93	97	21	200	287	229	172	302	99	64	22	16
27	85	93	27	170	286	199	150	252	82	51	20	19
28	80	92	39	146	349	163	134	216	71	47	19	18
29	75	81	56	138	---	181	125	199	61	51	18	17
30	71	75	182	153	---	375	112	171	58	636	38	16
31	66	---	695	178	---	574	---	147	---	420	37	---
TOTAL	5958	6020	1903	7830	23053	6180	10723	34612	7090	3662	2051	2772
MEAN	192	201	61.4	253	823	199	357	1117	236	118	66.2	92.4
MAX	2030	826	695	773	1940	574	1060	4410	1400	636	405	1230
MIN	26	53	14	82	208	94	112	102	58	22	18	15
CFSM	.84	.88	.27	1.11	3.61	.87	1.57	4.90	1.04	.52	.29	.41
IN.	.97	.98	.31	1.28	3.76	1.01	1.75	5.65	1.16	.60	.33	.45

CAL YR 1989 TOTAL 113648 MEAN 311 MAX 2610 MIN 14 CFSM 1.37 IN. 18.54
WTR YR 1990 TOTAL 111854 MEAN 306 MAX 4410 MIN 14 CFSM 1.34 IN. 18.25

03343000 WABASH RIVER AT VINCENNES, IN

LOCATION.--Lat 38°42'19", long 87°31'14", T.3 N., R.10 W., Lawrence County, IL, Hydrologic Unit 05120111, on right bank 30 ft east of Illinois State Highway 33, 300 ft upstream from Kelso Creek, 570 ft downstream from U.S. Highway 50 bridge, 5.1 mi downstream from Maria Creek, 7.5 mi upstream from Embarras River and at mile 129.6.

DRAINAGE AREA.--13,706 mi^2.

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 1.8 mi downstream, are contained in reports of National Weather Service.

REVISED RECORDS.--WSP 1173: 1943 (maximum gage height only). WSP 1335: 1930-31, 1933, 1936. WSP 1909: 1955. WDR IN-73-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 394.43 ft above National Geodetic Vertical Datum of 1929. Oct. 1, 1968, to June 19, 1979, recording gage at site 570 ft upstream at same datum. Oct. 1, 1960, to September 30, 1968, nonrecording gage at site 1.8 mi downstream at same datum. Oct. 1, 1960, to Sept. 30, 1968, auxiliary water-stage recorder at site 2.8 mi upstream from base gage at datum 0.80 ft lower. See WSP 1725 for history of changes prior to Oct. 1, 1960.

REMARKS.--Estimated daily discharges: Nov. 20 to Jan. 24. Records fair. Flow partially regulated by upstream reservoirs.

AVERAGE DISCHARGE.--61 years, 12,091 ft^3/s, 11.98 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 189,000 ft^3/s May 22, 23, 1943, gage height, 29.33 ft, at former site 1.8 mi downstream and at present datum; minimum daily, 770 ft^3/s Aug. 4, 5, 1934.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 29, 1913, reached a stage of 26.3 ft, at former site 1.8 mi downstream and at present datum, from floodmarks, determined by U.S. Army Corps of Engineers, discharge, 255,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 63,200 ft^3/s May 22, gage height, 23.74 ft; minimum daily, 2,300 ft^3/s Dec. 18.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7620	6030	6600	3400	9090	49000	17600	11300	24200	10700	19300	18200
2	7360	5760	6200	3650	12300	51800	18400	10600	22200	12100	15900	17800
3	7030	5550	5800	4000	15400	51800	18600	10100	20700	13900	12300	17100
4	6710	5430	5600	4400	20600	50100	17400	11300	19100	13100	10400	15800
5	6470	5310	5380	5220	25900	47400	16400	12300	18300	11200	10700	13400
6	6280	5250	5020	7400	28300	44200	15800	11700	17400	10400	9600	11400
7	6050	5160	4760	11800	28600	41000	15000	12600	22400	8420	8850	10700
8	5890	5730	4550	13200	27900	38200	13800	14200	22300	7570	8690	10300
9	5800	6320	4430	12900	26600	35300	12600	15600	21500	6910	8330	11900
10	5750	5820	4300	12400	24600	32500	13000	15500	22900	6280	7630	11500
11	5550	5570	4150	11300	23300	29500	17100	14500	25000	5830	6840	10100
12	5430	5620	4000	10100	22900	28300	20300	15000	24900	9840	6120	9760
13	5340	5570	3900	9400	22500	29200	21600	25000	24200	13000	5720	9890
14	5190	5480	3780	8800	21600	31200	22000	30300	23200	17100	8030	8930
15	5150	6450	3600	8480	24000	34700	22500	32500	21300	17400	9710	9040
16	5180	8020	3350	8000	31100	41600	22600	39000	19500	17400	10500	8690
17	7960	7720	2900	7350	33100	50200	22100	47900	18400	18000	11600	7560
18	7130	10200	2300	6780	34400	54500	21000	52700	19000	17800	11100	6450
19	5830	13200	2350	6200	35600	54400	19200	55200	17900	16800	9950	5880
20	5590	14900	2480	6400	36300	51500	17100	58900	18300	14600	8920	5960
21	5640	15100	2600	7800	36400	47300	17900	61800	22100	13000	13200	6040
22	5620	14800	2720	9900	36400	42700	19000	62700	24600	12700	18900	5970
23	5940	13900	2780	11600	37000	37900	18000	61200	25100	17500	21500	5740
24	6340	12700	2820	12400	37500	33000	16700	58000	22400	18600	23100	5540
25	7020	11400	2850	13000	37400	28300	16200	53300	18800	17300	24200	5330
26	7760	10000	2840	13100	37300	24400	15400	47700	16200	17400	25100	5110
27	7930	9000	2820	12600	38900	21300	14300	41500	14400	17400	25300	4860
28	7640	8200	2800	11600	43200	18900	13100	36800	13100	16900	23900	4630
29	7170	7600	2860	11200	---	17600	12400	32800	11900	15500	21300	4500
30	6760	7000	2980	10700	---	17200	11900	29300	11100	15500	19200	4570
31	6410	---	3100	9830	---	18000	---	26400	---	18500	18500	---
TOTAL	197540	248790	116620	284910	808190	1153000	519000	1007700	602400	428650	434390	272650
MEAN	6372	8293	3762	9191	28860	37190	17300	32510	20080	13830	14010	9088
MAX	7960	15100	6600	13200	43200	54500	22600	62700	25100	18600	25300	18200
MIN	5150	5160	2300	3400	9090	17200	11900	10100	11100	5830	5720	4500
CFSM	.46	.61	.27	.67	2.11	2.71	1.26	2.37	1.47	1.01	1.02	.66
IN.	.54	.68	.32	.77	2.19	3.13	1.41	2.74	1.63	1.16	1.18	.74

CAL YR 1989 TOTAL 4671090 MEAN 12800 MAX 40000 MIN 2300 CFSM .93 IN. 12.68
WTR YR 1990 TOTAL 6073840 MEAN 16640 MAX 62700 MIN 2300 CFSM 1.21 IN. 16.49

03347000 WHITE RIVER AT MUNCIE, IN

LOCATION.--Lat 40°12'15", long 85°23'14", in SE¼NW¼ Hackley Reserve, Delaware County, Hydrologic Unit 05120201, on right bank 200 ft downstream from Walnut Street bridge in Muncie, 6 mi upstream from Bell Creek, and at mile 315.8.

DRAINAGE AREA.--241 mi^2.

PERIOD OF RECORD.--November 1930 to current year. Prior to October 1948, published as West Fork White River at Muncie. Daily gage heights from July 1923 to December 1929 are available in the district office.

REVISED RECORDS.--WSP 1335: 1931-32(M), 1936(M), 1938, 1948. WSP 1435: 1955. WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 917.10 ft above National Geodetic Vertical Datum of 1929 (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.

REMARKS.--Estimated daily discharges: Dec. 14, 16, 17, 20-22, Dec. 31 to Jan. 3. Records good. Natural flow affected by regulation of Prairie Creek Reservoir and by diversion of municipal water supply by Muncie Water Works Co. above gage. Records of diversion available since October 1937.

AVERAGE DISCHARGE.--59 years (1931 to current year), 212 ft^3/s, 11.95 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,300 ft^3/s Apr. 21, 1964, gage height, 14.98 ft present datum, maximum gage height, 21.07 ft Jan. 15, 1937, present datum; minimum daily discharge, 1.1 ft^3/s Sept. 16, 17, 23-25, 1954, and Oct. 10, 1956.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 22.6 ft in March 1913, present datum, discharge, 20,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,500 ft^3/s and maximum(*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 31	2300	ice	*9.60	May 13	2300	3,120	8.16
Feb. 16	1400	*4,780	9.47	May 17	0400	3,100	8.15
Mar. 12	0400	3,090	8.14				

Minimum daily discharge, 36 ft^3/s July 8.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	93	66	84	660	171	350	380	123	137	65	82	343
2	85	64	82	380	1150	317	392	111	143	58	73	244
3	80	64	81	310	1180	292	322	117	194	54	67	191
4	75	78	74	434	1460	253	255	347	182	51	122	153
5	73	73	78	645	1200	223	225	1180	148	44	538	127
6	70	63	76	390	744	201	191	591	132	37	247	113
7	68	74	73	275	560	178	168	355	125	39	144	111
8	67	106	67	224	461	172	152	259	1150	36	109	111
9	62	135	58	199	425	177	143	207	1790	39	91	250
10	65	108	71	220	480	185	476	205	1300	48	78	286
11	58	87	67	224	379	1720	1540	180	543	78	71	180
12	60	72	58	192	313	2180	817	327	345	443	67	144
13	55	68	49	146	280	923	482	2490	257	1080	322	130
14	55	69	57	142	340	583	356	1920	205	826	305	146
15	55	196	53	126	2060	440	292	963	178	700	159	263
16	61	1500	47	120	4260	523	242	2290	154	368	118	197
17	65	830	49	127	2240	532	213	2620	138	221	98	148
18	56	424	50	147	925	397	180	1240	118	153	510	115
19	67	276	50	146	642	306	161	648	100	118	435	147
20	89	221	49	176	492	253	174	465	116	103	357	135
21	108	192	46	410	399	228	286	373	110	438	991	116
22	120	161	42	386	603	212	231	308	112	634	731	280
23	104	141	39	291	836	187	190	260	119	1140	542	345
24	87	125	42	243	618	167	167	224	114	598	336	245
25	79	121	46	227	424	158	151	224	94	332	250	177
26	75	110	50	205	361	145	136	239	85	225	192	134
27	72	107	51	187	326	137	129	283	86	170	149	111
28	69	103	55	156	377	130	131	232	82	143	155	98
29	69	94	61	149	---	137	194	201	75	120	1640	120
30	67	87	115	156	---	168	145	170	71	102	1270	123
31	68	---	950	142	---	286	---	149	---	88	593	---
TOTAL	2277	5815	2770	7835	23706	12160	8921	19301	8403	8551	10842	5283
MEAN	73.5	194	89.4	253	847	392	297	623	280	276	350	176
MAX	120	1500	950	660	4260	2180	1540	2620	1790	1140	1640	345
MIN	55	63	39	120	171	130	129	111	71	36	67	98
CFSM	.30	.80	.37	1.05	3.51	1.63	1.23	2.58	1.16	1.14	1.45	.73
IN.	.35	.90	.43	1.21	3.66	1.88	1.38	2.98	1.30	1.32	1.67	.82

CAL YR 1989 TOTAL 122918 MEAN 337 MAX 5630 MIN 30 CFSM 1.40 IN. 18.97
WTR YR 1990 TOTAL 115864 MEAN 317 MAX 4260 MIN 36 CFSM 1.32 IN. 17.88

03347500 BUCK CREEK NEAR MUNCIE, IN

LOCATION.--Lat 40°08'05", long 85°22'25", in SW¼SE¼ sec.34, T.20 N., R.10 E., Delaware County, Hydrologic Unit 05120201, on left bank at downstream side of bridge on County Road 400 South, 1.0 mi upstream from Muncie Water Works Co. pumping station, 4.2 mi southeast of court house in Muncie, and at mile 10.6.

DRAINAGE AREA.--35.5 mi^2.

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

REVISED RECORDS.--WSP 1909: 1955, 1957. WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 944.67 ft above National Geodetic Vertical Datum of 1929. Prior to May 5, 1955, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Dec. 13-31 and Jan. 14-17. Records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--36 years, 36.4 ft^3/s, 13.92 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,780 ft^3/s Apr. 21, 1964, gage height, 13.96 ft; minimum daily, 4.7 ft^3/s Jan. 17, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, about 15 ft, from information by local residents. Date unknown.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 15	1300	*685	*9.67	May 16	0900	428	7.80
Mar. 11	0800	632	9.34	June 9	1200	454	8.03
May 13	0600	530	8.63	Aug. 29	1400	408	7.62

Minimum daily discharge, 14 ft^3/s Dec. 23.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	27	25	74	38	54	48	33	39	29	27	47
2	27	27	25	48	152	52	49	32	40	27	26	43
3	26	26	24	43	96	48	44	34	40	27	26	40
4	26	26	24	83	166	45	42	82	40	26	41	38
5	27	26	25	69	98	43	40	111	38	25	57	35
6	27	26	25	50	72	41	38	62	38	25	35	33
7	27	28	24	43	63	39	37	48	37	25	30	33
8	25	36	23	40	55	40	36	42	49	24	27	33
9	25	34	23	38	56	40	36	39	236	23	26	86
10	26	30	23	41	54	44	105	41	94	24	26	55
11	26	28	23	38	48	435	129	37	58	31	25	42
12	25	28	22	35	43	172	78	86	48	84	24	41
13	25	27	21	32	41	105	59	341	42	63	96	40
14	25	28	20	29	63	81	53	132	39	73	48	55
15	25	88	19	28	431	67	48	104	37	47	34	54
16	25	166	17	28	261	81	45	335	35	37	30	41
17	27	75	19	30	125	66	43	200	34	32	28	36
18	26	50	21	33	91	56	40	104	32	30	174	34
19	29	42	22	30	74	51	39	77	32	28	73	40
20	30	41	21	41	61	48	43	65	37	38	70	37
21	35	37	18	51	55	46	54	58	35	72	123	43
22	37	34	15	42	123	45	45	53	35	182	69	72
23	32	32	14	38	118	43	42	50	35	125	51	49
24	31	30	16	35	80	42	40	47	34	65	44	41
25	30	30	18	34	61	41	38	51	32	47	38	38
26	30	29	19	32	54	40	36	58	32	40	34	36
27	28	29	20	31	58	39	36	56	33	36	32	34
28	28	28	20	30	61	39	36	50	30	33	31	33
29	28	26	21	31	---	41	36	47	29	31	254	36
30	28	26	27	29	---	43	34	42	29	30	98	35
31	29	---	140	28	---	48	---	41	---	29	58	---
TOTAL	862	1160	774	1234	2698	2075	1449	2558	1369	1408	1755	1280
MEAN	27.8	38.7	25.0	39.8	96.4	66.9	48.3	82.5	45.6	45.4	56.6	42.7
MAX	37	166	140	83	431	435	129	341	236	182	254	86
MIN	25	26	14	28	38	39	34	32	29	23	24	33
CFSM	.78	1.09	.70	1.12	2.71	1.89	1.36	2.32	1.29	1.28	1.59	1.20
IN.	.90	1.22	.81	1.29	2.83	2.17	1.52	2.68	1.43	1.48	1.84	1.34

CAL YR 1989 TOTAL 17248 MEAN 47.3 MAX 604 MIN 13 CFSM 1.33 IN. 18.07
WTR YR 1990 TOTAL 18622 MEAN 51.0 MAX 435 MIN 14 CFSM 1.44 IN. 19.51

03348000 WHITE RIVER AT ANDERSON, IN

LOCATION.--Lat 40°06'20", long 85°40'16", in NW¼NW¼ sec.18, T.19 N., R.8 E., Madison County, Hydrologic Unit 05120201, on downstream side of abandoned Twelfth Street bridge abutment, 250 ft upstream from municipal water-supply plant in Anderson, 1 mi upstream from Killbuck Creek, and at mile 293.3.

DRAINAGE AREA.--406 mi^2.

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 950 ft downstream December 1910 to February 1918, 250 ft downstream from February 1918 to Sept. 14, 1973, and at present site since Sept. 15, 1973, are contained in reports of National Weather Service. Prior to October 1948, published as West Fork White River at Anderson.

REVISED RECORDS.--WSP 1335: 1932, 1934-35, 1936(M), 1938-40. WSP 1385: 1950(P). WSP 1725: 1956 (P). WSP 1909: 1956. WSP 2109: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 825.02 ft above National Geodetic Vertical Datum of 1929. Prior to May 12, 1934, nonrecording gage at present site and datum. May 12, 1934, to Sept. 14, 1973 nonrecording gage at site 250 ft downstream at same datum. Sept. 15, 1973, to Sept. 23, 1976, nonrecording gage at present site and datum.

REMARKS.--Estimated daily discharges: Dec. 13-31. Records good except for estimated daily discharges, which are poor. Prior to Sept. 15, 1973, the City of Anderson diverted water for its municipal supply above the gage then in use.

AVERAGE DISCHARGE.--60 years, 388 ft^3/s, 12.98 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,700 ft^3/s Apr. 21, 1964, gage height, 19.41 ft; maximum gage height, 19.96 ft June 14, 1958; minimum daily discharge, 9.1 ft^3/s Sept. 24, 1940.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 23.6 ft Mar. 25, 1913, at site 250 ft downstream and at present datum, based on determination of National Weather Service at site then in use, discharge, 28,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 16	1100	*7,190	*11.66	May 17	1100	4,940	9.82
Mar. 12	0200	5,440	10.21	June 9	2000	5,920	10.57
May 14	0600	4,330	9.32	Aug. 30	0200	4,100	9.13

Minimum daily discharge, 110 ft^3/s Dec. 22, 23.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	266	211	222	1250	291	654	588	321	320	233	227	692
2	262	203	217	656	1230	603	602	299	320	218	212	525
3	253	200	210	467	1790	559	539	302	370	208	200	436
4	227	198	202	553	1890	500	462	476	366	200	235	384
5	210	206	206	907	1920	463	425	1540	325	192	828	346
6	214	204	204	639	1180	430	386	1030	310	187	544	323
7	208	235	201	472	928	398	352	668	296	176	323	315
8	201	295	193	399	788	379	334	513	1840	174	263	324
9	196	336	183	366	723	391	323	432	4310	171	239	432
10	195	301	182	363	754	396	564	405	3480	199	223	613
11	197	259	184	377	661	2600	2040	393	1340	243	209	426
12	191	233	172	352	564	4380	1310	459	836	500	202	387
13	192	219	160	310	508	1750	847	3110	625	1700	476	387
14	190	220	150	279	575	1100	660	3620	504	1350	692	374
15	186	432	140	277	2570	856	566	1570	432	1290	363	561
16	189	1970	120	262	6910	858	498	3030	385	716	289	469
17	308	1530	125	263	5430	906	455	4710	347	449	259	419
18	230	780	130	276	1740	730	412	2430	320	334	801	360
19	222	531	140	276	1170	587	378	1190	290	283	1120	419
20	269	447	145	300	921	508	388	862	317	262	826	413
21	311	397	125	468	770	465	550	694	310	577	2070	377
22	314	355	110	534	1030	442	502	586	331	1060	1970	557
23	293	323	110	437	1650	416	434	506	380	2060	1220	668
24	261	296	115	386	1160	382	400	450	345	1170	725	551
25	242	283	120	355	843	363	376	458	282	685	525	410
26	231	273	130	343	680	352	356	497	263	457	416	359
27	225	261	130	312	642	338	340	521	287	359	351	322
28	218	256	140	299	675	327	332	470	266	312	341	302
29	211	240	190	283	---	329	368	422	247	282	2220	311
30	211	228	250	286	---	373	359	376	239	261	2800	324
31	211	---	1000	283	---	422	---	341	---	242	1110	---
TOTAL	7134	11922	5906	13030	39993	23257	16146	32681	20283	16550	22279	12786
MEAN	230	397	191	420	1428	750	538	1054	676	534	719	426
MAX	314	1970	1000	1250	6910	4380	2040	4710	4310	2060	2800	692
MIN	186	198	110	262	291	327	323	299	239	171	200	302
CFSM	.57	.98	.47	1.04	3.52	1.85	1.33	2.60	1.67	1.31	1.77	1.05
IN.	.65	1.09	.54	1.19	3.66	2.13	1.48	2.99	1.86	1.52	2.04	1.17

CAL YR 1989 TOTAL 216602 MEAN 593 MAX 8880 MIN 110 CFSM 1.46 IN. 19.85
WTR YR 1990 TOTAL 221961 MEAN 608 MAX 6910 MIN 110 CFSM 1.50 IN. 20.34

03348020 KILLBUCK CREEK NEAR GASTON, IN

LOCATION.--Lat 40°15'45", long 85°30'53", in SE¼SW¼ sec.16, T.21 N., R.9 E., Delaware County, Hydrologic Unit 05120201, on right bank 30 ft upstream from bridge on County Road 500 North, 3.6 mi southwest of Gaston, and at mile 15.6.

DRAINAGE AREA.--25.5 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 873.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 4-27, and Dec. 20-29. Records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--22 years, 25.7 ft^3/s, 13.69 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,200 ft^3/s June 2, 1980, gage height, 12.70 ft; minimum daily, 0.76 ft^3/s Jan. 19, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 250 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 16	0800	337	10.08	May 16	1800	361	9.83
Feb. 16	0900	447	10.56	June 9	0800	*997	*11.56
Feb. 22	2400	264	9.16	July 13	0100	397	9.99
Mar. 11	1600	363	9.84	Aug. 21	2100	925	11.41
May 13	1400	297	9.42	Aug. 29	1400	423	10.10

Minimum daily discharge, 7.8 ft^3/s Dec. 25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	21	14	65	19	42	20	13	17	14	14	39
2	17	19	14	35	190	39	25	12	18	13	13	31
3	17	18	13	28	135	37	21	12	75	12	13	27
4	17	18	13	98	193	32	19	51	37	11	13	23
5	16	17	13	81	111	30	18	97	25	11	14	21
6	17	16	13	45	72	27	16	43	21	10	12	19
7	16	18	11	34	62	25	15	29	18	9.5	12	19
8	15	45	11	29	53	24	14	23	471	9.1	11	22
9	16	48	11	27	50	25	14	20	816	9.3	10	53
10	17	31	11	33	46	24	69	20	451	25	10	29
11	17	24	10	28	38	275	145	17	111	116	9.9	22
12	17	20	9.8	23	32	185	65	31	71	276	9.5	20
13	18	18	9.5	19	29	90	41	244	48	294	21	18
14	18	19	9.4	18	51	61	34	116	38	137	19	20
15	18	115	9.2	17	345	44	29	65	32	85	14	30
16	17	310	8.7	16	529	53	25	259	28	46	11	21
17	19	123	8.4	17	214	46	23	204	25	33	10	17
18	28	62	8.3	18	104	36	20	89	23	26	78	16
19	25	47	8.2	16	79	31	18	52	21	23	47	19
20	20	45	9.2	27	56	27	20	41	22	20	62	20
21	46	36	8.8	44	45	26	60	34	21	19	589	17
22	43	29	8.4	32	141	25	39	30	25	68	606	21
23	39	25	8.2	25	195	23	27	27	37	109	116	24
24	34	22	8.0	23	103	21	23	25	32	44	65	20
25	30	21	7.8	22	62	20	20	25	22	30	42	18
26	28	20	8.2	19	46	19	18	29	20	24	34	17
27	27	18	8.4	18	42	18	17	26	19	21	28	15
28	26	18	8.6	17	47	18	17	23	17	19	30	14
29	25	15	8.6	17	---	18	15	21	16	17	345	16
30	24	15	13	17	---	19	14	19	15	16	146	18
31	23	---	134	16	---	21	---	18	---	15	61	---
TOTAL	706	1253	436.7	924	3089	1381	901	1715	2592	1561.9	2465.4	666
MEAN	22.8	41.8	14.1	29.8	110	44.5	30.0	55.3	86.4	50.4	79.5	22.2
MAX	46	310	134	98	529	275	145	259	816	294	606	53
MIN	15	15	7.8	16	19	18	14	12	15	9.1	9.5	14
CFSM	.89	1.64	.55	1.17	4.33	1.75	1.18	2.17	3.39	1.98	3.12	.87
IN.	1.03	1.83	.64	1.35	4.51	2.01	1.31	2.50	3.78	2.28	3.60	.97

CAL YR 1989 TOTAL 13057.5 MEAN 35.8 MAX 891 MIN 5.6 CFSM 1.40 IN. 19.05
WTR YR 1990 TOTAL 17691.0 MEAN 48.5 MAX 816 MIN 7.8 CFSM 1.90 IN. 25.81

03348350 PIPE CREEK AT FRANKTON, IN

LOCATION.--Lat 40°13'38", long 85°45'58", in SE¼NE¼ sec.31, T.21 N., R.7 E., Madison County, Hydrologic Unit 05120201, on right bank 20 ft downstream from bridge on County Road 500 West, at northeast edge of Frankton.

DRAINAGE AREA.--113 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 810.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 13-29. Records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--22 years, 104 ft^3/s, 12.50 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,920 ft^3/s September 2, 1989, gage height, 14.71 ft; maximum gage height, 14.78 ft June 3, 1980; minimum daily discharge, 3.0 ft^3/s Oct. 11, 12, 1988.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 10, 1958, reached a stage of 15.5 ft, from floodmark determined by State of Indiana, Department of Natural Resources, discharge, 4,900 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 3	0200	892	8.31	May 13	2000	712	7.70
Feb. 4	2100	871	8.24	May 17	0400	857	8.22
Feb. 16	0900	1,570	10.11	June 9	2100	*3,240	*12.97
Feb. 23	0700	886	8.28	July 13	0200	895	8.37
Mar. 11	2000	1,120	9.02	Aug. 21	1600	2,250	11.48

Minimum daily discharge, 18 ft^3/s Aug. 10-12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	37	50	318	58	173	59	45	58	43	27	137
2	42	35	49	124	536	160	103	42	57	38	25	102
3	39	33	47	87	762	148	88	42	264	35	23	80
4	37	32	43	288	703	121	73	102	204	33	24	67
5	35	31	45	362	650	104	67	353	121	30	26	57
6	35	32	45	204	379	91	58	216	92	28	23	49
7	35	33	42	143	311	79	52	136	80	26	21	47
8	34	55	38	114	267	74	48	97	1040	25	20	45
9	34	105	37	102	243	77	45	78	2320	25	19	49
10	35	83	37	135	251	74	173	72	2010	34	18	72
11	35	61	37	129	195	729	564	61	896	195	18	52
12	35	50	35	100	155	792	336	67	469	564	18	42
13	34	43	31	74	133	427	204	539	256	740	78	38
14	34	41	29	64	151	280	155	518	187	494	59	36
15	27	71	28	60	674	208	126	271	149	343	35	43
16	28	503	27	56	1430	220	102	479	123	204	28	41
17	29	449	26	62	856	197	89	768	103	140	24	35
18	39	227	25	94	488	151	72	430	89	102	266	31
19	39	147	25	82	346	121	65	234	77	80	269	37
20	44	122	24	108	276	97	68	173	80	66	214	50
21	72	107	24	237	222	87	126	132	78	57	1730	42
22	153	86	23	178	374	82	140	107	96	58	1330	39
23	113	76	23	133	803	74	103	92	156	90	841	44
24	78	67	23	113	496	64	85	83	188	91	523	45
25	62	62	23	97	301	61	74	84	106	65	268	37
26	53	61	23	87	219	57	66	99	78	49	174	34
27	46	58	28	73	182	53	61	95	68	41	130	31
28	43	59	32	66	193	50	59	84	57	37	100	30
29	40	57	40	61	---	51	56	76	52	33	310	28
30	38	51	58	61	---	54	50	67	47	31	403	26
31	38	---	371	56	---	54	---	61	---	29	207	---
TOTAL	1450	2874	1388	3868	11654	5010	3367	5703	9601	3826	7251	1466
MEAN	46.8	95.8	44.8	125	416	162	112	184	320	123	234	48.9
MAX	153	503	371	362	1430	792	564	768	2320	740	1730	137
MIN	27	31	23	56	58	50	45	42	47	25	18	26
CFSM	.41	.85	.40	1.10	3.68	1.43	.99	1.63	2.83	1.09	2.07	.43
IN.	.48	.95	.46	1.27	3.84	1.65	1.11	1.88	3.16	1.26	2.39	.48

CAL YR 1989 TOTAL 51713 MEAN 142 MAX 3700 MIN 15 CFSM 1.25 IN. 17.02
WTR YR 1990 TOTAL 57458 MEAN 157 MAX 2320 MIN 18 CFSM 1.39 IN. 18.92

03349000 WHITE RIVER AT NOBLESVILLE, IN

LOCATION.--Lat 40°02'50", long 86°01'00", in SE¼SE¼ sec.36, T.19 N., R.4 E., Hamilton County, Hydrologic Unit 05120201, on right bank at downstream side of Logan Street bridge in Noblesville, 1.5 mi upstream from Cicero Creek, 5.1 mi downstream from dam at Clare, and at mile 263.5.

DRAINAGE AREA.--858 mi^2.

PERIOD OF RECORD.--October 1946 to current year. Gage-height records collected at present site from December 1913 to December 1935, and at site 400 ft downstream January 1936 to May 1951, are contained in reports of National Weather Service. Prior to October 1948, published as West Fork White River at Noblesville.

REVISED RECORDS.--WSP 1335: 1949. WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 738.16 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 18-28 and Jan. 1. Records good except those for Dec. 18-28, which are fair. Flow slightly regulated by powerplant above station.

AVERAGE DISCHARGE.--44 years, 841 ft^3/s, 13.31 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,800 ft^3/s Apr. 22, 1964, gage height, 21.31 ft; minimum daily, 44 ft^3/s Sept. 28, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 6,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 17	0600	9,210	15.01	June 10	1700	*10,300	*15.80
Mar. 12	1600	7,840	13.85	Aug. 22	1400	6,810	12.85
May 17	2100	6,730	12.77				

Minimum daily discharge, 210 ft^3/s Dec. 22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	451	407	460	2300	512	1500	773	558	622	442	381	1380
2	443	386	447	1840	2150	1380	974	513	596	406	358	994
3	422	368	428	1050	4780	1280	957	495	975	381	337	809
4	399	360	412	1310	4700	1130	817	736	1050	357	350	699
5	387	356	410	2300	5070	1020	733	2400	803	336	630	632
6	381	362	418	1700	3500	928	669	2550	683	322	863	564
7	371	400	399	1130	2500	846	601	1480	648	304	559	527
8	344	598	371	905	2060	799	549	1060	3530	290	425	557
9	325	848	355	808	1810	803	513	871	8030	284	371	580
10	316	795	342	821	1770	800	849	795	9860	292	341	877
11	313	641	347	873	1590	4470	3620	741	6770	476	318	746
12	307	529	339	791	1310	7620	3690	756	3240	1890	304	599
13	303	468	313	679	1140	5770	2160	3320	1980	3340	525	621
14	292	455	303	575	1200	3280	1530	5580	1420	3000	946	552
15	282	785	272	539	4130	2300	1240	3900	1140	2370	683	724
16	291	3440	242	507	8050	2020	1040	4120	961	1580	486	753
17	481	4600	255	508	8940	2020	922	6460	827	1040	410	608
18	960	2580	260	618	5920	1650	808	5780	739	778	594	515
19	719	1490	295	638	3290	1300	731	3120	676	651	1870	525
20	627	1150	292	679	2420	1070	716	2030	688	563	1290	635
21	830	989	250	1090	1920	946	889	1520	699	558	4360	565
22	1130	848	210	1260	2390	880	1070	1220	667	1140	6450	592
23	902	754	240	1020	4780	813	902	1030	1010	1990	4790	761
24	714	680	260	861	4130	731	796	904	1050	1830	2600	747
25	606	629	280	782	2580	678	730	864	836	1140	1630	633
26	533	604	305	721	1830	635	681	1000	675	803	1170	539
27	485	561	310	647	1560	596	645	999	642	658	923	472
28	454	553	335	582	1530	567	620	938	564	564	779	426
29	427	522	381	541	---	564	598	826	507	500	1730	396
30	413	479	448	539	---	602	622	741	467	452	4180	426
31	414	---	1220	519	---	660	---	672	---	416	2520	---
TOTAL	15322	27637	11199	29133	87562	49658	31445	57979	52355	29153	43173	19454
MEAN	494	921	361	940	3127	1602	1048	1870	1745	940	1393	648
MAX	1130	4600	1220	2300	8940	7620	3690	6460	9860	3340	6450	1380
MIN	282	356	210	507	512	564	513	495	467	284	304	396
CFSM	.58	1.07	.42	1.10	3.64	1.87	1.22	2.18	2.03	1.10	1.62	.76
IN.	.66	1.20	.49	1.26	3.80	2.15	1.36	2.51	2.27	1.26	1.87	.84

CAL YR 1989 TOTAL 412276 MEAN 1130 MAX 13900 MIN 207 CFSM 1.32 IN. 17.87
WTR YR 1990 TOTAL 454070 MEAN 1244 MAX 9860 MIN 210 CFSM 1.45 IN. 19.69

03350500 CICERO CREEK AT NOBLESVILLE, IN

LOCATION.--Lat 40°03'20", long 86°02'30", in NW¼NE¼ sec.35, T.19 N., R.4 E., Hamilton County, Hydrologic Unit 05120201, on right bank 150 ft downstream from bridge on Stage Highway 38, 1.0 mi northwest of Noblesville, 1.6 mi downstream from Morse Reservoir, 1.9 mi downstream from Hinkle Creek, and 3.2 mi upstream from mouth.

DRAINAGE AREA.--216 mi^2.

PERIOD OF RECORD.--July 1950 to September 1980 and October 1985 to current year.

REVISED RECORDS.--WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 750.00 ft above National Geodetic Vertical Datum of 1929 (levels by State of Indiana, Department of Natural Resources).

REMARKS.--Estimated daily discharges: Dec. 14-24 and 26. Records good except for estimated daily discharges, which are poor. Flow regulated by Morse Reservoir.

AVERAGE DISCHARGE.--35 years (1951-80, 1986 to current year), 193 ft^3/s, 12.13 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,800 ft^3/s June 28, 1957, gage height, 15.26 ft; minimum daily, 0.25 ft^3/s Oct. 21, 1977.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,990 ft^3/s June 9, gage height, 12.73 ft; minimum daily, 1.8 ft^3/s Sept. 18.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72	54	83	187	146	327	152	110	103	99	22	45
2	73	65	109	135	768	302	210	93	103	56	17	38
3	66	48	73	107	1270	290	214	108	161	51	17	32
4	47	39	43	256	1330	231	159	204	172	61	19	5.3
5	44	40	67	536	1160	213	165	607	124	43	50	5.9
6	55	58	81	364	782	195	146	508	111	44	32	4.3
7	58	78	71	247	616	155	117	334	117	32	13	4.1
8	54	108	64	197	533	148	105	251	2320	30	9.5	14
9	29	125	47	174	509	166	102	199	3680	15	11	21
10	44	122	52	190	504	186	254	195	2550	22	11	4.8
11	29	98	66	215	426	2540	906	162	1200	147	15	3.9
12	38	86	54	181	333	3240	748	190	638	852	13	3.4
13	40	69	43	147	286	1820	491	816	427	1080	92	4.1
14	44	81	39	142	339	949	383	901	317	571	86	28
15	38	202	34	122	1440	658	311	575	237	352	53	27
16	33	671	28	111	2700	549	261	980	187	241	39	30
17	72	640	29	122	1840	472	253	1710	147	173	29	4.5
18	68	411	32	176	1010	370	178	1080	124	129	43	1.8
19	48	265	36	193	719	312	161	614	93	102	45	14
20	22	232	34	233	525	236	171	448	118	92	28	17
21	58	188	29	380	415	205	200	327	136	92	304	18
22	93	159	25	388	662	197	187	249	156	111	295	36
23	128	126	27	308	1600	195	172	199	438	116	181	33
24	119	113	31	262	1180	149	161	173	362	99	117	4.0
25	102	107	35	221	678	132	153	184	213	79	91	2.6
26	89	112	37	224	467	134	141	221	158	59	69	6.5
27	116	101	39	187	383	115	133	222	160	50	33	5.7
28	68	117	39	173	354	112	127	201	133	51	31	5.3
29	44	90	45	164	---	122	133	173	109	42	107	14
30	55	85	67	149	---	134	122	130	99	38	79	15
31	67	---	145	139	---	136	---	115	---	31	50	---
TOTAL	1913	4690	1604	6630	22975	14990	7016	12279	14893	4960	2001.5	448.2
MEAN	61.7	156	51.7	214	821	484	234	396	496	160	64.6	14.9
MAX	128	671	145	536	2700	3240	906	1710	3680	1080	304	45
MIN	22	39	25	107	146	112	102	93	93	15	9.5	1.8
CFSM	.29	.72	.24	.99	3.80	2.24	1.08	1.83	2.30	.74	.30	.07
IN.	.33	.81	.28	1.14	3.96	2.58	1.21	2.11	2.56	.85	.34	.08

CAL YR 1989 TOTAL 79148.11 MEAN 217 MAX 2930 MIN .51 CFSM 1.00 IN. 13.63
WTR YR 1990 TOTAL 94399.7 MEAN 259 MAX 3680 MIN 1.8 CFSM 1.20 IN. 16.26

03350700 STONY CREEK NEAR NOBLESVILLE, IN

LOCATION (Revised).--Lat 40°01'44", long 85°59'44", in NE¼NE¼ sec.7, T.18 N., R.5 E., Hamilton County, Hydrologic Unit 05120201, on right bank, between dual bridges on State Highway 37, 1.1 mi upstream from mouth, and 1.4 mi southeast of Noblesville.

DRAINAGE AREA.--50.8 mi^2.

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

REVISED RECORDS.--WDR IN-82-1: 1981.

GAGE.--Water-stage recorder. Datum of gage is 749.00 ft above National Geodetic Vertical Datum of 1929 (Indiana Department of Highways bench mark). Prior to Oct. 1, 1988, water-stage recorder at county road bridge 200 ft upstream at same datum.

REMARKS.--Estimated daily discharges: Dec. 14-35, 30, and 31. Records good.

AVERAGE DISCHARGE.--23 years, 48.4 ft^3/s, 12.94 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,640 ft^3/s Feb. 23, 1979; maximum gage height, 7.67 ft Dec. 11, 1985; minimum daily discharge, 2.3 ft^3/s Aug. 4, 5, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 16	0230	468	4.44	May 13	1030	347	3.79
Feb. 4	1445	318	3.76	May 16	1315	901	5.93
Feb. 15	1645	1,110	6.47	June 9	1800	927	6.00
Feb. 22	2300	328	3.81	Aug. 22	0630	647	5.14
Mar. 11	1445	*1,230	*6.78	Aug. 29	1300	607	4.99

Minimum daily discharge, 10 ft^3/s Dec. 23.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	30	29	108	33	87	61	36	48	29	14	81
2	31	27	29	53	235	82	85	34	47	26	12	55
3	29	26	27	43	208	73	65	36	50	24	12	40
4	27	25	26	144	276	60	57	87	44	23	28	31
5	26	25	27	146	208	55	52	187	40	22	41	26
6	27	25	26	92	152	49	45	125	40	20	20	23
7	26	34	24	65	132	43	41	90	42	19	16	21
8	24	87	22	54	115	43	38	70	274	18	14	22
9	22	101	23	49	106	44	37	60	763	17	12	20
10	23	66	22	53	95	59	101	57	467	17	12	19
11	22	49	22	51	80	920	212	47	179	19	11	17
12	21	40	20	42	64	527	145	74	128	87	10	19
13	20	34	19	32	59	257	109	291	95	81	94	20
14	19	41	17	30	118	195	93	193	73	50	54	16
15	19	214	15	29	760	161	78	172	60	36	25	17
16	32	393	13	27	706	172	66	760	50	27	19	15
17	103	216	11	28	288	145	60	575	43	22	16	14
18	53	150	13	32	200	116	49	267	38	19	16	13
19	43	115	15	29	166	95	45	171	34	17	16	18
20	72	105	15	46	133	80	49	134	48	20	20	18
21	124	84	13	86	112	74	70	102	44	29	275	16
22	109	69	11	66	214	68	64	80	89	78	411	21
23	73	57	9.6	51	260	60	57	64	129	126	150	19
24	55	48	11	46	178	54	53	54	81	62	101	16
25	47	45	13	42	126	51	48	59	54	37	68	15
26	41	42	15	36	97	47	46	130	45	27	45	13
27	37	38	15	32	93	44	44	129	51	22	33	12
28	34	37	15	30	99	43	44	99	38	19	28	11
29	32	31	15	29	---	44	42	79	34	17	419	11
30	31	30	20	29	---	48	38	62	31	17	228	11
31	31	---	170	27	---	52	---	52	---	15	125	---
TOTAL	1284	2284	722.6	1627	5313	3848	1994	4376	3159	1042	2345	650
MEAN	41.4	76.1	23.3	52.5	190	124	66.5	141	105	33.6	75.6	21.7
MAX	124	393	170	146	760	920	212	760	763	126	419	81
MIN	19	25	9.6	27	33	43	37	34	31	15	10	11
CFSM	.82	1.50	.46	1.03	3.74	2.44	1.31	2.78	2.07	.66	1.49	.43
IN.	.94	1.67	.53	1.19	3.89	2.82	1.46	3.20	2.31	.76	1.72	.48

CAL YR 1989 TOTAL 23474.7 MEAN 64.3 MAX 822 MIN 7.2 CFSM 1.27 IN. 17.19
WTR YR 1990 TOTAL 28644.6 MEAN 78.5 MAX 920 MIN 9.6 CFSM 1.54 IN. 20.98

03351000 WHITE RIVER NEAR NORA, IN

LOCATION.--Lat 39°54'35", long 86°06'20", in NW¼NW¼ sec.20, T.17 N., R.4 E., Marion County, Hydrologic Unit 05120201, on downstream side of center pier of bridge on 82nd Street, 2 mi east of Nora, 14 mi upstream from Fall Creek, and at mile 247.9.

DRAINAGE AREA.--1,219 mi^2.

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.

REVISED RECORDS.--WSP 1335: 1930-31, 1934(m), 1936, 1941, 1943, 1945, 1947-48. WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 710.94 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Oct. 26, 1929 to July 29, 1942, at site 200 ft downstream at same datum. Supplemental water-stage recorder 4.5 mi downstream.

REMARKS.--Estimated daily discharges: Dec. 14-28, and Dec. 31 to Jan. 2. Records good. Flow slightly regulated by Morse Reservoir.

AVERAGE DISCHARGE: 61 years, 1,101 ft³/s, 12.38 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 32,400 ft^3/s May 19, 1943; maximum gage height, 18.65 ft Apr. 23, 1964; minimum daily discharge, 49 ft^3/s Sept. 17, 1941.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 26, 1913, reached a stage of 22.4 ft, from floodmark, determined by Indiana Department of Highways, discharge, 58,500 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 7,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 17	1600	13,100	12.57	May 17	2300	9,810	10.75
Mar. 12	2000	12,000	12.00	June 11	0100	*14,300	13.21
May 14	1900	7,320	9.20	Aug. 22	2200	8,090	9.70

Minimum daily discharge, 340 ft^3/s Dec. 22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	649	526	738	2520	855	2150	1240	950	1000	756	489	2070
2	625	501	722	2610	2290	2010	1550	875	951	694	449	1440
3	601	481	717	1640	5520	1890	1580	850	1210	624	421	1140
4	554	452	627	1740	6330	1700	1380	1270	1550	586	512	951
5	522	439	630	2870	6560	1520	1250	2660	1290	556	683	819
6	508	457	655	2650	5160	1400	1140	3640	1090	525	1020	730
7	517	524	645	1860	3590	1270	1030	2400	1030	492	775	665
8	480	744	595	1470	3010	1190	943	1750	2930	469	550	666
9	459	1040	562	1280	2660	1200	889	1450	10300	452	462	671
10	434	1080	541	1240	2550	1320	1270	1320	13500	432	420	907
11	428	876	546	1340	2390	6090	3760	1240	12400	591	391	1020
12	414	728	542	1280	2030	11400	5190	1340	5210	2060	373	824
13	409	628	497	1080	1760	10300	3350	3620	3070	4050	744	749
14	400	623	460	953	1880	5230	2420	6840	2280	4070	1120	703
15	383	1230	420	866	5240	3560	2000	6080	1860	3100	1060	770
16	473	3440	360	820	10800	3080	1710	6670	1550	2420	679	951
17	833	5340	370	814	12700	2910	1540	9140	1340	1640	540	796
18	1100	3830	390	914	10300	2560	1360	9080	1180	1220	514	666
19	1070	2340	440	1020	4910	2120	1230	5120	1060	981	1750	660
20	844	1810	430	1090	3500	1780	1200	3170	1210	865	1800	741
21	1020	1600	390	1540	2790	1570	1340	2440	1170	914	3690	747
22	1310	1370	340	1920	3090	1460	1530	1980	1160	1330	7170	729
23	1300	1220	355	1700	5860	1390	1440	1670	1670	2120	6780	847
24	1040	1080	380	1430	6100	1260	1290	1470	1810	2620	3800	908
25	870	989	410	1290	3940	1150	1200	1410	1510	1710	2370	789
26	760	959	450	1200	2760	1090	1130	1790	1170	1170	1690	642
27	689	908	465	1080	2310	1040	1070	1710	1120	875	1310	558
28	673	888	500	980	2190	984	1030	1570	996	734	1060	503
29	559	840	547	916	---	987	1000	1390	879	648	1850	466
30	540	766	609	896	---	1040	1000	1230	810	594	4350	462
31	538	---	1240	862	---	1110	---	1090	---	539	3790	---
TOTAL	21002	37709	16573	43871	123075	77761	48062	87215	78306	39837	52612	24590
MEAN	677	1257	535	1415	4396	2508	1602	2813	2610	1285	1697	820
MAX	1310	5340	1240	2870	12700	11400	5190	9140	13500	4070	7170	2070
MIN	383	439	340	814	855	984	889	850	810	432	373	462
CFSM	.56	1.03	.44	1.16	3.61	2.06	1.31	2.31	2.14	1.05	1.39	.67
IN.	.64	1.15	.51	1.34	3.76	2.37	1.47	2.66	2.39	1.22	1.61	.75

CAL YR 1989 TOTAL 556434 MEAN 1524 MAX 14700 MIN 233 CFSM 1.25 IN. 16.98
WTR YR 1990 TOTAL 650613 MEAN 1783 MAX 13500 MIN 340 CFSM 1.46 IN. 19.85

03351060 WHITE RIVER AT BROAD RIPPLE

LOCATION.--Lat 39°52'17", long 86°08'16", IN SW¼ sec.36, T.17 N., R.3 E., Marion County, Hydrologic Unit 05120201, on left bank at Indianapolis Water Company, 75 ft downstream from diversion canal, and 500 ft upstream from Broad Ripple dam.

DRAINAGE AREA.--1,238 mi^2.

PERIOD OF RECORD.--October 1989 to current year. Fragmentary record November 1927 to Jan. 24, 1947 and continuous record, Jan. 24, 1947 to Sept. 30, 1989, available in District office.

GAGE.--Water-stage recorder. Datum of gage is 709.91 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Record good. Stage affected by diversion through canal for water supply.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 7.04 ft, June 11, 1990; minimum, 2.88 ft, Dec. 16, 1989.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 7.04 ft, June 11; minimum, 2.88 ft, Dec. 16.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.15	3.08	3.14	4.20	3.39	3.89	3.60	3.28	3.32	3.19	3.06	3.71
2	3.15	3.07	3.14	3.82	4.58	3.82	3.69	3.25	3.34	3.11	3.01	3.52
3	3.12	3.05	3.12	3.52	5.26	3.77	3.63	3.26	3.60	3.07	2.99	3.40
4	3.09	3.03	3.08	3.92	5.29	3.67	3.52	3.93	3.62	3.05	3.24	3.28
5	3.08	3.04	3.11	4.29	5.32	3.60	3.47	4.54	3.46	3.00	3.37	3.21
6	3.08	3.06	3.13	3.94	4.66	3.53	3.40	4.32	3.41	3.02	3.39	3.12
7	3.09	3.14	3.11	3.66	4.36	3.47	3.35	3.89	3.34	2.98	3.19	3.12
8	3.06	3.33	3.08	3.53	4.20	3.44	3.29	3.67	5.37	2.96	3.08	3.17
9	3.04	3.45	3.06	3.45	4.11	3.47	3.27	3.54	6.56	2.94	3.03	3.17
10	3.03	3.38	3.05	3.47	4.08	3.96	3.89	3.51	7.04	2.96	3.00	3.39
11	3.01	3.27	3.07	3.52	3.97	6.15	5.02	3.45	5.74	3.22	2.99	3.28
12	2.99	3.19	3.04	3.44	3.80	6.64	4.73	3.77	4.52	4.37	3.10	3.28
13	3.01	3.13	2.99	3.34	3.71	5.55	4.20	5.12	4.10	4.74	3.38	3.22
14	2.98	3.23	3.00	3.28	4.04	4.64	3.96	5.64	3.87	4.45	3.54	3.17
15	2.97	3.98	2.94	3.24	5.83	4.36	3.81	5.23	3.69	4.26	3.29	3.32
16	3.36	4.73	2.96	3.21	6.54	4.24	3.69	5.73	3.57	3.87	3.14	3.32
17	3.20	4.90	2.96	3.24	6.77	4.20	3.61	6.23	3.43	3.57	3.08	3.20
18	3.46	4.17	3.00	3.33	5.40	4.00	3.50	5.70	3.40	3.40	3.28	3.13
19	3.35	3.81	2.98	3.35	4.61	3.84	3.44	4.59	3.33	3.29	3.95	3.17
20	3.29	3.68	2.98	3.45	4.29	3.69	3.50	4.21	3.47	3.33	3.67	3.25
21	3.45	3.56	2.96	3.76	4.09	3.62	3.60	3.92	3.40	3.29	5.21	3.25
22	3.57	3.47	2.93	3.79	4.66	3.57	3.68	3.76	3.52	3.74	5.64	3.21
23	3.45	3.39	2.93	3.64	5.40	3.54	3.54	3.66	3.81	4.17	4.85	3.34
24	3.33	3.33	2.94	3.53	4.94	3.46	3.47	3.57	3.74	3.93	4.16	3.31
25	3.26	3.29	2.97	3.46	4.34	3.41	3.42	3.62	3.51	3.61	3.83	3.22
26	3.21	3.28	2.95	3.43	4.05	3.39	3.38	3.79	3.41	3.40	3.61	3.15
27	3.18	3.24	2.96	3.36	3.95	3.36	3.35	3.69	3.37	3.28	3.43	3.09
28	3.14	3.24	2.95	3.31	3.92	3.32	3.34	3.63	3.29	3.21	3.33	3.06
29	3.09	3.18	2.99	3.30	---	3.36	3.33	3.53	3.24	3.17	4.28	3.04
30	3.08	3.16	3.22	3.27	---	3.38	3.33	3.45	3.21	3.12	4.92	3.08
31	3.10	---	3.58	3.26	---	3.42	---	3.38	---	3.08	4.09	---
MEAN	3.17	3.43	3.04	3.53	4.63	3.93	3.63	4.09	3.89	3.44	3.62	3.24
MAX	3.57	4.90	3.58	4.29	6.77	6.64	5.02	6.23	7.04	4.74	5.64	3.71
MIN	2.97	3.03	2.93	3.21	3.39	3.32	3.27	3.25	3.21	2.94	2.99	3.04

03351310 CROOKED CREEK AT INDIANAPOLIS, IN

LOCATION.--Lat 39°49'47", long 86°12'22", in NW¼SE¼ sec.16, T.16 N., R.3 E., Marion County, Hydrologic Unit 05120201, on left bank 150 ft downstream from 42nd Street bridge in Indianapolis, and at mile 1.6.

DRAINAGE AREA.--17.9 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 711.00 ft above National Geodetic Vertical Datum of 1929 (Indiana Department of Highways bench mark).

REMARKS.--Estimated daily discharges: Oct. 1-18, Dec. 22-25, Dec. 30 to Jan. 1, and Jan. 14-17. Records fair except those for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--21 years, 18.9 ft^3/s, 14.34 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,500 ft^3/s June 26, 1978, gage height, 13.31 ft; minimum daily, 0.39 ft^3/s Sept. 1, 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 400 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 15	1600	467	5.01	May 13	0130	528	5.21
Feb. 15	1115	1,200	7.19	May 16	0200	*1,730	*8.59
Mar. 11	0615	1,090	6.88	June 20	0915	420	4.85

Minimum daily discharge, 1.2 ft^3/s Sept. 2, 4, 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.7	6.0	7.5	21	30	21	52	8.5	8.1	4.5	2.9	1.6
2	5.4	6.0	6.9	17	166	19	40	7.6	9.7	3.7	2.4	1.2
3	5.1	7.2	6.8	15	57	17	24	12	17	3.2	2.0	1.3
4	4.9	7.2	5.9	56	130	14	19	110	13	3.0	49	1.2
5	5.1	7.0	5.9	34	54	13	17	63	7.6	2.7	25	1.3
6	6.7	11	6.5	21	34	12	14	35	9.3	2.3	5.8	1.2
7	5.4	34	6.7	16	34	11	12	22	13	2.1	3.8	1.3
8	4.8	42	6.0	14	26	11	11	17	9.4	1.9	2.9	1.8
9	4.9	20	5.3	13	31	15	10	14	17	2.1	2.4	3.8
10	5.9	12	5.1	15	25	73	93	17	8.0	6.9	2.0	2.0
11	4.9	7.9	5.2	13	21	527	68	12	5.7	27	1.8	1.5
12	4.4	6.4	4.8	11	18	77	35	98	5.0	97	1.8	25
13	4.6	5.6	4.2	8.6	16	46	24	222	4.7	28	71	9.0
14	4.5	28	4.0	7.3	68	34	22	53	4.5	14	9.8	3.1
15	4.3	196	3.7	6.7	550	34	19	133	4.5	8.0	4.5	5.0
16	13	101	3.2	6.4	120	55	17	887	4.0	5.5	3.4	2.1
17	9.4	40	2.9	9.6	51	33	16	184	3.8	4.4	2.7	1.5
18	8.4	25	2.7	18	35	24	13	57	3.3	3.8	2.5	1.6
19	15	19	3.1	12	28	21	11	36	3.0	3.2	1.9	22
20	24	18	3.2	33	22	18	21	28	128	9.7	2.3	5.6
21	26	15	3.0	33	20	16	27	22	23	28	26	12
22	17	12	2.5	22	142	15	17	19	36	41	6.2	12
23	10	11	2.1	17	79	14	14	15	25	18	4.0	5.0
24	8.1	10	2.6	15	44	13	12	13	34	7.6	3.1	3.0
25	6.8	9.9	2.9	25	27	13	11	27	12	5.1	2.4	2.4
26	6.0	10	3.2	21	22	11	11	40	7.4	4.2	2.0	2.0
27	5.7	9.9	3.0	16	24	11	9.6	26	8.9	3.7	1.9	1.6
28	5.1	11	2.9	13	26	11	11	18	5.8	3.4	1.8	1.3
29	4.6	8.5	3.7	14	---	16	12	14	4.8	3.0	16	1.3
30	4.7	7.5	6.2	17	---	19	9.5	10	4.7	6.0	5.8	1.3
31	5.4	---	13	14	---	23	---	8.5	---	3.8	2.5	---
TOTAL	245.8	704.1	144.7	554.6	1900	1237	672.1	2228.6	440.2	356.8	271.6	135.0
MEAN	7.93	23.5	4.67	17.9	67.9	39.9	22.4	71.9	14.7	11.5	8.76	4.50
MAX	26	196	13	56	550	527	93	887	128	97	71	25
MIN	4.3	5.6	2.1	6.4	16	11	9.5	7.6	3.0	1.9	1.8	1.2
CFSM	.44	1.31	.26	1.00	3.79	2.23	1.25	4.02	.82	.64	.49	.25
IN.	.51	1.46	.30	1.15	3.95	2.57	1.40	4.63	.91	.74	.56	.28

CAL YR 1989 TOTAL 9453.3 MEAN 25.9 MAX 940 MIN 1.6 CFSM 1.45 IN. 19.65
WTR YR 1990 TOTAL 8890.5 MEAN 24.4 MAX 887 MIN 1.2 CFSM 1.36 IN. 18.48

03351500 FALL CREEK NEAR FORTVILLE, IN

LOCATION.--Lat 39°57'15", long 85°52'05", in NW¼NE¼ sec.5, T.17 N., R.6 E., Hamilton County, Hydrologic Unit 05120201, on right bank 100 ft downstream from bridge on State Highway 238, 0.2 mi downstream from Lick Creek, 2 mi northwest of Fortville, and at mile 26.1.

DRAINAGE AREA.--169 mi^2.

PERIOD OF RECORD.--July 1941 to current year.

REVISED RECORDS.--WSP 1435: 1949(P). WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 787.43 ft above National Geodetic Vertical Datum of 1929 (levels by Indianapolis Water Co.). Prior to June 27, 1942, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Dec. 9-11, Dec. 14 To Jan. 1, and Jan. 30. Records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--49 years, 168 ft^3/s, 13.50 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,750 ft^3/s Apr. 21, 1964, gage height, 9.88 ft; minimum daily, 5.0 ft^3/s Sept. 23, 24, 1941.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, about 12 ft March 1913 (information by local resident).

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,300 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Dec. 31	2000	ice jam	5.74	May 17	0700	*2,510	*7.37
Feb. 16	1300	2,310	7.18	June 10	0500	2,000	6.83
Mar. 12	0600	2,410	7.27	Aug. 30	1500	2,260	7.13
May 14	0300	1,610	6.27				

Minimum daily discharge, 71 ft^3/s Aug. 12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	132	105	122	539	137	299	240	146	217	117	97	368
2	131	106	122	288	503	286	284	139	210	108	90	270
3	126	102	117	227	622	272	248	143	245	100	86	217
4	121	98	112	317	744	245	221	299	214	95	99	178
5	120	100	115	432	723	234	208	641	192	90	134	151
6	120	102	116	306	486	221	189	431	182	85	111	135
7	118	108	112	247	411	203	176	313	187	82	90	127
8	111	130	103	216	366	199	166	249	292	81	83	131
9	109	171	92	198	337	208	161	219	1290	78	78	225
10	108	150	93	201	324	210	257	212	1550	75	76	306
11	107	130	95	198	291	1340	699	189	563	91	72	206
12	103	118	97	178	261	1960	494	267	357	163	71	164
13	102	111	96	151	244	824	367	1200	285	226	134	247
14	101	112	91	142	279	555	316	1240	243	244	166	195
15	99	258	85	136	1160	439	281	718	218	266	106	208
16	100	894	79	129	2100	434	251	1750	194	169	91	166
17	104	604	83	135	1130	397	233	2280	176	128	82	139
18	101	386	87	147	627	335	205	1120	160	108	117	121
19	110	295	90	138	487	297	190	579	144	97	172	128
20	126	266	88	167	394	267	198	443	189	107	144	139
21	148	235	84	281	346	250	294	367	220	382	238	127
22	173	201	72	259	495	236	270	320	175	497	344	219
23	152	181	80	217	796	223	236	285	221	748	246	208
24	135	165	89	196	559	210	215	257	216	381	169	164
25	125	159	96	180	394	205	197	258	177	255	132	141
26	119	156	101	168	329	195	184	463	150	193	111	129
27	113	148	105	148	309	184	175	541	165	158	98	116
28	111	144	103	140	323	180	166	380	141	138	88	107
29	110	132	108	138	---	186	160	317	128	124	1170	105
30	108	124	133	132	---	202	153	268	122	114	2080	106
31	106	---	788	129	---	221	---	237	---	105	813	---
TOTAL	3649	5991	3754	6480	15177	11517	7434	16271	8823	5605	7588	5243
MEAN	118	200	121	209	542	372	248	525	294	181	245	175
MAX	173	894	788	539	2100	1960	699	2280	1550	748	2080	368
MIN	99	98	72	129	137	180	153	139	122	75	71	105
CFSM	.70	1.18	.72	1.24	3.21	2.20	1.47	3.11	1.74	1.07	1.45	1.03
IN.	.80	1.32	.83	1.43	3.34	2.54	1.64	3.58	1.94	1.23	1.67	1.15

CAL YR 1989 TOTAL 84421 MEAN 231 MAX 3340 MIN 50 CFSM 1.37 IN. 18.58
WTR YR 1990 TOTAL 97532 MEAN 267 MAX 2280 MIN 71 CFSM 1.58 IN. 21.47

03352500 FALL CREEK AT MILLERSVILLE, IN

LOCATION.--Lat 39°51'07", long 86°05'15", in NE¼NE¼ sec.9, T.16 N., R.4 E., Marion County, Hydrologic Unit 05120201, on right bank at downstream side of Emerson Way bridge at Millersville, and 9.2 mi upstream from mouth.

DRAINAGE AREA.--298 mi^2.

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 from July 1925 to September 1926 are available in the district office.

REVISED RECORDS.--WSP 1335: 1930-31, 1933, 1936-38, 1942-43. WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 722.16 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 21, 1961, water-stage recorder at site 500 ft downstream at same datum.

REMARKS.--Estimated daily discharges: Dec. 15-31. Records good except those for estimated daily discharges, which are poor. Flow regulated by Geist Reservoir.

AVERAGE DISCHARGE.--61 years, 286 ft^3/s, 13.05 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,900 ft^3/s May 28, 1956, gage height, 13.53 ft; minimum daily, 7.8 ft^3/s Sept. 28, 1941.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 16.3 ft Mar. 26, 1913, from floodmarks, discharge, 22,000 ft^3/s by slope-area measurement.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,940 ft^3/s May 17, gage height, 9.69 ft; minimum daily, 78 ft^3/s Dec. 22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	168	123	159	990	211	448	365	194	311	187	119	785
2	159	118	146	586	826	418	451	180	306	158	107	464
3	154	110	141	384	1070	400	400	189	405	135	100	335
4	138	107	139	529	1400	357	340	385	392	126	159	245
5	128	103	146	734	1390	326	306	1070	312	118	226	200
6	132	108	149	575	993	334	275	884	274	116	169	173
7	134	149	153	424	767	280	241	591	286	104	125	154
8	124	222	153	347	635	255	227	434	331	93	105	156
9	116	263	112	307	579	272	215	349	815	90	97	202
10	105	245	116	293	519	336	436	305	1750	104	91	278
11	109	208	122	288	454	2230	980	292	1240	127	101	274
12	104	183	118	261	393	2850	905	510	655	311	92	242
13	108	153	124	228	344	2020	652	1720	461	351	333	226
14	106	161	115	205	445	1110	515	1900	382	288	258	234
15	103	505	102	194	1930	797	438	1420	332	307	184	217
16	112	1520	90	184	3160	781	375	3070	287	271	143	207
17	331	1330	92	194	2470	672	343	3850	254	206	119	162
18	224	832	98	209	1290	556	295	2740	221	171	110	134
19	182	549	103	200	878	462	261	1330	205	146	141	164
20	201	433	101	268	681	397	285	864	389	136	191	163
21	302	388	92	407	560	357	405	668	390	313	484	164
22	316	324	78	417	798	328	394	529	316	618	779	219
23	269	267	81	365	1180	316	349	432	338	887	539	238
24	226	235	85	310	985	300	310	377	369	707	352	204
25	193	219	94	270	735	267	283	390	302	439	253	169
26	171	220	100	280	549	256	259	634	246	307	194	155
27	156	203	103	230	481	247	239	931	258	231	151	139
28	146	191	106	219	479	234	223	722	227	192	125	125
29	137	180	112	216	---	247	220	531	194	166	788	121
30	132	159	215	211	---	269	203	430	189	155	1900	110
31	129	---	734	197	---	301	---	356	---	140	1810	---
TOTAL	5115	9808	4279	10522	26202	18423	11190	28277	12437	7700	10345	6659
MEAN	165	327	138	339	936	594	373	912	415	248	334	222
MAX	331	1520	734	990	3160	2850	980	3850	1750	887	1900	785
MIN	103	103	78	184	211	234	203	180	189	90	91	110
CFSM	.55	1.10	.46	1.14	3.14	1.99	1.25	3.06	1.39	.83	1.12	.74
IN.	.64	1.22	.53	1.31	3.27	2.30	1.40	3.53	1.55	.96	1.29	.83

CAL YR 1989 TOTAL 136907 MEAN 375 MAX 3950 MIN 48 CFSM 1.26 IN. 17.09
WTR YR 1990 TOTAL 150957 MEAN 414 MAX 3850 MIN 78 CFSM 1.39 IN. 18.84

03352875 FALL CREEK AT 16TH STREET AT INDIANAPOLIS, IN

LOCATION.--Lat 39°47'20", long 86°10'40", in SW¼NW¼ sec.35, T.16 N., R.3 E., Marion County, Hydrologic Unit 05120201, on left bank 120 ft upstream from 16th Street on Aqueduct Street, 1.3 mi upstream from mouth.

DRAINAGE AREA.--317 mi^2.

PERIOD OF RECORD.--October 1985 to current year.

GAGE.--Water-stage recorder. Datum of gage is 675.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Nov. 16 to Dec. 29. Records fair except those for estimated daily discharges, which are poor. Natural flow affected by regulation of Geist Reservoir, and by diversion of municipal water supply by the Indianapolis Water Company.

AVERAGE DISCHARGE.--5 years, 322 ft^3/s, 13.80 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,310 ft^3/s Oct. 4, 1986, gage height, 11.92 ft; maximum gage height, 12.81 ft Dec. 12, 1985; minimum daily discharge, 19 ft^3/s Sept. 3, 1987.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,110 ft^3/s May 16, gage height, 11.53 ft; minimum daily, 65 ft^3/s Aug. 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	148	113	170	1130	225	517	417	209	327	191	105	917
2	140	103	160	721	852	471	518	185	339	157	86	487
3	131	98	155	465	1270	447	461	197	433	129	75	316
4	126	92	150	617	1610	402	392	478	395	114	226	204
5	108	88	155	820	1610	359	350	1170	312	117	238	146
6	109	86	160	681	1240	356	315	1030	273	99	188	117
7	116	166	150	501	920	313	280	699	280	93	109	120
8	111	237	130	390	756	273	262	508	321	73	80	126
9	97	281	118	333	680	279	243	388	1150	72	69	164
10	89	264	124	325	620	470	497	335	2170	105	65	243
11	87	235	128	310	545	2080	1090	310	2020	139	74	269
12	82	195	130	281	462	2620	1100	670	869	326	83	253
13	87	171	132	245	390	2270	779	1710	506	374	490	220
14	82	193	122	215	464	1390	603	1910	398	305	278	223
15	84	540	110	198	1750	958	509	1750	339	302	184	184
16	101	1600	96	187	2740	911	425	2630	302	283	133	177
17	292	1480	99	207	2630	805	371	3080	270	208	104	144
18	213	980	105	228	1950	671	329	2570	221	162	96	128
19	133	700	108	213	1140	550	291	1590	199	129	123	183
20	146	498	110	279	829	459	323	1030	624	128	217	164
21	252	420	98	432	658	402	429	792	427	348	489	198
22	315	360	82	471	857	368	442	626	362	708	901	223
23	272	300	77	415	1390	336	389	491	346	957	698	247
24	221	250	82	338	1290	328	358	420	388	800	377	221
25	188	230	86	308	895	296	318	429	326	489	262	171
26	161	240	84	290	661	282	290	664	272	334	188	151
27	142	220	82	266	554	273	266	1020	275	247	139	137
28	129	205	79	223	545	260	262	839	239	188	104	121
29	121	195	95	229	---	275	234	608	204	157	686	116
30	115	180	213	227	---	289	226	476	195	151	1750	111
31	110	---	844	204	---	331	---	374	---	129	1800	---
TOTAL	4508	10720	4434	11749	29533	20041	12769	29188	14782	8014	10417	6481
MEAN	145	357	143	379	1055	646	426	942	493	259	336	216
MAX	315	1600	844	1130	2740	2620	1100	3080	2170	957	1800	917
MIN	82	86	77	187	225	260	226	185	195	72	65	111
CFSM	.46	1.13	.45	1.20	3.33	2.04	1.34	2.97	1.55	.82	1.06	.68
IN.	.53	1.26	.52	1.38	3.47	2.35	1.50	3.43	1.73	.94	1.22	.76

CAL YR 1989 TOTAL 134719 MEAN 369 MAX 3230 MIN 57 CFSM 1.16 IN. 15.81
WTR YR 1990 TOTAL 162636 MEAN 446 MAX 3080 MIN 65 CFSM 1.41 IN. 19.09

03353000 WHITE RIVER AT INDIANAPOLIS, IN

LOCATION.--Lat 39°45'05", long 86°10'30", in NW¼NW¼ sec.14, T.15 N., R.3 E., Marion County, Hydrologic Unit 05120201, on downstream side of second pier from right bank of Morris Street bridge in Indianapolis, 2.6 mi downstream from Fall Creek, 3.4 mi upstream from Eagle Creek, 4.0 mi upstream from Indianapolis Power and Light Company dam, and at mile 230.3.

DRAINAGE AREA.--1,635 mi^2.

PERIOD OF RECORD.--March 1904 to July 1906 and April 1930 to current year. Gage-height record published in reports of National Weather Service for site 1.1 mi upstream Feb. 8, 1911, to Mar. 25, 1913, and at site 2.3 mi upstream since Oct. 16, 1913. Prior to October 1948, published as West Fork White River at Indianapolis.

REVISED RECORDS.--WSP 1335: 1932-33, 1937, 1939-41. WSP 1505: 1938. WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 662.26 ft above National Geodetic Vertical Datum of 1929. March 1904 to July 1906, nonrecording gage at railroad bridge 0.8 mi upstream at datum approximately 2.9 ft higher. April 1930 to July 20, 1931, nonrecording gage at Indianapolis sanitation plant, 2.5 mi downstream at datum 660.00 ft lower. July 21, 1931 to Mar. 2, 1932, nonrecording gage and March 3, 1932, to September 30, 1960, water-stage recorder at present site at datum 660.00 ft lower.

REMARKS.--Estimated daily discharges: Dec. 14 to Jan. 3. Records fair. Natural flow affected by regulation of Morse Reservoir and Geist Reservoir, and by diversion of municipal water supply by the Indianapolis Water Company. Stage-discharge relation affected at times by large releases from Eagle Creek and by variable leakage at Indianapolis Power and Light Company dam.

AVERAGE DISCHARGE.--61 years (water years 1905, 1931 to current year), 1,408 ft^3/s, 11.69 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 37,200 ft^3/s May 18, 1943; maximum gage height, 21.57 ft Jan. 16, 1937; minimum daily discharge, 8.0 ft^3/s Sept. 29, 1941.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 26, 1913, reached a stage of 30.0 ft, from floodmarks determined by Indianapolis Water Company, discharge, 70,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 8,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 4	1300	8,780	10.03	May 16	1100	*14,800	*12.96
Feb. 17	1600	14,800	12.93	June 11	0500	14,500	12.80
Mar. 12	0600	14,400	12.76				

Minimum daily discharge, 315 ft^3/s Dec. 22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	794	594	825	2580	1040	2680	1810	1030	1300	739	517	2840
2	773	585	791	2840	3620	2490	2170	954	1350	676	474	1770
3	739	569	770	1940	6430	2340	2050	977	1530	584	429	1320
4	696	491	718	2080	8440	2150	1860	1940	1800	538	791	1070
5	658	504	722	3240	8060	1890	1640	3650	1590	509	919	874
6	637	475	722	3380	6720	1750	1450	4600	1360	462	1010	773
7	690	637	785	2220	4720	1590	1350	3250	1310	442	930	676
8	637	868	704	1630	3890	1490	1200	2290	1980	418	588	672
9	603	1120	661	1370	3430	1450	1190	1840	8840	407	470	1030
10	577	1230	657	1270	3170	2040	2030	1650	13100	458	419	875
11	564	1070	618	1300	2970	10200	4340	1470	13400	768	391	1130
12	551	890	658	1290	2540	14000	6080	2600	6620	1810	386	1020
13	534	790	624	1120	2210	12800	4340	6090	3540	3780	1440	1020
14	538	746	570	972	2430	7230	3100	8050	2450	4060	1030	897
15	509	2280	525	891	9010	4770	2540	8250	1910	3110	1100	801
16	501	5140	475	849	13600	4170	2170	13200	1520	2420	764	926
17	1160	6620	430	850	14500	3710	1910	13400	1290	1580	574	865
18	1030	5290	380	897	12200	3250	1640	11900	1110	1140	493	709
19	1250	3150	425	968	6450	2680	1480	7360	982	887	925	919
20	1130	2250	390	1220	4450	2250	1560	4350	2580	858	1870	758
21	1160	1930	350	1550	3500	1980	1750	3270	1480	1450	2750	906
22	1470	1650	315	2000	4350	1800	1880	2500	1310	1790	6450	837
23	1530	1470	330	1950	7000	1680	1780	2130	1680	2360	6980	785
24	1220	1310	355	1640	7440	1600	1590	1850	1960	3020	4130	893
25	1060	1200	380	1520	5070	1400	1460	1830	1640	1940	2440	813
26	895	1210	405	1350	3550	1350	1300	2570	1240	1320	1710	680
27	802	1220	420	1240	2920	1260	1190	2780	1120	978	1300	596
28	794	963	430	1070	2710	1210	1240	2360	1030	787	1020	533
29	714	936	495	1040	---	1260	1100	1950	881	691	1720	493
30	649	828	620	1020	---	1350	1060	1710	821	662	4850	469
31	633	---	1790	977	---	1490	---	1440	---	574	5630	---
TOTAL	25498	48016	18340	48264	156420	101310	60260	123241	82724	41218	54500	27950
MEAN	823	1601	592	1557	5586	3268	2009	3976	2757	1330	1758	932
MAX	1530	6620	1790	3380	14500	14000	6080	13400	13400	4060	6980	2840
MIN	501	475	315	849	1040	1210	1060	954	821	407	386	469
CFSM	.50	.98	.36	.95	3.42	2.00	1.23	2.43	1.69	.81	1.08	.57
IN.	.58	1.09	.42	1.10	3.56	2.31	1.37	2.80	1.88	.94	1.24	.64

CAL YR 1989 TOTAL 671605 MEAN 1840 MAX 15700 MIN 315 CFSM 1.13 IN. 15.28
WTR YR 1990 TOTAL 787741 MEAN 2158 MAX 14500 MIN 315 CFSM 1.32 IN. 17.92

03353120 PLEASANT RUN AT ARLINGTON AVENUE AT INDIANAPOLIS, IN

LOCATION.--Lat 39°46'33", long 86°03'50", in SW¼NW¼ sec.2, T.15 N., R.4 E., Marion County, Hydrologic Unit 05120201, on right bank 46 ft upstream from Arlington Avenue bridge in Indianapolis, 0.5 mi downstream from small left-bank tributary, and at mile 7.9.

DRAINAGE AREA.--7.58 mi^2.

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

REVISED RECORDS.--WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 780.00 ft above National Geodetic Vertical Datum of 1929 (levels by State of Indiana, Department of Natural Resources).

REMARKS.--Estimated daily discharges: Dec. 5-7, Dec. 14 to Jan. 3, Jan. 11-18, 28-31, Feb. 11 and 19. Records fair except those for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--30 years (water years 1961 to current year), 7.98 ft^3/s, 14.30 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,600 ft^3/s June 25, 1978, gage height, 13.86 ft; no flow at times in 1960-62.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1956 reached a stage of 16.0 ft, from information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 450 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 15	0845	669	6.84	June 20	0845	688	6.92
Mar. 11	0015	*1,060	*8.39	Aug. 13	0400	471	5.96
May 12	2300	478	5.99	Sept. 9	0330	480	6.00
May 15	2330	650	6.76				

Minimum daily discharge, 0.51 ft^3/s Aug. 3.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	3.3	1.9	8.4	35	3.4	35	1.4	1.9	1.2	.69	.80
2	1.7	3.4	1.9	4.5	54	3.1	10	1.3	12	1.1	.66	.75
3	1.9	2.8	2.0	3.5	15	2.9	5.7	12	17	.90	.51	.63
4	1.6	3.2	2.2	34	66	2.4	9.3	76	5.4	.80	34	.67
5	1.6	3.9	2.1	8.8	14	2.2	3.7	12	3.1	.78	4.3	.65
6	2.0	5.3	2.6	5.2	8.3	2.1	2.8	13	11	.83	1.6	.62
7	1.8	22	2.3	3.7	11	2.3	2.5	4.5	4.3	.63	.99	1.3
8	1.7	26	2.1	3.0	5.9	2.5	2.4	3.0	2.3	1.0	.84	.82
9	1.4	3.8	2.0	3.5	8.7	2.7	2.2	2.5	2.3	1.1	.75	68
10	1.8	6.4	1.9	3.6	5.0	111	88	8.2	2.0	1.5	.71	3.8
11	1.6	2.1	2.0	2.7	3.9	161	20	2.7	1.9	38	.58	1.8
12	1.8	1.7	1.8	2.3	3.5	13	8.2	143	1.7	29	.56	1.4
13	1.8	1.6	1.7	2.1	2.9	7.3	5.5	80	1.1	6.9	84	1.3
14	2.4	29	1.6	2.0	19	5.2	6.3	14	4.3	2.6	5.0	2.6
15	2.9	125	1.5	1.9	180	15	4.4	58	1.7	1.5	2.0	.99
16	2.9	38	1.1	2.2	24	19	3.6	189	.99	1.2	1.3	.85
17	6.7	9.8	.92	3.4	9.0	6.2	3.2	74	.97	1.1	1.0	.75
18	2.3	5.6	.96	2.8	6.0	4.6	2.7	13	2.2	1.0	.85	.89
19	7.8	4.0	1.2	2.9	4.0	4.9	2.3	7.7	.95	.82	.79	25
20	7.1	3.7	1.4	28	3.3	3.5	27	5.9	131	38	29	2.0
21	10	3.3	.96	11	2.9	3.1	11	4.4	11	26	28	22
22	2.8	2.7	.77	5.5	46	3.1	5.4	4.4	12	56	7.8	6.9
23	1.4	2.4	.69	4.1	14	3.0	3.9	6.1	8.8	8.4	2.8	3.3
24	1.5	2.1	.76	3.4	8.9	3.6	3.0	2.6	6.2	3.1	1.6	1.6
25	1.5	2.3	.87	7.7	5.7	3.3	2.5	15	2.3	1.9	1.1	1.2
26	1.3	3.6	.96	3.4	4.5	3.0	2.2	33	1.8	1.3	.92	1.1
27	1.3	2.4	1.1	2.8	6.1	2.6	2.0	6.9	1.8	1.1	1.1	.87
28	1.5	2.8	1.3	2.7	4.3	2.5	1.9	4.2	1.5	.96	.76	.91
29	1.9	2.3	2.2	4.1	---	13	1.9	3.2	2.3	.95	21	.87
30	2.3	2.1	27	3.6	---	13	1.7	2.7	1.3	2.8	2.0	1.0
31	4.3	---	34	3.3	---	9.1	---	2.2	---	.82	1.0	---
TOTAL	83.7	326.6	105.79	180.1	570.9	433.6	280.3	805.9	257.11	233.29	238.21	155.37
MEAN	2.70	10.9	3.41	5.81	20.4	14.0	9.34	26.0	8.57	7.53	7.68	5.18
MAX	10	125	34	34	180	161	88	189	131	56	84	68
MIN	1.1	1.6	.69	1.9	2.9	2.1	1.7	1.3	.95	.63	.51	.62
CFSM	.36	1.44	.45	.77	2.69	1.85	1.23	3.43	1.13	.99	1.01	.68
IN.	.41	1.60	.52	.88	2.80	2.13	1.38	3.96	1.26	1.14	1.17	.76

CAL YR 1989 TOTAL 3569.23 MEAN 9.78 MAX 373 MIN .66 CFSM 1.29 IN. 17.52
WTR YR 1990 TOTAL 3670.87 MEAN 10.1 MAX 189 MIN .51 CFSM 1.33 IN. 18.02

03353180 BEAN CREEK AT INDIANAPOLIS, IN

LOCATION.--Lat 39°43'45", long 86°07'14", in NW¼SW¼ sec.20, T.15 N., R.4 E., Marion County, Hydrologic Unit 05120201, on left bank 80 ft upstream from Keystone Avenue bridge and west edge of Sarah Shank Golf Course in Indianapolis, and at mile 1.8.

DRAINAGE AREA.--4.40 mi^2.

PERIOD OF RECORD.--October 1970 to current year.

GAGE.--Water-stage recorder. Datum of gage is 735.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 24 to Nov. 6, Dec. 15-31, Jan. 11-16, 27-29, and Feb. 11. Records poor.

AVERAGE DISCHARGE.--20 years, 5.21 ft^3/s, 16.08 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 770 ft^3/s June 25, 1978, gage height, 7.77 ft; minimum daily, 0.30 ft^3/s Dec. 28, 1989, result of freezeup.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 15	1315	220	4.53	June 20	0900	248	4.76
Feb. 15	0830	261	4.86	July 11	2000	250	4.77
Mar. 11	0015	315	5.25	July 20	2315	286	5.04
May 15	2330	*319	*5.28				

Minimum daily discharge, 0.30 ft^3/s Dec. 28, result of freezeup.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	1.8	1.9	1.4	13	5.1	16	2.4	4.1	1.6	1.5	1.3
2	2.1	1.7	1.9	1.0	23	4.8	8.1	2.2	7.1	1.5	1.4	1.2
3	1.9	1.6	1.8	1.5	9.4	4.3	5.2	5.6	6.5	1.3	1.3	1.1
4	1.7	1.5	1.9	11	30	3.8	4.4	22	4.3	1.3	10	1.2
5	1.5	1.5	1.9	4.5	9.5	3.6	4.0	6.0	3.9	1.2	2.8	1.2
6	1.4	3.0	2.3	3.6	6.6	3.5	3.4	5.5	6.7	1.2	1.6	1.2
7	1.5	9.0	2.0	3.3	6.8	3.3	2.9	3.3	4.4	1.1	1.6	1.2
8	1.4	8.2	1.8	3.3	5.4	6.3	2.6	3.0	3.8	1.1	1.6	1.2
9	1.4	2.2	1.8	3.7	7.1	3.8	2.4	2.8	3.7	1.3	1.6	23
10	1.5	3.8	1.7	3.5	4.9	31	29	4.7	3.1	1.4	1.9	1.9
11	1.2	1.9	1.7	2.9	4.2	54	11	2.7	2.8	29	2.4	1.6
12	1.2	1.7	1.7	2.5	4.0	12	6.4	46	2.8	14	2.0	1.4
13	1.1	1.7	1.7	2.2	3.8	8.1	5.2	33	3.7	4.1	23	1.4
14	1.1	7.0	1.6	1.9	7.8	6.4	4.8	11	8.3	2.4	2.4	8.6
15	1.0	54	1.4	1.8	72	9.7	4.0	29	3.6	1.9	1.9	1.9
16	1.3	17	1.2	2.1	16	13	3.5	81	2.9	1.6	2.0	1.4
17	3.2	6.8	.92	3.5	9.0	6.4	3.3	42	2.8	1.4	3.2	1.2
18	1.6	4.7	.97	2.9	7.0	4.5	2.8	13	3.3	1.3	2.5	1.5
19	4.4	3.8	1.2	3.1	5.9	3.9	2.5	9.0	2.7	1.2	2.0	8.5
20	4.5	3.5	1.3	12	5.0	3.5	10	7.0	45	14	9.4	2.0
21	3.2	3.1	.98	6.3	4.6	3.3	10	5.8	5.5	15	13	5.3
22	1.6	2.9	.76	4.4	22	3.3	4.5	5.1	5.7	21	3.5	2.4
23	1.4	2.7	.66	4.0	12	3.0	3.6	4.2	5.2	5.8	2.2	1.7
24	1.3	2.5	.72	3.6	8.7	2.9	3.3	4.0	4.2	3.3	1.9	1.5
25	1.3	2.4	.81	4.9	6.4	2.7	3.1	9.4	2.5	2.5	1.7	1.4
26	1.2	3.3	.92	3.4	5.4	2.5	2.9	38	2.2	2.0	1.6	1.4
27	1.2	2.7	.73	2.8	7.2	2.4	2.7	12	2.1	1.8	1.4	1.3
28	1.2	2.2	.30	2.5	6.0	2.4	2.7	7.5	1.9	1.6	1.5	1.3
29	1.1	2.0	.86	3.4	---	6.3	2.5	6.1	2.1	1.6	9.6	1.3
30	1.1	1.9	7.2	3.7	---	7.6	2.4	5.0	1.8	2.4	1.6	1.2
31	2.0	---	2.0	3.5	---	6.2	---	4.6	---	1.6	1.4	---
TOTAL	53.9	162.1	48.63	114.2	322.7	233.6	169.2	432.9	158.7	142.5	115.5	82.8
MEAN	1.74	5.40	1.57	3.68	11.5	7.54	5.64	14.0	5.29	4.60	3.73	2.76
MAX	4.5	54	7.2	12	72	54	29	81	45	29	23	23
MIN	1.0	1.5	.30	1.0	3.8	2.4	2.4	2.2	1.8	1.1	1.3	1.1
CFSM	.40	1.23	.36	.84	2.62	1.71	1.28	3.17	1.20	1.04	.85	.63
IN.	.46	1.37	.41	.97	2.73	1.97	1.43	3.66	1.34	1.20	.98	.70

CAL YR 1989 TOTAL 2053.93 MEAN 5.63 MAX 140 MIN .30 CFSM 1.28 IN. 17.37
WTR YR 1990 TOTAL 2036.73 MEAN 5.58 MAX 81 MIN .30 CFSM 1.27 IN. 17.22

03353200 EAGLE CREEK AT ZIONSVILLE, IN

LOCATION.--Lat 39°56'56", long 86°15'22", in SW¼NW¼ sec.1, T.17 N., R.2 E., Boone County, Hydrologic Unit 05120201, on downstream side of second pier from right bank of bridge on State Highway 334 at Zionsville, 200 ft upstream from Long Branch, and at mile 24.7.

DRAINAGE AREA.--103 mi^2.

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

REVISED RECORDS.--WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 816.85 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 9, 1957, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Nov. 25-27, Dec. 13 to Jan. 9, Jan. 12-16, 27-29,. and Feb. 25-27. Records fair except those for estimated daily discharges, which are poor. Low flow affected by the Zionsville well field located on the right bank below the gage before 1989.

AVERAGE DISCHARGE.--33 years, 101.2 ft^3/s, 13.34 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,400 ft^3/s Apr. 20, 1964, gage height, 14.64 ft; no flow at times during 1959, 1963-68, 1970, 1971, 1983, 1984, and 1988.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 28, 1957, reached a stage of 19.20 ft, from floodmark.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 15	1500	3,340	9.32	May 16	1300	2,020	7.18
Mar. 11	1300	*6,640	*11.91	June 8	1700	2,580	8.22
May 13	0300	1,830	6.82				

Minimum daily discharge, 1.3 ft^3/s Sept. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	25	36	160	84	148	152	46	47	34	5.8	4.2
2	28	23	35	122	859	138	212	40	47	28	4.7	2.9
3	26	22	32	106	501	119	139	42	81	23	4.1	2.4
4	23	21	30	490	908	96	113	269	54	21	10	2.1
5	22	23	32	215	474	86	98	361	45	19	12	1.9
6	23	29	31	140	324	76	81	201	43	16	6.7	2.0
7	24	38	27	105	295	66	70	135	42	15	4.8	1.9
8	22	119	24	93	241	65	63	104	1410	14	3.7	2.2
9	20	128	24	85	261	70	59	85	780	12	3.2	2.2
10	20	85	25	110	244	248	346	80	277	13	2.9	6.5
11	20	61	24	104	179	3990	494	64	162	90	2.7	2.8
12	20	50	22	82	138	925	271	197	110	302	2.6	2.3
13	19	44	21	64	122	475	187	1100	83	185	68	17
14	19	50	20	55	309	324	163	403	65	106	31	6.7
15	18	322	19	49	2110	237	132	353	54	72	13	10
16	24	581	15	45	1030	243	113	1750	45	47	7.9	7.6
17	41	299	17	57	457	195	101	1040	40	33	6.1	3.4
18	23	179	20	92	301	145	82	401	35	25	5.3	2.6
19	22	128	21	73	225	118	76	237	30	20	5.0	5.3
20	29	113	19	131	165	98	82	170	100	18	4.8	4.1
21	64	88	17	204	136	93	101	121	76	18	12	7.6
22	85	74	14	138	696	87	87	98	135	23	9.8	8.3
23	64	64	13	104	629	78	79	83	192	25	6.5	6.0
24	49	55	15	92	354	70	73	72	147	16	5.3	4.1
25	39	46	18	93	210	67	66	83	82	13	4.4	2.6
26	34	39	22	88	150	62	58	145	62	11	3.6	2.0
27	30	41	21	69	144	56	56	119	92	9.0	3.1	1.7
28	28	49	20	60	175	53	57	91	55	7.7	2.8	1.4
29	29	39	25	53	---	60	55	75	44	7.0	6.4	1.4
30	29	37	39	66	---	71	50	61	38	7.4	14	1.3
31	27	---	88	62	---	81	---	52	---	8.3	6.4	---
TOTAL	947	2872	786	3407	11721	8640	3716	8078	4473	1238.4	278.6	126.5
MEAN	30.5	95.7	25.4	110	419	279	124	261	149	39.9	8.99	4.22
MAX	85	581	88	490	2110	3990	494	1750	1410	302	68	17
MIN	18	21	13	45	84	53	50	40	30	7.0	2.6	1.3
CFSM	.30	.93	.25	1.07	4.06	2.71	1.20	2.53	1.45	.39	.09	.04
IN.	.34	1.04	.28	1.23	4.23	3.12	1.34	2.92	1.62	.45	.10	.05

CAL YR 1989 TOTAL 43186.8 MEAN 118 MAX 2700 MIN 3.5 CFSM 1.15 IN. 15.60
WTR YR 1990 TOTAL 46283.5 MEAN 127 MAX 3990 MIN 1.3 CFSM 1.23 IN. 16.72

03353450 EAGLE CREEK RESERVOIR NEAR INDIANAPOLIS, IN

LOCATION.--Lat 39°49'20", long 86°18'11", in NW¼NW¼ sec.22, T.16 N., R.2 E., Marion County, Hydrologic Unit 05120201, in outlet structure of reservoir on Eagle Creek, 800 ft upstream from Interstate Highway 74, 0.5 mi downstream from School Branch, 1.0 mi northeast of Clermont, and 2 mi west of Indianapolis.

DRAINAGE AREA.--162 mi^2.

PERIOD OF RECORD.--March 1970 to current year.

GAGE.--Water-stage recorder. Datum of gage is 780.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Reservoir is formed by earth-fill dam. Low flow is controlled through a 48-inch diameter conduit. Spillway elevation, 783 ft is an ogee section with 6 taintor gates, each 40 ft wide and 25 ft high. Permanent pool capacity is 24,000 acre-ft, elevation, 790.00 ft. Reservoir is used for flood control, low-flow maintenance, water supply, and recreation. Reservoir put into operation Nov. 27, 1969.

COOPERATION.--Water-stage elevations and capacity tables furnished by Indianapolis Flood Control District.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 27,350 acre-ft June 26, 1978, elevation, 792.39 ft; minimum, 13,750 acre-ft Nov. 28, 1971, elevation, 781.25 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 25,550 acre-ft Mar. 11, elevation, 791.11 ft; minimum, 17,640 acre-ft Dec. 15, elevation, 784.95 ft.

MONTHEND ELEVATION AND CONTENTS, AT 2400, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	790.08	24,110	
Oct. 31	790.06	24,080	-30
Nov. 30	785.06	17,770	-6,310
Dec. 31	785.33	18,100	+330
CAL YR 1989			-40
Jan. 31	789.96	23,950	+5,850
Feb. 28	790.06	24,080	+130
Mar. 31	789.99	23,990	-90
Apr. 30	789.98	23,970	-20
May 31	790.04	24,060	+90
June 30	789.98	23,970	-90
July 31	789.74	23,660	-310
Aug. 31	789.01	22,710	+50
Sept. 30	788.24	21,710	-1,000
WTR YR 1990			-2,400

03353500 EAGLE CREEK AT INDIANAPOLIS, IN

LOCATION.--Lat 39°46'33", long 86°15'01", in NW¼NW¼ sec.6, T.15 N., R.3 E., Marion County, Hydrologic Unit 05120201, 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 mi downstream from West 10th Street bridge, 1.0 mi upstream from Vermont Street bridge, 3.0 mi upstream from Little Eagle Creek, and 7.1 mi upstream from mouth.

DRAINAGE AREA.--174 mi^2.

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

REVISED RECORDS.--WSP 953: 1939. WSP 1625: 1958. WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 699.00 ft above National Geodetic Vertical Datum of 1929. 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.

REMARKS.--Estimated daily discharges: Dec. 13, 14, 16-29. Records good except for estimated daily discharges, which are poor. Flow regulated since November 1969 by Eagle Creek Reservoir, 4.7 mi upstream (see station 03353450).

AVERAGE DISCHARGE.--51 years (water years 1940 to current year), 156 ft^3/s, 12.18 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,800 ft^3/s June 28, 1957, gage height, 23.59 ft present datum from rating curve extended above 9,000 ft^3/s on basis of a combined current-meter measurement and slope-area measurement; no flow for several days in August 1941.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1913 reached a stage of 23.2 ft present datum, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,840 ft^3/s Mar. 11, gage height, 9.52 ft; minimum daily, 5.9 ft^3/s Sept. 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	137	67	324	81	230	163	27	31	25	21	11
2	13	280	65	76	1290	152	352	29	122	25	21	11
3	14	270	18	23	811	194	143	54	94	25	20	13
4	14	133	9.0	42	1370	136	161	257	82	24	31	17
5	13	197	81	29	735	113	155	837	31	23	20	14
6	39	191	60	25	532	129	120	288	75	24	18	12
7	90	199	33	38	353	27	68	203	69	24	17	12
8	14	195	8.0	39	324	122	40	152	936	20	16	9.6
9	14	184	7.4	36	299	66	158	98	1290	21	15	15
10	12	181	61	25	271	327	367	150	337	20	14	8.7
11	12	175	7.5	23	243	6040	747	110	233	31	14	8.0
12	11	168	63	22	144	2960	330	308	68	192	14	7.6
13	11	135	7.4	32	203	586	209	2350	105	253	65	7.3
14	10	16	7.0	22	353	475	244	585	108	59	21	7.2
15	10	490	106	21	3740	379	175	642	31	81	17	7.3
16	23	785	11	21	2150	294	187	5060	27	22	16	7.0
17	24	410	9.0	24	597	276	185	2190	26	20	15	7.1
18	12	397	8.4	24	498	193	37	639	26	20	15	7.1
19	18	202	8.0	24	320	115	136	353	66	19	13	17
20	94	154	8.0	34	189	137	189	345	269	37	15	7.4
21	19	226	7.6	30	202	152	144	253	124	95	22	13
22	149	125	7.6	27	812	150	136	91	165	149	16	9.1
23	136	184	7.4	147	1150	39	71	177	286	41	14	7.5
24	13	179	7.4	134	539	144	93	95	236	45	14	7.7
25	111	172	8.0	122	225	37	157	122	39	39	13	6.7
26	12	381	9.0	140	226	117	31	245	108	35	13	6.6
27	11	321	12	118	153	36	28	282	107	32	13	6.1
28	93	22	21	104	249	111	208	153	28	30	12	5.9
29	13	71	35	96	---	116	31	68	26	26	25	6.0
30	12	30	75	93	---	45	31	136	96	24	13	6.3
31	11	---	227	107	---	200	---	33	---	23	12	---
TOTAL	1042	6610	1061.7	2022	18059	14098	5096	16332	5241	1504	565	281.2
MEAN	33.6	220	34.2	65.2	645	455	170	527	175	48.5	18.2	9.37
MAX	149	785	227	324	3740	6040	747	5060	1290	253	65	17
MIN	10	16	7.0	21	81	27	28	27	26	19	12	5.9
CFSM	.19	1.27	.20	.37	3.71	2.61	.98	3.03	1.00	.28	.10	.05
IN.	.22	1.41	.23	.43	3.86	3.01	1.09	3.49	1.12	.32	.12	.06

CAL YR 1989 TOTAL 72207.3 MEAN 198 MAX 6740 MIN 6.6 CFSM 1.14 IN. 15.44
WTR YR 1990 TOTAL 71911.9 MEAN 197 MAX 6040 MIN 5.9 CFSM 1.13 IN. 15.37

03353551 LITTLE EAGLE CREEK AT 52ND STREET AT INDIANAPOLIS, IN

LOCATION.--Lat 39°50'45", long 86°14'55", in NE¼SW¼ sec.7, T.16 N., R.2 E., Marion County, Hydrologic Unit 05120201, on right bank at downstream side of West 52nd Street, 0.4 mi east of Lafayette Road, 1.1 mi upstream from Guion Creek, and at mile 7.2.

DRAINAGE AREA.--6.94 mi^2.

PERIOD OF RECORD.--October 1989 to current year.

GAGE.--Water-stage recorder. Datum of gage is 766.34 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 1-4, Dec. 2 to Jan. 1, Jan. 13-15, June 5, Aug. 31, and Sept. 1. Records fair except for estimated daily discharges, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,210 ft^3/s May 16, 1990, gage height, 6.39 ft; minimum daily, 0.26 ft^3/s Sept. 17, 28, 1990.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 250 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 15	1550	351	4.22	May 16	0035	*1,210	*6.39
Feb. 15	0955	745	5.35	June 20	0845	366	4.27
Mar. 11	0320	434	4.48	Sept. 12	1705	422	4.44
May 13	0030	330	4.15				

Minimum daily discharge, 0.26 ft^3/s Sept. 17, 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.72	1.3	1.7	4.1	26	6.5	34	1.9	1.6	.93	1.5	.80
2	.68	.95	1.7	11	96	5.9	13	1.6	1.7	.75	1.3	.51
3	.72	.85	1.6	7.4	24	4.9	7.4	6.3	5.5	.63	1.1	.47
4	.72	1.2	1.5	42	74	3.9	5.5	80	2.4	.54	29	.51
5	1.3	1.3	1.8	11	22	3.9	4.6	24	1.4	.51	5.2	.70
6	1.7	2.3	1.7	6.0	14	3.5	3.6	15	2.5	.48	2.0	.68
7	1.3	13	1.5	4.7	16	3.1	3.1	6.8	2.7	.43	1.6	.60
8	1.0	14	1.4	4.2	11	4.0	2.8	4.9	1.6	.47	1.1	.79
9	.84	3.3	1.3	4.3	15	6.4	2.7	3.6	3.8	.76	.74	3.4
10	1.1	2.2	1.2	5.8	9.7	60	59	5.6	1.4	2.4	.66	1.1
11	.87	1.5	1.1	4.1	7.6	168	21	3.6	1.3	20	.74	.64
12	.83	1.2	1.0	3.1	6.2	21	9.6	87	1.0	42	.73	57
13	.89	1.2	.90	2.5	5.8	13	6.3	89	.88	6.7	50	5.1
14	.92	14	.86	2.2	48	9.1	7.0	15	.87	5.4	3.0	1.2
15	1.1	108	.84	2.4	237	9.0	5.0	108	.98	2.1	1.6	.98
16	1.7	36	.80	2.7	42	19	4.3	363	1.0	1.3	1.2	.40
17	2.8	10	.80	7.2	16	8.1	4.1	59	1.3	1.0	1.1	.26
18	1.3	6.1	.84	6.0	10	5.5	3.1	13	.98	.81	1.2	.36
19	4.6	4.6	.82	3.7	8.0	4.9	2.9	7.2	.76	.74	1.0	18
20	7.1	4.6	.80	19	6.0	3.8	12	5.3	84	4.1	10	1.4
21	9.2	3.8	.74	12	5.4	3.6	9.3	4.3	5.5	21	10	11
22	2.6	3.3	.72	6.4	88	3.5	4.6	3.5	20	34	2.0	5.5
23	1.2	2.8	.72	5.0	30	3.0	3.9	2.8	6.5	6.6	1.2	1.7
24	1.2	2.5	.82	4.3	14	3.1	3.3	2.7	7.0	3.0	1.0	.65
25	.96	2.5	.90	11	12	3.1	2.9	13	2.1	2.1	.89	.87
26	.87	2.8	1.0	6.0	8.9	2.6	2.6	17	1.6	1.6	.82	.64
27	.80	2.7	1.3	4.6	9.8	2.4	2.2	5.7	2.2	1.4	.78	.30
28	.86	3.0	1.2	3.6	9.0	2.6	5.4	3.6	1.2	1.3	.66	.26
29	.75	2.1	1.1	4.5	---	6.5	3.9	2.9	1.0	1.1	6.5	.29
30	.76	1.7	1.1	5.0	---	7.1	2.2	2.3	1.0	3.7	1.6	.29
31	1.1	---	1.8	5.3	---	8.8	---	2.0	---	1.8	1.2	---
TOTAL	52.49	254.80	35.56	221.1	871.4	409.8	251.3	959.6	165.77	169.65	141.42	116.40
MEAN	1.69	8.49	1.15	7.13	31.1	13.2	8.38	31.0	5.53	5.47	4.56	3.88
MAX	9.2	108	1.8	42	237	168	59	363	84	42	50	57
MIN	.68	.85	.72	2.2	5.4	2.4	2.2	1.6	.76	.43	.66	.26
CFSM	.24	1.22	.17	1.03	4.48	1.90	1.21	4.46	.80	.79	.66	.56
IN.	.28	1.37	.19	1.19	4.67	2.20	1.35	5.14	.89	.91	.76	.62

WTR YR 1990 TOTAL 3649.29 MEAN 10.0 MAX 363 MIN .26 CFSM 1.44 IN. 19.56

03353560 GUION CREEK ABOVE 52ND STREET AT INDIANAPOLIS, IN

LOCATION.--Lat 39°50'45", long 86°13'57", in NW¼SW¼ sec.08., T.16 N., R.3 E., Marion County, Hydrologic Unit 05120201, on right bank 25 ft upstream from private bridge, 0.2 mi north of West 52nd Street along Guion Road, and 1.25 mi upstream of the confluence with Little Eagle Creek.

DRAINAGE AREA.--3.91 mi^2.

PERIOD OF RECORD.--October 1989 to current year.

GAGE.--Water-stage recorder. Datum of gage is 760.11 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 1, Dec. 7 to Jan. 31, Feb. 25, and 26. Records fair except for estimated daily discharges, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 421 ft^3/s May 16, 1990, gage height, 7.35 ft; minimum daily, 0.11 ft^3/s Sept. 1, 2, 4, 1990.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 170 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 15	1100	285	6.05	May 16	0110	*421	*7.35
Mar. 11	0340	187	4.90	Sept. 12	1640	182	4.84

Minimum daily discharge, 0.11 ft^3/s Sept. 1, 2, 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.26	.35	1.2	7.0	9.7	4.0	8.1	.73	.61	.72	.21	.11
2	.23	.26	1.2	5.3	44	3.4	4.7	.56	.69	.55	.21	.11
3	.21	.22	.94	3.7	14	2.7	3.6	1.6	1.4	.50	.19	.12
4	.19	.22	1.1	7.0	39	2.1	3.3	34	.65	.39	1.4	.11
5	.18	.34	1.0	23	14	1.8	2.4	16	.61	.35	.55	.12
6	.36	.30	.97	4.5	8.5	1.5	1.8	7.6	.79	.37	.23	.12
7	.25	4.3	.70	2.6	8.1	1.1	1.4	4.4	.95	.21	.21	.16
8	.22	6.3	.66	2.3	7.1	1.5	1.2	3.1	.62	.21	.21	.17
9	.22	1.8	.64	2.1	7.2	1.7	1.5	2.4	.94	.49	.24	.39
10	.22	1.0	.60	2.9	7.0	25	21	2.7	.41	.35	.27	.17
11	.22	.47	.54	2.3	6.9	87	12	1.8	.36	3.5	.18	.15
12	.59	.23	.48	1.7	5.9	14	6.4	36	.25	12	.20	34
13	1.5	.29	.40	1.3	5.7	7.4	4.1	50	.37	4.6	13	5.4
14	1.8	3.1	.35	1.1	17	5.3	3.9	11	.36	3.0	1.2	1.3
15	1.3	31	.30	1.2	126	4.9	3.2	53	.23	2.0	.68	.77
16	1.5	21	.26	1.4	29	7.5	2.7	184	.27	2.0	.48	.49
17	.45	8.5	.25	3.5	11	4.4	2.4	41	.19	1.6	.33	.54
18	.15	4.6	.24	2.5	6.4	3.0	1.7	12	.17	.91	.49	.88
19	1.3	3.5	.24	1.8	5.2	2.6	1.4	7.0	.17	.57	.51	5.5
20	2.5	3.2	.23	8.8	3.3	1.8	3.4	4.9	36	.95	1.1	1.2
21	3.6	2.6	.23	5.7	2.5	1.6	3.5	3.9	8.1	4.7	2.3	4.4
22	.94	2.8	.23	3.8	39	1.5	2.2	3.9	13	12	.57	2.6
23	.80	1.9	.23	3.3	17	1.1	1.8	3.0	5.3	3.8	.34	1.3
24	.32	1.5	.23	2.5	7.4	.97	1.5	2.4	4.6	1.4	.22	.65
25	.20	1.5	.24	5.2	4.5	.96	1.2	5.5	2.3	.81	.18	.40
26	.20	1.4	.25	3.0	3.7	1.3	1.1	12	1.7	.94	.15	.26
27	.20	1.4	.26	2.4	4.3	1.1	.98	5.3	1.3	.92	.13	.22
28	.20	1.6	.27	2.0	4.6	.89	1.5	3.0	1.0	.37	.12	.21
29	.22	1.4	.30	2.6	---	.87	1.0	1.9	.95	.37	.85	.23
30	.26	1.2	.42	2.2	---	1.0	1.4	1.2	.82	.53	.20	.22
31	.61	---	1.2	1.9	---	1.3	---	.89	---	.22	.15	---
TOTAL	21.20	108.28	16.16	120.6	458.0	195.29	106.38	516.78	85.11	61.33	27.10	62.30
MEAN	.68	3.61	.52	3.89	16.4	6.30	3.55	16.7	2.84	1.98	.87	2.08
MAX	3.6	31	1.2	23	126	87	21	184	36	12	13	34
MIN	.15	.22	.23	1.1	2.5	.87	.98	.56	.17	.21	.12	.11
CFSM	.17	.92	.13	.99	4.18	1.61	.91	4.26	.73	.51	.22	.53
IN.	.20	1.03	.15	1.15	4.36	1.86	1.01	4.92	.81	.58	.26	.59

WTR YR 1990 TOTAL 1778.53 MEAN 4.87 MAX 184 MIN .11 CFSM 1.25 IN. 16.92

03353583 FALCON CREEK AT 30TH ST. AT INDIANAPOLIS, IN

LOCATION.--Lat 39°48'33", long 86°13'56", in NW¼NW¼ sec.29, T.16 N., R.03 E., Marion County, Hydrologic Unit 05120201, on left bank, 150 ft downstream from bridge on West 30th Street, 0.6 mi west of Lafayette Road, and 0.6 mi upstream of confluence with Little Eagle Creek.

DRAINAGE AREA.--2.95 mi^2.

PERIOD OF RECORD.--October 1989 to current year.

GAGE.--Water-stage recorder. Datum of gage is 727.27 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 13-27. Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 388 ft^3/s, May 15, 1990, gage height, 6.00 ft; minimum daily 0.22 ft^3/s Oct. 2, 1989.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 140 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 15	0815	257	5.29	June 20	0825	147	4.71
Mar. 10	2225	290	5.48	July 20	2320	264	5.33
May 15	2225	*388	*6.00	Aug. 13	0240	165	4.81

Minimum daily discharge, 0.22 ft^3/s Oct. 2.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.23	.45	.70	5.1	14	2.8	12	.70	1.6	.30	.37	.23
2	.22	.44	.67	2.6	35	2.5	6.6	.60	2.1	.29	.36	.25
3	.23	.42	.61	2.4	13	2.2	3.6	4.1	2.5	.30	.36	.25
4	.23	.42	.64	14	32	1.8	2.7	37	1.1	.29	12	.25
5	.23	.43	.61	6.4	11	1.6	2.2	15	.93	.28	.85	.26
6	.33	.54	.94	3.8	6.4	1.4	1.7	8.1	2.2	.28	.40	.26
7	.23	8.0	.60	2.7	5.8	1.3	1.4	3.8	1.1	.28	.36	.58
8	.23	9.3	.57	2.3	4.4	2.2	1.2	2.6	.90	.28	.37	.30
9	.27	1.8	.54	2.6	6.7	2.2	1.1	1.9	1.5	3.7	.37	2.9
10	.26	1.7	.54	2.5	4.4	40	21	2.6	.87	.83	.38	.40
11	.25	.79	.53	2.1	3.6	82	10	1.4	.78	11	.38	.38
12	.52	.63	.49	1.6	2.9	12	4.4	47	.73	9.3	.41	5.0
13	.43	.57	.48	1.3	2.6	5.6	3.0	44	.77	1.5	27	1.5
14	.28	5.1	.46	1.1	13	4.0	3.1	9.0	.81	2.6	.83	.67
15	.26	34	.45	1.1	108	6.7	2.4	66	.78	.60	.34	.60
16	8.1	18	.44	1.1	25	6.3	2.1	130	.81	.33	.29	.62
17	3.0	6.2	.43	3.7	7.8	4.0	2.0	37	.80	.28	.28	.63
18	.73	3.6	.46	2.6	4.9	2.8	1.4	8.0	.78	.29	.26	.76
19	4.4	2.6	.44	2.4	3.8	2.3	1.2	4.4	.76	.28	.26	7.7
20	4.1	2.3	.41	8.0	2.9	1.8	5.8	3.3	39	11	3.3	.75
21	2.7	1.8	.39	6.0	2.6	1.6	3.4	2.5	2.7	12	1.8	6.3
22	1.1	1.6	.39	3.7	35	1.5	2.3	1.9	8.5	15	.28	1.5
23	.95	1.5	.38	2.8	17	1.3	1.8	1.5	1.6	3.1	.25	.72
24	.71	1.5	.38	2.4	7.6	1.4	1.4	1.3	.85	1.1	.24	.65
25	.83	1.3	.38	5.3	4.1	1.2	1.2	5.8	.43	.67	.24	.65
26	.55	1.2	.39	2.9	3.1	1.0	1.0	8.3	.37	.55	.24	.67
27	.47	1.1	.41	2.4	3.5	.91	.87	3.7	.31	.52	.25	.68
28	.45	.99	.44	2.0	3.4	.87	2.8	2.4	.29	.48	.24	.71
29	.44	.90	3.2	3.3	---	3.3	1.2	1.8	.62	.73	2.4	.80
30	.44	.76	15	2.7	---	3.3	.91	1.4	.31	2.9	.25	.72
31	.72	---	19	2.4	---	3.1	---	1.1	---	.45	.23	---
TOTAL	33.89	109.94	51.37	105.5	383.5	204.98	105.78	458.20	76.20	81.51	55.59	37.69
MEAN	1.09	3.66	1.66	3.40	13.7	6.61	3.53	14.8	2.54	2.63	1.79	1.26
MAX	8.1	34	19	14	108	82	21	130	39	15	27	7.7
MIN	.22	.42	.38	1.1	2.6	.87	.87	.60	.29	.28	.23	.23
CFSM	.37	1.24	.56	1.15	4.64	2.24	1.20	5.01	.86	.89	.61	.43
IN.	.43	1.39	.65	1.33	4.84	2.58	1.33	5.78	.96	1.03	.70	.48

WTR YR 1990 TOTAL 1704.15 MEAN 4.67 MAX 130 MIN .22 CFSM 1.58 IN. 21.49

03353600 LITTLE EAGLE CREEK AT SPEEDWAY, IN

LOCATION.--Lat 39°47'15", long 86°13'41", in NE¼SW¼ sec.32, T.16 N., R.3 E., Marion County, Hydrologic Unit 05120201, on right bank at upstream side of 16th Street bridge in Speedway, 0.6 mi upstream from Dry Run, and 2.3 mi upstream from mouth.

DRAINAGE AREA.--23.9 mi^2 including 5.57 mi^2 from Dry Run basin. Since June 1964 part of the flow from the 5.57 mi^2 of Dry Run basin has been diverted into Little Eagle Creek above gage.

PERIOD OF RECORD.--October 1959 to current year. Figures of runoff for 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 707.82 ft above National Geodetic Vertical Datum of 1929 (levels by State of Indiana, Department of Natural Resources). Prior to June 13, 1975, at datum 3.00 ft higher.

REMARKS.--Estimated daily discharges: Nov. 2-5, Dec. 2 to Jan. 1, 13, 29-31, Feb. 25, 26, June 12-19, 26, and June 29 to July 9. Records fair except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--26 years (water years 1965 to current year) 22.6 ft^3/s, 12.84 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,330 ft^3/s July 28, 1979, gage height, 12.13 ft; no flow at times in 1960-64, 1966.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 450 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 15	1805	504	4.88	June 20	0915	759	5.55
Feb. 15	1130	1,230	6.92	July 21	0035	680	5.39
Mar. 10	2400	1,250	6.97	Aug. 13	0500	525	4.94
May 13	0140	629	5.05	Sept. 12	2000	525	4.94
May 16	0255	*1,780	*8.06				

Minimum daily discharge, 1.5 ft^3/s Sept. 4-6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.8	6.1	6.3	15	44	16	76	7.5	7.3	3.5	3.6	2.2
2	4.5	4.5	6.1	25	217	15	35	6.3	8.3	3.1	3.1	1.8
3	4.3	3.2	5.7	15	61	13	19	15	18	2.8	2.7	1.6
4	3.5	6.0	5.4	77	180	11	16	189	9.9	2.5	65	1.5
5	3.3	11	5.8	32	59	11	14	96	6.7	2.3	17	1.5
6	3.8	23	5.3	19	32	9.6	12	47	11	2.0	5.0	1.5
7	4.3	52	4.9	15	29	8.4	11	27	11	1.8	3.6	2.9
8	3.5	57	4.5	13	24	10	9.5	19	7.5	1.6	3.0	2.7
9	3.1	17	4.1	13	31	14	8.9	15	11	1.8	2.3	15
10	3.0	13	4.3	14	22	143	128	19	6.9	9.3	2.1	3.8
11	3.1	9.1	4.0	13	18	517	68	14	5.6	52	1.9	2.4
12	3.2	7.3	3.8	11	15	78	30	199	5.0	91	1.7	90
13	3.3	6.1	3.5	9.0	13	39	20	269	4.2	21	151	35
14	3.4	30	3.3	7.7	75	26	18	42	3.4	21	15	8.1
15	3.0	219	3.0	7.5	615	30	17	248	3.7	8.4	7.1	6.4
16	25	116	2.7	7.0	146	52	14	1040	4.5	5.1	5.4	4.7
17	18*	37	2.4	17	53	25	14	246	4.1	3.9	4.4	3.4
18	6.0	21	2.3	17	33	18	11	58	3.6	3.2	3.6	3.3
19	11	15	2.3	11	25	15	10	30	3.2	2.8	3.6	60
20	20	13	2.2	39	19	12	31	20	258	17	13	11
21	20	11	2.2	34	16	11	29	16	32	106	40	40
22	12	11	2.2	21	186	11	15	13	65	96	7.8	26
23	6.7	10	2.2	16	88	10	13	11	26	28	4.9	11
24	5.8	9.1	2.3	15	39	9.1	11	9.3	22	11	3.9	6.8
25	5.1	7.7	2.5	28	19	9.1	10	31	11	6.8	3.1	5.1
26	4.3	6.7	3.0	19	16	8.6	9.1	49	6.4	5.0	2.9	5.6
27	3.9	7.1	3.8	15	18	8.1	8.2	22	7.9	4.6	2.7	4.6
28	3.5	7.5	3.6	12	21	7.2	15	15	6.2	3.8	2.4	3.8
29	3.3	7.5	3.5	11	---	15	14	12	4.3	3.5	17	4.0
30	3.2	6.9	4.5	10	---	17	8.5	9.4	3.9	12	5.2	3.3
31	4.7	---	6.0	12	---	20	---	8.1	---	4.9	2.8	---
TOTAL	206.6	750.8	117.7	570.2	2114	1189.1	695.2	2802.6	577.6	537.7	406.8	369.0
MEAN	6.66	25.0	3.80	18.4	75.5	38.4	23.2	90.4	19.3	17.3	13.1	12.3
MAX	25	219	6.3	77	615	517	128	1040	258	106	151	90
MIN	3.0	3.2	2.2	7.0	13	7.2	8.2	6.3	3.2	1.6	1.7	1.5
CFSM	.28	1.05	.16	.77	3.16	1.60	.97	3.78	.81	.73	.55	.51
IN.	.32	1.17	.18	.89	3.29	1.85	1.08	4.36	.90	.84	.63	.57

CAL YR 1989 TOTAL 10903.02 MEAN 29.9 MAX 963 MIN .65 CFSM 1.25 IN. 16.97
WTR YR 1990 TOTAL 10337.3 MEAN 28.3 MAX 1040 MIN 1.5 CFSM 1.18 IN. 16.09

03353620 LICK CREEK AT INDIANAPOLIS, IN

LOCATION.--Lat 39°42'21", long 86°06'13", in NE¼NE¼ sec.32, T.15 N., R.4 E., Marion County, Hydrologic Unit 05120201, on left bank at upstream side of Sherman Drive bridge in Indianapolis, and at mile 6.2.

DRAINAGE AREA.--15.6 mi^2.

PERIOD OF RECORD.--October 1970 to current year.

GAGE.--Water-stage recorder. Datum of gage is 742.00 ft above National Geodetic Vertical Datum of 1929 (Indiana Flood Control and Water Resources Commission bench mark).

REMARKS.--Estimated daily discharges: Dec. 14 to Jan. 4 and Jan. 11-16. Records fair except those for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--20 years, 19.4 ft^3/s, 16.89 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,500 ft^3/s June 25, 1978, gage height, 9.61 ft; minimum daily, 0.05 ft^3/s Sept. 19, 1983.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 15	1615	583	4.36	May 17	0115	583	4.36
Feb. 15	1030	846	5.26	June 20	0830	540	4.20
Mar. 11	0100	*944	*5.57	July 11	2000	690	4.74
May 13	0130	518	4.12	July 20	2330	690	4.74
May 15	2310	909	5.46				

Minimum daily discharge, 0.90 ft^3/s Sept. 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.3	6.5	6.8	28	43	15	62	7.2	9.9	4.1	2.5	1.8
2	3.6	4.9	6.9	17	139	13	37	6.6	14	5.3	2.2	1.3
3	3.2	4.6	6.8	13	52	12	25	15	16	2.3	1.8	1.1
4	2.7	4.2	6.2	72	139	10	21	91	10	1.9	24	1.0
5	2.5	4.1	7.0	35	54	9.3	17	33	7.7	1.8	13	.97
6	2.9	5.1	7.4	22	35	11	13	22	11	1.5	4.8	.90
7	3.4	27	7.2	17	34	8.3	11	14	11	2.3	3.1	1.1
8	9.2	34	5.6	14	26	8.5	9.6	9.9	7.5	1.7	2.4	.97
9	3.8	15	5.2	14	31	9.9	9.0	8.1	6.9	1.6	5.1	61
10	3.1	17	5.3	15	25	70	120	12	5.1	1.6	4.7	7.6
11	3.6	9.0	5.5	11	20	352	64	7.1	4.1	85	2.1	3.8
12	2.3	7.1	4.9	9.3	16	59	32	190	3.7	86	1.3	2.8
13	2.1	9.1	4.4	8.3	15	34	23	199	3.4	38	50	2.4
14	2.2	21	4.2	7.3	28	24	21	47	9.3	21	8.0	24
15	2.2	246	3.8	6.6	363	28	18	90	7.9	14	4.0	11
16	3.4	136	3.1	7.8	92	51	16	465	3.8	8.1	2.8	4.4
17	13	47	2.5	12	39	26	14	234	3.0	5.5	2.2	2.7
18	5.3	28	2.6	12	25	19	11	50	4.8	4.4	1.8	2.9
19	8.8	21	3.0	9.3	20	16	11	31	2.4	3.2	1.5	28
20	12	18	3.6	53	15	14	33	22	178	39	36	10
21	22	17	2.6	38	13	12	42	18	36	107	28	16
22	14	15	2.0	25	67	12	24	15	31	93	15	16
23	7.0	11	1.8	21	46	11	18	12	21	41	9.6	6.6
24	5.7	9.5	2.0	18	28	13	15	11	21	19	7.6	4.2
25	4.7	9.2	2.2	19	20	10	13	24	11	12	3.6	3.0
26	4.3	11	2.6	14	19	8.9	14	167	8.2	8.3	2.6	2.4
27	4.0	9.9	2.9	12	19	8.3	13	60	6.8	6.4	2.1	1.9
28	3.8	10	4.4	10	18	7.9	10	31	5.3	5.2	1.8	1.6
29	3.3	7.8	11	13	---	18	9.4	21	4.8	4.3	22	1.5
30	3.0	6.9	98	17	---	26	8.1	14	4.6	5.6	7.8	1.4
31	4.8	---	68	14	---	28	---	11	---	3.2	2.8	---
TOTAL	169.0	771.9	299.5	584.6	1441	945.1	734.1	1937.9	469.2	633.3	276.2	224.34
MEAN	5.45	25.7	9.66	18.9	51.5	30.5	24.5	62.5	15.6	20.4	8.91	7.48
MAX	22	246	98	72	363	352	120	465	178	107	50	61
MIN	2.1	4.1	1.8	6.6	13	7.9	8.1	6.6	2.4	1.5	1.3	.90
CFSM	.35	1.65	.62	1.21	3.30	1.95	1.57	4.01	1.00	1.31	.57	.48
IN.	.40	1.84	.71	1.39	3.44	2.25	1.75	4.62	1.12	1.51	.66	.53

CAL YR 1989 TOTAL 8625.52 MEAN 23.6 MAX 560 MIN .92 CFSM 1.51 IN. 20.57
WTR YR 1990 TOTAL 8486.14 MEAN 23.2 MAX 465 MIN .90 CFSM 1.49 IN. 20.24

03353630 LITTLE BUCK CREEK NEAR SOUTHPORT, IN

LOCATION.--Lat 39°40'11", long 86°04'57", in SW¼SW¼ sec.10, T.14 N., T.4 E., Marion County, Hydrologic Unit 05120201, on right bank 5 ft upstream from Emerson Avenue bridge in Indianapolis, 1.1 mi downstream from Bunker Creek, and 2.5 mi upstream from Derbyshire Creek.

DRAINAGE AREA.--5.73 mi^2.

PERIOD OF RECORD.--October 1989 to current year.

GAGE.--Water-stage recorder. Datum of gage is 783.17 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 12 to Jan. 3 and Jan. 13. Records fair except for estimated daily discharges, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 624 ft^3/s May 16, 1990, gage height, 7.22; minimum daily 0.01 ft^3/s July 10, 1990.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 220 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 15	1020	432	7.00	May 16	0135	*624	*7.22
Mar. 10	2230	435	7.02	May 17	0205	314	5.47
Mar. 11	0215	401	6.79	Aug. 4	1900	252	5.03

Minimum daily discharge, 0.01 ft^3/s July 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.76	.75	1.4	15	17	6.5	27	2.6	2.8	.60	.50	.86
2	.78	.61	1.4	8.6	62	6.0	16	2.1	3.0	.29	.41	.69
3	.68	.51	1.1	6.0	24	5.1	9.7	3.6	3.0	.16	.41	.64
4	.51	.48	1.1	22	70	4.2	7.3	48	2.3	.20	47	.47
5	.46	.50	1.3	13	26	3.8	5.8	24	1.8	.15	16	.37
6	.41	.53	1.4	8.3	16	3.4	4.3	17	2.0	.07	4.3	.30
7	.46	2.5	1.1	6.0	16	2.9	3.4	11	2.1	.03	1.9	.25
8	.42	8.3	.93	5.0	12	3.3	2.8	7.4	1.7	.03	1.2	.28
9	.38	3.6	.88	4.7	12	3.8	2.5	5.7	1.9	.02	.81	9.2
10	.44	2.5	.92	4.9	9.8	52	35	5.9	1.1	.01	.60	1.5
11	.43	1.5	.92	4.1	7.9	126	23	3.9	.77	8.9	.44	.90
12	.39	1.2	.74	3.1	6.3	28	12	60	.61	26	.37	1.1
13	.31	.93	.64	2.6	5.5	17	8.2	80	.49	7.9	15	.73
14	.29	1.8	.56	2.0	12	12	7.0	24	.40	5.1	2.9	.50
15	.29	65	.50	2.2	159	11	5.5	31	.42	2.9	1.4	.58
16	.35	43	.45	2.2	46	21	4.6	304	.34	1.7	.97	.34
17	1.4	16	.42	3.2	21	12	3.8	119	.29	1.1	.68	.19
18	.91	9.3	.41	3.8	14	7.8	2.7	32	.38	.74	.53	.14
19	2.0	6.8	.45	2.9	10	6.2	2.6	16	.22	.64	.43	5.6
20	3.8	6.2	.44	25	7.7	4.9	7.9	12	25	30	11	1.7
21	5.1	4.5	.40	17	6.4	4.4	14	9.1	7.4	56	20	2.1
22	2.3	3.7	.39	11	24	4.0	7.9	6.7	6.4	43	8.6	2.6
23	1.3	2.9	.39	9.7	19	3.2	5.6	4.5	4.2	19	3.6	1.2
24	.97	2.4	.39	9.5	12	3.4	4.1	3.8	4.1	7.4	2.0	.76
25	.79	2.4	.41	9.3	9.4	3.2	3.7	6.9	1.9	4.1	1.3	.58
26	.69	2.5	.43	6.6	9.1	2.7	3.3	53	1.2	2.3	.92	.54
27	.68	2.3	.50	5.0	8.7	2.3	2.6	25	.99	1.6	.58	.40
28	.63	2.2	1.1	3.8	8.1	2.3	3.1	12	.69	1.3	.59	.62
29	.60	1.6	2.7	4.5	---	4.7	2.7	8.1	.60	1.0	5.7	.99
30	.59	1.5	9.0	4.4	---	7.9	2.7	5.2	.68	.99	1.8	.85
31	.70	---	39	4.1	---	11	---	3.7	---	.67	1.2	---
TOTAL	29.82	198.01	71.77	229.5	650.9	386.0	240.8	947.2	78.78	223.90	153.14	36.98
MEAN	.96	6.60	2.32	7.40	23.2	12.5	8.03	30.6	2.63	7.22	4.94	1.23
MAX	5.1	65	39	25	159	126	35	304	25	56	47	9.2
MIN	.29	.48	.39	2.0	5.5	2.3	2.5	2.1	.22	.01	.37	.14
CFSM	.17	1.15	.40	1.29	4.06	2.17	1.40	5.33	.46	1.26	.86	.22
IN.	.19	1.29	.47	1.49	4.23	2.51	1.56	6.15	.51	1.45	.99	.24

WTR YR 1990 TOTAL 3246.80 MEAN 8.90 MAX 304 MIN .01 CFSM 1.55 IN. 21.08

03353635 DERBYSHIRE CREEK AT SOUTHPORT, IN

LOCATION.--Lat 39°40'15", long 86°07'21", in NE¼SE¼ sec.07, T.14 N., R.04 E., Marion County Hydrologic Unit 05120201, on left bank, 10 ft downstream from bridge on Derbyshire Road, and 0.3 mi upstream from mouth.

DRAINAGE AREA.--1.79 mi^2.

PERIOD OF RECORD.--September 1989 to current year.

GAGE.--Water-stage recorder. Datum of gage is 746.37 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges, Dec. 11-27, Jan. 24-30, Apr. 23-26, and May 18 to June 6. Records poor.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 15	1350	104	3.72	May 15	2400	*1010	*4.58
Feb. 15	0820	296	3.96	July 11	2025	115	3.56
Mar. 11	0055	232	4.04	Aug. 4	1645	229	3.83

Minimum daily discharge, 0.22 ft^3/s Oct. 12-14.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.46	.37	.68	7.4	6.1	4.9	15	.76	1.8	.78	.35	1.1
2	.30	.37	.65	5.1	32	2.8	13	1.0	2.1	.67	.33	1.2
3	.32	.35	.60	4.2	6.0	1.9	2.5	1.6	1.6	.68	.30	.96
4	.29	.35	.60	12	22	1.7	2.1	17	1.2	.62	21	.79
5	.30	.35	.66	8.2	8.2	1.7	1.8	19	.90	.65	2.0	.70
6	.30	.35	.69	5.3	4.1	1.6	1.5	12	.92	.68	.90	.48
7	.30	.55	.64	4.3	2.7	1.5	1.4	5.5	.93	.64	.72	.65
8	.30	1.1	.59	3.4	1.9	1.6	1.3	2.9	.86	.55	.62	.76
9	.30	.50	.56	3.4	2.0	1.7	1.2	1.7	.92	.40	.54	7.0
10	.32	.39	.54	3.7	1.6	14	13	1.8	.82	.61	.49	1.2
11	.25	.36	.60	3.4	1.4	56	9.7	1.5	.79	11	.42	.96
12	.22	.35	.58	2.9	1.2	28	5.1	24	.78	10	.40	1.1
13	.22	.45	.54	2.7	1.1	16	3.7	21	.72	1.7	8.6	.91
14	.22	.65	.52	3.0	2.9	7.2	2.5	6.0	.68	1.1	.97	.88
15	.23	28	.52	3.1	106	8.9	2.1	29	.62	.82	.75	.89
16	.28	11	.50	3.1	40	24	1.9	119	.58	.71	.59	.86
17	.28	3.1	.50	3.4	14	16	1.7	18	.57	.62	.45	.80
18	.23	2.3	.52	4.0	9.7	6.7	1.4	11	.61	.61	.40	.80
19	.38	2.1	.52	4.4	8.0	4.4	1.3	8.0	.55	.56	.30	3.3
20	.44	1.5	.50	21	6.4	3.4	2.6	5.2	12	2.1	13	1.1
21	.35	1.1	.49	23	6.1	3.5	3.7	3.7	1.7	4.3	8.0	1.5
22	.28	.99	.48	17	26	3.5	2.4	2.0	1.9	6.7	3.4	1.3
23	.27	.89	.47	13	17	2.8	2.1	1.9	1.4	1.7	1.9	.99
24	.27	.83	.46	5.2	11	2.6	2.0	1.6	1.2	.94	1.5	.92
25	.27	.86	.46	3.5	7.4	2.4	2.2	4.5	1.1	.84	1.3	.90
26	.29	.90	.51	2.2	6.6	1.5	1.8	18	.98	.74	1.2	.87
27	.30	.87	.51	1.5	8.5	.76	.74	9.0	.97	.65	1.1	.83
28	.29	.79	.50	1.1	6.6	.71	.80	5.0	.93	.60	1.1	.86
29	.32	.69	.73	1.3	---	1.2	.84	3.0	.91	.55	3.4	.86
30	.32	.76	4.4	1.0	---	2.0	.84	2.0	.88	.57	1.5	.80
31	.35	---	19	1.2	---	2.3	---	1.3	---	.45	1.3	---
TOTAL	9.25	63.17	39.52	178.0	366.5	227.27	102.22	357.96	41.92	53.54	78.83	36.27
MEAN	.30	2.11	1.27	5.74	13.1	7.33	3.41	11.5	1.40	1.73	2.54	1.21
MAX	.46	28	19	23	106	56	15	119	12	11	21	7.0
MIN	.22	.35	.46	1.0	1.1	.71	.74	.76	.55	.40	.30	.48
CFSM	.17	1.18	.71	3.21	7.31	4.10	1.90	6.45	.78	.96	1.42	.68
IN.	.19	1.31	.82	3.70	7.62	4.72	2.12	7.44	.87	1.11	1.64	.75

WTR YR 1990 TOTAL 1554.45 MEAN 4.26 MAX 119 MIN .22 CFSM 2.38 IN. 32.30

03353636 LITTLE BUCK CREEK AT SOUTHPORT, IN

LOCATION.--Lat 39°39'54", long 86°08'11", in SW¼SW¼ sec.7, T.14 N., R.4 E., Marion County, Hydrologic Unit 05120201, on left bank 50 ft downstream from Southport Road bridge in Indianapolis.

DRAINAGE AREA.--12.3 mi^2.

PERIOD OF RECORD.--October 1989 to current year.

GAGE.--Water-stage recorder. Datum of gage is 725.50 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 3, 4, Dec. 6 to Jan. 2, and Jan. 13. Records good except for estimated daily discharges, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 1,260 ft^3/s May 15, 1990, gage height, 7.52 ft; minimum daily, 0.64 ft^3/s July 8, 1990.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 350 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 15	1715	427	5.28	May 15	2400	*1,260	*7.52
Feb. 15	1130	1,170	7.33	May 17	0220	490	5.50
Mar. 11	0030	1,230	7.45	July 20	1845	414	5.23
May 4	1355	372	5.07	Aug. 4	1725	475	5.45
May 13	0415	409	5.21				

Minimum daily discharge, 0.64 ft^3/s July 8.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.7	2.1	3.8	20	31	13	52	6.7	6.0	2.1	1.9	2.8
2	2.4	2.1	3.5	12	110	11	31	6.2	7.0	1.4	1.8	2.5
3	2.3	1.8	3.3	10	48	9.8	19	8.9	6.7	1.1	1.5	2.2
4	1.8	1.7	3.1	38	127	8.4	15	108	5.1	.98	92	2.0
5	1.9	1.6	3.3	24	51	7.9	12	43	4.2	.93	33	1.6
6	1.6	1.8	3.0	15	33	7.3	10	30	4.7	.87	12	1.3
7	1.6	7.9	2.9	11	31	6.7	8.4	19	4.9	.73	6.5	1.3
8	1.5	18	2.8	9.2	24	7.4	7.5	14	4.2	.64	9.3	1.5
9	1.5	8.7	2.7	8.8	22	8.3	7.1	12	4.5	.65	4.1	26
10	1.6	6.9	2.6	9.7	20	128	67	12	3.2	.74	3.6	4.7
11	1.5	4.1	2.5	8.4	17	319	45	8.9	2.6	28	3.3	3.1
12	1.4	3.3	2.5	7.0	15	50	22	135	2.4	61	3.1	4.2
13	1.7	2.5	2.4	6.0	13	30	16	163	2.1	15	40	2.8
14	5.4	5.2	2.4	5.4	18	21	14	43	2.2	9.3	8.3	1.9
15	2.4	151	2.3	5.7	419	21	12	78	2.1	6.1	5.2	1.7
16	4.2	81	1.9	5.8	89	40	10	616	1.7	4.3	4.1	1.5
17	5.5	31	2.1	7.7	38	22	9.1	200	1.5	3.1	3.4	1.1
18	3.9	19	2.3	8.3	25	15	7.6	45	1.7	2.6	2.6	1.1
19	9.3	14	2.5	7.1	19	12	7.1	26	1.1	2.2	2.1	23
20	12	11	2.5	48	15	10	17	19	49	60	27	7.5
21	11	8.3	2.2	34	13	9.7	26	16	12	87	54	9.3
22	6.8	6.8	2.0	22	44	9.0	16	14	11	60	24	9.8
23	5.6	5.6	1.8	18	35	8.0	12	10	7.1	26	11	5.4
24	3.3	4.9	1.8	17	23	8.0	10	7.4	6.4	12	6.9	3.5
25	2.7	4.7	1.9	17	16	7.5	8.8	12	4.1	7.5	5.0	2.8
26	2.3	4.8	2.0	12	13	6.8	8.0	72	3.1	5.3	3.9	3.2
27	2.1	4.4	2.2	9.2	16	6.2	7.2	36	2.7	4.2	3.2	2.3
28	1.9	4.2	2.4	7.3	22	5.9	7.4	18	2.2	3.5	2.9	1.7
29	1.9	4.2	6.0	9.1	---	9.6	7.2	13	2.0	3.0	15	2.4
30	1.8	4.1	18	8.7	---	16	6.7	9.1	2.6	3.1	5.8	2.0
31	2.2	---	60	8.2	---	20	---	7.0	---	2.4	3.9	---
TOTAL	107.8	426.7	154.7	429.6	1347	854.5	498.1	1808.2	170.1	415.74	400.4	136.2
MEAN	3.48	14.2	4.99	13.9	48.1	27.6	16.6	58.3	5.67	13.4	12.9	4.54
MAX	12	151	60	48	419	319	67	616	49	87	92	26
MIN	1.4	1.6	1.8	5.4	13	5.9	6.7	6.2	1.1	.64	1.5	1.1
CFSM	.28	1.16	.41	1.13	3.91	2.24	1.35	4.74	.46	1.09	1.05	.37
IN.	.33	1.29	.47	1.30	4.07	2.58	1.51	5.47	.51	1.26	1.21	.41

WTR YR 1990 TOTAL 6749.04 MEAN 18.5 MAX 616 MIN .64 CFSM 1.50 IN. 20.41

03353637 LITTLE BUCK CREEK NEAR INDIANAPOLIS, IN

LOCATION.--Lat 39°40'00", long 86°11'48", in SW¼SW¼ sec.10, T.14 N., R.3 E., Marion County, Hydrologic Unit 05120201, on right bank, 10 ft upstream from bridge on South Belmont Street, and 2.2 mi above mouth.

DRAINAGE AREA.--16.6 mi^2.

PERIOD OF RECORD.--October 1989 to current year.

GAGE.--Handar Data Collection Platform and water-stage recorder. Datum of gage is 666.20 above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 1, 2 and Dec. 12-27. Record good except for estimated daily discharges, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 915 ft^3/s March 11, 1990, gage height, 6.84 ft; minimum daily discharge, 1.7 ft^3/s July 10, 1990.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 425 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 15	1510	441	4.98	May 16	0215	906	6.81
Feb. 15	1330	892	6.76	May 17	0305	474	5.01
Mar. 11	0205	*915	*6.84				

Minimum daily discharge, 1.7 ft^3/s July 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	4.0	7.7	26	26	23	52	9.2	14	5.1	4.2	4.5
2	6.3	4.1	7.5	16	124	19	44	8.6	13	3.9	3.7	4.1
3	5.8	3.9	7.1	14	52	18	29	11	16	3.3	3.4	3.6
4	5.7	3.6	6.8	36	141	15	24	95	12	3.0	93	3.2
5	5.6	3.6	7.3	24	59	14	21	49	9.8	2.8	54	2.8
6	5.1	3.6	6.4	17	36	14	18	34	9.1	2.5	17	2.5
7	5.3	11	6.0	14	33	13	15	27	11	2.2	9.8	2.6
8	5.1	22	5.6	12	27	13	14	21	9.0	1.9	12	2.7
9	5.0	10	5.4	12	25	14	13	17	8.9	1.8	6.8	39
10	5.2	8.3	5.3	12	23	64	69	16	7.6	1.7	5.8	7.9
11	4.9	5.7	5.5	11	19	335	58	14	6.4	29	5.3	4.8
12	4.6	4.3	5.0	9.9	16	60	31	119	5.8	92	5.1	5.6
13	4.5	3.9	4.8	8.7	15	45	24	170	5.7	26	59	4.4
14	7.1	6.6	4.7	8.3	22	35	21	47	5.1	16	14	3.6
15	6.3	168	4.5	8.4	381	32	18	41	5.0	11	8.8	2.8
16	6.6	105	4.4	8.5	108	54	16	582	5.0	8.3	6.6	2.8
17	11	39	4.3	9.8	52	37	15	248	5.0	5.8	5.6	2.5
18	6.8	25	4.3	11	39	27	12	74	4.9	4.8	4.8	2.4
19	8.6	20	4.8	8.9	31	24	11	55	3.7	4.1	3.9	31
20	14	17	4.7	42	25	20	18	45	66	44	29	9.9
21	13	14	4.3	33	23	19	34	36	22	112	80	10
22	8.5	12	3.8	23	56	17	23	30	18	74	43	12
23	6.6	10	3.5	19	51	16	17	24	14	44	18	6.9
24	5.5	9.4	3.4	19	36	15	15	19	11	21	11	4.6
25	4.4	9.2	3.4	18	26	15	13	21	8.4	13	8.4	3.8
26	4.3	9.3	3.5	15	23	13	11	93	6.5	9.6	6.4	3.7
27	4.0	9.1	3.8	13	26	13	10	61	5.7	7.6	5.2	3.3
28	3.7	8.4	4.7	11	31	12	10	39	5.2	6.3	4.4	2.7
29	3.6	8.0	6.5	12	---	17	9.8	28	4.9	5.6	24	2.8
30	3.5	7.8	19	13	---	21	9.2	23	5.1	5.8	9.7	2.8
31	4.1	---	85	12	---	33	---	17	---	4.9	6.2	---
TOTAL	190.7	565.8	253.0	497.5	1526	1067	675.0	2073.8	323.8	573.0	568.1	195.3
MEAN	6.15	18.9	8.16	16.0	54.5	34.4	22.5	66.9	10.8	18.5	18.3	6.51
MAX	14	168	85	42	381	335	69	582	66	112	93	39
MIN	3.5	3.6	3.4	8.3	15	12	9.2	8.6	3.7	1.7	3.4	2.4
CFSM	.37	1.14	.49	.97	3.28	2.07	1.36	4.03	.65	1.11	1.10	.39
IN.	.43	1.27	.57	1.11	3.42	2.39	1.51	4.65	.73	1.28	1.27	.44

WTR YR 1990 TOTAL 8509.0 MEAN 23.3 MAX 582 MIN 1.7 CFSM 1.40 IN. 19.07

03353700 WEST FORK WHITE LICK CREEK AT DANVILLE, IN

LOCATION.--Lat 39°45'36", long 86°30'47", in NW¼NE¼ sec.10, T.15 N., R.1 W., Hendricks County, Hydrologic Unit 05120201, on downstream side of bridge on U.S. Highway 36, 0.5 mi upstream from small left-bank tributary, and 7 mi west of Avon.

DRAINAGE AREA.--28.8 mi^2.

PERIOD OF RECORD.--May 1958 to current year.

REVISED RECORDS.--WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 828.83 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 23, 1968, nonrecording gage and crest-stage gage on upstream side of bridge at same datum. Oct. 23, 1968, to Aug. 6, 1970, water-stage recorder on upstream side of bridge at same datum.

REMARKS.--Estimated daily discharges: Oct. 13-15, Dec. 9 to Jan. 4, and Jan. 14. Records fair except for estimated daily discharges, which are poor. Low flow affected by releases from Danville Filtration Plant.

AVERAGE DISCHARGE.--32 years, 30.1 ft^3/s, 14.19 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,330 ft^3/s July 14, 1962, gage height, 11.32 ft; maximum gage height, 12.13 ft July 13, 1979; no flow at times during most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 28, 1957, reached a stage of 16.0 ft, from floodmarks, discharge, 6,660 ft^3/s, from contracted-opening measurement.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 15	1030	1,110	6.73	May 13	0030	893	5.81
Mar. 10	2200	*1,810	*9.23	May 16	0115	1,470	8.12

Minimun daily discharge, 0.18 (ft^3/s) Sept. 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.9	8.4	6.7	200	38	63	76	5.6	12	10	2.2	.61
2	7.4	7.3	6.9	60	303	55	80	4.8	14	5.4	2.0	.42
3	5.5	6.9	5.1	25	173	44	44	6.6	18	4.0	1.7	.33
4	4.6	6.4	6.5	30	308	33	32	74	11	3.2	32	.23
5	4.6	6.6	6.6	43	178	29	24	90	9.4	2.7	46	.20
6	4.7	7.0	6.0	66	123	24	17	59	10	2.3	8.5	.18
7	4.5	21	4.6	36	109	20	13	39	9.5	1.8	4.3	.28
8	3.6	70	3.9	26	91	22	11	23	8.7	1.6	2.8	.38
9	3.4	55	3.7	25	89	23	10	16	8.4	1.7	2.3	.77
10	3.5	33	3.2	41	79	298	84	16	6.2	2.0	1.9	.51
11	3.3	23	2.9	30	61	830	118	8.8	5.3	15	1.6	.55
12	3.0	17	2.7	20	42	245	66	146	5.2	61	1.4	1.1
13	2.9	14	2.5	16	37	153	44	502	5.0	20	40	1.9
14	2.7	43	2.3	13	102	111	40	204	4.8	10	10	2.4
15	2.6	266	2.2	10	659	81	30	213	4.6	6.5	3.8	1.2
16	38	274	2.1	9.1	334	77	25	1010	3.9	4.2	2.5	.63
17	51	150	2.1	29	183	60	21	455	3.6	2.8	2.0	.30
18	14	97	2.1	48	135	40	14	192	3.6	2.3	1.7	.23
19	14	66	2.0	30	108	30	14	128	3.0	1.8	1.4	2.6
20	43	57	1.9	77	82	23	22	102	80	7.4	1.7	2.4
21	106	35	1.9	89	69	21	34	82	49	137	3.4	2.6
22	77	28	1.8	56	272	19	24	63	64	162	1.6	2.1
23	41	20	1.8	38	221	14	20	46	54	84	1.1	1.6
24	28	17	1.8	29	133	13	16	36	29	28	.92	1.3
25	23	16	1.9	31	92	12	13	37	16	12	.85	1.0
26	18	14	2.1	23	70	10	11	42	11	8.1	.79	.84
27	15	12	2.7	20	70	8.9	9.6	33	8.6	5.5	.77	.82
28	13	11	10	14	77	8.8	11	27	7.1	4.5	.67	1.0
29	11	7.2	15	18	---	14	8.2	21	7.1	3.7	31	1.1
30	10	7.3	35	14	---	14	6.8	16	15	5.2	3.3	.89
31	11	---	180	13	---	15	---	13	---	3.2	1.2	---
TOTAL	576.2	1396.1	330.0	1179.1	4238	2410.7	938.6	3710.8	487.0	618.9	215.40	30.47
MEAN	18.6	46.5	10.6	38.0	151	77.8	31.3	120	16.2	20.0	6.95	1.02
MAX	106	274	180	200	659	830	118	1010	80	162	46	2.6
MIN	2.6	6.4	1.8	9.1	37	8.8	6.8	4.8	3.0	1.6	.67	.18
CFSM	.65	1.62	.37	1.32	5.26	2.70	1.09	4.16	.56	.69	.24	.04
IN.	.74	1.80	.43	1.52	5.47	3.11	1.21	4.79	.63	.80	.28	.04

CAL YR 1989 TOTAL 13442.4 MEAN 36.8 MAX 761 MIN 1.8 CFSM 1.28 IN. 17.36
WTR YR 1990 TOTAL 16131.27 MEAN 44.2 MAX 1010 MIN .18 CFSM 1.53 IN. 20.84

03353800 WHITE LICK CREEK AT MOORESVILLE, IN

LOCATION.--Lat 39°36'28", long 86°22'56", in NE¼SE¼ sec.35, T.14 N., R.1 E., Morgan County, Hydrologic Unit 05120201, on right bank at downstream side of bridge on State Highway 42 at Mooresville, 0.9 mi downstream from McCracken Creek, 2.0 mi upstream from East Fork White Lick Creek, and at mile 11.4.

DRAINAGE AREA.--212 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 644.64 ft above National Geodetic Vertical Datum of 1929. Dec. 10, 1963 to Sept. 30, 1964, nonrecording gage at bridge 1,950 ft upstream at datum 1.39 ft higher.

REMARKS.--Estimated daily discharges: Dec. 10 to Jan. 2, and Feb. 25-27. Records good except for Dec. 10 to Jan. 2, which are poor. Pumpage from a well field above gage affects low flows.

AVERAGE DISCHARGE.--33 years, 220 ft^3/s, 14.09 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,000 ft^3/s July 13, 1979, gage height, 23.31 ft; minimum daily, 0.68 ft^3/s Aug. 27, 1988 (affected by upstream pumpage).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 28, 1957, reached a stage of 22.5 ft, from levels to high-water mark by State of Indiana, Department of Natural Resources.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 15	1600	7,650	19.04	May 13	0800	3,420	14.73
Mar. 11	0900	*10,700	*20.43	May 16	1600	7,630	19.03

Minimum daily discharge, 19 ft^3/s Sept. 7, 8, 27, 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	108	103	138	320	184	338	407	116	121	170	50	30
2	106	98	134	250	1430	311	515	108	118	83	42	25
3	101	92	128	202	951	282	319	114	124	67	38	23
4	93	88	121	520	1510	247	259	302	116	59	81	21
5	88	86	123	645	955	226	231	535	103	53	192	20
6	85	87	126	352	598	208	200	366	99	49	85	20
7	84	127	122	255	510	187	177	291	108	46	57	19
8	79	247	113	215	433	182	163	215	96	44	46	19
9	76	265	105	194	423	199	154	178	93	42	41	31
10	74	203	92	207	408	267	384	174	109	41	36	26
11	72	159	87	212	332	6200	703	154	82	81	34	23
12	70	138	82	186	283	1560	402	593	71	145	33	21
13	68	124	78	150	254	881	292	2260	64	147	118	25
14	66	129	77	140	282	637	265	957	61	103	106	37
15	64	1030	75	135	3750	499	239	779	57	79	63	44
16	77	1420	74	130	2100	500	213	5790	54	63	46	32
17	835	683	74	136	919	404	197	3250	51	53	38	25
18	229	437	74	201	610	325	172	1150	49	46	34	24
19	176	328	73	197	482	277	159	697	44	42	30	55
20	256	293	72	264	383	242	176	493	208	46	32	40
21	349	263	69	424	326	223	252	375	308	247	67	32
22	283	231	66	335	968	221	210	297	188	343	61	49
23	208	211	64	262	1200	199	183	243	247	319	42	34
24	174	191	60	236	665	184	169	213	158	145	34	25
25	154	181	58	219	410	178	156	211	114	94	30	22
26	139	179	57	227	350	168	144	255	89	69	27	20
27	128	171	55	200	340	157	137	251	76	57	25	19
28	119	166	53	186	393	151	133	210	68	51	23	19
29	112	154	58	176	---	175	132	181	62	46	69	20
30	108	142	90	181	---	206	122	153	143	76	74	20
31	106	---	450	172	---	214	---	135	---	89	40	---
TOTAL	4687	8026	3048	7529	21449	16048	7265	21046	3281	2995	1694	820
MEAN	151	268	98.3	243	766	518	242	679	109	96.6	54.6	27.3
MAX	835	1420	450	645	3750	6200	703	5790	308	343	192	55
MIN	64	86	53	130	184	151	122	108	44	41	23	19
CFSM	.71	1.26	.46	1.15	3.61	2.44	1.14	3.20	.52	.46	.26	.13
IN.	.82	1.41	.53	1.32	3.76	2.82	1.27	3.69	.58	.53	.30	.14

CAL YR 1989 TOTAL 95220 MEAN 261 MAX 4910 MIN 36 CFSM 1.23 IN. 16.71
WTR YR 1990 TOTAL 97888 MEAN 268 MAX 6200 MIN 19 CFSM 1.27 IN. 17.18

03354000 WHITE RIVER NEAR CENTERTON, IN
(National stream-quality accounting network station)

LOCATION.--Lat 39°29'51", long 86°24'02", in NE¼NE¼ sec.10, T.12 N., R.1 E., Morgan County, Hydrologic Unit 05120201, on right bank at upstream side of bridge on Blue Bluff Road, 0.8 mi downstream from White Lick Creek, 1 mi south of Centerton, and at mile 199.3.

DRAINAGE AREA.--2,444 mi^2.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1925 to September 1930 (gage heights 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.

REVISED RECORDS.--WSP 1335: 1948-49. WSP 1909: 1931(M). WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 595.44 ft above National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark), levels by Indianapolis Power and Light Co. See WSP 1725 for history of changes prior to July 1953. July 1953 to Aug. 7, 1975, water-stage recorder at site 0.4 mi downstream at same datum.

REMARKS.--Estimated daily discharges: Feb. 2-7. Records good. Flow regulated up upstream reservoirs.

AVERAGE DISCHARGE.--45 years (1930-31, 1946 to current year), 2,444 ft^3/s, 13.58 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 50,500 ft^3/s Apr. 22, 1964, gage height, 17.57 ft, at site 0.4 mile downstream; minimum daily, 131 ft^3/s Nov. 15, 1930.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1913 reached a stage of 22.8 ft at Martinsville site (from information by Indiana State Highway Commission) and 21.9 ft at site 0.4 mi downstream (from information by Corps of Engineers), discharge, 90,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 9,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 16	0300	10,700	9.44	Mar. 11	2100	23,100	14.73
Feb. 5	----	a 14,500	----	May 17	0600	*31,300	*16.38
Feb. 16	0400	22,500	14.57	June 12	0300	14,400	11.65
Feb. 24	1300	10,400	9.23				

a - Estimated

Minimum daily discharge, 447 ft^3/s Dec. 22, result of freezeup.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1530	1140	1520	2780	1690	4360	3220	1660	2350	1830	1170	4810
2	1450	1260	1450	2940	7200	4120	4330	1560	2270	1540	1050	2990
3	1400	1290	1420	2830	9400	3790	3640	1550	2520	1400	982	2240
4	1350	1210	1330	2900	12300	3450	3200	3020	2660	1270	1180	1870
5	1290	1150	1310	3220	13000	3140	2840	5730	2580	1200	2440	1610
6	1240	1180	1320	3340	9600	2900	2560	6210	2280	1150	1560	1410
7	1270	1390	1340	2860	7800	2720	2310	5510	2290	1070	1580	1270
8	1210	1990	1260	2480	6160	2410	2050	3890	2050	1030	1340	1200
9	1140	2210	1200	2280	5470	2490	1990	3050	6410	986	1110	1690
10	1120	2200	1160	1980	5070	2730	2850	2690	10500	1040	970	1490
11	1080	2060	1140	2100	4500	16700	6390	2320	13300	1280	900	1590
12	1070	1790	1120	1860	4090	18900	7350	4460	13000	3020	852	1590
13	1030	1600	1110	1620	3470	18600	6850	11900	6110	4490	2180	1680
14	1020	1470	1050	1630	3310	15000	4990	10600	4130	5050	2040	1420
15	992	3760	1010	1640	11700	8370	4080	11000	3490	4500	1770	1450
16	973	9580	1000	1560	20700	7430	3480	19500	2840	3670	1550	1370
17	2260	8140	816	1520	18600	6250	3050	28600	2460	2850	1240	1450
18	1870	7930	693	1400	17400	5460	2690	21000	2260	2140	1070	1310
19	1890	5490	796	1330	13800	4620	2400	15500	2020	1730	1020	1640
20	2140	3860	725	2030	7640	3920	2250	8600	3730	1570	2040	1540
21	2170	3220	614	2330	5960	3370	3190	6180	4140	3460	2740	1360
22	2270	2900	447	2490	6580	3110	2910	4800	2790	2770	5710	1740
23	2350	2540	480	2570	10100	2920	2850	4070	3070	4060	7650	1450
24	2180	2280	484	2470	10200	2720	2560	3580	3340	3870	6390	1460
25	1810	2100	659	2220	8690	2470	2280	3230	3010	3390	3970	1460
26	1660	2060	717	1990	6130	2310	2150	4240	2480	2430	2860	1350
27	1440	2200	772	1920	5050	2160	1930	4930	2130	1910	2240	1210
28	1350	1870	789	1610	4720	2040	1910	4100	2070	1600	1850	1110
29	1360	1700	868	1600	---	2130	1840	3550	1810	1410	2550	1040
30	1200	1560	1100	1610	---	2360	1690	3050	1740	1410	4190	995
31	1170	---	3030	1530	---	2640	---	2660	---	1410	6500	---
TOTAL	46285	83130	32730	66640	240330	165590	95830	212740	115830	70536	74694	48795
MEAN	1493	2771	1056	2150	8583	5342	3194	6863	3861	2275	2409	1626
MAX	2350	9580	3030	3340	20700	18900	7350	28600	13300	5050	7650	4810
MIN	973	1140	447	1330	1690	2040	1690	1550	1740	986	852	995
CFSM	.61	1.13	.43	.88	3.51	2.19	1.31	2.81	1.58	.93	.99	.67
IN.	.70	1.27	.50	1.01	3.66	2.52	1.46	3.24	1.76	1.07	1.14	.74

CAL YR 1989 TOTAL 1142283 MEAN 3130 MAX 24000 MIN 447 CFSM 1.28 IN. 17.39
WTR YR 1990 TOTAL 1253130 MEAN 3433 MAX 28600 MIN 447 CFSM 1.40 IN. 19.07

03354000 WHITE RIVER NEAR CENTERTON, IN
(National stream-quality accounting network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--
CHEMICAL ANALYSIS: October 1986 to current year.
WATER TEMPERATURE: September 1953 to April 1956, October 1966 to September 1967, May 1970 to September 1972, October 1977 to July 1980, October 1982 to June 1985.
SEDIMENT DISCHARGE: March 1965 to September 1977, October 1986 to current year (partial-record station).

EXTREMES FOR PERIOD OF RECORD.--Water temperature: Maximum, 33 °C July 3, 1970; minimum, -0.5 °C, several days during winters.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	SPE-CIFIC CON-DUCI-ANCE LAB (US/CM) (90095)	PH (STAND-ARD UNITS) (00400)	PH LAB (STAND-ARD UNITS) (00403)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)
OCT											
04...	1100	1240	874	868	7.9	7.9	14.0	16.0	754	9.2	95
DEC											
05...	1330	1250	886	893	8.1	7.8	11.0	6.0	739	11.5	95
FEB											
13...	1430	3350	745	748	8.0	7.9	15.5	8.0	744	11.1	96
APR											
11...	1145	6190	530	572	7.6	7.6	8.0	10.0	750	9.8	88
JUN											
19...	1245	1990	722	742	7.8	8.0	30.0	24.5	738	8.3	104
SEP											
05...	1315	1590	687	705	8.0	8.0	32.0	25.5	733	8.6	110

DATE	TUR-BID-ITY (NTU) (00076)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD-NESS TOTAL (MG/L AS CACO3) (00900)	HARD-NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY WAT DIS FIX END FIELD CACO3 (MG/L) (39036)	ALKA-LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)
OCT											
04...	5.0	290	62	350	72	93	29	47	4.2	270	280
DEC											
05...	0.9	660	64	350	54	94	29	45	4.5	290	300
FEB											
13...	3.0	5200	24	330	86	87	27	30	2.8	240	242
APR											
11...	22	23000	4600	230	64	62	19	27	2.6	170	170
JUN											
19...	21	1400	120	320	79	84	26	39	3.8	230	238
SEP											
05...	13	370	240	280	61	74	24	38	4.4	220	222

DATE	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	BICAR-BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR-BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)
OCT											
04...	270	342	0	82	62	0.4	9.1	499	512	1670	0.04
DEC											
05...	278	366	0	76	71	0.3	8.4	529	530	1790	0.04
FEB											
13...	239	295	0	65	53	0.3	7.7	468	438	4230	0.06
APR											
11...	172	207	0	42	41	0.2	4.5	319	312	5330	0.05
JUN											
19...	236	290	0	79	59	0.5	8.5	419	461	2250	0.02
SEP											
05...	229	271	0	62	54	0.4	9.0	421	400	1810	0.02

03354000 WHITE RIVER NEAR CENTERTON, IN --Continued
(National stream-quality accounting network station)

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHORUS TOTAL (MG/L AS P) (00665)	PHOS-PHORUS DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	ARSENIC DIS-SOLVED (UG/L AS AS) (01000)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)
OCT										
04...	3.5	0.02	0.03	0.9	0.50	0.39	0.36	10	2	74
DEC										
05...	4.4	0.17	0.16	1.0	0.51	0.43	0.39	20	<1	70
FEB										
13...	4.4	0.34	0.33	1.8	0.27	--	0.16	--	--	--
APR										
11...	2.4	0.16	0.15	1.1	0.32	0.13	0.12	20	1	47
JUN										
19...	3.9	0.01	<0.01	1.0	0.33	0.33	0.33	50	2	74
SEP										
05...	2.1	0.05	0.02	0.7	0.34	0.34	0.32	--	--	--

DATE	BERYL-LIUM, DIS-SOLVED (UG/L AS BE) (01010)	CADMIUM DIS-SOLVED (UG/L AS CD) (01025)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	LITHIUM DIS-SOLVED (UG/L AS LI) (01130)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY DIS-SOLVED (UG/L AS HG) (71890)
OCT										
04...	<0.5	<1	1	<3	<1	12	<1	10	22	0.2
DEC										
05...	<0.5	1	<1	<3	6	8	1	8	48	<0.1
FEB										
13...	--	--	--	--	--	--	--	--	--	--
APR										
11...	<0.5	<1	<1	<3	4	15	<1	5	13	0.3
JUN										
19...	<0.5	<1	<1	<3	21	6	1	8	8	<0.1
SEP										
05...	--	--	--	--	--	--	--	--	--	--

DATE	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO) (01060)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	SELE-NIUM, DIS-SOLVED (UG/L AS SE) (01145)	SILVER, DIS-SOLVED (UG/L AS AG) (01075)	STRON-TIUM, DIS-SOLVED (UG/L AS SR) (01080)	VANA-DIUM, DIS-SOLVED (UG/L AS V) (01085)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	SEDI-MENT, SUS-PENDED (MG/L) (80154)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT										
04...	<10	5	<1	<1	290	<6	17	15	50	97
DEC										
05...	<10	5	<1	<1	310	<6	16	5	18	98
FEB										
13...	--	--	--	--	--	--	--	38	347	82
APR										
11...	<10	2	<1	<1	180	<6	7	169	2820	72
JUN										
19...	<10	4	<1	<1	240	<6	8	47	253	97
SEP										
05...	--	--	--	--	--	--	--	50	215	98

03354500 BEANBLOSSOM CREEK AT BEANBLOSSOM, IN

LOCATION.--Lat 39°15'45", long 86°14'55", in SW¼NW¼ sec.31, T.10 N., R.3 E., Brown County, Hydrologic Unit 05120202, on right bank 15 ft downstream from bridge on State Highway 135, 0.3 mi south of Beanblossom, 2.7 mi upstream from North Fork Beanblossom Creek, and at mile 42.1.

DRAINAGE AREA.--14.6 mi^2.

PERIOD OF RECORD.--October 1951 to current year. Prior to October 1965, published as Bean Blossom Creek at Bean Blossom.

REVISED RECORDS.--WSP 1555: 1952, 1953(M), 1956-57. WSP 1705: 1952(P). WDR IN-79-1: 1978.

GAGE.--Water-stage recorder. Datum of gage is 673.65 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 1-15, Dec. 13-29, Jan. 2, and June 9 to Sept. 28. Records poor.

AVERAGE DISCHARGE.--39 years, 16.0 ft^3/s, 14.91 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,140 ft^3/s June 23, 1960, gage height, 11.78 ft, from curve extended above 2,000 ft^3/s on basis of contracted-opening measurement at gage height 11.78 ft; no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 15	1630	732	6.62	May 17	0200	806	7.07
Feb. 15	1145	*1,140	8.84				

Minimum daily discharge, 0.36 ft^3/s Aug. 21.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	7.7	9.2	68	31	31	45	17	6.3	3.6	3.5	4.0
2	1.5	7.2	8.7	35	83	28	42	16	7.0	3.4	2.9	2.8
3	1.3	6.7	7.9	17	44	24	30	22	6.5	3.1	2.5	2.3
4	1.2	5.9	7.7	33	307	22	25	191	4.9	2.8	10	2.1
5	1.2	8.0	7.7	25	69	20	22	64	4.6	2.6	30	2.0
6	1.2	6.6	8.9	18	37	20	19	43	5.0	2.4	11	1.8
7	1.1	14	8.2	13	29	19	18	31	13	2.3	4.0	1.6
8	1.1	73	7.5	11	24	18	16	24	6.7	2.3	3.3	1.4
9	1.0	29	7.7	10	26	18	16	17	4.3	2.2	2.8	3.2
10	1.1	19	7.1	10	28	18	138	25	3.8	2.1	2.6	5.2
11	1.1	14	7.1	10	23	19	81	18	3.5	12	2.3	2.2
12	1.0	12	7.0	10	19	18	45	121	3.2	100	2.2	1.6
13	.98	10	6.5	11	17	17	35	152	3.1	50	4.7	1.5
14	.97	17	6.1	10	15	17	31	42	3.0	22	4.5	1.5
15	5.0	247	5.8	10	417	18	28	35	2.9	12	3.5	1.4
16	19	126	5.6	9.1	106	30	25	386	2.8	6.4	2.2	1.3
17	12	41	5.4	11	48	25	22	298	2.7	5.1	1.9	1.2
18	6.4	25	5.2	12	35	21	20	43	4.2	4.7	1.7	1.1
19	10	21	5.2	12	28	19	19	31	4.0	4.2	1.5	19
20	12	16	5.0	72	24	17	24	27	51	3.9	4.5	7.4
21	12	12	5.0	39	23	16	34	24	55	46	20	3.8
22	11	12	4.9	23	40	16	28	21	17	23	17	2.9
23	8.3	13	4.8	16	39	15	25	14	44	12	7.5	2.1
24	7.1	12	4.8	12	31	17	22	13	16	6.8	4.8	1.7
25	6.9	12	5.0	10	27	18	20	14	9.0	4.9	3.7	1.5
26	7.4	11	5.4	8.7	25	18	18	15	6.3	4.0	2.8	1.4
27	6.5	11	6.0	8.6	38	17	17	10	5.2	3.4	2.3	1.3
28	8.0	10	7.0	8.9	38	16	16	9.4	4.7	3.2	2.0	1.2
29	7.7	10	10	9.0	---	17	15	9.3	4.2	3.1	40	.99
30	6.2	9.8	18	9.2	---	21	15	7.6	3.9	2.9	19	1.1
31	8.4	---	230	9.2	---	34	---	6.9	---	4.1	6.0	---
TOTAL	170.25	818.9	440.4	560.7	1671	624	911	1747.2	307.8	360.5	226.7	82.59
MEAN	5.49	27.3	14.2	18.1	59.7	20.1	30.4	56.4	10.3	11.6	7.31	2.75
MAX	19	247	230	72	417	34	138	386	55	100	40	19
MIN	.97	5.9	4.8	8.6	15	15	15	6.9	2.7	2.1	1.5	.99
CFSM	.38	1.87	.97	1.24	4.09	1.38	2.08	3.86	.70	.80	.50	.19
IN.	.43	2.09	1.12	1.43	4.26	1.59	2.32	4.45	.78	.92	.58	.21

CAL YR 1989 TOTAL 9046.00 MEAN 24.8 MAX 448 MIN .41 CFSM 1.70 IN. 23.05
WTR YR 1990 TOTAL 7921.04 MEAN 21.7 MAX 417 MIN .97 CFSM 1.49 IN. 20.18

03357000 WHITE RIVER AT SPENCER, IN

LOCATION.--Lat 39°16'49", long 86°45'42", IN NE¼NE¼ SEC.29, T.10 N., R. 3 W., Owen County, Hydrologic Unit 05120202, on right bank at downstream side of county road bridge at the south edge of Spencer, 3.3 mi upstream from McBrides Creek, and at mile 165.9.

DRAINAGE AREA.--2,980 mi^2.

PERIOD OF RECORD.--July 1925 to September 1971 (discharge), October 1971 to current year (gage heights only).

GAGE.--Data-Collection Platform. Datum of gage is 526.04 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 26, 1940, nonrecording gage at same site and datum.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 23.2 ft Jan. 16, 1937; minimum gage height, 0.88 ft Sept. 25, 30, and Oct. 1, 1941.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 28.5 ft Mar. 26, 1913, from flood marks.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 21.92 ft May 18; minimum gage height, 3.50 ft Dec. 30.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.84	3.89	4.70	8.27	5.99	9.08	8.10	5.14	6.10	5.09	4.33	8.62
2	4.70	3.97	4.63	8.13	11.15	8.71	9.59	4.99	5.90	4.59	4.07	6.66
3	4.59	4.09	4.58	7.58	12.74	8.29	8.57	5.00	6.25	4.40	3.89	5.71
4	4.47	4.04	4.41	7.68	15.00	7.90	7.79	8.92	6.18	4.17	5.30	5.18
5	4.34	3.84	4.30	8.79	16.98	7.49	7.23	11.34	6.16	4.02	6.76	4.79
6	4.23	3.84	4.34	8.74	16.45	7.12	6.77	11.29	5.87	3.92	5.06	4.48
7	4.13	4.15	4.30	7.86	14.53	6.86	6.34	10.58	5.96	3.79	4.85	4.26
8	4.13	5.31	4.22	6.89	11.37	6.43	5.94	8.61	5.61	3.71	4.55	4.18
9	4.02	5.86	4.09	6.31	10.19	6.49	5.68	7.51	8.89	3.61	4.15	4.18
10	3.95	5.71	4.00	6.00	9.68	6.45	7.98	6.90	12.09	3.56	3.90	4.49
11	3.85	5.49	3.97	5.81	9.04	13.02	11.92	6.41	13.93	3.81	3.74	4.37
12	3.80	5.10	3.89	5.70	8.51	17.21	12.07	10.69	15.31	8.19	3.61	4.57
13	3.73	4.81	3.90	5.43	7.89	18.05	11.78	15.39	12.00	8.57	4.37	4.58
14	3.67	4.81	3.77	5.17	7.68	17.89	9.73	16.59	8.35	8.85	5.46	4.28
15	3.61	10.64	3.69	4.95	15.32	15.35	8.65	16.20	7.49	8.37	4.87	4.33
16	3.58	14.31	4.50	4.81	18.89	12.06	7.83	18.62	6.63	7.38	4.73	4.11
17	5.28	14.08	5.00	4.79	19.89	10.83	7.29	21.45	6.17	6.57	4.29	4.22
18	5.10	13.59	6.00	5.01	19.10	9.85	6.84	21.52	6.05	5.70	3.98	4.09
19	4.95	10.98	5.91	5.09	18.23	9.02	6.37	19.84	5.53	5.15	3.80	4.31
20	5.34	8.66	5.59	7.36	15.07	8.24	6.32	17.32	6.82	4.83	4.74	4.65
21	5.39	7.66	5.05	7.84	10.82	7.60	7.60	11.86	8.35	7.30	6.11	4.22
22	5.41	7.17	4.66	7.55	11.21	7.25	7.20	9.75	6.65	6.18	8.33	4.71
23	5.56	6.54	4.56	7.37	13.74	7.07	7.04	8.69	6.77	7.69	10.19	4.29
24	5.47	6.12	4.38	6.99	14.18	6.69	6.62	7.98	6.89	7.25	10.07	4.18
25	5.01	5.84	4.44	6.49	13.74	6.57	6.22	7.46	6.63	7.07	7.73	4.25
26	4.84	5.65	4.45	6.28	10.99	6.28	6.01	8.14	5.97	6.02	6.44	4.11
27	4.50	5.79	4.52	5.92	9.90	6.10	5.67	8.91	5.50	5.34	5.63	3.93
28	4.31	5.45	4.55	5.63	9.43	5.90	5.50	8.20	5.42	4.87	5.09	3.79
29	4.31	5.06	4.18	5.45	---	6.07	5.47	7.59	5.05	5.35	6.18	3.67
30	4.06	4.88	3.92	5.43	---	6.53	5.18	6.93	4.86	5.25	7.25	3.58
31	3.96	---	8.42	5.35	---	7.17	---	6.50	---	4.94	9.41	---
MEAN	4.49	6.58	4.61	6.47	12.78	9.02	7.51	10.85	7.31	5.66	5.58	4.56
MAX	5.56	14.31	8.42	8.79	19.89	18.05	12.07	21.52	15.31	8.85	10.19	8.62
MIN	3.58	3.84	3.69	4.79	5.99	5.90	5.18	4.99	4.86	3.56	3.61	3.58

WTR YR 1990 MEAN 7.08 MAX 21.52 MIN 3.56

03357350 PLUM CREEK NEAR BAINBRIDGE, IN

LOCATION.--Lat 39°45'42", long 86°43'46", in SW¼SE¼ sec.3, T.15 N., R.3 W., Putnam County, Hydrologic Unit 05120203, on right upstream wingwall of bridge on U.S. Highway 36, 0.5 mi west of Groveland, and 4.5 mi east of Bainbridge.

DRAINAGE AREA.--3.00 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 828.44 ft above National Geodetic Vertical Datum of 1929 (Indiana Department of Highways bench mark).

REMARKS.--Estimated daily discharges: Dec. 9 to Jan. 3. Records fair except for estimated daily discharges and daily discharges below 0.20 ft^3/s, which are poor.

AVERAGE DISCHARGE.--21 years, 3.58 ft^3/s, 16.21 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 940 ft^3/s Sept. 14, 1989, gage height, 6.50 ft; no flow at times during 1970, 1975-77, 1983-89.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 150 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 15	0900	260	3.53	May 12	2130	312	3.74
Mar. 10	2345	582	5.06	May 15	2315	*593	*5.11

Minimum daily discharge, 0.10 ft^3/s Sept. 5, 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.73	.87	1.2	1.8	5.1	5.4	5.3	1.0	.95	.54	.30	.11
2	.70	.83	1.2	1.0	33	5.1	4.8	.87	.98	.37	.26	.11
3	.53	.77	.90	1.5	12	4.5	3.9	1.3	1.4	.33	.23	.11
4	.48	.76	1.1	21	43	3.9	3.4	12	.91	.27	1.3	.11
5	.51	.78	1.2	5.1	13	3.5	2.8	6.6	.79	.23	.60	.10
6	.53	.94	1.1	3.1	8.5	2.9	2.3	6.5	.80	.21	.33	.10
7	.51	2.9	.79	2.3	7.3	2.5	1.9	4.6	.85	.20	.27	.12
8	.46	3.9	.75	1.9	6.1	2.8	1.8	3.6	.74	.20	.24	.12
9	.42	2.9	.68	2.0	7.1	2.9	1.7	2.9	.58	.49	.21	.13
10	.39	2.1	.61	2.3	5.8	68	5.4	3.2	.47	.57	.20	.11
11	.35	1.8	.56	2.0	4.9	92	5.3	2.2	.44	1.9	.20	.11
12	.32	1.4	.51	1.5	4.2	12	4.2	52	.43	4.5	.20	2.7
13	.31	1.4	.47	1.1	3.9	7.7	3.6	41	.40	2.9	15	1.4
14	.34	1.8	.43	1.2	16	6.0	3.6	11	.37	2.7	2.0	.27
15	.40	19	.41	1.2	95	5.0	2.9	61	.36	1.4	.83	.22
16	.99	13	.37	1.2	19	4.7	2.5	128	.33	.73	.46	.12
17	1.9	6.1	.35	3.0	8.7	4.2	2.2	36	.30	.48	.34	.12
18	.90	4.5	.34	3.0	6.4	3.3	1.8	9.1	.29	.41	.28	.12
19	1.0	4.1	.33	2.2	5.2	2.9	1.8	6.2	.25	.37	.23	3.8
20	2.9	3.8	.31	4.8	4.5	2.6	3.0	5.1	4.1	.56	.18	.75
21	4.8	3.0	.25	5.2	4.3	2.6	3.5	4.3	1.6	4.1	.22	.35
22	3.7	2.7	.20	4.1	25	2.4	2.7	3.5	3.9	5.6	.26	.28
23	2.5	2.2	.18	3.4	12	1.9	2.3	2.9	2.0	2.9	.25	.18
24	1.9	2.0	.19	2.8	7.3	2.1	2.0	2.5	1.1	1.2	.19	.15
25	1.6	2.0	.21	3.0	5.6	1.9	1.7	3.1	.66	.67	.16	.14
26	1.4	1.8	.24	2.2	5.0	1.7	1.6	3.2	.54	.50	.15	.15
27	1.3	1.6	.26	2.3	7.1	1.5	1.4	2.4	.48	.44	.14	.13
28	1.2	1.6	.30	1.8	6.5	1.5	1.5	2.0	.43	.39	.14	.14
29	1.1	1.3	.35	2.1	---	2.3	1.3	1.6	.53	.36	.59	.14
30	1.0	1.3	.45	1.9	---	2.3	1.2	1.2	.61	.64	.14	.13
31	1.0	---	5.2	1.7	---	2.3	---	1.1	---	.38	.11	---
TOTAL	36.17	93.35	21.44	93.7	381.5	264.4	83.4	421.97	27.59	36.54	26.01	12.52
MEAN	1.17	3.11	.69	3.02	13.6	8.53	2.78	13.6	.92	1.18	.84	.42
MAX	4.8	19	5.2	21	95	92	5.4	128	4.1	5.6	15	3.8
MIN	.31	.76	.18	1.0	3.9	1.5	1.2	.87	.25	.20	.11	.10
CFSM	.39	1.04	.23	1.01	4.54	2.84	.93	4.54	.31	.39	.28	.14
IN.	.45	1.16	.27	1.16	4.73	3.28	1.03	5.23	.34	.45	.32	.16

CAL YR 1989 TOTAL 1214.64 MEAN 3.33 MAX 166 MIN .09 CFSM 1.11 IN. 15.06
WTR YR 1990 TOTAL 1498.59 MEAN 4.11 MAX 128 MIN .10 CFSM 1.37 IN. 18.58

03357500 BIG WALNUT CREEK NEAR REELSVILLE, IN

LOCATION.--Lat 39°32'11", long 86°58'35", in NW¼SW¼ sec.28, T.13 N., R.5 W., Putnam County, Hydrologic Unit 05120203, on left bank at downstream side of county highway bridge, 1.5 mi southwest of Reelsville, and 4.1 mi upstream from Mill Creek.

DRAINAGE AREA.--326 mi^2.

PERIOD OF RECORD.--July 1949 to current year. Published as Eel River near Reelsville, October 1952 to September 1956.

REVISED RECORDS.--WSP 1335: 1950. WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 588.24 ft above National Geodetic Vertical Datum of 1929 (levels by State of Indiana, Department of Natural Resources). Prior to Dec. 10, 1949, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Dec. 10 to Jan. 5, and Feb. 26-28. Records good except for Dec. 10 to Jan. 5, which are poor. Flow partly regulated by Soil Conservation Service control structures on tributaries to Little Walnut Creek beginning in 1971.

AVERAGE DISCHARGE.--41 years, 351 ft^3/s, 14.62 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,400 ft^3/s June 28, 1957, gage height, 18.63 ft, from rating curve extended above 18,000 ft^3/s on basis of slope-conveyance method; minimum daily, 1.4 ft^3/s Sept. 8, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 2,800 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 15	1900	6,370	13.47	May 13	0600	6,200	13.29
Mar. 11	2200	7,500	14.56	May 17	0800	*10,100	*15.99

Minimum daily discharge, 32 ft^3/s Sept. 27.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	268	155	208	360	310	548	643	176	260	229	206	72
2	251	146	202	250	1650	478	760	162	245	153	141	60
3	229	138	191	210	1360	419	568	170	324	122	109	52
4	204	132	179	540	2140	338	449	485	338	105	105	47
5	187	126	191	660	1650	291	390	836	249	93	198	44
6	175	128	191	437	1120	256	334	713	223	84	139	41
7	167	170	185	336	920	218	289	550	222	75	95	39
8	157	266	170	293	768	204	262	400	204	70	78	40
9	143	313	152	275	744	222	245	317	338	67	69	51
10	135	277	140	288	748	322	572	308	472	67	63	47
11	127	242	132	292	567	6540	895	261	261	131	58	43
12	122	213	122	270	443	4230	681	849	200	172	54	40
13	114	193	120	235	369	1880	510	5040	170	423	830	41
14	108	186	118	215	437	1270	489	2100	151	314	527	53
15	104	436	114	219	4030	980	438	1370	136	241	249	54
16	101	1210	112	208	4100	822	382	6710	125	178	169	43
17	312	840	111	245	1840	703	348	7840	116	133	127	37
18	196	590	113	307	1230	582	302	2650	112	105	106	34
19	146	464	110	294	955	492	271	1700	99	87	89	63
20	169	416	107	370	737	420	323	1220	377	80	77	68
21	237	377	100	465	585	381	428	975	662	229	77	56
22	306	334	97	432	1430	364	351	808	509	449	91	58
23	299	309	94	369	2110	338	304	665	540	345	80	46
24	261	286	92	337	1310	309	277	561	371	209	67	40
25	234	273	97	323	893	298	254	501	275	141	60	36
26	213	266	99	321	620	273	235	753	217	107	55	34
27	196	257	102	299	590	254	217	529	183	87	51	32
28	184	250	107	285	600	240	209	444	158	76	48	35
29	174	233	114	274	---	293	212	382	142	85	351	39
30	165	214	130	279	---	337	193	325	161	685	188	35
31	160	---	400	266	---	341	---	285	---	468	103	---
TOTAL	5844	9440	4400	9954	34256	24643	11831	40085	7840	5810	4660	1380
MEAN	189	315	142	321	1223	795	394	1293	261	187	150	46.0
MAX	312	1210	400	660	4100	6540	895	7840	662	685	830	72
MIN	101	126	92	208	310	204	193	162	99	67	48	32
CFSM	.58	.97	.44	.98	3.75	2.44	1.21	3.97	.80	.57	.46	.14
IN.	.67	1.08	.50	1.14	3.91	2.81	1.35	4.57	.89	.66	.53	.16

CAL YR 1989 TOTAL 143312 MEAN 393 MAX 8270 MIN 48 CFSM 1.20 IN. 16.35
WTR YR 1990 TOTAL 160143 MEAN 439 MAX 7840 MIN 32 CFSM 1.35 IN. 18.27

03358000 MILL CREEK NEAR CATARACT, IN

LOCATION.--Lat 39°26'00", long 86°45'48", in NE¼SE¼ sec.32, T.12 N., R.3 W., Owen County, Hydrologic Unit 05120203, on left bank at downstream side of bridge on U.S. Highway 231, 3 mi east of Cataract, and at mile 17.5.

DRAINAGE AREA.--245 mi^2.

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

REVISED RECORDS.--WSP 1505: 1956(P). WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 706.40 ft above National Geodetic Vertical Datum of 1929. 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.

REMARKS.--Estimated daily discharges: Nov. 15-19, Dec. 14 to Jan. 4, Jan. 14-16, 20-24, 26, Feb. 1-11, 14-28, Mar. 11-13. Records fair except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--41 years, 263 ft^3/s, 14.58 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,400 ft^3/s June 24, 1960, gage height, 22.58 ft; minimum daily, 0.1 ft^3/s Sept. 7, 28, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 15	---	a 2,700	-----	May 17	1500	*5,190	*16.63
Mar. 11	---	a 4,500	-----				

a - Estimated daily discharge.

Minimum daily discharge, 17 ft^3/s Sept. 18.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72	61	94	390	260	322	678	95	102	535	232	70
2	72	58	90	280	1300	294	682	87	97	174	130	49
3	67	53	81	220	900	265	439	90	101	103	92	38
4	60	51	85	500	1600	221	321	518	92	77	159	32
5	58	51	88	760	960	203	267	543	82	63	550	28
6	58	52	86	395	640	185	216	399	79	52	194	26
7	56	62	79	278	550	163	183	317	92	45	109	23
8	53	201	68	232	480	161	163	219	89	40	81	22
9	50	283	64	201	430	189	150	172	77	37	66	39
10	49	161	71	227	435	236	427	158	67	33	55	35
11	49	119	68	213	340	4500	702	131	58	68	48	26
12	47	101	59	173	265	4000	475	859	55	1340	43	23
13	46	87	56	119	244	1100	324	1130	53	481	164	32
14	45	96	54	113	260	490	292	1380	50	246	137	34
15	43	610	52	109	2700	363	254	876	49	151	66	25
16	43	1200	50	106	2100	383	221	2850	46	107	50	22
17	231	680	49	129	1000	329	198	4900	43	78	43	19
18	172	420	49	209	660	259	160	3860	79	62	40	17
19	100	320	48	162	450	216	145	1210	47	53	37	96
20	127	293	46	280	390	187	169	482	495	51	32	112
21	216	234	44	440	315	177	389	325	435	740	66	50
22	211	192	43	380	800	169	270	256	354	541	138	80
23	146	166	41	300	940	155	212	209	391	500	107	63
24	110	145	40	270	550	141	181	182	186	200	61	41
25	92	138	40	250	440	148	156	165	127	119	44	32
26	83	134	41	260	380	135	140	395	97	84	36	29
27	75	124	43	224	350	123	129	267	83	67	31	25
28	70	123	47	198	430	117	122	190	72	56	28	22
29	66	102	60	187	---	143	118	162	64	54	493	21
30	69	94	80	192	---	261	102	130	75	1020	412	23
31	63	---	460	197	---	361	---	111	---	777	130	---
TOTAL	2699	6411	2276	7994	20169	15996	8285	22668	3737	7954	3874	1154
MEAN	87.1	214	73.4	258	720	516	276	731	125	257	125	38.5
MAX	231	1200	460	760	2700	4500	702	4900	495	1340	550	112
MIN	43	51	40	106	244	117	102	87	43	33	28	17
CFSM	.36	.87	.30	1.05	2.94	2.11	1.13	2.98	.51	1.05	.51	.16
IN.	.41	.97	.35	1.21	3.06	2.43	1.26	3.44	.57	1.21	.59	.18

CAL YR 1989 TOTAL 106657 MEAN 292 MAX 3460 MIN 15 CFSM 1.19 IN. 16.19
WTR YR 1990 TOTAL 103217 MEAN 283 MAX 4900 MIN 17 CFSM 1.15 IN. 15.67

03359000 MILL CREEK NEAR MANHATTAN, IN

LOCATION.--Lat 39°29'16", long 86°55'30", in SE¼SE¼ sec.11, T.12 N., R.5 W., Putnam County, Hydrologic Unit 05120203, on left bank 0.3 mi upstream from Cagles Mill dam, 0.4 mi downstream from Cagles Mill Lake, 1.3 mi upstream from Deer Creek, 5.0 mi south of Manhattan, and at mile 2.3.

DRAINAGE AREA.--294 mi^2.

PERIOD OF RECORD.--May to September 1931 (fragmentary), October 1938 to current year. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 1335: 1940-41. WSP 2109: Drainage area.

GAGE.--Data-Collection Platform. Datum of gage is 581.83 ft above National Geodetic Vertical Datum of 1929. May 12, 1941 to Sept. 30, 1974, water-stage recorder at site 0.3 mi downstream. Data-Collection Platform installed on Apr. 22, 1986. See WSP 1725 for history of changes prior to May 12, 1941.

REMARKS.--Flow regulated by Cagles Mill Lake since July 1953. Daily discharge computed from relation between discharge, head, and gate openings for Cagles Mill Lake beginning Oct. 1, 1974.

COOPERATION.--Records of daily discharge provided by U.S. Army Corps of Engineers beginning Oct. 1, 1976.

AVERAGE DISCHARGE.--52 years (1938 to current year), 312 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,960 ft^3/s Jan. 5, 1950, gage height, 18.38 ft; no flow Aug. 7, 1953.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 1,840 ft^3/s Mar. 28; minimum daily, 33 ft^3/s Sept. 7-14, 18.

PROVISIONAL DATA SUBJECT TO REVISION

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1810	88	145	343	270	1200	1330	155	1780	123	849	338
2	1790	82	64	688	148	1410	1090	125	1220	210	766	397
3	1760	82	72	833	102	1540	1090	106	824	210	227	159
4	1740	82	83	700	105	1520	1240	109	1150	210	50	50
5	1550	70	83	629	108	1510	1500	298	1380	145	143	50
6	1610	64	83	629	109	1320	1480	430	1460	90	492	40
7	1670	64	137	627	110	1000	906	430	1210	90	480	33
8	1650	138	185	622	241	998	222	657	968	89	113	33
9	1620	270	115	485	479	1280	70	796	1040	67	69	33
10	1600	270	46	411	798	1350	73	633	697	50	69	33
11	1400	197	46	337	953	287	78	518	237	50	69	33
12	1100	65	47	204	1250	117	207	158	237	352	69	33
13	1080	77	47	164	1520	120	440	132	236	924	112	33
14	1070	100	47	102	1170	120	439	106	363	1040	183	33
15	1050	234	47	102	504	121	439	108	909	604	162	43
16	769	323	47	137	88	121	860	111	1420	124	89	50
17	627	336	47	205	91	121	1060	116	1570	124	64	42
18	494	338	47	205	92	390	1050	121	1550	76	50	33
19	414	338	47	329	92	878	801	124	1060	50	50	59
20	274	674	47	411	92	1170	352	124	217	50	50	196
21	205	863	47	414	93	1430	345	124	103	52	50	185
22	205	928	47	683	93	1670	560	114	260	55	50	50
23	205	1040	47	825	94	1740	418	252	729	473	88	50
24	205	872	47	515	95	1720	209	536	1150	854	155	62
25	167	544	47	236	95	1700	209	535	1290	845	112	78
26	99	226	68	273	363	1680	209	357	1260	427	78	89
27	99	65	198	339	530	1800	176	581	793	69	69	89
28	99	65	126	207	861	1840	155	890	275	81	62	89
29	99	138	64	176	---	1810	155	1160	156	89	50	88
30	98	270	65	270	---	1780	155	1650	82	299	128	75
31	98	---	165	269	---	1760	---	1800	---	711	265	---
TOTAL	26657	8903	2403	12370	10546	35503	17318	13356	25626	8633	5263	2576
MEAN	860	297	77.5	399	377	1145	577	431	854	278	170	85.9
MAX	1810	1040	198	833	1520	1840	1500	1800	1780	1040	849	397
MIN	98	64	46	102	88	117	70	106	82	50	50	33

CAL YR 1989 TOTAL 140656 MEAN 385 MAX 1870 MIN 17
WTR YR 1990 TOTAL 169154 MEAN 463 MAX 1840 MIN 33

03360000 EEL RIVER AT BOWLING GREEN, IN

LOCATION.--Lat 39°22'58", long 87°01'14", in NE¼NE¼ sec.24, T.11 N., R.6 W., Clay County, Hydrologic Unit 05120203, on left bank 500 ft downstream from bridge on State Highway 46 at Bowling Green, 0.2 mi downstream from Jordan Creek, and at mile 38.4.

DRAINAGE AREA.--830 mi^2.

PERIOD OF RECORD.--January 1931 to current year. Prior to October 1934, published as "near Centerpoint".

REVISED RECORDS.--WSP 893: 1935, 1937-39. WSP 973: 1937-38, 1939(M). WSP 1335: 1931(M). WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 548.02 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). See WSP 1725 for history of changes prior to Dec. 1, 1949.

REMARKS.--Estimated daily discharges: Dec. 11 to Jan. 4. Records good except for estimated daily discharges, which are poor. Flow regulated by Cagles Mill Lake.

AVERAGE DISCHARGE.--59 years, 884 ft^3/s, 14.46 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 34,000 ft^3/s Jan. 4, 1950, gage height, 23.53 ft; minimum daily, 11 ft^3/s Oct. 7, 8, 1954.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, about 30.0 ft in 1875, present datum, from information by U.S. Army Corps of Engineers.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 15,400 ft^3/s May 17, gage height, 20.09 ft; minimum daily, 106 ft^3/s Sept. 18.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1990	259	443	1000	742	1940	2790	461	2070	496	1230	356
2	1960	238	298	820	3950	2050	2600	428	1930	478	1060	483
3	1930	228	283	1000	2980	2180	2030	399	1060	417	683	343
4	1890	221	282	1400	3790	2100	1820	1050	1510	387	298	169
5	1800	215	278	1930	3130	2030	2050	1480	1620	361	355	143
6	1690	202	288	1340	1810	1960	1960	1530	1730	252	540	135
7	1800	217	289	1130	1470	1520	1710	1300	1680	229	766	120
8	1780	316	362	1040	1260	1450	858	1110	1280	217	364	114
9	1740	609	345	945	1480	1560	530	1480	1270	206	221	130
10	1720	581	232	834	1690	1920	1420	975	1490	174	201	129
11	1660	514	210	815	1790	4210	2070	1180	658	230	189	119
12	1290	305	200	593	1780	7820	1260	2010	521	718	180	114
13	1250	261	195	510	2000	3380	1280	6810	475	1200	501	110
14	1230	270	190	403	1970	1890	1240	5380	477	1390	992	110
15	1210	612	182	395	5010	1430	1190	2390	820	1230	532	118
16	1090	2100	179	386	9650	1230	1270	8010	1370	438	316	123
17	912	1650	178	499	4070	1060	1630	15000	1650	348	255	116
18	941	1160	178	664	1970	1040	1560	8930	1720	293	206	106
19	708	938	175	661	1520	1370	1460	2870	1530	215	201	171
20	646	979	168	1160	1230	1650	1060	1900	1270	224	179	215
21	549	1320	160	1290	1050	1820	1370	1490	940	529	168	315
22	605	1260	154	1250	1890	2000	1220	1220	937	1020	175	201
23	585	1370	150	1370	3500	2120	1180	1010	1390	921	179	154
24	524	1310	150	1210	2170	2080	755	1310	1540	1190	232	133
25	481	944	153	729	1470	2060	696	1260	1640	1070	230	131
26	360	681	160	725	1230	2010	652	1840	1550	908	165	133
27	322	378	170	741	1490	2020	597	1290	1340	286	149	133
28	302	352	350	680	1630	2100	524	1510	626	237	142	130
29	287	335	220	476	---	2160	509	1630	429	234	314	142
30	273	469	280	642	---	2390	485	1890	370	1320	557	140
31	266	---	680	639	---	2380	---	2120	---	1390	398	---
TOTAL	33791	20294	7582	27277	67722	66930	39776	81263	36893	18608	11978	5036
MEAN	1090	676	245	880	2419	2159	1326	2621	1230	600	386	168
MAX	1990	2100	680	1930	9650	7820	2790	15000	2070	1390	1230	483
MIN	266	202	150	386	742	1040	485	399	370	174	142	106
CFSM	1.31	.82	.29	1.06	2.91	2.60	1.60	3.16	1.48	.72	.47	.20
IN.	1.51	.91	.34	1.22	3.04	3.00	1.78	3.64	1.65	.83	.54	.23

CAL YR 1989 TOTAL 369410 MEAN 1012 MAX 8600 MIN 98 CFSM 1.22 IN. 16.56
WTR YR 1990 TOTAL 417150 MEAN 1143 MAX 15000 MIN 106 CFSM 1.38 IN. 18.70

03360500 WHITE RIVER AT NEWBERRY, IN

LOCATION.--Lat 38°55'39", long 87°00'41", in NE¼NW¼ sec.30, T.6 N., R.5 W., Greene County, Hydrologic Unit 05120202, on left bank 0.4 mi upstream from bridge on State Highway 57 at Newberry, 1.9 mi downstream from Doans Creek, and at mile 113.0.

DRAINAGE AREA.--4,688 mi^2.

PERIOD OF RECORD.--September 1928 to current year. Prior to October 1948, published as West Fork White River at Newberry.

REVISED RECORDS.--WSP 873: 1937(M). WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 465.59 ft above National Geodetic Vertical Datum of 1929. Nonrecording gage prior to Oct. 21, 1928. Prior to Aug. 5, 1982, recording gage 0.3 mi downstream at same datum.

REMARKS.--Estimated daily discharges: Dec. 16 to Feb. 6, and Aug. 10, 11. Records good except Dec. 16 to Feb. 6, which are poor. Flow regulated by upstream reservoirs.

AVERAGE DISCHARGE.--62 years, 4,777 ft^3/s, 13.84 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 76,900 ft^3/s May 21, 1943, gage height, 24.19 ft; minimum daily, 200 ft^3/s Oct. 1, 1941.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1875, 27.5 ft Mar. 27, 1913, from floodmarks by Indiana Department of Highways, discharge, 130,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 52,100 ft^3/s May 20, gage height, 22.78 ft; minimum daily, 1,220 ft^3/s Dec. 22, 23.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4610	2260	3410	5000	4500	9330	8330	3880	6340	3090	4210	5530
2	4440	2190	3310	7600	8000	8980	10000	3770	5900	3110	3540	6020
3	4260	2130	3080	7200	13000	8630	10500	3740	5730	2980	3120	4720
4	4120	2160	2890	7000	17000	8240	8960	5680	4900	2740	2800	3800
5	4010	2160	2830	8500	18800	7780	7810	10600	4990	2560	3770	3180
6	3880	2450	2760	8600	20300	7300	7260	11200	5230	2410	4200	2770
7	3660	2420	2710	8200	20200	6860	6700	11200	7060	2240	3510	2510
8	3670	3560	2660	7000	18300	6300	6080	10100	6760	2110	3190	2380
9	3640	4130	2650	5800	13800	5980	5140	8200	5160	2020	2880	2940
10	3540	3940	2620	5200	10600	5980	6260	7070	5710	1940	2420	2490
11	3450	3830	2500	4700	9450	6640	12700	6060	9040	1900	2170	2540
12	3370	3620	2370	4400	8750	10300	12600	7140	10400	4360	2010	2950
13	3090	3260	2270	4200	8130	15200	11500	16900	11600	8910	1950	2680
14	2940	2980	2200	3900	7750	19500	11100	20500	11800	7220	2230	2440
15	2860	5210	2090	3700	12500	21200	9680	21700	7680	7090	3580	2350
16	3150	12400	1800	3400	21800	20700	8180	28700	5880	6720	3050	2200
17	5800	13000	1550	3300	23800	15700	7270	39700	5510	5360	2750	2130
18	3550	13200	1350	3400	26400	10700	6910	40200	6650	4440	2430	2080
19	3800	12400	1370	3600	28700	8970	6410	46600	5970	3730	2180	2120
20	3780	10900	1400	5100	26900	8190	5960	49900	6670	3240	2060	2240
21	3720	8050	1370	7200	23400	7660	7230	38000	8460	3870	2250	2550
22	3570	6850	1220	7100	17000	7210	7650	26700	7790	5160	3100	2380
23	3510	6180	1220	6700	14000	6950	6760	15300	6420	8180	4140	2340
24	3550	5710	1300	6400	14900	6830	6290	9320	5760	6440	6020	2300
25	3500	5320	1340	6000	15100	6750	5620	7950	5670	5580	6770	2120
26	3230	4810	1350	5300	14000	6970	5130	7240	5650	5350	5550	2110
27	2970	4410	1380	4800	11900	6550	4800	7530	5270	4550	4260	2070
28	2720	4120	1400	4500	10200	6240	4460	7860	4570	3590	3540	1980
29	2560	3910	1450	4100	---	6120	4190	7650	3800	3010	3120	1910
30	2440	3540	1600	4000	---	6590	4060	7000	3370	3540	3330	1820
31	2380	---	2500	4000	---	7950	---	6540	---	4910	4430	---
TOTAL	109770	161100	63950	169900	439180	288300	225540	493930	195740	132350	104560	81650
MEAN	3541	5370	2063	5481	15680	9300	7518	15930	6525	4269	3373	2722
MAX	5800	13200	3410	8600	28700	21200	12700	49900	11800	8910	6770	6020
MIN	2380	2130	1220	3300	4500	5980	4060	3740	3370	1900	1950	1820
CFSM	.76	1.15	.44	1.17	3.35	1.98	1.60	3.40	1.39	.91	.72	.58
IN.	.87	1.28	.51	1.35	3.48	2.29	1.79	3.92	1.55	1.05	.83	.65

CAL YR 1989 TOTAL 2198740 MEAN 6024 MAX 25400 MIN 1220 CFSM 1.28 IN. 17.45
WTR YR 1990 TOTAL 2465970 MEAN 6756 MAX 49900 MIN 1220 CFSM 1.44 IN. 19.57

03361000 BIG BLUE RIVER AT CARTHAGE, IN

LOCATION.--Lat 39°44'38", long 85°34'33", in SW¼SW¼ sec.18, T.15 N., R.9 E., Rush County, Hydrologic Unit 05120204, on right bank 300 ft upstream from highway bridge, 0.5 mi northwest of Carthage, 2.2 mi downstream from Three Mile Creek, and at mile 50.7.

DRAINAGE AREA.--184 mi^2.

PERIOD OF RECORD.--October 1950 to current year. Prior to October 1961, published as Blue River at Carthage.

REVISED RECORDS.--WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 859.33 ft above National Geodetic Vertical Datum of 1929. Prior to July 19, 1951, nonrecording gage at site 300 ft downstream at same datum.

REMARKS.--Estimated daily discharges: Dec. 14-30. Records good except for estimated daily discharges, which are poor. Flow partly regulated by Big Blue River Conservancy District control structures on tributaries to Big Blue River beginning in 1969.

AVERAGE DISCHARGE.--40 years, 199 ft^3/s, 14.69 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,900 ft^3/s Mar. 4, 1963, gage height, 14.62 ft, from floodmarks, from rating curve extended above 6,200 ft^3/s; minimum daily, 17 ft^3/s Jan. 18, Aug. 5, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 15	2300	3,200	8.73	May 16	1900	*3,640	*9.22
Mar. 11	1300	2,250	7.17	Aug. 29	2200	2,510	7.71
May 13	1300	2,120	6.89				

Minimum daily discharge, 70 ft^3/s Dec. 22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	109	97	120	414	162	253	369	156	225	130	103	305
2	111	92	118	243	662	241	405	148	238	118	98	230
3	106	88	112	196	549	226	300	154	233	112	96	191
4	101	88	109	351	946	204	256	273	212	108	131	163
5	102	88	112	386	678	195	231	671	199	105	235	149
6	104	90	111	259	478	184	207	399	194	101	137	137
7	101	117	106	208	411	170	191	290	193	98	112	129
8	99	184	100	182	350	170	179	233	187	96	103	130
9	97	196	97	169	352	180	173	204	439	96	97	411
10	100	155	99	181	360	191	429	234	340	95	94	308
11	97	129	98	172	294	1790	730	196	230	129	91	201
12	96	118	95	156	251	869	483	535	195	242	88	165
13	93	112	90	135	232	556	371	1790	178	233	225	160
14	92	143	86	128	240	441	319	860	165	226	164	168
15	91	600	82	126	1550	376	275	780	160	194	116	195
16	91	1420	75	124	2040	407	246	2790	151	149	104	150
17	98	654	80	129	773	363	228	2470	145	126	97	130
18	91	430	84	138	549	302	204	976	140	114	178	122
19	102	317	85	130	454	268	193	592	131	109	160	159
20	114	275	84	255	378	241	201	480	261	116	342	143
21	123	231	82	352	328	227	335	411	242	324	522	131
22	130	201	70	264	488	219	280	357	184	382	327	203
23	115	177	76	215	558	205	236	312	172	488	224	168
24	109	158	85	197	421	193	214	277	180	280	176	142
25	104	150	90	182	316	185	196	287	149	196	148	129
26	105	147	95	163	273	176	183	489	141	159	130	123
27	100	139	100	150	271	167	176	480	149	139	120	114
28	98	142	100	141	281	163	171	367	133	128	113	110
29	94	129	110	145	---	182	181	317	126	119	1740	110
30	93	124	140	140	---	212	167	266	128	113	1190	107
31	96	---	735	133	---	342	---	241	---	109	464	---
TOTAL	3162	6991	3626	6164	14645	9898	8129	18035	5820	5134	7925	5083
MEAN	102	233	117	199	523	319	271	582	194	166	256	169
MAX	130	1420	735	414	2040	1790	730	2790	439	488	1740	411
MIN	91	88	70	124	162	163	167	148	126	95	88	107
CFSM	.55	1.27	.64	1.08	2.84	1.74	1.47	3.16	1.05	.90	1.39	.92
IN.	.64	1.41	.73	1.25	2.96	2.00	1.64	3.65	1.18	1.04	1.60	1.03

CAL YR 1989 TOTAL 88019 MEAN 241 MAX 2800 MIN 69 CFSM 1.31 IN. 17.80
WTR YR 1990 TOTAL 94612 MEAN 259 MAX 2790 MIN 70 CFSM 1.41 IN. 19.13

03361500 BIG BLUE RIVER AT SHELBYVILLE, IN

LOCATION.--Lat 39°31'45", long 85°46'55", in SE¼SE¼ sec.31, T.13 N., R.7 E., Shelby County, Hydrologic Unit 05120204, on left bank 0.2 mi downstream from bridge on State Highway 9 in Shelbyville, 0.6 mi downstream from Little Blue River, and at mile 23.9.

DRAINAGE AREA.--421 mi^2.

PERIOD OF RECORD.--September 1943 to current year. Prior to October 1961, published as Blue River at Shelbyville.

REVISED RECORDS.--WSP 1505: 1944. WSP 1909: 1959(M). WSP 2109: Drainage area. WDR IN-79-1: 1975.

GAGE.--Water-stage recorder. Datum of gage is 737.67 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1953, nonrecording gage at bridge 0.2 mi upstream at datum 3.5 ft higher.

REMARKS.--Estimated daily discharges: Dec. 13 to Jan. 2. Records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--47 years, 465 ft^3/s, 15.00 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,800 ft^3/s Mar. 5, 1963, gage height, 17.70 ft; minimum daily, 27 ft^3/s Jan. 18, 1977.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1913 reached a stage of about 20.2 ft from floodmarks.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,400 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 16	2400	5,420	13.23	May 17	1900	*7,040	*14.71
Mar. 12	0700	4,280	12.03				

Minimum daily discharge, 140 ft^3/s Dec. 22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	230	173	284	1400	372	610	775	336	474	245	204	575
2	227	168	275	750	1210	574	1070	315	475	229	192	407
3	219	162	264	527	1540	544	779	312	491	214	183	323
4	206	158	250	648	2420	486	621	425	434	204	211	270
5	199	158	253	1030	2310	452	540	1130	399	196	442	237
6	199	158	253	726	1560	428	472	911	382	188	321	218
7	199	190	243	555	1240	400	426	643	376	178	234	201
8	190	350	225	470	1030	388	394	513	359	173	203	193
9	183	489	218	426	882	399	374	441	380	170	188	366
10	183	390	216	419	910	429	646	457	609	169	177	660
11	182	313	216	423	768	2650	1720	433	406	225	169	417
12	177	270	209	389	653	3550	1230	609	344	1370	163	307
13	173	241	190	332	581	1690	885	2460	316	1090	200	263
14	169	281	180	307	548	1240	719	2580	300	721	353	241
15	165	967	170	299	2120	958	619	1700	304	578	217	302
16	164	3100	150	290	4940	926	544	3570	277	421	185	266
17	169	2280	155	286	3720	869	493	6440	261	326	171	226
18	170	1350	160	304	1640	714	438	5040	254	271	164	202
19	171	919	165	303	1270	607	408	1820	239	242	248	270
20	194	746	160	612	993	538	415	1260	411	278	348	305
21	211	633	150	1060	823	496	728	973	684	1240	743	249
22	234	528	140	836	882	473	750	800	464	953	628	274
23	222	459	150	641	1310	442	602	684	414	1220	430	306
24	203	404	160	551	1030	412	517	605	395	767	319	257
25	191	373	170	487	778	397	462	565	346	504	260	227
26	184	360	180	440	651	378	421	943	298	380	224	208
27	181	340	185	390	625	358	397	1290	283	315	202	195
28	174	340	187	361	667	347	382	910	268	279	189	185
29	172	312	190	350	---	353	371	733	248	252	739	177
30	167	292	230	348	---	402	354	607	236	232	2190	172
31	171	---	1000	325	---	576	---	523	---	219	1030	---
TOTAL	5879	16904	6978	16285	37473	23086	18552	40028	11127	13849	11527	8499
MEAN	190	563	225	525	1338	745	618	1291	371	447	372	283
MAX	234	3100	1000	1400	4940	3550	1720	6440	684	1370	2190	660
MIN	164	158	140	286	372	347	354	312	236	169	163	172
CFSM	.45	1.34	.53	1.25	3.18	1.77	1.47	3.07	.88	1.06	.88	.67
IN.	.52	1.49	.62	1.44	3.31	2.04	1.64	3.54	.98	1.22	1.02	.75

CAL YR 1989 TOTAL 217363 MEAN 596 MAX 5830 MIN 140 CFSM 1.41 IN. 19.21
WTR YR 1990 TOTAL 210187 MEAN 576 MAX 6440 MIN 140 CFSM 1.37 IN. 18.57

03361650 SUGAR CREEK AT NEW PALESTINE, IN

LOCATION.--Lat 39°42'51", long 85°53'08", in SE¼SW¼ sec.29, T.15 N., R.6 E., Hancock County, Hydrologic Unit 05120204, on left bank 10 ft downstream from bridge on County Road 450 West, 0.5 mi south of New Palestine, 3.1 mi upstream from Little Sugar Creek, and 37.3 mi upstream from mouth.

DRAINAGE AREA.--93.9 mi^2.

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

REVISED RECORDS.--WDR IN-76-1: 1975.

GAGE.--Water-stage recorder. Datum of gage is 786.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 13 to Jan. 4, Aug. 30 and 31. Records good except for estimated daily discharges and after May, which are poor.

AVERAGE DISCHARGE.--23 years, 101.3 ft^3/s, 14.65 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,880 ft^3/s Feb. 24, 1985, and Oct. 4, 1986; maximum gage height, 10.34 ft Feb. 23, 1979 (ice jam); minimum daily discharge, 2.4 ft^3/s Oct. 3, 1983.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 950 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 15	2100	975	6.98	May 17	1000	*1,250	*7.84
Mar. 11	1000	1,040	7.19				

Minimum daily discharge, 17 ft^3/s July 10 and Aug. 12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47	33	48	320	69	134	147	57	94	33	26	211
2	45	32	47	190	307	124	184	53	87	30	23	116
3	43	36	44	122	392	115	145	53	84	27	21	79
4	40	33	43	132	473	102	113	146	79	24	29	61
5	38	32	43	247	460	90	97	323	70	23	52	50
6	37	32	43	187	323	83	84	315	66	21	50	42
7	37	36	41	134	248	75	73	198	65	20	40	35
8	35	57	37	107	212	72	66	139	60	19	28	28
9	34	78	37	95	197	74	62	110	58	18	23	76
10	32	83	35	93	188	95	140	99	159	17	20	172
11	31	64	35	93	167	862	335	87	118	23	19	115
12	31	53	34	82	140	768	317	242	81	30	17	74
13	30	48	30	68	124	555	223	793	65	39	39	60
14	29	48	28	59	122	310	170	730	56	47	46	58
15	28	173	25	57	632	227	139	657	50	49	48	42
16	26	547	22	54	838	222	118	1020	46	47	31	33
17	29	521	24	55	844	200	102	1170	41	34	24	28
18	28	297	25	58	432	159	87	1020	39	27	21	27
19	30	187	26	59	279	128	77	509	35	23	58	41
20	36	152	25	113	212	108	83	281	153	42	231	35
21	44	126	23	180	170	96	149	216	145	134	183	36
22	54	103	20	172	227	90	138	169	102	221	149	48
23	59	87	22	131	378	83	111	138	72	263	122	65
24	52	76	24	108	317	75	96	114	69	240	71	52
25	46	70	25	95	216	70	86	108	54	139	51	42
26	41	67	26	82	160	66	78	213	47	84	40	35
27	39	64	27	71	143	62	74	310	43	60	34	30
28	36	61	27	65	142	59	71	248	41	47	29	27
29	33	56	30	62	---	61	69	179	37	39	135	24
30	34	51	34	60	---	69	62	135	34	34	450	22
31	36	---	90	57	---	97	---	109	---	29	617	---
TOTAL	1160	3303	1040	3408	8412	5331	3696	9941	2150	1883	2727	1764
MEAN	37.4	110	33.5	110	300	172	123	321	71.7	60.7	88.0	58.8
MAX	59	547	90	320	844	862	335	1170	159	263	617	211
MIN	26	32	20	54	69	59	62	53	34	17	17	22
CFSM	.40	1.17	.36	1.17	3.20	1.83	1.31	3.42	.76	.65	.94	.63
IN.	.46	1.31	.41	1.35	3.33	2.11	1.46	3.94	.85	.75	1.08	.70

CAL YR 1989 TOTAL 47783 MEAN 131 MAX 1250 MIN 16 CFSM 1.39 IN. 18.93
WTR YR 1990 TOTAL 44815 MEAN 123 MAX 1170 MIN 17 CFSM 1.31 IN. 17.75

03361850 BUCK CREEK AT ACTON, IN

LOCATION.--Lat 39°39'25", long 85°57'27", in NW¼SE¼ sec.15, T.14 N., R.5 E., Marion County, Hydrologic Unit 05120204, on left bank 30 ft downstream from McGregor Road bridge, 0.5 mi east of Acton, and 4.1 mi upstream from mouth.

DRAINAGE AREA.--78.8 mi^2.

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

REVISED RECORDS.--WDR IN-79-1: 1969 (M).

GAGE.--Water-stage recorder. Datum of gage is 757.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 1-16, Oct. 23 to Nov. 10, Dec. 14-19, 21-23, Dec. 27 to Jan. 1, and Jan. 4. Records fair. Low flow is affected by regulation.

AVERAGE DISCHARGE.--23 years, 90.8 ft^3/s, 15.65 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,140 ft^3/s July 20, 1969, gage height, 14.99 ft; minimum daily, 0.60 ft^3/s Oct. 1, 4, 1967.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 16	0300	1,270	8.11	May 13	0900	1,560	9.06
Dec. 31	1100	ice jam	7.39	May 16	1200	*2,420	*10.72
Feb. 15	2200	1,770	9.64	June 20	1700	1,040	7.30
Mar. 11	1300	1,750	9.59	July 21	0600	1,170	7.77

Minimum daily discharge, 8.4 ft^3/s Sept. 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	22	36	325	85	97	184	37	46	22	13	16
2	22	16	32	146	625	91	214	34	46	20	13	12
3	21	11	33	95	379	81	125	35	50	19	15	9.5
4	18	19	33	110	656	69	94	299	48	17	145	9.4
5	20	20	32	245	410	63	79	408	41	16	120	11
6	26	23	32	145	234	57	65	213	38	15	39	11
7	25	29	30	98	201	52	56	138	39	13	25	11
8	23	57	21	83	169	52	51	93	35	13	20	11
9	22	63	25	73	158	56	48	74	33	12	17	88
10	21	53	25	81	145	106	248	73	29	11	16	44
11	21	47	26	76	112	1500	427	56	26	30	15	22
12	21	43	21	57	92	604	199	484	24	147	14	17
13	20	35	17	44	87	292	128	1300	23	117	101	15
14	18	36	15	40	93	193	106	489	25	57	39	25
15	15	385	13	39	1050	145	90	381	31	39	21	25
16	12	924	11	35	1050	212	77	2060	22	28	17	14
17	25	396	14	38	375	160	67	1690	21	18	16	13
18	9.5	222	17	48	229	111	55	507	21	18	15	12
19	15	153	17	42	171	89	51	245	19	16	12	40
20	26	131	16	187	125	74	65	167	430	169	102	28
21	31	104	12	230	103	68	181	122	224	695	171	19
22	39	83	9.4	152	232	64	119	92	112	407	116	37
23	21	67	11	105	337	57	88	76	78	309	56	25
24	17	55	12	89	202	52	72	67	78	125	35	19
25	12	48	13	79	133	50	61	71	51	67	22	16
26	16	53	14	67	104	47	55	457	37	39	20	15
27	20	48	15	59	104	44	51	283	33	33	15	13
28	21	51	16	49	116	42	49	149	28	27	16	11
29	21	42	18	52	---	49	45	101	25	23	30	8.4
30	18	39	29	54	---	63	40	72	24	21	50	11
31	21	---	90	49	---	107	---	56	---	17	28	---
TOTAL	641.5	3275	705.4	2992	7777	4747	3190	10329	1737	2560	1334	608.3
MEAN	20.7	109	22.8	96.5	278	153	106	333	57.9	82.6	43.0	20.3
MAX	39	924	90	325	1050	1500	427	2060	430	695	171	88
MIN	9.5	11	9.4	35	85	42	40	34	19	11	12	8.4
CFSM	.26	1.39	.29	1.22	3.52	1.94	1.35	4.23	.73	1.05	.55	.26
IN.	.30	1.55	.33	1.41	3.67	2.24	1.51	4.88	.82	1.21	.63	.29

CAL YR 1989 TOTAL 37843.9 MEAN 104 MAX 1570 MIN 9.4 CFSM 1.32 IN. 17.87
WTR YR 1990 TOTAL 39896.2 MEAN 109 MAX 2060 MIN 8.4 CFSM 1.39 IN. 18.83

03362000 YOUNGS CREEK NEAR EDINBURGH, IN

LOCATION.--Lat 39°25'08", long 86°00'18", in SE¼SW¼ sec.5, T.11 N., R.5 E., Johnson County, Hydrologic Unit 05120204, on left bank at upstream side of county highway bridge, 0.5 mi southwest of Amity, 2.0 mi upstream from mouth, and 5 mi northwest of Edinburgh.

DRAINAGE AREA.--107 mi^2.

PERIOD OF RECORD.--October 1942 to current year. Prior to December 1942 monthly discharge only, published in WSP 1305. Prior to October 1977, published as "near Edinburg".

REVISED RECORDS.--WSP 1335: 1944. WSP 1909: 1958. WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 670.20 ft above National Geodetic Vertical Datum of 1929. Prior to June 30, 1955, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Dec. 13-23, 31, and Feb. 2, 3. Records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--48 years, 107 ft^3/s, 13.58 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,700 ft^3/s Jan. 27, 1952, gage height, 13.4 ft; minimum daily, 0.5 ft^3/s Sept. 29, Oct. 20, 21, 1953.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,300 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 16	0945	1,370	6.92	Mar. 11	1430	1,500	7.26
Feb. 4	1745	1,450	7.15	May 13	1900	1,510	7.29
Feb. 16	0600	2,550	9.14	May 17	0730	*3,190	*9.79

Minimum daily discharge, 10 ft^3/s Sept. 18.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	23	51	184	111	135	214	59	60	35	26	32
2	29	23	48	90	476	125	304	53	63	32	22	24
3	28	21	43	80	342	111	155	57	66	29	20	20
4	25	20	41	167	1180	95	121	219	52	26	52	20
5	24	20	44	193	750	89	105	556	48	24	162	17
6	25	22	43	126	353	83	91	276	46	22	60	14
7	24	41	39	101	255	75	82	200	59	22	36	14
8	23	152	34	90	204	74	75	133	51	22	29	12
9	21	155	34	84	176	77	70	109	44	21	25	29
10	22	92	35	84	153	177	196	123	39	20	22	20
11	22	67	33	83	132	1380	475	95	35	42	20	15
12	20	54	29	72	114	608	212	415	33	623	17	14
13	20	45	26	54	108	304	144	1390	31	398	39	14
14	19	58	25	55	107	209	122	660	30	183	37	14
15	18	434	23	52	1210	164	106	444	29	112	22	13
16	21	1190	19	48	1930	225	95	1420	28	82	18	11
17	20	446	20	48	550	185	88	2700	27	61	16	11
18	25	230	21	58	301	134	76	868	41	50	16	10
19	27	162	22	54	220	112	72	337	35	43	14	96
20	34	143	21	247	164	97	79	219	217	38	16	58
21	39	116	19	267	138	91	137	160	229	280	114	28
22	41	99	17	182	201	87	122	126	125	152	102	25
23	31	86	18	138	256	80	101	106	206	116	53	21
24	28	76	19	118	185	76	91	95	105	79	34	17
25	25	72	20	106	134	77	81	89	77	58	25	15
26	24	69	20	93	118	71	75	108	61	46	21	14
27	24	64	22	83	126	66	71	161	52	39	18	13
28	23	70	22	76	158	63	67	107	46	34	17	12
29	22	55	24	77	---	69	62	91	40	30	233	12
30	22	52	40	76	---	82	56	77	37	29	119	11
31	23	---	300	71	---	126	---	66	---	36	52	---
TOTAL	778	4157	1172	3257	10152	5347	3745	11519	2012	2784	1457	626
MEAN	25.1	139	37.8	105	363	172	125	372	67.1	89.8	47.0	20.9
MAX	41	1190	300	267	1930	1380	475	2700	229	623	233	96
MIN	18	20	17	48	107	63	56	53	27	20	14	10
CFSM	.23	1.30	.35	.98	3.39	1.61	1.17	3.47	.63	.84	.44	.20
IN.	.27	1.45	.41	1.13	3.53	1.86	1.30	4.00	.70	.97	.51	.22

CAL YR 1989 TOTAL 52121 MEAN 143 MAX 1990 MIN 14 CFSM 1.33 IN. 18.12
WTR YR 1990 TOTAL 47006 MEAN 129 MAX 2700 MIN 10 CFSM 1.20 IN. 16.34

03362500 SUGAR CREEK NEAR EDINBURGH, IN

LOCATION.--Lat 39°21'39", long 85°59'51", in SW¼SE¼ sec.29, T.11 N., R.5 E., Johnson County, Hydrologic Unit 05120204, on left bank 50 ft upstream from highway bridge in Camp Atterbury, 1.3 mi upstream from confluence with Blue River, 1.5 mi northwest of Edinburgh, and at mile 1.3.

DRAINAGE AREA.--474 mi^2.

PERIOD OF RECORD.--October 1942 to current year. Prior to February 1943 monthly discharge only, published in WSP 1305. Prior to October 1977, published as "near Edinburg".

REVISED RECORDS.--WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 646.23 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1952, nonrecording gage on downstream side of old highway bridge, 100 ft downstream at same datum.

REMARKS.--Estimated daily discharges: Dec. 14 to Jan. 2. Records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--48 years, 493 ft^3/s, 14.12 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,600 ft^3/s May 29, 1956, gage height, 18.38 ft; minimum daily, 9.2 ft^3/s Sept. 19, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 16	1700	6,470	12.20	May 14	0200	4,480	10.34
Mar. 12	1900	4,890	10.84	May 17	2300	*10,600	*14.38

Minimum daily discharge, 106 ft^3/s Sept. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	216	136	256	1400	350	688	678	268	372	185	180	662
2	209	136	243	930	1700	629	1380	245	346	172	159	296
3	196	130	228	614	2120	572	922	239	346	158	149	222
4	183	127	220	664	3200	487	675	388	313	149	160	183
5	174	128	222	1250	3280	429	545	1930	287	140	717	157
6	170	130	221	907	1900	387	446	1420	268	133	393	141
7	164	145	212	638	1370	348	376	1080	275	125	260	131
8	158	307	191	505	1120	332	334	726	263	119	213	123
9	154	560	178	434	953	336	306	543	242	115	178	148
10	144	428	180	408	907	341	439	527	225	110	157	254
11	143	344	176	412	774	3000	2030	455	304	137	145	281
12	139	278	168	369	650	4630	1460	729	268	1040	134	216
13	135	242	157	300	569	2870	993	3650	237	1110	162	181
14	131	234	150	273	525	1580	755	4310	218	670	359	153
15	128	733	140	261	2470	1110	622	2680	210	439	220	155
16	128	3370	120	245	5930	1120	518	3690	200	325	181	164
17	129	3070	125	241	4880	1110	446	8120	180	259	151	129
18	131	1730	130	264	2370	840	375	8280	186	213	137	119
19	139	1080	140	270	1430	658	334	3560	175	186	127	222
20	152	842	130	809	1050	535	329	1470	327	170	357	252
21	183	701	120	1280	845	469	596	1020	1370	1520	980	182
22	216	569	110	991	886	429	836	790	676	1510	702	159
23	210	475	115	733	1570	394	603	632	649	1510	459	182
24	194	400	122	606	1340	353	482	525	442	948	331	178
25	181	359	125	510	957	338	409	459	360	614	250	156
26	163	342	128	445	737	317	358	611	287	416	203	138
27	156	325	132	376	671	296	331	1760	250	317	172	127
28	149	324	140	339	756	282	313	1090	228	269	148	119
29	142	291	150	327	---	283	297	765	210	236	353	114
30	136	268	170	322	---	315	273	563	196	216	466	106
31	136	---	1100	301	---	478	---	440	---	207	676	---
TOTAL	4989	18204	5999	17424	45310	25956	18461	52965	9910	13718	9279	5650
MEAN	161	607	194	562	1618	837	615	1709	330	443	299	188
MAX	216	3370	1100	1400	5930	4630	2030	8280	1370	1520	980	662
MIN	128	127	110	241	350	282	273	239	175	110	127	106
CFSM	.34	1.28	.41	1.19	3.41	1.77	1.30	3.60	.70	.93	.63	.40
IN.	.39	1.43	.47	1.37	3.56	2.04	1.45	4.16	.78	1.08	.73	.44

CAL YR 1989 TOTAL 249167 MEAN 683 MAX 6070 MIN 110 CFSM 1.44 IN. 19.55
WTR YR 1990 TOTAL 227865 MEAN 624 MAX 8280 MIN 106 CFSM 1.32 IN. 17.88

03363000 DRIFTWOOD RIVER NEAR EDINBURGH, IN

LOCATION.--Lat 39°20'21", long 85°59'11", in NW¼SW¼ sec.4, T.10 N., R.5 E., Bartholomew County, Hydrologic Unit 05120204, on left bank at downstream side of highway bridge, 0.8 mi downstream from confluence of Big Blue River and Sugar Creek, 1.5 mi southwest of Edinburgh, and at mile 14.1.

DRAINAGE AREA.--1,060 mi^2.

PERIOD OF RECORD.--October 1940 to current year. Prior to July 1941 monthly discharge only, published in WSP 1305. Prior to October 1977, published as "near Edinburg".

REVISED RECORDS.--WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 636.99 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 7, 1941, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Dec. 13-24, and 31. Records good.

AVERAGE DISCHARGE.--50 years, 1,159 ft^3/s, 14.85 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,500 ft^3/s Mar. 6, 1963, gage height, 16.97 ft; minimum daily, 38 ft^3/s Sept. 23, 1941.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1913 reached a stage of 20.3 ft.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 7,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 17	0800	7,230	10.98	Mar. 12	2300	9,240	12.52
Feb. 5	0900	7,300	11.05	May 14	2000	8,040	11.63
Feb. 17	0600	11,600	13.53	May 18	0300	*18,000	*15.05

Minimum daily discharge, 330 ft^3/s Dec. 22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	664	430	718	3350	778	1640	1690	879	1170	619	544	1560
2	639	431	690	2320	2240	1520	2840	816	1110	605	516	926
3	612	418	655	1480	4160	1420	2320	795	1110	579	494	716
4	581	410	626	1350	5450	1290	1800	995	1040	556	495	608
5	559	410	617	2370	7080	1180	1540	2960	976	534	1020	542
6	544	412	619	2000	5130	1090	1350	2980	929	516	870	502
7	531	435	598	1480	3420	1010	1200	2260	929	498	643	473
8	518	663	563	1220	2710	961	1100	1670	897	483	555	452
9	503	1140	534	1080	2280	958	1020	1370	853	471	508	501
10	488	1080	525	1010	2130	963	1170	1300	947	458	480	820
11	484	900	520	1000	1920	4410	3880	1250	956	494	460	859
12	476	752	508	948	1640	8280	3770	1430	848	1720	445	674
13	466	661	470	821	1440	7410	2630	5720	786	2660	460	572
14	454	633	440	729	1330	4160	2030	7800	749	1660	707	525
15	443	1440	430	692	3470	2960	1730	6560	732	1230	583	509
16	441	5700	350	664	9090	2700	1520	6980	710	985	503	558
17	437	6940	380	643	10900	2670	1370	13000	677	800	462	484
18	436	4760	400	662	7000	2190	1220	16700	666	684	439	453
19	451	2830	420	682	3850	1820	1110	10200	642	619	442	564
20	465	2130	400	1090	2800	1580	1070	4200	753	577	633	631
21	508	1780	380	2330	2220	1440	1410	2780	2040	2170	1450	558
22	551	1490	330	2180	2110	1360	2040	2160	1360	2950	1420	514
23	566	1290	350	1680	3200	1270	1650	1780	1250	2720	1050	560
24	541	1120	360	1400	3070	1190	1410	1530	1020	2090	795	548
25	514	1010	364	1220	2310	1130	1250	1390	939	1380	643	505
26	485	955	364	1100	1820	1070	1130	1520	807	1020	554	468
27	468	904	382	963	1640	1020	1050	3440	737	822	504	446
28	458	878	392	873	1730	974	994	2570	703	718	468	429
29	446	820	408	825	---	963	952	1890	666	650	641	416
30	434	754	456	814	---	1030	902	1520	638	606	1830	401
31	432	---	1300	772	---	1270	---	1300	---	580	2490	---
TOTAL	15595	43576	15549	39748	96918	62929	49148	111745	27640	32454	23104	17774
MEAN	503	1453	502	1282	3461	2030	1638	3605	921	1047	745	592
MAX	664	6940	1300	3350	10900	8280	3880	16700	2040	2950	2490	1560
MIN	432	410	330	643	778	958	902	795	638	458	439	401
CFSM	.47	1.37	.47	1.21	3.27	1.92	1.55	3.40	.87	.99	.70	.56
IN.	.55	1.53	.55	1.39	3.40	2.21	1.72	3.92	.97	1.14	.81	.62

CAL YR 1989 TOTAL 571816 MEAN 1567 MAX 11900 MIN 330 CFSM 1.48 IN. 20.07
WTR YR 1990 TOTAL 536180 MEAN 1469 MAX 16700 MIN 330 CFSM 1.39 IN. 18.82

03363500 FLATROCK RIVER AT ST. PAUL, IN

LOCATION.--Lat 39°25'03", long 85°38'03", in SE¼NE¼ sec.9, T.11 N., R.8 E., Shelby County, Hydrologic Unit 05120205, on right bank 500 ft downstream from highway bridge, 0.8 mi southwest of St. Paul, 1.5 mi downstream from Mill Creek, and at mile 34.4.

DRAINAGE AREA.--303 mi^2.

PERIOD OF RECORD.--October 1930 to current year. Prior to October 1958, published as Flatrock Creek at St. Paul.

REVISED RECORDS.--WSP 853: 1934-36. WSP 973: 1942. WSP 1335: 1933, 1936. WSP 1725: 1957(M). WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 764.84 ft above National Geodetic Vertical Datum of 1929 (levels by State of Indiana, Department of Natural Resources). Prior to Oct. 21, 1938, nonrecording gage at site 500 ft upstream at same datum.

REMARKS.--Estimated daily discharges: Dec. 9 to Jan. 2. Records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--60 years, 321 ft^3/s, 14.39 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,500 ft^3/s Jan. 5, 1949, gage height, 10.60 ft; maximum recorded gage height, 12.37 ft May 24, 1968; minimum daily discharge, 0.6 ft^3/s Aug. 7, 1931.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1913 reached a stage of approximately 20.5 ft, from information by local residents.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 4	1400	3,290	4.87	May 5	0800	3,280	4.86
Feb. 17	0100	3,920	5.37	May 17	1400	*5,820	*6.69
Mar. 11	1700	2,860	4.49				

Minimum daily discharge, 50 ft^3/s Dec. 22 and July 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	102	61	169	640	259	431	625	257	262	133	110	439
2	96	60	161	500	840	396	986	222	269	109	99	264
3	92	58	151	362	1110	368	740	212	303	90	90	193
4	84	59	140	414	2670	317	518	1050	250	81	114	150
5	81	56	144	717	2300	284	421	2510	220	75	360	121
6	80	59	146	509	1730	264	349	1730	208	68	187	105
7	78	76	138	356	1120	244	298	1010	208	62	124	91
8	75	222	121	291	923	236	266	634	195	58	102	84
9	71	376	110	261	827	240	240	463	185	54	89	131
10	69	275	105	257	884	255	412	402	196	50	81	293
11	68	201	104	267	724	2160	1030	338	200	69	75	209
12	65	162	100	248	566	2430	954	418	169	1300	69	145
13	64	137	90	196	483	1540	613	1570	156	1220	68	116
14	62	129	82	178	439	917	474	1770	147	580	70	104
15	58	749	74	168	2060	678	404	1580	301	486	72	166
16	61	2050	66	160	3380	764	349	2950	173	336	63	170
17	74	1740	70	155	3000	820	307	5200	137	237	58	119
18	63	1240	75	172	1470	608	263	3850	124	184	53	94
19	65	692	80	178	919	469	239	1890	109	154	51	217
20	77	525	80	473	689	392	243	889	210	137	79	204
21	90	438	64	911	538	346	371	613	416	1530	157	147
22	86	358	50	755	530	320	644	465	262	911	274	119
23	84	305	54	532	621	294	444	386	238	846	170	137
24	80	265	56	432	608	271	346	330	299	579	133	128
25	77	243	58	364	471	260	297	301	220	351	105	108
26	76	236	60	314	402	241	269	455	154	257	85	95
27	71	215	62	270	402	226	251	818	129	204	73	85
28	65	208	64	247	473	213	241	588	115	173	62	77
29	62	190	68	241	---	215	278	442	104	150	739	70
30	59	174	100	235	---	240	283	360	98	135	1540	64
31	61	---	800	212	---	378	---	295	---	121	1610	---
TOTAL	2296	11559	3642	11015	30438	16817	13155	33998	6057	10740	6962	4445
MEAN	74.1	385	117	355	1087	542	438	1097	202	346	225	148
MAX	102	2050	800	911	3380	2430	1030	5200	416	1530	1610	439
MIN	58	56	50	155	259	213	239	212	98	50	51	64
CFSM	.24	1.27	.39	1.17	3.59	1.79	1.45	3.62	.67	1.14	.74	.49
IN.	.28	1.42	.45	1.35	3.74	2.06	1.62	4.17	.74	1.32	.85	.55

CAL YR 1989 TOTAL 163985 MEAN 449 MAX 5840 MIN 45 CFSM 1.48 IN. 20.13
WTR YR 1990 TOTAL 151124 MEAN 414 MAX 5200 MIN 50 CFSM 1.37 IN. 18.55

03363900 FLATROCK RIVER AT COLUMBUS, IN

LOCATION.--Lat 39°14'06", long 85°55'36", in NE¼SW¼ sec.12, T.9 N., R.5 E., Bartholomew County, Hydrologic Unit 05120205, on left bank at downstream side of bridge on U.S. Highway 31, 0.2 mi northwest of Columbus city limits, and 2.6 mi upstream from mouth.

DRAINAGE AREA.--534 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 610.14 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 10-26. Records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--23 years, 594 ft^3/s, 15.11 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,000 ft^3/s May 25, 1968, gage height, 15.87 ft; minimum daily, 22 ft^3/s Oct. 5, 1967.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 3,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 16	2100	4,690	10.26	Mar. 12	0800	3,850	9.39
Feb. 5	0900	5,210	10.74	May 5	2100	3,520	9.00
Feb. 16	1600	6,310	11.51	May 18	0700	*8,440	*12.63

Minimum daily discharge, 118 ft^3/s Aug. 20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	289	157	421	1420	452	910	787	456	591	248	259	1170
2	280	155	410	1080	1040	838	1470	426	554	264	239	512
3	267	154	393	811	1820	790	1350	398	612	241	222	378
4	249	149	374	675	2700	717	1010	618	562	223	214	306
5	237	149	367	1040	4780	645	832	2850	486	208	343	259
6	228	150	369	1100	3400	601	707	2560	447	197	469	226
7	221	155	363	754	2230	557	612	1920	452	184	312	203
8	212	264	338	626	1760	526	543	1280	431	171	250	184
9	202	762	311	558	1510	523	498	959	406	166	219	190
10	194	701	290	519	1490	518	534	864	382	159	199	229
11	188	527	280	513	1380	1930	1520	772	383	163	185	360
12	183	429	270	507	1110	3760	1620	702	365	841	169	294
13	178	371	240	455	918	2950	1210	1920	339	2430	162	240
14	172	345	220	405	823	1790	949	2470	325	1600	154	212
15	166	836	200	387	1450	1350	813	2250	342	1040	150	191
16	166	3690	160	373	5490	1200	706	2760	409	788	148	238
17	238	3620	170	361	5020	1330	634	6700	322	553	141	244
18	204	2480	180	365	3250	1140	560	7950	297	433	134	200
19	189	1580	180	373	1920	921	501	4620	279	370	125	222
20	198	1200	175	539	1470	780	485	2260	288	332	118	371
21	208	1010	160	1400	1190	692	563	1620	621	1100	150	315
22	210	840	130	1390	1090	642	888	1290	615	1940	263	257
23	202	725	140	1050	1170	602	861	1050	483	1520	304	234
24	196	640	150	843	1170	558	681	887	451	1230	237	226
25	185	580	150	722	1020	528	586	786	498	788	208	225
26	180	554	155	645	851	505	520	748	381	548	179	208
27	173	525	166	565	823	474	480	1250	325	431	156	189
28	169	502	175	516	917	446	454	1290	296	371	139	177
29	162	473	187	489	---	437	442	982	275	335	153	165
30	159	439	215	482	---	452	469	803	258	305	1280	154
31	157	---	772	453	---	565	---	673	---	288	1760	---
TOTAL	6262	24162	8111	21416	52244	29677	23285	56114	12475	19467	9041	8379
MEAN	202	805	262	691	1866	957	776	1810	416	628	292	279
MAX	289	3690	772	1420	5490	3760	1620	7950	621	2430	1760	1170
MIN	157	149	130	361	452	437	442	398	258	159	118	154
CFSM	.38	1.51	.49	1.29	3.49	1.79	1.45	3.39	.78	1.18	.55	.52
IN.	.44	1.68	.57	1.49	3.64	2.07	1.62	3.91	.87	1.36	.63	.58

CAL YR 1989 TOTAL 301748 MEAN 827 MAX 9890 MIN 127 CFSM 1.55 IN. 21.02
WTR YR 1990 TOTAL 270633 MEAN 741 MAX 7950 MIN 118 CFSM 1.39 IN. 18.85

03364000 EAST FORK WHITE RIVER AT COLUMBUS, IN

LOCATION.--Lat 39°12'00", long 85°55'32", in NE¼NW¼ sec.25, T.9 N., R.5 E., Bartholomew County, Hydrologic Unit 05120205, on left bank at abutment of abandoned bridge at west end of Second Street in Columbus, 0.6 mi downstream from confluence of Driftwood River and Flatrock River, 1.3 mi upstream from Haw Creek, and at mile 238.7.

DRAINAGE AREA.--1,707 mi^2.

PERIOD OF RECORD.--October 1947 to current year. Prior to January 1948 monthly discharge only, published in WSP 1305.

REVISED RECORDS.--WSP 1335: 1948-49. WSP 2109: Drainage area.

GAGE.--Water-stage recorder above concrete control. Datum of gage is 603.12 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 22, 1952, nonrecording gage 600 ft upstream at same datum.

REMARKS.--Estimated daily discharges: Dec. 15-29. Records good.

AVERAGE DISCHARGE.--43 years, 1,845 ft^3/s, 14.68 in/yr.

EXTREMES FOR PERIOD OF RECORD.---Maximum discharge, 52,300 ft^3/s Mar. 6, 1963, gage height, 16.23 ft; minimum daily, 87 ft^3/s Sept. 29, 1954.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 10,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 17	500	11,000	5.84	Mar. 13	0700	12,700	6.71
Feb. 5	1200	12,900	6.82	May 15	0600	10,400	5.49
Feb. 17	1900	17,500	8.82	May 18	1500	*25,800	*11.44

Minimum daily discharge, 498 ft^3/s Sept. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	939	582	1170	4840	1390	2760	2580	1450	2060	935	820	3030
2	902	585	1130	4100	3290	2520	4540	1360	1950	936	748	1620
3	864	564	1070	2790	6150	2350	4240	1330	1970	868	695	1190
4	824	545	1020	2400	8470	2110	3120	2490	1870	810	687	981
5	786	543	1000	3670	12400	1900	2540	5880	1700	762	1140	840
6	767	578	1010	3620	9570	1770	2160	6170	1610	720	1520	736
7	737	588	986	2590	6220	1620	1860	5050	1670	676	1060	663
8	713	960	935	2080	5150	1530	1660	3410	1570	645	859	610
9	691	1860	880	1800	4360	1520	1530	2590	1470	625	742	675
10	670	1840	858	1650	4190	1540	2070	2360	1480	596	669	897
11	656	1490	851	1630	3770	4710	5350	2190	1600	626	622	1270
12	647	1220	828	1560	3130	10600	5900	2280	1450	2180	578	1060
13	639	1060	781	1390	2670	11900	4510	6530	1320	5590	571	867
14	625	1010	769	1230	2430	6550	3360	9630	1240	3890	775	756
15	612	2710	680	1160	4860	4750	2800	9650	1210	2630	825	683
16	614	8350	580	1120	13600	4200	2410	10300	1280	2110	670	785
17	700	10700	560	1090	17000	4320	2120	17800	1120	1630	591	729
18	643	7930	560	1130	13500	3560	1870	22600	1060	1340	545	633
19	638	5060	540	1150	6500	2850	1670	19900	1010	1150	514	753
20	662	3660	540	1850	4880	2420	1610	8650	1070	1040	556	1040
21	709	3000	520	4150	3800	2140	1940	5110	2780	2530	1320	926
22	755	2480	520	4230	3490	1980	3120	4000	2510	5440	1740	768
23	790	2120	520	3220	4530	1860	2790	3260	2090	4370	1470	756
24	757	1840	520	2560	4800	1730	2280	2800	1800	3860	1150	783
25	712	1650	540	2190	3760	1660	1980	2500	1710	2510	934	721
26	671	1550	560	1940	2910	1590	1760	2420	1420	1780	786	648
27	640	1480	580	1700	2710	1480	1620	4550	1230	1400	674	593
28	624	1430	600	1520	2880	1400	1540	4510	1130	1190	600	555
29	599	1350	640	1430	---	1380	1500	3410	1050	1060	758	531
30	598	1240	734	1410	---	1470	1470	2760	981	956	2220	498
31	598	---	2070	1350	---	1910	---	2340	---	897	4110	---
TOTAL	21782	69975	24552	68550	162410	94080	77900	179280	46411	55752	30949	26597
MEAN	703	2332	792	2211	5800	3035	2597	5783	1547	1798	998	887
MAX	939	10700	2070	4840	17000	11900	5900	22600	2780	5590	4110	3030
MIN	598	543	520	1090	1390	1380	1470	1330	981	596	514	498
CFSM	.41	1.37	.46	1.30	3.40	1.78	1.52	3.39	.91	1.05	.58	.52
IN.	.47	1.52	.54	1.49	3.54	2.05	1.70	3.91	1.01	1.21	.67	.58

CAL YR 1989 TOTAL 908713 MEAN 2490 MAX 20800 MIN 520 CFSM 1.46 IN. 19.80
WTR YR 1990 TOTAL 858238 MEAN 2351 MAX 22600 MIN 498 CFSM 1.38 IN. 18.70

03364200 HAW CREEK NEAR CLIFFORD, IN

LOCATION.--Lat 39°16'04", long 85°51'22", in NW¼SW¼ sec.34, T.10 N., R.6 E., Bartholomew County, Hydrologic Unit 05120205, on left bank 20 ft downstream from bridge on County Road 450 North, 1.2 mi southeast of Clifford, 5.8 mi northeast of Columbus, and 7.6 mi upstream from mouth.

DRAINAGE AREA.--47.5 mi^2.

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 643.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 13-29 and Feb. 18 to Mar. 14. Records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--23 years, 49.2 ft^3/s, 14.07 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,560 ft^3/s May 24, 1968, gage height, 13.9 ft, from floodmark; no flow at times during September and October 1967 due to diversion for irrigation.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 4	1000	1,370	10.50	May 16	1500	*2,000	*12.56
Feb. 15	1700	1,310	10.31				

Minimum daily discharge, 1.7 ft^3/s Sept. 8.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	9.9	22	84	73	60	77	22	23	12	5.6	2.7
2	14	9.7	22	52	183	54	81	20	24	11	4.9	2.7
3	13	9.4	20	46	126	48	56	21	24	10	4.3	1.9
4	13	9.1	20	72	839	42	47	425	22	9.8	4.8	1.9
5	12	9.4	21	72	248	39	42	259	20	9.0	11	1.8
6	12	12	21	54	135	36	37	153	21	8.6	5.4	1.9
7	12	14	19	44	112	33	34	102	28	8.6	4.7	1.8
8	11	42	18	39	92	33	32	69	25	8.2	4.3	1.7
9	11	39	18	35	87	35	30	54	21	7.8	3.6	21
10	10	26	18	33	102	100	127	60	19	7.5	3.6	6.7
11	10	20	17	31	80	280	169	43	17	9.3	3.5	3.7
12	10	18	16	28	67	170	83	71	16	43	3.2	22
13	9.5	16	15	23	61	100	61	283	15	34	3.5	12
14	9.4	17	13	23	56	58	52	113	18	23	3.5	21
15	9.1	304	12	22	638	53	44	82	17	18	3.0	25
16	9.9	421	10	21	371	67	39	1060	16	15	2.9	11
17	19	126	11	21	144	58	35	884	15	11	2.9	6.8
18	13	78	11	27	110	47	30	198	14	9.0	2.6	5.4
19	13	61	12	24	90	40	29	111	14	8.1	2.6	64
20	17	55	11	113	75	36	30	79	22	7.7	2.7	34
21	16	45	10	105	62	34	45	61	24	11	3.0	19
22	13	39	9.5	73	90	34	40	49	19	11	2.9	14
23	12	34	9.8	57	115	32	34	42	19	17	2.8	10
24	11	31	10	50	85	32	30	37	18	12	2.6	8.1
25	11	29	11	45	60	34	28	35	16	8.8	2.6	7.0
26	11	28	11	35	54	33	27	35	15	7.6	2.6	6.2
27	10	27	12	32	58	30	26	31	14	6.8	2.3	5.1
28	11	28	12	29	70	29	25	29	13	6.5	2.2	4.7
29	10	23	15	31	---	30	23	28	12	6.1	15	4.6
30	9.8	23	50	30	---	34	21	25	12	5.5	5.4	4.1
31	9.9	---	194	31	---	68	---	24	---	6.4	3.2	---
TOTAL	367.6	1603.5	671.3	1382	4283	1779	1434	4505	553	369.3	127.2	331.8
MEAN	11.9	53.4	21.7	44.6	153	57.4	47.8	145	18.4	11.9	4.10	11.1
MAX	19	421	194	113	839	280	169	1060	28	43	15	64
MIN	9.1	9.1	9.5	21	54	29	21	20	12	5.5	2.2	1.7
CFSM	.25	1.13	.46	.94	3.22	1.21	1.01	3.06	.39	.25	.09	.23
IN.	.29	1.26	.53	1.08	3.35	1.39	1.12	3.53	.43	.29	.10	.26

CAL YR 1989 TOTAL 29266.4 MEAN 80.2 MAX 1400 MIN 9.1 CFSM 1.69 IN. 22.92
WTR YR 1990 TOTAL 17406.7 MEAN 47.7 MAX 1060 MIN 1.7 CFSM 1.00 IN. 13.63

03364500 CLIFTY CREEK AT HARTSVILLE, IN

LOCATION.--Lat 39°16'25", long 85°42'10", in NW¼NW¼ sec.36, T.10 N., R.7 E., Bartholomew County, Hydrologic Unit 05120206, at downstream side of left abutment of county highway bridge, 0.2 mi north of Hartsville, 5.9 mi upstream from Duck Creek, and at mile 20.0.

DRAINAGE AREA.--91.4 mi^2.

PERIOD OF RECORD.--February 1948 to current year.

REVISED RECORDS.--WSP 1335: 1950. WSP 1725: 1949(M). WSP 2109: Drainage area. WDR IN-74-1: 1973.

GAGE.--Water-stage recorder. Datum of gage is 677.34 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 24, 1952, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Oct. 18 to Nov. 8 and Dec. 14-29. Records fair.

AVERAGE DISCHARGE.--42 years, 97.0 ft^3/s, 14.41 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,300 ft^3/s Jan. 21, 1959, gage height, 14.29 ft; no flow at times most years.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1913 reached an elevation of 702.4 ft National Geodetic Vertical Datum of 1929, from floodmarks, upstream from bridge.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,300 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 16	0400	1,480	5.04	May 5	0200	2,650	6.91
Feb. 4	1300	2,160	6.15	May 16	1500	*2,850	*7.19
Feb. 15	2200	2,070	6.01				

Minimum daily discharge, 2.3 ft^3/s Sept. 8.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	9.8	36	265	97	122	194	56	38	9.2	8.7	18
2	15	9.6	34	136	410	112	266	66	37	8.2	7.9	12
3	14	9.3	32	85	346	100	162	61	40	7.3	6.6	7.8
4	13	9.0	28	121	1480	85	127	1210	37	6.0	6.2	4.9
5	12	10	32	196	663	78	108	1460	33	5.0	8.4	3.4
6	12	12	33	118	337	69	91	530	33	4.4	26	2.7
7	11	15	31	85	271	62	78	317	42	3.7	18	2.6
8	11	35	26	72	227	60	69	194	37	3.1	13	2.3
9	11	77	22	65	196	63	64	138	31	2.8	9.1	7.6
10	11	66	26	62	266	64	206	117	26	2.6	7.0	77
11	10	42	26	64	196	493	483	87	23	2.8	5.6	28
12	9.7	31	21	56	143	278	231	96	20	121	4.8	22
13	8.8	25	18	40	121	175	152	564	19	251	4.9	14
14	8.7	22	18	40	102	136	124	302	18	107	5.1	28
15	11	318	16	38	891	116	102	196	17	67	4.4	16
16	13	1010	15	35	1080	170	88	1780	16	46	4.1	8.3
17	15	366	13	35	375	187	78	1880	14	31	3.7	7.0
18	13	202	12	50	226	131	64	474	14	22	3.4	6.9
19	13	135	11	54	173	105	58	233	12	19	3.0	136
20	17	115	10	212	134	89	60	158	25	16	2.6	113
21	16	93	9.6	299	115	81	88	116	55	30	2.4	31
22	13	75	9.2	178	122	77	103	93	38	59	2.8	15
23	12	65	9.0	123	128	70	79	77	36	50	4.1	8.9
24	11	55	9.0	101	113	66	68	67	36	37	5.6	5.7
25	11	50	9.0	84	88	70	60	63	25	23	6.8	5.0
26	11	51	9.2	71	83	66	55	66	19	17	6.0	5.2
27	10	47	9.8	59	98	60	53	62	15	14	4.4	4.2
28	11	48	11	53	145	56	52	56	13	12	3.1	4.0
29	10	41	15	54	---	58	58	54	12	10	17	4.3
30	10	36	111	54	---	70	57	46	10	9.8	63	4.0
31	10	---	651	50	---	167	---	40	---	9.4	34	---
TOTAL	370.2	3079.7	1312.8	2955	8626	3536	3478	10659	791	1005.3	301.7	604.8
MEAN	11.9	103	42.3	95.3	308	114	116	344	26.4	32.4	9.73	20.2
MAX	17	1010	651	299	1480	493	483	1880	55	251	63	136
MIN	8.7	9.0	9.0	35	83	56	52	40	10	2.6	2.4	2.3
CFSM	.13	1.12	.46	1.04	3.37	1.25	1.27	3.76	.29	.35	.11	.22
IN.	.15	1.25	.53	1.20	3.51	1.44	1.42	4.34	.32	.41	.12	.25

CAL YR 1989 TOTAL 54303.4 MEAN 149 MAX 2570 MIN 3.1 CFSM 1.63 IN. 22.10
WTR YR 1990 TOTAL 36719.5 MEAN 101 MAX 1880 MIN 2.3 CFSM 1.10 IN. 14.94

03365500 EAST FORK WHITE RIVER AT SEYMOUR, IN

LOCATION.--Lat 38°58'57", long 85°53'57", in NW¼NE¼ sec.7, T.6 N., R.6 E., Jackson County, Hydrologic Unit 05120206, on left bank 1,700 ft downstream from highway bridge, 1 mi north of Seymour, 9.5 mi downstream from Sand Creek, and at mile 214.6.

DRAINAGE AREA.--2,341 mi^2.

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.

REVISED RECORDS.--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. WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 550.67 ft above National Geodetic Vertical Datum of 1929. 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.

REMARKS.--Estimated daily discharges: Dec. 16-26, and Dec. 31 to Jan. 1. Records good.

AVERAGE DISCHARGE.--63 years, 2,477 ft^3/s, 14.37 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 78,500 ft^3/s Jan. 5, 1949, gage height, 19.67 ft; minimum daily, 86 ft^3/s Sept. 28, 30, 1941.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 26, 1913, reached a stage of 21.0 ft, from information by Corps of Engineers and Indiana Department of Highways, discharge, 120,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 12,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 18	0300	12,300	14.24	Mar. 14	0100	12,400	14.29
Feb. 5	1900	16,300	15.37	May 5	1800	13,400	14.64
Feb. 18	1000	20,800	16.12	May 17	1400	*46,500	*18.35

Minimum daily discharge, 676 ft^3/s Sept. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1370	783	1630	5200	1970	3870	3300	1920	2900	1340	1100	3700
2	1320	769	1560	4910	3100	3540	4230	1900	2670	1300	1030	2400
3	1270	761	1490	3830	6010	3300	5170	1800	2690	1270	961	1640
4	1210	739	1410	3050	8240	3040	4290	2830	2750	1200	923	1310
5	1170	722	1360	3710	15100	2760	3510	11200	2700	1160	987	1120
6	1130	789	1350	4290	15000	2560	3020	11000	2380	1110	1720	991
7	1090	895	1330	3510	11000	2390	2640	8870	2960	1060	1480	899
8	1060	1120	1290	2800	7730	2240	2360	6030	2880	1020	1170	829
9	1020	2270	1220	2420	6380	2180	2160	4270	2370	987	1020	829
10	990	2280	1160	2190	6920	2150	2460	3570	2160	958	926	1020
11	956	1950	1150	2060	5740	3210	7740	3300	2110	958	861	1360
12	934	1630	1130	2010	4670	7790	7680	2950	2090	2340	814	1360
13	913	1400	1070	1850	3940	11100	6390	7000	1930	6150	784	1500
14	889	1260	1030	1640	3480	11300	4790	10600	1800	5330	791	1160
15	863	1600	1020	1520	4090	7000	3980	11700	1730	3570	980	1180
16	856	8280	760	1460	14800	5470	3460	17400	1730	2710	882	1100
17	898	11600	750	1410	20100	5590	3090	41400	1680	2160	800	1020
18	905	11900	740	1470	20300	4930	2770	33900	1590	1760	748	890
19	893	9010	770	1600	13500	4050	2500	31800	1520	1500	712	844
20	892	5440	780	2570	7620	3430	2320	21900	1480	1340	710	1740
21	906	4120	750	4680	5440	3010	2580	9810	1640	1300	1180	1470
22	923	3450	720	5000	4570	2760	3200	6130	2260	4040	2070	1170
23	950	2930	720	4220	4730	2600	3540	4830	2520	4370	1810	1000
24	954	2550	730	3380	5420	2480	3090	4130	2400	4220	1460	971
25	927	2280	740	2890	4920	2380	2700	3680	2120	3330	1200	938
26	893	2110	760	2550	4010	2390	2430	3430	2000	2440	1020	865
27	860	2000	791	2260	3540	2250	2230	3770	1760	1920	894	794
28	834	1920	817	2020	3890	2100	2070	5180	1600	1610	810	744
29	817	1860	849	1900	---	2010	2000	4440	1490	1410	785	708
30	794	1740	921	1970	---	2030	1950	3730	1410	1280	1780	676
31	799	---	1800	2000	---	2830	---	3250	---	1180	3230	---
TOTAL	30286	90158	32598	86370	216210	118740	103650	287720	63320	66323	35638	36228
MEAN	977	3005	1052	2786	7722	3830	3455	9281	2111	2139	1150	1208
MAX	1370	11900	1800	5200	20300	11300	7740	41400	2960	6150	3230	3700
MIN	794	722	720	1410	1970	2010	1950	1800	1410	958	710	676
CFSM	.42	1.28	.45	1.19	3.30	1.64	1.48	3.96	.90	.91	.49	.52
IN.	.48	1.43	.52	1.37	3.44	1.89	1.65	4.57	1.01	1.05	.57	.58

CAL YR 1989 TOTAL 1325304 MEAN 3631 MAX 25400 MIN 720 CFSM 1.55 IN. 21.06
WTR YR 1990 TOTAL 1167241 MEAN 3198 MAX 41400 MIN 676 CFSM 1.37 IN. 18.55

03366200 HARBERTS CREEK NEAR MADISON, IN

LOCATION.--Lat 38°46'55", long 85°29'08", in SW¼SE¼ sec.14, T.4 N., R.9 E., Jefferson County, Hydrologic Unit 05120207, attached to left downstream wingwall of bridge on County Road 533 West, 0.2 mi west of Smyrna, 3.7 mi upstream from Big Creek, and 4 mi northwest of Madison.

DRAINAGE AREA.--9.31 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 725.75 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 16, 17, 21, 22, 24-28, Jan. 11-16, Jan. 29 to Mar. 29 and July 26 to Aug. 4. Records fair, except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--22 years, 12.9 ft^3/s, 18.84 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,150 ft^3/s May 16 1990, gage height, 8.96 ft; no flow at times many years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 15	Unknown	969	6.85	May 16	2315	*2,150	*8.96

Minimum daily discharge, 0.13 ft^3/s July 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.61	4.1	1.7	25	10	6.0	26	7.3	3.0	.73	.52	2.4
2	.66	3.4	1.7	11	30	5.0	19	5.4	3.1	.53	.41	1.6
3	.63	3.0	1.6	8.9	12	4.5	12	4.4	14	.46	.30	1.2
4	.54	2.8	1.4	14	130	4.0	9.1	64	6.7	.45	.45	.95
5	.46	2.6	1.4	11	90	3.8	7.6	34	4.4	3.0	1.6	.83
6	.67	2.6	1.8	7.5	35	3.5	6.1	28	8.3	8.0	.73	.70
7	2.3	5.1	1.7	5.5	18	3.4	5.0	15	201	.79	.43	.59
8	1.1	17	1.5	4.7	10	3.2	4.4	8.1	29	.35	.33	.64
9	.73	10	1.3	4.4	30	3.0	4.1	6.2	14	.21	.26	.70
10	.67	5.4	1.4	4.2	60	3.5	133	5.5	7.9	.13	.25	.56
11	.64	3.7	1.2	3.8	24	4.6	50	4.5	5.5	16	.22	.50
12	.59	2.7	.92	2.9	13	3.9	18	6.3	4.3	27	.25	1.6
13	.48	2.1	.94	2.7	10	3.5	11	29	3.3	9.3	3.8	.93
14	.45	2.1	.76	2.5	8.0	3.3	10	10	16	6.4	1.7	.60
15	.39	102	.47	2.4	430	5.6	9.9	57	14	4.2	.59	.48
16	5.3	67	.36	2.3	120	170	8.0	452	4.5	2.6	.41	.34
17	10	15	.28	9.4	45	35	7.2	592	2.9	1.4	.29	.27
18	3.8	8.2	.23	29	25	18	6.3	28	2.5	.87	.34	.21
19	21	5.4	2.8	16	15	13	4.8	15	1.8	.71	.21	.83
20	18	4.8	2.0	277	11	8.6	4.1	17	6.6	1.9	1.4	.80
21	8.8	4.5	.74	46	8.2	7.0	227	13	3.9	79	61	.48
22	4.4	3.6	.31	24	9.6	6.4	23	28	23	6.7	14	.85
23	2.8	2.8	.42	17	6.6	5.9	12	12	16	4.3	3.6	.58
24	2.1	2.3	.52	14	5.4	6.9	8.3	8.1	4.4	2.2	2.0	.35
25	1.8	2.1	.60	14	4.8	8.8	6.2	6.7	2.6	1.3	1.3	.30
26	1.8	2.5	.67	15	4.4	13	5.0	6.6	1.7	1.2	.91	.31
27	1.6	2.7	.74	13	5.8	10	4.5	6.0	1.4	1.7	.64	.35
28	1.6	3.1	.81	13	7.0	8.4	4.5	5.2	1.1	1.3	.51	.35
29	1.5	2.4	1.0	110	---	7.9	4.4	5.6	.80	.90	55	.65
30	1.9	1.9	4.0	64	---	12	4.4	4.2	.80	.56	9.6	2.0
31	3.2	---	148	25	---	27	---	3.4	---	.67	4.1	---
TOTAL	100.52	296.9	183.27	799.2	1177.8	418.7	654.9	1487.5	408.50	184.86	167.15	22.95
MEAN	3.24	9.90	5.91	25.8	42.1	13.5	21.8	48.0	13.6	5.96	5.39	.76
MAX	21	102	148	277	430	170	227	592	201	79	61	2.4
MIN	.39	1.9	.23	2.3	4.4	3.0	4.1	3.4	.80	.13	.21	.21
CFSM	.35	1.06	.64	2.77	4.52	1.45	2.34	5.15	1.46	.64	.58	.08
IN.	.40	1.19	.73	3.19	4.71	1.67	2.62	5.94	1.63	.74	.67	.09

CAL YR 1989 TOTAL 5580.45 MEAN 15.3 MAX 245 MIN .02 CFSM 1.64 IN. 22.30
WTR YR 1990 TOTAL 5902.25 MEAN 16.2 MAX 592 MIN .13 CFSM 1.74 IN. 23.58

03366500 MUSCATATUCK RIVER NEAR DEPUTY, IN

LOCATION.--Lat 38°48'15", long 85°40'26", in SW¼NE¼ sec.7, T.4 N., R.8 E., Jefferson County, Hydrologic Unit 05120207, on left bank at downstream side of highway bridge, 1.4 mi northwest of Deputy, 1.9 mi upstream from Coffee Creek, 2.4 mi downstream from confluence of Graham Creek and Big Creek, and at mile 50.0.

DRAINAGE AREA.--293 mi^2.

PERIOD OF RECORD.--November 1947 to current year.

REVISED RECORDS.--WSP 1335: 1948. WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 540.00 ft above National Geodetic Vertical Datum of 1929. Prior to June 22, 1955, nonrecording gage at same site. Prior to Aug. 25, 1983, at datum 1.17 ft higher.

REMARKS.--Estimated daily discharges: Oct. 3-15, Dec. 14-29, and Jan. 2-5. Records good except estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--42 years (water years 1949 to current year), 349 ft^3/s, 16.18 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 52,200 ft^3/s Jan. 21, 1959, from rating curve extended above 25,000 ft^3/s on basis of contracted-opening measurement of peak flow, gage height, 34.3 ft, present datum, from floodmarks; no flow at times many years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 7,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 20	1400	8,060	20.44	May 17	0600	*29,600	*29.26
Feb. 16	0300	18,200	25.56	June 7	1400	8,640	20.83

Minimum daily discharge, 4.7 ft^3/s Sept. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	32	62	2670	565	344	748	182	137	31	14	83
2	14	31	56	1100	1390	256	916	301	116	26	12	48
3	12	31	51	600	1450	219	542	230	962	23	11	31
4	9.0	30	46	400	3400	190	361	698	629	19	9.8	22
5	10	29	46	600	2230	165	289	2920	298	19	13	17
6	12	29	45	364	855	148	236	1100	425	170	15	13
7	17	31	46	233	614	133	193	1090	5800	87	13	11
8	15	85	45	182	541	123	164	498	2340	56	9.9	11
9	10	524	43	157	1350	122	144	311	826	31	8.3	47
10	9.0	279	43	142	2550	127	858	242	488	21	7.7	37
11	8.6	159	43	130	1080	180	3440	193	338	83	7.3	17
12	8.0	113	41	118	603	230	978	175	263	632	6.7	12
13	9.0	88	38	97	411	179	521	1740	201	262	8.1	54
14	9.6	73	35	85	311	152	370	1230	156	230	14	25
15	10	673	33	81	4060	139	323	1010	1100	116	19	52
16	12	4250	31	81	11500	1640	280	8690	549	54	12	23
17	76	1220	30	92	1820	1460	235	20400	264	37	9.9	12
18	84	479	28	558	836	603	203	2680	172	27	8.1	8.5
19	149	278	28	596	590	380	178	992	113	20	7.1	7.7
20	401	200	28	5610	441	316	160	717	121	146	37	7.0
21	361	157	27	2510	349	262	2420	620	321	1490	510	13
22	208	127	26	863	317	221	1440	660	370	433	1340	27
23	134	104	25	497	301	196	570	596	663	192	328	19
24	92	88	25	351	272	197	362	439	324	97	115	15
25	71	79	25	273	228	269	266	361	185	61	57	10
26	59	77	26	212	188	649	209	328	115	45	37	8.5
27	50	77	27	172	185	501	173	308	71	36	27	6.9
28	44	80	29	144	304	333	156	272	52	29	21	5.9
29	39	77	30	678	---	266	164	254	43	24	174	5.4
30	35	69	95	1370	---	267	172	211	36	20	871	4.7
31	33	---	2420	773	---	725	---	168	---	17	223	---
TOTAL	2015.2	9569	3573	21739	38741	10992	17071	49616	17478	4534	3945.9	653.6
MEAN	65.0	319	115	701	1384	355	569	1601	583	146	127	21.8
MAX	401	4250	2420	5610	11500	1640	3440	20400	5800	1490	1340	83
MIN	8.0	29	25	81	185	122	144	168	36	17	6.7	4.7
CFSM	.22	1.09	.39	2.39	4.72	1.21	1.94	5.46	1.99	.50	.43	.07
IN.	.26	1.21	.45	2.76	4.92	1.40	2.17	6.30	2.22	.58	.50	.08

CAL YR 1989 TOTAL 166458.1 MEAN 456 MAX 8690 MIN 8.0 CFSM 1.56 IN. 21.13
WTR YR 1990 TOTAL 179927.7 MEAN 493 MAX 20400 MIN 4.7 CFSM 1.68 IN. 22.84

03368000 BRUSH CREEK NEAR NEBRASKA, IN

LOCATION.--Lat 39°04'13", long 85°29'10" in NW¼NE¼ sec.11, T.7 N., R.9 E., Jennings County, Hydrologic Unit 05120207, on right bank at downstream side of county road bridge, 1.5 mi northwest of Nebraska, 2.9 mi northeast of Butlerville, and 3.6 mi upstream from Brush Creek Dam.

DRAINAGE AREA.--11.4 mi^2.

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

REVISED RECORDS.--WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 717.17 ft above National Geodetic Vertical Datum of 1929 (levels by State of Indiana, Department of Natural Resources).

REMARKS.--Estimated daily discharges: Oct. 19 to Nov. 5, 14-23, and Dec. 25-27. Records fair.

AVERAGE DISCHARGE.--35 years, 13.2 ft^3/s, 15.72 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,360 ft^3/s June 10, 1981, gage height, 12.99 ft, from rating curve extended above 550 ft^3/s on basis of slope-area measurement of peak flow and a contracted-opening measurement at gage height, 10.20 ft; no flow at times most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 950 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 15	1130	1,080	7.30	May 16	1315	*1,700	8.88
Apr. 10	1645	958	6.94	May 17	0045	1,210	7.63

Minimum daily discharge, no flow Aug. 11-17.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	1.0	1.4	22	31	11	30	10	1.6	.30	.03	.85
2	.03	.92	1.4	11	71	9.0	18	7.0	1.6	.27	.02	.60
3	.03	.84	1.2	9.2	29	7.2	11	7.1	2.1	.24	.02	.44
4	.03	.75	1.2	31	208	5.6	8.3	242	1.8	.20	.03	.32
5	.02	.75	1.4	14	31	4.8	6.8	54	1.7	13	.06	.26
6	.03	3.4	1.6	8.1	17	4.2	5.4	63	17	13	.08	.28
7	.08	5.9	1.5	5.9	21	3.7	4.4	20	83	.71	.04	.22
8	.07	26	1.4	5.1	13	3.7	3.8	12	12	.39	.02	.20
9	.06	8.8	1.3	4.7	87	4.1	3.4	7.9	5.4	.29	.01	.38
10	.07	4.1	1.4	5.1	53	66	271	6.8	3.1	.20	.01	.34
11	.08	2.6	2.0	4.2	19	38	57	4.7	2.3	.93	.00	.22
12	.07	2.0	1.2	3.7	13	16	19	28	1.7	16	.00	.20
13	.06	1.7	.88	2.8	10	12	12	239	1.4	1.6	.00	.20
14	.06	1.6	.80	2.7	8.1	9.4	11	25	1.7	.82	.00	.18
15	.06	116	.70	2.9	467	17	9.0	202	1.7	.54	.00	1.5
16	2.3	49	.55	2.7	104	113	7.1	688	1.0	.47	.00	.23
17	5.3	12	.40	5.2	23	25	6.0	262	.82	.31	.00	.10
18	1.2	6.6	.43	35	14	14	4.8	25	1.2	.23	.85	.07
19	2.7	4.5	.47	10	11	10	4.2	13	.65	.18	3.4	7.5
20	5.0	3.7	.50	174	8.1	8.0	4.5	11	6.2	.16	12	.62
21	3.5	3.0	.50	29	6.8	6.7	149	8.4	2.2	.54	134	.23
22	2.5	2.5	.15	14	8.1	6.0	22	12	1.2	.89	11	.26
23	1.9	2.1	.17	9.9	7.1	5.1	12	6.8	.98	.74	1.8	.18
24	1.5	1.8	.19	7.8	6.4	7.1	8.5	5.0	.86	.40	.90	.13
25	1.2	1.8	.25	6.4	4.5	13	6.2	4.5	.60	.22	.58	.11
26	1.0	2.1	.40	5.2	4.1	13	4.8	4.4	.49	.14	.43	.11
27	.97	2.0	.45	4.2	31	8.8	3.8	3.6	.43	.08	.35	.08
28	.92	2.0	.61	3.7	19	6.8	6.3	3.0	.37	.06	.30	.07
29	.86	1.7	1.5	16	---	6.6	6.6	2.7	.32	.04	124	.06
30	.80	1.5	22	25	---	11	4.1	2.2	.31	.04	5.6	.05
31	.90	---	129	20	---	23	---	1.8	---	.04	1.6	---
TOTAL	33.33	272.66	176.95	500.5	1325.2	488.8	720.0	1981.9	155.73	53.03	297.13	15.99
MEAN	1.08	9.09	5.71	16.1	47.3	15.8	24.0	63.9	5.19	1.71	9.58	.53
MAX	5.3	116	129	174	467	113	271	688	83	16	134	7.5
MIN	.02	.75	.15	2.7	4.1	3.7	3.4	1.8	.31	.04	.00	.05
CFSM	.09	.80	.50	1.42	4.15	1.38	2.11	5.61	.46	.15	.84	.05
IN.	.11	.89	.58	1.63	4.32	1.60	2.35	6.47	.51	.17	.97	.05

CAL YR 1989 TOTAL 6609.98 MEAN 18.1 MAX 471 MIN .00 CFSM 1.59 IN. 21.57
WTR YR 1990 TOTAL 6021.22 MEAN 16.5 MAX 688 MIN .00 CFSM 1.45 IN. 19.65

03369000 VERNON FORK MUSCATATUCK RIVER NEAR BUTLERVILLE, IN

LOCATION.--Lat 39°02'55", long 85°32'40", in NW¼SE¼ sec.17, T.7 N., R.9 E., Jennings County, Hydrologic Unit 05120207, on left bank 0.3 mi downstream from Muscatatuck State School dam, 1.1 mi downstream from Brush Creek, 2 mi northwest of Butlerville, and at mile 50.6.

DRAINAGE AREA.--85.9 mi^2.

PERIOD OF RECORD.--February 1942 to current year. Prior to October 1960, published as North Fork of Vernon Fork near Butlerville, and as Vernon Fork near Butlerville, October 1960 to September 1979.

REVISED RECORDS.--WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 669.40 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 19, 1942, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Dec. 14-27. Records good. Water supply for the Muscatatuck State School is diverted and the sewage effluent returned above station. Flow regulated by Brush Creek Reservoir.

AVERAGE DISCHARGE.--48 years, 94.1 ft^3/s, 14.88 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,200 ft^3/s Jan. 21, 1959, gage height, 25.41 ft, from rating curve extended above 10,000 ft^3/s on basis of slope-area measurement at gage height 25.41 ft; no flow at times during 1944, 1945, 1949, and 1968.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 4,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Apr. 10	2000	4,240	11.15	May 16	1800	*7,900	*15.65
May 4	2100	5,130	12.34	May 17	0400	4,430	11.41

Minimum daily discharge, 0.96 ft^3/s Oct. 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	5.7	17	235	158	111	170	57	17	4.5	2.0	20
2	1.6	5.9	16	80	436	90	182	73	17	3.8	1.8	13
3	1.3	5.4	14	68	242	77	114	49	338	3.5	1.7	10
4	1.0	5.6	12	164	1430	62	90	1950	40	3.3	1.8	7.5
5	1.1	5.5	13	152	331	51	76	798	27	3.0	10	5.9
6	1.7	80	14	71	175	45	63	461	33	39	14	5.2
7	1.5	44	14	49	193	39	50	231	336	7.9	5.4	4.8
8	1.2	309	14	41	146	36	42	147	113	4.4	3.3	4.5
9	.96	119	11	38	518	39	37	105	52	3.2	2.4	69
10	1.6	51	12	38	411	86	1370	98	35	2.6	1.9	45
11	1.4	35	13	34	189	360	721	73	26	92	1.8	14
12	1.5	27	12	30	133	139	217	180	21	576	1.9	248
13	2.0	21	9.3	22	100	94	145	1490	17	98	1.9	56
14	2.8	19	8.2	22	82	75	116	280	17	28	1.7	60
15	3.9	649	7.4	22	1720	68	99	707	20	18	1.6	119
16	8.2	756	6.4	21	1260	593	82	3840	14	14	1.5	23
17	37	150	5.6	23	256	226	72	2050	11	10	1.4	12
18	18	71	5.2	93	181	136	58	296	11	8.0	1.3	8.5
19	9.6	47	5.0	57	119	99	48	150	9.0	6.4	1.4	314
20	9.5	39	4.5	889	73	79	47	96	34	5.6	1.8	58
21	17	34	4.0	315	59	67	297	69	36	27	298	23
22	15	29	3.0	121	66	58	166	65	18	16	134	21
23	12	24	2.7	64	71	51	102	50	15	12	28	15
24	10	21	2.7	55	61	56	77	42	15	9.4	14	9.9
25	9.0	19	2.8	47	43	78	62	39	14	7.7	8.6	7.6
26	7.8	21	3.0	43	36	92	48	38	11	5.8	6.0	6.0
27	7.1	21	3.5	37	117	73	41	34	8.2	4.0	4.4	5.0
28	6.3	20	4.4	34	187	59	37	29	6.6	3.4	3.3	4.6
29	6.1	25	6.5	51	---	55	62	27	5.5	2.9	727	4.2
30	6.0	19	30	103	---	69	40	23	5.0	2.9	105	3.5
31	6.2	---	659	134	---	192	---	20	---	3.9	35	---
TOTAL	209.96	2678.1	935.2	3153	8793	3355	4731	13567	1322.3	1026.2	1423.9	1197.2
MEAN	6.77	89.3	30.2	102	314	108	158	438	44.1	33.1	45.9	39.9
MAX	37	756	659	889	1720	593	1370	3840	338	576	727	314
MIN	.96	5.4	2.7	21	36	36	37	20	5.0	2.6	1.3	3.5
CFSM	.08	1.04	.35	1.18	3.66	1.26	1.84	5.09	.51	.39	.53	.46
IN.	.09	1.16	.40	1.37	3.81	1.45	2.05	5.88	.57	.44	.62	.52

CAL YR 1989 TOTAL 47548.26 MEAN 130 MAX 2480 MIN .96 CFSM 1.52 IN. 20.59
WTR YR 1990 TOTAL 42391.86 MEAN 116 MAX 3840 MIN .96 CFSM 1.35 IN. 18.36

03369500 VERNON FORK MUSCATATUCK RIVER AT VERNON, IN

LOCATION.--Lat 38°58'34", long 85°37'13", in NW¼SE¼ sec.10, T.6 N., R.8 E., Jennings County, Hydrologic Unit 05120207, at downstream end of left bank bridge pier, 1 mi southwest of Vernon, 3.1 mi downstream from Otter Creek, and at mile 36.4.

DRAINAGE AREA.--198 mi^2.

PERIOD OF RECORD.--October 1939 to current year. Monthly discharge only for some periods, published in WSP 1305. Prior to October 1979, published as Vernon Fork at Vernon.

REVISED RECORDS.--WSP 1335: 1940, 1953. WSP 1909: 1952-53. WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 585.00 ft above National Geodetic Vertical Datum of 1929, (levels by State of Indiana, Department of Natural Resources). 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. Prior to Aug. 8, 1983, datum 2.30 ft higher.

REMARKS.--Estimated daily discharges: Dec. 14-27. Records good except for estimated daily discharges, which are poor. Diversion above station for municipal water supply of North Vernon and Vernon. Part of this diverson returned above gage as sewage effluent by North Vernon Sewage Treatment Plant. Some regulation at times at low flow by Old Timbers Lake on Jefferson Proving Grounds.

AVERAGE DISCHARGE.--51 years, 222 ft^3/s, 15.23 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 56,800 ft^3/s Jan. 21, 1959, from rating curve extended above 24,000 ft^3/s on basis of slope-area measurement of peak flow, gage height, 35.13 ft, present datum, from high-water mark. No flow at times in 1940, 1943-44.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 6,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 15	2300	9,230	16.23	May 15	2200	6,200	13.19
Apr. 10	2300	7,390	14.44	May 16	2400	*14,900	*21.03
May 4	2400	7,790	14.84				

Minimum daily discharge, 0.37 ft^3/s Aug. 20.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	15	38	665	342	220	326	147	50	12	1.6	64
2	2.1	14	35	255	917	178	421	195	50	11	1.8	37
3	2.8	13	32	207	665	169	243	140	332	8.5	1.0	23
4	3.2	13	30	276	2800	142	190	2390	134	7.0	.86	16
5	2.5	12	30	392	953	128	163	2340	65	5.4	2.1	11
6	2.9	24	31	209	420	117	139	1010	83	30	5.3	7.4
7	5.6	90	32	155	366	104	119	583	947	60	17	4.7
8	3.9	342	32	133	315	97	106	315	398	22	6.9	2.7
9	2.3	356	30	121	889	101	98	223	209	11	2.8	1.9
10	2.0	129	28	116	1140	112	2000	195	131	6.8	1.6	115
11	2.8	71	29	112	438	498	2190	147	84	5.6	.84	37
12	3.0	52	29	99	296	264	495	186	65	585	.51	129
13	2.9	44	25	85	226	177	294	3130	54	380	.44	225
14	3.1	38	21	76	187	150	228	704	61	95	.45	44
15	4.6	690	20	77	3450	136	201	1890	147	49	.44	191
16	9.1	2220	18	77	3710	1270	167	8300	59	36	.43	87
17	79	404	16	85	685	548	149	6350	40	29	.40	33
18	87	209	14	394	398	286	127	853	38	21	.40	17
19	63	125	13	227	290	207	108	442	37	17	.37	224
20	93	91	12	2380	196	171	103	345	88	21	41	306
21	83	77	11	882	162	146	1090	288	159	174	344	75
22	61	65	10	380	161	132	472	280	77	72	679	40
23	46	56	9.0	235	165	122	260	211	48	70	158	30
24	35	49	8.4	190	149	124	191	145	40	42	57	21
25	28	44	8.4	162	126	159	152	116	36	23	32	14
26	22	46	8.6	141	103	221	129	107	31	15	20	9.1
27	21	47	10	122	135	171	110	97	27	11	14	5.1
28	14	48	13	109	407	140	101	80	20	6.6	9.5	2.8
29	13	45	16	188	---	129	152	71	16	3.6	921	1.9
30	13	44	43	332	---	148	121	63	13	2.2	421	1.2
31	11	---	1390	354	---	397	---	55	---	1.8	159	---
TOTAL	724.0	5473	2042.4	9236	20091	6964	10645	31398	3539	1833.5	2900.74	1775.8
MEAN	23.4	182	65.9	298	718	225	355	1013	118	59.1	93.6	59.2
MAX	93	2220	1390	2380	3710	1270	2190	8300	947	585	921	306
MIN	2.0	12	8.4	76	103	97	98	55	13	1.8	.37	1.2
CFSM	.12	.92	.33	1.50	3.62	1.13	1.79	5.12	.60	.30	.47	.30
IN.	.14	1.03	.38	1.74	3.77	1.31	2.00	5.90	.66	.34	.54	.33

CAL YR 1989 TOTAL 106795.8 MEAN 293 MAX 5510 MIN 1.1 CFSM 1.48 IN. 20.06
WTR YR 1990 TOTAL 96622.44 MEAN 265 MAX 8300 MIN .37 CFSM 1.34 IN. 18.15

03371500 EAST FORK WHITE RIVER NEAR BEDFORD, IN

LOCATION.--Lat 38°46'10", long 86°24'30", in SW¼NE¼ sec.21, T.4 N., R.1 E., Lawrence County, Hydrologic Unit 05120208, on downstream side of center pier of bridge on county road, 0.4 mi upstream from Mill Creek, 2.9 mi downstream from Sugar Creek, 3.9 mi northeast of Mitchell, 7.8 mi southeast of Bedford, and at mile 153.3.

DRAINAGE AREA.--3,861 mi^2.

PERIOD OF RECORD.--May 1939 to current year (high-water records only October 1943 to September 1957).

REVISED RECORDS.--WSP 2109: Drainage area. WDR IN-73-1: 1972.

GAGE.--Water-stage recorder. Datum of gage is 473.59 ft above National Geodetic Vertical Datum of 1929. Prior to Feb. 6, 1940, nonrecording gage, and Feb. 6, 1940, to Sept. 24, 1957, water-stage recorder, at site 9.8 mi downstream at datum 4.39 ft lower.

REMARKS.--Estimated daily discharges: Dec. 15 to Jan. 4, and Aug. 11 to Sept. 7. Records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--37 years (1939-43, 1957 to current year), 4,017 ft^3/s, 14.13 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 75,700 ft^3/s Mar. 12, 1964; maximum gage height, 35.97 ft May 11, 1961; minimum daily discharge, 138 ft^3/s Sept. 7, 1941.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1913 reached a stage of 47.5 ft, from floodmark determined by U.S. Army Corps of Engineers, discharge, 155,000 ft^3/s, at former site.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 13,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 20	2100	13,200	16.84	May 8	1800	14,400	17.19
Feb. 8	2000	18,300	20.50	May 20	0300	*54,100	*32.17
Feb. 20	1300	28,500	25.24				

Minimum daily discharge, 986 ft^3/s Sept. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2040	1180	2860	3000	5990	5770	5740	3370	5030	1910	1750	2700
2	1930	1170	2710	4500	6130	6110	6740	3320	4460	1790	1620	2850
3	1840	1160	2590	7400	6970	5850	7200	3320	4610	1690	1500	2500
4	1740	1140	2470	8600	9580	5330	7740	3700	5050	1620	1430	2100
5	1670	1130	2360	7490	11600	4880	7390	5580	5380	1550	1690	1850
6	1600	1110	2260	6270	12900	4490	6440	8400	4850	1550	1530	1700
7	1540	1120	2190	6540	15600	4110	5560	11600	7680	1460	1600	1550
8	1500	1290	2160	6070	18000	3810	4800	14100	9110	1410	1910	1410
9	1450	1650	2130	5020	17900	3570	4200	14000	8570	1380	1710	1300
10	1400	2390	2050	4300	16700	3420	4740	12000	8390	1330	1490	1190
11	1350	3340	1970	3850	14400	3380	8180	9170	8430	1300	1470	1220
12	1310	3170	1900	3530	13000	3620	9310	6710	7910	1650	1380	1430
13	1270	2690	1840	3340	11900	5940	10800	7420	6730	2320	1320	1640
14	1230	2340	1790	3120	10700	8030	11700	9020	4790	4930	1250	1680
15	1200	2750	1760	2850	10100	9890	11200	10900	4040	6190	1230	1750
16	1190	5650	1400	2620	12200	10700	9730	17600	3590	5400	1220	1550
17	1230	7480	1300	2510	13000	9230	7750	32400	3410	4120	1230	1540
18	1330	9430	1310	2830	17300	8790	5860	38500	3330	3270	1220	1460
19	1410	11300	1340	3140	24600	8800	4930	51000	2950	2700	1200	1350
20	1510	12900	1360	6820	28100	7640	4360	53700	2640	2420	1140	1230
21	1700	12400	1320	8870	25800	6160	4460	50700	2520	2660	1070	1340
22	1810	9100	1280	9250	20200	5230	6190	43200	2470	2990	1320	1930
23	1810	6210	1270	10000	14700	4670	7400	34300	3480	4210	2300	1730
24	1710	4980	1280	10600	11000	4340	8020	26400	3860	5330	2500	1460
25	1620	4320	1300	10400	9140	4150	7680	19600	3530	5060	2300	1320
26	1530	3860	1340	9310	7710	4320	6210	14200	3090	4600	1900	1260
27	1440	3530	1380	7780	6590	4770	4850	10800	2760	3690	1600	1190
28	1370	3280	1430	5750	5850	4860	4140	8730	2480	2940	1450	1110
29	1310	3080	1500	4520	---	4470	3720	7510	2230	2460	1400	1040
30	1260	2970	1600	4780	---	4110	3470	6810	2060	2140	1330	986
31	1220	---	2200	5540	---	4600	---	5850	---	1920	1800	---
TOTAL	46520	128120	55650	180600	377660	175040	200510	543910	139430	87990	47860	47366
MEAN	1501	4271	1795	5826	13490	5646	6684	17550	4648	2838	1544	1579
MAX	2040	12900	2860	10600	28100	10700	11700	53700	9110	6190	2500	2850
MIN	1190	1110	1270	2510	5850	3380	3470	3320	2060	1300	1070	986
CFSM	.39	1.11	.46	1.51	3.49	1.46	1.73	4.54	1.20	.74	.40	.41
IN.	.45	1.23	.54	1.74	3.64	1.69	1.93	5.24	1.34	.85	.46	.46

CAL YR 1989 TOTAL 2199450 MEAN 6026 MAX 36100 MIN 1110 CFSM 1.56 IN. 21.19
WTR YR 1990 TOTAL 2030656 MEAN 5563 MAX 53700 MIN 986 CFSM 1.44 IN. 19.56

03371520 BACK CREEK AT LEESVILLE, IN

LOCATION.--Lat 38°50'48", long 86°18'06", in SW¼SE¼ sec.21, T.5 N., R.2 E., Lawrence County, Hydrologic Unit 05120208, on left bank at downstream side of county road bridge, 0.9 mi west of Leesville, 2.5 mi upstream from Jones Defeat Hollow, and 7 mi above mouth.

DRAINAGE AREA.--24.1 mi^2.

PERIOD OF RECORD.--October 1970 to current year.

REVISED RECORDS.--WRD IN-72-1: 1971.

GAGE.--Water-stage recorder. Datum of gage is 575.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 10 to Jan. 4. Records good, except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--20 years, 33.1 ft^3/s, 18.65 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,300 ft^3/s July 21, 1973, gage height, 14.0 ft, from floodmarks, from rating extended above 550 ft^3/s on basis of step-backwater analysis and contracted-opening and flow-over-road measurement of peak flow; no flow at times during 1971, 1975, 1976, 1981, 1984, 1987, 1988, and 1989.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1913 reached a stage of 18.1 ft from information by local resident.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 15	1500	1,270	5.20	May 16	1030	3,790	7.89
Feb. 9	1045	1,420	5.42	May 17	0030	2,540	6.75
May 4	1515	1,200	5.10	June 7	0315	1,190	5.08
May 15	1915	*3,950	*8.02				

Minimum daily discharge, .17 ft^3/s Oct. 15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.30	.90	1.5	4.3	31	19	71	13	9.2	2.2	.80	.52
2	.28	.87	1.4	3.9	104	16	57	6.2	9.0	1.9	.76	.48
3	.26	.85	1.3	8.0	78	12	41	6.8	53	1.6	.69	.46
4	.24	.82	1.2	24	374	8.6	28	270	15	1.4	14	.43
5	.22	.82	1.3	20	127	7.2	18	134	11	1.8	25	.41
6	.24	.80	1.3	12	72	5.9	12	91	45	1.4	2.3	.40
7	.30	.98	1.3	7.9	56	4.9	8.4	64	354	1.2	1.4	.38
8	.32	6.0	1.2	6.3	43	4.9	6.6	42	115	1.0	1.2	.40
9	.29	4.4	1.1	5.4	335	5.3	5.4	24	69	.97	1.0	.59
10	.27	2.7	1.1	4.7	172	5.3	262	25	46	.88	.94	.81
11	.25	2.0	.99	3.8	86	5.6	162	11	29	49	.85	.65
12	.23	1.6	.94	3.2	55	4.9	76	61	19	165	.80	1.1
13	.21	1.4	.90	2.7	40	4.5	50	266	13	25	.77	.85
14	.19	1.8	.87	2.5	25	4.2	39	94	48	10	.76	.73
15	.17	230	.76	2.7	305	6.2	24	598	39	6.5	.69	.71
16	.30	92	.77	2.4	189	46	16	1500	15	4.7	.66	.72
17	.71	33	.78	9.8	84	28	13	679	9.3	3.2	.62	.65
18	.83	11	.80	34	56	16	8.5	180	10	2.4	.61	.51
19	.99	6.2	.74	19	39	13	7.0	116	6.4	2.0	.59	.43
20	1.6	4.8	.70	375	22	8.9	8.2	90	93	1.9	.57	.49
21	1.7	3.6	.66	122	15	7.6	93	70	46	3.7	21	.44
22	1.4	2.9	.68	64	42	7.1	55	57	22	2.9	32	.50
23	1.2	2.3	.71	43	45	5.8	36	46	14	2.5	2.9	.42
24	1.2	1.9	.74	25	33	7.6	21	37	9.2	2.0	1.4	.36
25	1.1	1.9	.77	16	18	14	13	30	6.6	1.5	1.1	.32
26	1.0	2.2	.80	9.7	13	34	8.9	37	4.9	1.3	.86	.27
27	.98	2.1	.87	7.4	26	29	6.6	26	4.0	1.1	.74	.25
28	.92	2.1	1.1	5.9	25	21	5.7	24	3.3	1.0	.62	.23
29	.97	1.8	2.1	12	---	22	4.5	30	2.7	.95	.65	.20
30	.95	1.6	31	13	---	47	3.3	16	2.4	.92	.68	.18
31	.91	---	13	20	---	100	---	12	---	.86	.56	---
TOTAL	20.53	425.34	73.38	889.6	2510	521.5	1160.1	4656.0	1123.0	302.78	117.52	14.89
MEAN	.66	14.2	2.37	28.7	89.6	16.8	38.7	150	37.4	9.77	3.79	.50
MAX	1.7	230	31	375	374	100	262	1500	354	165	32	1.1
MIN	.17	.80	.66	2.4	13	4.2	3.3	6.2	2.4	.86	.56	.18
CFSM	.03	.59	.10	1.19	3.72	.70	1.60	6.23	1.55	.41	.16	.02
IN.	.03	.66	.11	1.37	3.87	.80	1.79	7.19	1.73	.47	.18	.02

CAL YR 1989 TOTAL 14685.78 MEAN 40.2 MAX 1170 MIN .00 CFSM 1.67 IN. 22.67
WTR YR 1990 TOTAL 11814.64 MEAN 32.4 MAX 1500 MIN .17 CFSM 1.34 IN. 18.24

03372300 STEPHENS CREEK NEAR BLOOMINGTON, IN

LOCATION.--Lat 39°10'11", long 86°25'07", in NE¼NW¼ sec.4, T.8 N., R.1 E., Monroe County, Hydrologic Unit 05120208, on downstream side of right pier of bridge on State Highway 46, 0.2 mi downstream from Kerr Creek, 4.0 mi west of Belmont, and 6.1 mi east of Bloomington.

DRAINAGE AREA.--10.9 mi^2.

PERIOD OF RECORD.--October 1970 to current year.

GAGE.--Water-stage recorder. Datum of gage is 550.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 9 to Jan. 16, Aug. 30 to Sept. 8, 11, 15-18, 21-30. Records fair except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--20 years, 14.0 ft^3/s, 17.44 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,400 ft^3/s July 13, 1979, gage height, 13.18 ft from rating curve extended above 1,200 ft^3/s on basis of contracted-opening measurements at gage heights of 11.52 ft and 13.18 ft; no flow at times most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 350 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 14	1445	426	7.13	Feb. 15	1015	1,070	9.65
Nov. 15	1515	768	8.63	May 13	0115	381	6.91
Feb. 4	0330	559	7.74	May 16	1100	*1,490	*10.55

Minimum daily discharge, 0.13 ft^3/s Aug. 8-12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	2.4	6.1	51	32	21	45	6.4	2.1	.73	.25	.30
2	1.1	2.1	5.8	26	82	18	43	4.9	2.1	.67	.21	.27
3	.80	1.9	5.5	13	58	15	29	13	2.2	.66	.18	.26
4	.65	1.7	5.1	25	273	12	22	124	1.9	.57	.22	.25
5	.62	2.1	4.7	19	70	11	17	48	1.8	.56	.18	.24
6	.58	10	5.0	14	40	9.2	14	45	1.9	.53	.16	.23
7	.51	33	4.9	9.8	28	7.6	11	30	6.1	.47	.15	.22
8	.64	88	4.2	8.2	21	7.3	9.4	21	3.6	.44	.13	.22
9	.84	43	3.8	7.5	20	7.7	7.9	15	2.6	.39	.13	3.0
10	.86	25	3.4	7.5	18	7.6	157	17	2.1	.34	.13	1.7
11	.81	16	3.2	7.5	15	8.3	67	11	1.7	.41	.13	1.2
12	.77	11	2.9	7.5	13	7.9	33	104	1.4	15	.13	6.3
13	.82	8.3	2.7	8.2	11	7.4	24	169	1.3	1.6	1.4	2.8
14	.91	101	2.5	7.5	10	7.3	20	51	1.2	1.0	.18	3.2
15	1.1	282	2.4	7.5	328	9.0	15	81	1.2	.72	.14	1.8
16	20	148	2.2	6.8	96	28	13	500	1.1	.58	.16	1.2
17	11	60	2.1	13	41	24	11	233	1.2	.42	.17	1.0
18	4.6	38	2.0	21	28	18	9.3	52	1.3	.35	.19	.90
19	7.0	26	1.8	18	21	15	8.2	28	1.2	.30	.21	3.0
20	13	20	1.7	84	16	12	14	19	8.2	.30	.37	2.4
21	12	15	1.7	57	14	11	18	13	3.2	.49	.45	1.8
22	8.7	12	1.6	39	28	9.9	17	9.9	2.8	.67	.62	1.2
23	6.4	9.8	1.6	28	30	8.1	15	7.4	2.6	.77	.73	.94
24	4.9	8.3	1.6	22	25	9.3	13	5.9	1.8	.48	.48	.83
25	4.0	7.6	1.6	19	20	11	11	5.3	1.4	.34	.27	.74
26	3.4	7.6	1.8	16	20	15	9.3	4.7	1.2	.25	.22	.64
27	2.9	7.1	2.1	15	24	15	7.7	4.0	1.1	.20	.19	.58
28	2.7	8.8	2.8	13	24	14	7.2	3.6	.88	.16	.18	.54
29	2.6	7.4	4.0	13	---	15	6.1	3.5	.80	.19	1.2	.50
30	2.4	6.6	14	12	---	18	5.0	2.9	.76	.28	.58	.45
31	2.4	---	173	12	---	34	---	2.4	---	.26	.37	---
TOTAL	120.21	1009.7	277.8	608.0	1406	413.6	679.1	1634.9	62.74	30.13	10.11	38.71
MEAN	3.88	33.7	8.96	19.6	50.2	13.3	22.6	52.7	2.09	.97	.33	1.29
MAX	20	282	173	84	328	34	157	500	8.2	15	1.4	6.3
MIN	.51	1.7	1.6	6.8	10	7.3	5.0	2.4	.76	.16	.13	.22
CFSM	.36	3.09	.82	1.80	4.61	1.22	2.08	4.84	.19	.09	.03	.12
IN.	.41	3.45	.95	2.08	4.80	1.41	2.32	5.58	.21	.10	.03	.13

CAL YR 1989 TOTAL 6640.06 MEAN 18.2 MAX 315 MIN .26 CFSM 1.67 IN. 22.66
WTR YR 1990 TOTAL 6291.00 MEAN 17.2 MAX 500 MIN .13 CFSM 1.58 IN. 21.47

03372500 SALT CREEK NEAR HARRODSBURG, IN

LOCATION.--Lat 39°00'16", long 86°30'31", in NE¼NW¼ sec.34, T.7 N., R.1 W., Monroe County, Hydrologic Unit 05120208, on right bank 0.35 mi downstream from Monroe Lake, 0.9 mi upstream from Clear Creek, 2.2 mi southeast of Harrodsburg, and 25.7 mi upstream from mouth.

DRAINAGE AREA.--432 mi^2.

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

REVISED RECORDS.--WSP 1705: 1959. WSP 1725: 1956(M). WSP 2109: Drainage area.

GAGE.--Data-Collection Platform installed on May 13, 1988. Datum of gage was 480.00 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Oct. 1, 1960, to Sept. 30, 1974, water-stage recorder at site described in "LOCATION" paragraph. Prior to Oct. 1, 1960, nonrecording gage at site 0.7 mi upstream at datum 2.41 ft higher.

REMARKS.--Flow regulated by Monroe Lake since April 1966. Daily discharge computed from relation between discharge, head, and gate openings for Monroe Lake beginning Oct. 1, 1974.

COOPERATION.--Records of daily discharge provided by U.S. Army Corps of Engineers beginning Oct. 1, 1976.

AVERAGE DISCHARGE.--35 years, 492 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,000 ft^3/s June 25, 1960, gage height, 32.76 ft 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.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 2,060 ft^3/s Nov. 30, Mar. 26; minimum daily, 48 ft^3/s Oct. 22-29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	489	213	2050	130	535	1760	1430	1070	1560	1810	57	51
2	305	213	2040	205	206	2000	1430	1070	1550	1800	53	51
3	136	213	2030	206	208	2000	1430	1070	1550	1790	51	51
4	59	213	2030	388	211	1990	1420	691	1550	1780	51	51
5	59	144	2020	572	213	1980	1600	212	1540	1770	51	51
6	59	89	2010	572	214	1790	1870	213	1080	1770	51	51
7	59	213	2000	572	215	1480	2020	214	305	1760	51	51
8	59	214	1990	572	215	955	2010	439	232	1750	51	51
9	59	301	1980	1020	216	1150	2000	600	232	1740	51	51
10	59	531	1970	1540	217	1320	1260	898	443	1730	51	51
11	59	602	1520	1540	217	1140	765	1650	1000	1730	51	51
12	59	601	754	1530	218	1140	533	1730	1190	1720	51	51
13	59	600	560	1150	408	1140	213	1110	1180	1720	51	51
14	59	600	343	879	723	1560	213	874	929	1510	51	51
15	59	316	201	513	433	1450	213	363	884	1170	51	51
16	59	125	201	201	225	419	405	222	1180	859	51	51
17	59	223	201	201	227	221	597	231	1170	486	51	51
18	59	224	201	201	227	222	1450	235	1170	295	51	51
19	162	225	201	201	227	479	1740	235	1050	171	51	51
20	213	225	201	203	228	956	1410	235	447	78	51	51
21	155	400	201	206	228	1420	1410	213	229	57	51	51
22	48	794	201	207	228	1540	1410	189	418	57	51	51
23	48	1250	200	414	228	1550	1410	189	811	57	51	51
24	48	1760	200	736	229	1780	1290	189	981	57	51	51
25	48	1950	200	897	229	1920	1090	189	1310	57	51	51
26	48	1940	127	896	486	2060	1090	189	1680	57	51	51
27	48	1320	54	894	848	2050	1080	189	1840	57	51	51
28	48	612	54	893	1330	1820	1080	189	1830	57	51	51
29	48	1300	54	892	---	1430	1080	354	1820	57	51	51
30	158	2060	54	890	---	1430	1080	821	1810	57	51	51
31	213	---	54	889	---	1430	---	1350	---	57	51	---
TOTAL	3100	19471	25902	20210	9389	43582	36029	17423	32971	28066	1589	1530
MEAN	100	649	836	652	335	1406	1201	562	1099	905	51.3	51.0
MAX	489	2060	2050	1540	1330	2060	2020	1730	1840	1810	57	51
MIN	48	89	54	130	206	221	213	189	229	57	51	51

CAL YR 1989 TOTAL 234604 MEAN 643 MAX 2230 MIN 32
WTR YR 1990 TOTAL 239262 MEAN 656 MAX 2060 MIN 48

03373500 EAST FORK WHITE RIVER AT SHOALS, IN

LOCATION (Revised).--Lat 38°39'58", long 86°47'35", in SW¼NW¼ sec.30, T.3 N., R.3 W., Martin County, Hydrologic Unit 05120208, on left bank 100 feet downstream of Baltimore and Ohio Railroad bridge, 440 feet downstream from U.S. Highway 50 bridge at Shoals, 0.9 mi upstream from Beaver Creek, 6.6 mi downstream from Indian Creek, and at mile 105.2.

DRAINAGE AREA.--4,927 mi^2.

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, 1903-06, 1908-16. Gage-height records collected at same site since May 1908 are contained in reports of the National Weather Service.

REVISED RECORDS.--WSP 353: 1912. WSP 1335: 1903-6. WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 442.25 ft above National Geodetic Vertical Datum of 1929. Oct. 26, 1932 to Dec. 13, 1989, water-stage recorder located at U.S. Highway 50 bridge 440 ft upstream. See WSP 1725 for history of changes prior to Oct. 26, 1932.

REMARKS.--Estimated daily discharges: Dec. 12, and Dec. 21 to Jan. 1. Records poor. Flow partially regulated by upstream reservoirs.

AVERAGE DISCHARGE.--76 years (1903-5, 1909-16, 1923 to current year), 5,461 ft^3/s, 15.05 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 160,000 ft^3/s Mar. 28, 1913, gage height, 42.2 ft, from rating curve extended above 100,000 ft^3/s; minimum daily, 64 ft^3/s Oct. 6, 1935, as a result of filling Williams Reservoir.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 20,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 10	0900	22,000	14.40	May 22	0600	*48,000	*28.03
Feb. 21	2300	26,800	17.65				

Minimum daily discharge, 1,010 ft^3/s Aug. 22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2680	1660	4930	2500	5900	6450	6390	3310	5600	3060	1800	1720
2	2580	1650	4590	3740	7380	6780	7750	3510	5060	3050	1680	2710
3	2350	1650	4560	4480	9350	7150	8660	3430	5160	2930	1590	2950
4	2060	1640	4770	9530	12000	6810	9270	4510	5100	2820	1530	2540
5	1890	1630	4440	10800	17900	6170	9560	8800	5390	2690	1630	2110
6	1810	1590	4470	7880	17100	5660	8450	9230	5370	2690	1720	1780
7	1760	1920	4340	7910	17100	5060	7030	11600	14200	2720	1500	1580
8	1680	2100	4290	7810	19100	4490	6130	14500	17500	2720	1540	1480
9	1630	2900	3860	7180	20800	3960	5410	16200	12400	2670	1730	1440
10	1570	3100	4170	6290	21800	3780	6190	15500	9660	2670	1640	1600
11	1530	3780	4090	6160	20200	3930	13800	13300	9120	2730	1500	1440
12	1480	4330	2840	6060	17500	3940	14000	10400	9310	3090	1390	1320
13	1450	4030	2410	5860	15500	4490	13100	11500	8200	3510	1310	1420
14	1400	3640	2160	5260	14000	6970	13900	14700	6110	3930	1280	1620
15	1350	4060	2010	4920	14200	10500	14000	13800	4590	5490	1250	1600
16	1350	10300	1630	4560	19400	13600	12700	22000	3620	5630	1190	1600
17	1580	10500	1420	4200	19700	12900	10300	36200	3510	4380	1180	1410
18	2380	9820	1310	4060	18100	10100	7080	41100	3620	3410	1220	1410
19	1960	11400	1330	4800	20800	9500	5800	42300	3540	2780	1200	1430
20	1910	13200	1560	8200	24100	8940	5350	44700	3470	2410	1150	1380
21	2180	14200	1610	15500	26400	7230	5110	47200	4220	2550	1110	1310
22	2310	12800	1410	12700	26000	6080	6210	47600	3110	2560	1010	1480
23	2210	8710	1320	11800	22600	5430	7290	45500	3000	2660	1300	1750
24	2110	6530	1340	12400	17400	4900	8310	41800	3660	3450	2220	1650
25	1980	6260	1370	12900	12700	4880	8860	36300	3730	3790	2540	1480
26	1900	6110	1400	12200	9500	5200	7950	29000	3650	3610	2170	1390
27	1800	5720	1340	10200	7430	5960	5860	19000	3590	3270	1840	1250
28	1710	5550	1260	7340	6590	6290	4710	12500	3490	2760	1600	1170
29	1640	4180	1320	5130	---	5930	4020	8680	3300	2380	1460	1120
30	1580	4010	1390	4600	---	5080	3630	6930	3180	2150	1340	1060
31	1570	---	1700	5080	---	5290	---	6190	---	1940	1250	---
TOTAL	57390	168970	80640	232050	460550	203450	246820	641290	175460	96500	46870	48200
MEAN	1851	5632	2601	7485	16450	6563	8227	20690	5849	3113	1512	1607
MAX	2680	14200	4930	15500	26400	13600	14000	47600	17500	5630	2540	2950
MIN	1350	1590	1260	2500	5900	3780	3630	3310	3000	1940	1010	1060
CFSM	.38	1.14	.53	1.52	3.34	1.33	1.67	4.20	1.19	.63	.31	.33
IN.	.43	1.28	.61	1.75	3.48	1.54	1.86	4.84	1.32	.73	.35	.36

CAL YR 1989 TOTAL 2810740 MEAN 7701 MAX 40100 MIN 1260 CFSM 1.56 IN. 21.22
WTR YR 1990 TOTAL 2458190 MEAN 6735 MAX 47600 MIN 1010 CFSM 1.37 IN. 18.56

03373700 LOST RIVER NEAR WEST BADEN SPRINGS, IN

LOCATION.--Lat 38°35'10", long 86°38'03", in SW¼SE¼ sec.21, T.2 N., R.2 W., Orange County, Hydrologic Unit 05120208, on left bank 20 ft downstream from bridge on U.S. Highway 150, 1.7 mi northwest of West Baden Springs, 3.8 mi downstream from Lick Creek, and at mile 34.8.

DRAINAGE AREA.--287 mi^2.

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 National Geodetic Vertical Datum of 1929 (levels by State of Indiana, Department of Natural Resources).

REMARKS.--Estimated daily discharges: Oct. 1-12, and Dec. 13-28. Records poor.

AVERAGE DISCHARGE.--25 years, 370 ft^3/s, 17.51 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,000 ft^3/s May 17, 1990, gage height, 27.21 ft; minimum daily, 5.9 ft^3/s Sept. 9, 11, 1988.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1964 reached a stage of 28.1 ft, from floodmarks, discharge, 14,500 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base discharge of 2,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 16	2000	2,030	19.75	Apr. 11	1400	2,050	19.82
Jan. 20	2400	3,330	21.98	May 17	1100	*14,000	*27.21
Feb. 5	1300	2,020	19.72	June 7	2100	8,840	24.84
Feb. 16	1700	2,740	21.31				

Minimum daily discharge, 17 ft^3/s Sept. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	78	159	833	540	347	477	230	517	124	52	33
2	21	76	149	574	741	325	525	221	488	115	48	28
3	19	71	138	443	1000	304	480	201	522	107	44	25
4	18	68	125	404	1550	280	404	304	456	99	45	24
5	19	66	123	413	1980	263	349	634	374	92	131	22
6	56	63	124	376	1680	245	296	477	379	86	119	22
7	40	76	117	328	1120	224	253	386	4780	81	68	29
8	35	205	107	299	715	211	222	322	6680	75	49	36
9	33	370	101	277	910	205	200	270	3820	69	43	29
10	31	300	100	254	1810	202	728	283	2280	65	40	24
11	29	206	98	230	1830	196	1960	253	1490	61	37	23
12	29	162	95	211	1340	184	1700	247	871	200	34	23
13	28	137	80	185	806	169	1010	638	590	267	33	33
14	27	128	74	167	584	155	653	622	509	166	32	24
15	28	508	70	163	1020	151	559	582	462	103	31	21
16	37	1900	64	157	2490	252	481	3180	418	82	29	20
17	194	1880	62	161	2510	333	423	12800	341	71	28	26
18	212	1240	58	320	2010	267	373	9490	343	63	27	26
19	164	696	56	384	1410	221	333	4820	313	57	27	25
20	232	546	52	2180	863	199	308	2930	314	68	26	27
21	256	474	52	3080	633	186	700	2190	333	509	26	26
22	200	402	50	2410	577	176	835	2160	273	463	31	24
23	150	342	50	1740	551	171	620	1870	268	261	43	21
24	123	297	50	1070	490	165	514	1430	247	163	31	20
25	108	267	50	631	417	187	429	1030	204	119	27	21
26	96	251	52	488	367	279	367	847	179	99	25	19
27	88	228	54	408	356	292	322	779	163	86	24	18
28	81	212	60	353	366	254	290	698	150	74	23	18
29	79	190	73	398	---	236	267	697	141	65	27	18
30	77	172	363	672	---	242	239	635	131	63	48	17
31	77	---	876	624	---	423	---	568	---	58	47	---
TOTAL	2610	11611	3682	20233	30666	7344	16317	51794	28036	4011	1295	722
MEAN	84.2	387	119	653	1095	237	544	1671	935	129	41.8	24.1
MAX	256	1900	876	3080	2510	423	1960	12800	6680	509	131	36
MIN	18	63	50	157	356	151	200	201	131	57	23	17
CFSM	.29	1.35	.41	2.27	3.82	.83	1.90	5.82	3.26	.45	.15	.08
IN.	.34	1.50	.48	2.62	3.97	.95	2.11	6.71	3.63	.52	.17	.09

CAL YR 1989 TOTAL 170199 MEAN 466 MAX 4400 MIN 18 CFSM 1.62 IN. 22.06
WTR YR 1990 TOTAL 178321 MEAN 489 MAX 12800 MIN 17 CFSM 1.70 IN. 23.11

03373980 WHITE RIVER ABOVE PETERSBURG, IN

LOCATION.--Lat 38°31'42", long 87°15'12", in NE¼SW¼ sec.12, T.1 N., R.8 W., Pike County, Hydrologic Unit 05120202, on left bank 300 ft upstream from intake structure of Indianapolis Power and Light Company's generating plant, 1.5 mi downstream from East Fork White River, 2.2 mi upstream from State Highway 61, 2.9 mi northeast of Petersburg, and at mile 48.0.

DRAINAGE AREA.--11,123 mi^2.

PERIOD OF RECORD.--October 1976 to current year.

GAGE.--Water-stage recorder. Datum of gage is 401.52 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Discharges below 1,500 ft^3/s only published. Records good. For a complete record of White River in this vicinity use records of White River at Petersburg, IN (sta. 03374000), 2.3 mi downstream.

03374000 WHITE RIVER AT PETERSBURG, IN

LOCATION.--Lat 38°30'39", long 87°17'22", in SE¼SW¼ sec.15, T.1 N., R.8 W., Pike County, Hydrologic Unit 05120202, on left bank 300 ft downstream from bridge on State Highway 61, 0.4 mi upstream from Prides Creek, 1.4 mi north of Petersburg, and at mile 45.7.

DRAINAGE AREA.--11,125 mi^2.

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 National Weather Service.

REVISED RECORDS.--WSP 1305: 1930(M). WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 400.00 ft above National Geodetic Vertical Datum of 1929. See WSP 1725 for history of changes prior to Apr. 1, 1941.

REMARKS.--No estimated daily discharges. Records good. Flow partially regulated by upstream reservoirs.

AVERAGE DISCHARGE.--63 years, 11,903 ft^3/s, 14.53 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 183,000 ft^3/s Jan. 22, 1937, gage height, 28.3 ft present datum, 31.58 ft site and datum then in use; minimum daily, 573 ft^3/s Oct. 1, 1941.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1913, reached a stage of 29.5 ft, present site and datum, from floodmarks by U.S. Army Corps of Engineers, discharge, 235,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 120,000 ft^3/s May 22, gage height, 25.80 ft; minimum daily, 2840 ft^3/s Sept. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8320	4210	8180	8550	12200	23000	16100	10400	16400	8560	7150	5110
2	8110	4110	8430	11600	15400	20600	18000	10000	15200	7960	6820	6220
3	7820	4010	8360	13200	20500	19300	19600	9770	15700	7640	6080	7910
4	7430	3910	8020	13300	25600	18700	20700	11100	14800	7400	5510	7760
5	6990	3870	7710	16500	31100	17900	20600	16900	13400	7410	5440	6710
6	6630	3870	7510	18300	35400	16800	19300	21200	13600	10500	5730	5630
7	6390	4340	7310	17100	37900	15800	17600	22900	28300	7620	6280	4840
8	6080	5270	7130	15700	39500	14700	16100	24100	44000	6610	5770	4480
9	5850	6230	6970	14800	41700	13400	14600	25600	42700	6250	5260	4880
10	5740	7150	6860	13200	45300	12300	15400	25800	34400	6030	5180	5050
11	5570	7230	6790	11800	44800	11700	23800	23800	26600	5890	4770	4500
12	5420	7510	6620	11000	39900	12100	27500	21000	24700	9710	4310	4180
13	5270	7770	6240	10200	34200	13700	28900	21700	24300	11200	4000	4760
14	5040	7400	5610	9550	28900	17300	28500	26200	23600	12800	3780	4460
15	4790	8320	5120	8860	27800	21600	27600	31000	23400	12800	3720	4230
16	4670	17100	4630	8120	35300	26300	26200	41900	18500	13600	4490	4020
17	5160	22800	3450	7510	39100	30500	23400	75500	13400	13500	4590	3820
18	7190	24700	3100	7810	42200	32100	20100	101000	14900	11500	4300	3570
19	7000	24700	3380	8070	45000	29700	17100	114000	15900	9440	4040	3500
20	6580	25200	3270	16700	49100	24000	15200	117000	15400	8120	3790	3460
21	6480	25500	3210	23800	55500	20100	15100	117000	18600	11000	3950	3390
22	6400	24000	2870	25500	60100	17800	17200	119000	17600	10700	3940	3590
23	6370	20500	2940	24100	61500	16100	18900	112000	15400	9750	4240	3620
24	6170	16400	3160	22300	56100	14900	18600	99600	12700	11300	4900	3770
25	6020	13700	3190	21600	45100	14300	18000	84300	11800	11400	6990	3730
26	5870	12400	3240	20800	35100	14300	17100	70500	11400	10800	8370	3420
27	5570	11500	3250	18900	29600	14600	15400	58700	11100	10200	7730	3230
28	5190	10700	3310	16600	26000	14900	13400	46000	10600	9260	6350	3100
29	4860	9750	3450	14400	---	14800	11900	32700	9910	7940	5480	2980
30	4580	8630	3950	12900	---	14400	10900	23500	9200	6910	5270	2840
31	4370	---	6090	11900	---	14900	---	18800	---	6580	4640	---
TOTAL	187930	352780	163350	454670	1059900	562600	572800	1532970	567510	290380	162870	132760
MEAN	6062	11760	5269	14670	37850	18150	19090	49450	18920	9367	5254	4425
MAX	8320	25500	8430	25500	61500	32100	28900	119000	44000	13600	8370	7910
MIN	4370	3870	2870	7510	12200	11700	10900	9770	9200	5890	3720	2840
CFSM	.54	1.06	.47	1.32	3.40	1.63	1.72	4.45	1.70	.84	.47	.40
IN.	.63	1.18	.55	1.52	3.54	1.88	1.92	5.13	1.90	.97	.54	.44

CAL YR 1989 TOTAL 5851040 MEAN 16030 MAX 76800 MIN 2870 CFSM 1.44 IN. 19.56
WTR YR 1990 TOTAL 6040520 MEAN 16550 MAX 119000 MIN 2840 CFSM 1.49 IN. 20.20

03374455 PATOKA RIVER NEAR HARDINSBURG, IN

LOCATION.--Lat 38°26'41", long 86°23'14", in NW¼SE¼ sec.10, T.1 S., R.1 E., Orange County, Hydrologic Unit 05120209, on downstream edge of center pier of county road bridge, 0.3 mi downstream from Fudge Creek, 0.7 mi northeast of Valeene, 6.0 mi southwest of Hardinsburg, and at mile 158.0.

DRAINAGE AREA.--12.8 mi^2.

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 606.89 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 13-30. Records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--22 years, 24.8 ft^3/s, 26.31 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,270 ft^3/s July 26, 1979, gage height, 11.35 ft; no flow for several days in 1971, 1972, 1975, 1983, 1984, 1987, and 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 800 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 15	1800	810	5.75	May 16	1600	1,120	6.65
Jan. 20	0230	1,560	7.61	May 17	0030	1,880	8.14
Feb. 15	1645	1,280	7.06	June 7	0845	*2,410	*8.84

Minimum daily discharge, 0.10 ft^3/s Aug. 21, 27, 28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.7	5.6	2.3	50	44	20	44	13	16	2.5	.70	.48
2	1.7	5.3	2.1	28	118	19	51	13	17	2.2	.65	.30
3	1.5	5.5	1.8	21	111	17	37	12	45	2.0	.50	.20
4	1.2	6.5	1.7	21	251	15	30	84	20	1.9	.55	.19
5	1.2	8.8	1.9	19	98	14	25	75	14	1.8	2.0	.19
6	1.6	8.4	2.7	16	55	13	20	43	114	1.7	1.0	.19
7	2.6	11	2.9	14	44	11	17	33	1120	1.5	.61	.19
8	1.8	23	2.7	12	35	11	15	25	156	1.4	.47	.44
9	1.5	20	2.6	11	147	11	14	20	63	1.3	.42	.76
10	1.5	13	2.7	9.9	167	11	139	19	39	1.2	.36	.54
11	1.3	9.4	2.5	9.2	67	10	111	15	25	1.8	.32	.40
12	1.2	7.4	2.8	8.3	42	9.9	52	20	17	8.3	.36	.38
13	1.3	6.2	2.5	7.2	33	9.6	35	153	12	4.2	.36	.38
14	1.1	6.1	2.3	7.2	26	9.2	30	53	9.7	2.9	.42	2.0
15	1.1	224	2.0	6.7	632	10	28	105	8.1	2.4	.31	1.2
16	1.4	163	1.8	6.3	280	41	24	858	6.9	2.0	.25	.22
17	10	58	1.5	7.7	81	28	22	644	5.8	1.5	.19	.15
18	7.1	32	1.4	21	48	20	19	111	9.3	1.4	.15	.19
19	17	21	1.2	30	36	18	18	53	6.4	1.2	.12	.23
20	26	15	1.1	759	27	18	17	37	7.1	1.8	.11	.39
21	16	11	.98	121	23	16	53	46	6.8	33	.10	.49
22	11	7.9	.88	55	26	15	40	80	9.3	8.4	.14	.99
23	10	5.8	.80	37	25	14	30	42	13	4.4	.11	.49
24	8.0	4.5	.72	28	21	14	25	30	7.0	2.8	.11	.40
25	7.2	4.1	.72	23	17	19	21	24	5.2	2.1	.11	.37
26	6.2	4.0	.72	18	16	30	18	27	4.3	1.7	.11	.31
27	5.7	3.8	.76	16	17	24	16	26	3.8	1.4	.10	.25
28	5.7	3.5	.86	14	22	20	15	40	3.3	1.3	.10	.19
29	5.6	2.7	1.1	58	---	19	14	66	2.9	1.2	2.5	.17
30	5.8	2.5	5.2	66	---	24	13	33	2.7	.98	2.3	.15
31	6.0	---	132	50	---	46	---	22	---	1.0	.80	---
TOTAL	171.0	699.0	187.24	1550.5	2509	556.7	993	2822	1769.6	103.28	16.33	12.83
MEAN	5.52	23.3	6.04	50.0	89.6	18.0	33.1	91.0	59.0	3.33	.53	.43
MAX	26	224	132	759	632	46	139	858	1120	33	2.5	2.0
MIN	1.1	2.5	.72	6.3	16	9.2	13	12	2.7	.98	.10	.15
CFSM	.43	1.82	.47	3.91	7.00	1.40	2.59	7.11	4.61	.26	.04	.03
IN.	.50	2.03	.54	4.51	7.29	1.62	2.89	8.20	5.14	.30	.05	.04

CAL YR 1989 TOTAL 10499.69 MEAN 28.8 MAX 485 MIN .35 CFSM 2.25 IN. 30.51
WTR YR 1990 TOTAL 11390.48 MEAN 31.2 MAX 1120 MIN .10 CFSM 2.44 IN. 33.10

03374500 PATOKA RIVER NEAR CUZCO, IN

LOCATION.--Lat 38°26'30", long 86°43'01", in SW¼SW¼ sec.11, T.1 S., R.3 W., Dubois County, Hydrologic Unit 05120209, on right bank 20 ft upstream from bridge on Cuzco Road South, 2.3 mi south of Cuzco, 0.7 mi downstream from Patoka Lake, 4.5 mi upstream from Dillon Creek, and at mile 117.8.

DRAINAGE AREA.--170 mi^2.

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

GAGE.--Data-Collection Platform. Datum of gage is 477.00 ft above National Geodetic Vertical Datum of 1929 (levels by State of Indiana, Department of Natural Resources). Prior to Oct. 1, 1961, nonrecording gage on downstream side of bridge, 1.7 mi downstream at same datum. Oct. 1, 1961 to Sept. 30, 1981, water-stage recorder at site described above. Prior to October 1979, published as "near Ellsworth". Data-Collection Platform installed on July 25, 1985.

REMARKS.--Flow regulated by Patoka Lake since February 1978. Daily discharge computed from relation between discharge, head, and gate openings for Patoka Lake beginning Oct. 1, 1981.

COOPERATION.--Records of daily discharge provided by U.S. Army Corps of Engineers beginning Oct. 1, 1981.

AVERAGE DISCHARGE.--29 years, 221 ft^3/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,700 ft^3/s Mar. 10, 1964, gage height, 20.02 ft; no flow Oct. 30, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1913 reached a stage of 19.1 ft according to information by local resident, discharge, 12,300 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 967 ft^3/s Mar. 5; minimum daily, 31 ft^3/s Dec. 26-28

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	196	159	508	32	225	797	418	100	103	303	400	406
2	141	49	507	71	101	868	370	80	103	303	399	406
3	49	49	506	96	101	900	400	65	103	302	399	406
4	49	199	540	96	101	899	502	65	103	302	272	468
5	150	290	600	158	102	967	501	65	103	302	101	430
6	196	290	599	204	306	787	501	65	103	242	52	305
7	196	156	599	203	408	490	500	66	105	211	124	219
8	196	98	598	203	472	490	500	66	106	211	295	103
9	196	229	597	203	372	561	499	66	107	264	398	204
10	195	290	596	203	308	664	301	66	107	301	398	250
11	195	290	596	203	382	768	211	66	107	301	315	203
12	195	289	595	203	506	803	211	66	107	241	207	239
13	195	289	594	203	506	675	211	66	107	211	277	289
14	195	289	534	203	506	342	211	66	107	271	203	304
15	195	201	498	203	238	213	211	66	107	301	152	304
16	159	98	497	203	107	213	211	66	107	331	294	304
17	98	170	497	203	107	213	211	68	106	348	410	304
18	160	291	374	203	320	213	211	80	107	383	409	303
19	195	291	301	203	661	343	165	102	107	402	409	303
20	195	291	301	93	761	421	95	102	106	288	409	303
21	195	291	164	49	554	421	100	102	126	138	274	303
22	195	290	74	49	283	420	100	102	196	105	206	303
23	195	290	50	137	387	420	100	102	248	105	341	303
24	195	435	50	329	567	420	100	103	276	175	408	377
25	195	509	38	397	607	419	100	103	304	274	408	414
26	219	353	31	397	681	419	100	103	303	347	407	414
27	276	161	31	397	771	441	100	103	303	347	407	413
28	291	97	31	396	798	445	100	103	303	383	407	413
29	291	169	32	396	---	418	100	103	303	401	311	413
30	291	371	32	397	---	418	100	103	303	400	310	412
31	291	---	32	397	---	418	---	103	---	400	406	---
TOTAL	5980	7274	11002	6730	11238	16286	7440	2582	4776	8893	9808	9818
MEAN	193	242	355	217	401	525	248	83.3	159	287	316	327
MAX	291	509	600	397	798	967	502	103	304	402	410	468
MIN	49	49	31	32	101	213	95	65	103	105	52	103

CAL YR 1989 TOTAL 109679 MEAN 300 MAX 1200 MIN 23
WTR YR 1990 TOTAL 101827 MEAN 279 MAX 967 MIN 31

03375500 PATOKA RIVER AT JASPER, IN

LOCATION.--Lat 38°24'49", long 86°52'36", in NW¼SE¼ sec.20, T.1 S., R.4 W., Dubois County, Hydrologic Unit 05120209, on left bank 0.3 mi upstream from unnamed outlet of Jasper Lake, 1.0 mi downstream from Coon Seitz bridge, 1.2 mi downstream from Beaver Creek, 3.3 mi northeast of Jasper, and at mile 91.5.

DRAINAGE AREA.--262 mi^2.

PERIOD OF RECORD.--November 1947 to current year.

REVISED RECORDS.--WSP 1909: 1958. WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 446.00 ft above National Geodetic Vertical Datum of 1929 (levels by State of Indiana, Department of Natural Resources). Nonrecording gage at bridge 5.6 mi downstream, used for high-water periods when flow exceeds about 2,500 ft^3/s, at datum 0.34 ft lower. Prior to Sept. 18, 1956, nonrecording gage at bridge 5.6 mi downstream at datum 0.34 ft lower.

REMARKS.--No estimated daily discharges. Records fair. Flow regulated by Beaver Creek Reservoir beginning Oct. 11, 1955, and by Patoka Lake beginning Feb. 13, 1978.

AVERAGE DISCHARGE.--42 years (water years 1949 to current year), 365 ft^3/s, 18.92 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,100 ft^3/s Mar. 11, 1964, gage height, 15.17 ft at downstream gage; maximum gage height at upstream gage, 21.20 ft Mar. 11, 1964, from floodmarks; no flow at times during 1948, 1952-56, 1963-65.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1913 reached a stage of 15.9 ft at downstream site, from floodmark furnished by local residents, discharge, 16,000 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,930 ft^3/s June 8, gage height, 16.57 ft; minimum daily, 56 ft^3/s Oct. 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	190	354	422	435	495	971	738	177	218	301	420	410
2	189	206	519	211	656	969	847	181	204	297	416	410
3	142	84	516	193	643	1010	689	147	210	294	413	409
4	61	76	519	222	1040	1040	660	200	184	293	428	410
5	56	206	570	238	1020	1040	737	334	169	496	1090	475
6	156	331	603	266	432	1070	700	215	227	593	512	399
7	224	338	598	283	489	976	665	182	1730	304	163	311
8	208	409	594	272	515	684	639	155	3560	252	165	233
9	204	342	621	265	802	653	623	138	2460	243	307	142
10	204	351	631	256	1290	709	976	176	1610	308	396	220
11	210	381	630	248	1100	791	1450	164	687	345	396	242
12	214	369	626	243	676	884	1400	156	256	559	314	210
13	212	362	621	235	633	922	710	368	192	343	225	236
14	210	365	613	231	584	799	451	315	170	270	273	293
15	212	652	552	233	981	392	403	584	158	312	222	314
16	226	1270	527	232	1500	314	364	1850	156	330	169	307
17	313	913	524	239	1440	292	347	3340	143	365	288	301
18	195	457	518	308	593	239	330	3240	178	377	409	300
19	258	439	382	328	514	222	305	2190	183	412	413	311
20	374	410	331	1540	846	468	258	1320	208	453	414	307
21	325	389	326	1750	947	566	553	670	248	783	422	311
22	276	374	267	1740	723	561	509	1140	211	382	301	316
23	257	361	174	782	476	545	325	738	265	242	229	304
24	249	357	112	324	610	538	264	375	270	195	343	302
25	242	506	95	440	761	567	230	288	292	232	413	377
26	239	546	85	446	784	570	208	380	310	319	414	398
27	263	387	71	425	850	545	194	461	306	371	414	397
28	324	216	70	413	938	594	185	412	303	370	415	409
29	344	149	85	524	---	615	182	526	299	406	437	416
30	349	217	201	724	---	606	176	344	301	484	370	416
31	355	---	568	555	---	725	---	255	---	434	346	---
TOTAL	7281	11817	12971	14601	22338	20877	16118	21021	15708	11365	11537	9886
MEAN	235	394	418	471	798	673	537	678	524	367	372	330
MAX	374	1270	631	1750	1500	1070	1450	3340	3560	783	1090	475
MIN	56	76	70	193	432	222	176	138	143	195	163	142
CFSM	.90	1.50	1.60	1.80	3.04	2.57	2.05	2.59	2.00	1.40	1.42	1.26
IN.	1.03	1.68	1.84	2.07	3.17	2.96	2.29	2.98	2.23	1.61	1.64	1.40

CAL YR 1989 TOTAL 178280 MEAN 488 MAX 1950 MIN 23 CFSM 1.86 IN. 25.31
WTR YR 1990 TOTAL 175520 MEAN 481 MAX 3560 MIN 56 CFSM 1.84 IN. 24.92

03375800 HALL CREEK NEAR ST. ANTHONY, IN

LOCATION.--Lat 38°21'45", long 86°49'43", in NW¼NW¼ sec.11, T.2 S., R.4 W., Dubois County, Hydrologic Unit 05120209, on downstream side of right pier of bridge on County Road 125 South, 0.7 mi upstream from Grassy Fork, 3.3 mi north of St. Anthony, and at mile 4.1.

DRAINAGE AREA.--21.8 mi^2.

PERIOD OF RECORD.--October 1970 to current year.

REVISED RECORDS.--WDR IN-75-1: 1971-74.

GAGE.--Water-stage recorder. Datum of gage is 459.22 ft above National Geodetic Vertical Datum of 1929 (levels by State of Indiana, Department of Natural Resources).

REMARKS.--Estimated daily discharges: Oct. 1-12, Dec. 15-30 and Jan. 22-29. Records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--20 years, 33.5 ft^3/s, 20.87 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,500 ft^3/s July 26, 1979, gage height, 15.30 ft from contracted-opening and flow-over-the-road measurements at gage height of 15.30 ft; no flow for many days in most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 950 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 20	0445	2,940	12.22	May 17	0230	2,690	12.10
Feb. 15	1615	1,260	10.89	May 21	1830	1,290	10.96
Apr. 10	1245	1,030	10.10	June 7	1115	*3,800	*12.55
May 15	1300	1,190	10.68				

Minimum daily discharge, 0.03 ft^3/s Sept. 18.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.96	3.7	3.8	38	47	15	64	11	14	2.2	1.3	.09
2	.90	3.2	3.7	20	143	14	80	9.3	57	1.6	.94	.08
3	.84	2.8	3.4	16	152	12	42	11	88	1.3	.74	.10
4	.82	2.6	2.9	26	297	9.9	31	112	21	1.1	1.4	.15
5	.98	2.5	3.0	17	84	8.9	23	50	13	35	79	.15
6	2.0	2.5	3.2	13	49	7.9	18	29	142	17	2.9	.12
7	1.3	6.5	3.0	10	38	6.6	14	20	1310	3.8	1.1	.12
8	1.1	18	2.6	9.2	28	7.5	12	14	133	2.6	.61	5.4
9	.94	11	2.6	8.1	234	8.0	11	11	66	1.9	.37	.23
10	.82	7.5	2.6	6.7	159	9.8	356	25	35	2.9	.24	.07
11	.76	5.9	2.8	6.2	61	9.4	116	11	22	11	.18	.04
12	.74	4.9	2.5	4.8	37	8.8	52	42	15	59	.17	.05
13	.74	4.3	1.8	5.3	28	7.4	34	146	11	7.4	.31	.05
14	.80	7.7	1.6	3.5	21	6.5	31	42	7.9	5.0	.31	17
15	1.2	176	1.5	3.8	674	9.6	25	387	6.3	3.4	.12	1.7
16	8.9	102	1.3	3.4	198	30	21	1210	5.0	2.6	.09	.14
17	18	42	1.2	8.4	64	18	20	977	41	2.0	.24	.05
18	5.3	22	1.0	17	41	12	16	144	38	1.6	.40	.03
19	31	15	.94	61	30	14	14	90	10	1.3	.17	.91
20	28	13	.85	1190	22	11	14	134	52	38	6.1	.25
21	14	9.6	.80	277	19	10	71	422	22	61	3.7	6.8
22	9.1	8.7	.74	170	35	10	34	176	19	57	.40	2.1
23	7.4	8.0	.70	90	28	10	24	69	11	23	.24	.35
24	6.2	7.0	.67	60	21	20	19	39	7.1	8.7	.16	.15
25	5.3	6.5	.66	39	16	27	15	28	5.0	5.2	.10	.11
26	4.6	6.4	.65	28	13	23	12	101	3.9	3.5	.07	.10
27	4.1	7.2	.65	23	18	17	10	50	3.2	2.8	.07	.08
28	3.7	6.5	.70	17	18	15	9.2	184	2.7	2.2	.07	.05
29	3.5	4.8	1.0	14	---	15	9.9	85	2.3	1.7	2.5	.05
30	3.3	4.0	20	61	---	38	8.4	38	2.1	8.2	.78	.05
31	3.5	---	144	36	---	46	---	22	---	2.8	.13	---
TOTAL	170.80	521.8	216.86	2282.4	2575	457.3	1206.5	4689.3	2165.5	376.8	104.91	36.57
MEAN	5.51	17.4	7.00	73.6	92.0	14.8	40.2	151	72.2	12.2	3.38	1.22
MAX	31	176	144	1190	674	46	356	1210	1310	61	79	17
MIN	.74	2.5	.65	3.4	13	6.5	8.4	9.3	2.1	1.1	.07	.03
CFSM	.25	.80	.32	3.38	4.22	.68	1.84	6.94	3.31	.56	.16	.06
IN.	.29	.89	.37	3.89	4.39	.78	2.06	8.00	3.70	.64	.18	.06

CAL YR 1989 TOTAL 14966.84 MEAN 41.0 MAX 908 MIN .65 CFSM 1.88 IN. 25.54
WTR YR 1990 TOTAL 14803.74 MEAN 40.6 MAX 1310 MIN .03 CFSM 1.86 IN. 25.26

03376300 PATOKA RIVER AT WINSLOW, IN

LOCATION.--Lat 38°22'48", long 87°13'00", in SW¼SW¼ sec.32, T.1 S., R.7 W., Pike County, Hydrologic Unit 05120209, 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 mi above mouth.

DRAINAGE AREA.--603 mi^2.

PERIOD OF RECORD.--October 1963 to September 1974, May 1986 to current year. Discharge measurements and gage readings June 1961 to September 1963, obtained by State of Indiana, Department of Natural Resources, are available in the district office.

GAGE.--Water-stage recorder. Datum of gage is 400.00 ft above National Geodetic Vertical Datum of 1929 (levels by State of Indiana, Department of Natural Resources). Prior to Nov. 21, 1963, nonrecording gage on downstream side of bridge 65 ft downstream at same datum.

REMARKS.--Estimated daily discharges: Dec. 17-20. Records good. An average 0.13 ft^3/s is diverted for municipal water supply 100 ft above gage.

AVERAGE DISCHARGE.--15 years (1964-74, 1987 to current year), 695 ft^3/s, 15.65 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 15,500 ft^3/s Mar. 13, 1964, gage height, 28.84 ft; minimum daily, 0.5 ft^3/s Aug. 5, 1964.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in January 1937 reached a stage of 28.9 ft, from floodmarks, information from State of Indiana, Department of Natural Resources.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,840 ft^3/s May 19, gage height, 25.89 ft; minimum daily, 105 ft^3/s Oct. 6.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	213	367	222	1400	1560	1300	1340	351	2030	347	509	432
2	213	371	322	1370	1790	1270	1460	362	1740	346	468	409
3	208	357	496	1190	1900	1240	1470	383	1440	327	443	424
4	202	243	542	938	2270	1200	1430	739	1270	323	440	418
5	157	144	552	740	2280	1170	1330	1360	1050	444	623	416
6	105	109	573	615	2180	1160	1210	1270	968	1120	912	440
7	125	247	608	529	2140	1150	1100	992	2220	1190	917	466
8	232	503	619	499	2090	1140	1010	701	2280	1020	567	378
9	245	709	619	470	2260	1070	923	493	2160	647	259	321
10	235	624	626	442	2590	976	1450	501	2150	418	227	232
11	224	473	644	414	2390	953	2260	505	2290	349	361	169
12	222	445	648	385	2270	953	2070	479	2530	573	410	226
13	225	440	641	356	2220	966	2010	938	2730	806	391	234
14	228	430	635	337	2150	985	2000	1140	2730	671	292	220
15	228	760	632	328	2590	989	1980	1320	2460	490	252	260
16	244	1740	614	328	3050	1020	1850	2820	2000	395	261	320
17	383	1670	610	338	2770	949	1580	4770	1490	381	369	311
18	462	1620	590	469	2720	784	1270	5830	1060	380	439	296
19	426	1450	570	568	2800	648	1010	7490	839	400	468	308
20	431	1170	560	2870	2850	572	823	7590	726	415	469	363
21	519	912	512	3010	2710	610	1150	7090	805	830	558	374
22	497	733	422	2700	2520	721	1330	6890	714	1130	569	396
23	413	609	367	2670	2340	764	1220	6200	565	1110	493	426
24	354	533	326	2770	2090	779	998	5500	458	837	336	357
25	326	486	266	2820	1800	871	767	4890	391	526	295	315
26	302	508	207	2740	1560	960	595	4420	354	336	398	323
27	286	591	175	2460	1420	937	478	3910	346	315	429	372
28	280	562	167	2090	1340	879	399	3430	353	383	427	387
29	307	430	176	1790	---	858	377	3010	335	403	450	392
30	352	283	385	1710	---	943	355	2550	330	419	548	400
31	366	---	1140	1630	---	1260	---	2250	---	492	579	---
TOTAL	9010	19519	15466	40976	62650	30077	37245	90174	40814	17823	14159	10385
MEAN	291	651	499	1322	2237	970	1241	2909	1360	575	457	346
MAX	519	1740	1140	3010	3050	1300	2260	7590	2730	1190	917	466
MIN	105	109	167	328	1340	572	355	351	330	315	227	169
CFSM	.48	1.08	.83	2.19	3.71	1.61	2.06	4.82	2.26	.95	.76	.57
IN.	.56	1.20	.95	2.53	3.86	1.86	2.30	5.56	2.52	1.10	.87	.64

CAL YR 1989 TOTAL 386014 MEAN 1058 MAX 7910 MIN 64 CFSM 1.75 IN. 23.81
WTR YR 1990 TOTAL 388298 MEAN 1064 MAX 7590 MIN 105 CFSM 1.76 IN. 23.95

03376500 PATOKA RIVER NEAR PRINCETON, IN

LOCATION.--Lat 38°23'25", long 87°32'55", in Location 107, T.1 S., R.10 W., Gibson County, Hydrologic Unit 05120209, on right downstream side of bridge on State Highway 65, 0.5 mi downstream from Indian Creek, 2 mi northeast of Princeton, and at mile 21.4.

DRAINAGE AREA.--822 mi^2.

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).

REVISED RECORDS.--WSP 1275: 1952. WSP 1335: 1935-36, 1938-39, 1949(M), 1940-50. WSP 1385: 1951-52. WSP 2109: Drainage area.

GAGE.--Water-stage recorder and Data-Collection Platform. Datum of gage is 390.00 ft above National Geodetic Vertical Datum of 1929. Jan. 21, 1941 to Oct. 23, 1986, water-stage recorder at dam 0.1 mi downstream and at datum 4.14 ft higher. See WSP 1725 for history of changes prior to Jan. 21, 1941.

REMARKS.--Estimated daily discharges: Nov. 23 to Jan. 7, and Mar. 19-25. Records good except for estimated daily discharges, which are poor. Flow regulated by Patoka Lake.

AVERAGE DISCHARGE.--56 years, 1,034 ft^3/s, 17.08 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,700 ft^3/s Jan. 26, 1937, gage height, 26.80 ft, site and datum then in use; no flow Aug. 29 to Sept. 12, 1936.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,650 ft^3/s May 23, gage height, 22.42 ft; minimum daily, 159 ft^3/s Oct. 6, 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	233	359	300	1430	2670	2410	1530	480	4420	476	540	558
2	238	362	400	1520	2690	2220	1630	505	4020	462	514	439
3	238	362	560	1600	2620	2020	1680	535	3650	430	475	446
4	227	327	600	1500	2680	1830	1720	1050	3250	409	461	446
5	206	228	620	1200	2700	1700	1710	1490	2910	439	742	438
6	159	163	640	940	2730	1590	1660	1550	2760	1050	936	443
7	159	252	670	780	2730	1510	1550	1560	2800	1270	1140	492
8	190	511	680	654	2710	1460	1430	1370	2740	1320	959	485
9	258	722	700	591	2750	1410	1290	990	2770	1140	490	466
10	253	751	715	539	2870	1370	1870	767	2790	714	274	370
11	238	603	720	499	2930	1310	2120	715	2770	507	333	253
12	232	481	720	463	2970	1240	2160	730	2730	608	437	229
13	230	461	720	421	2980	1200	2280	1200	2690	849	455	289
14	231	446	720	397	2910	1170	2340	1330	2680	908	409	275
15	231	1040	715	381	3330	1180	2350	1650	2700	693	316	275
16	290	1790	710	376	3530	1250	2350	3170	2740	496	307	344
17	705	1780	700	424	3530	1270	2330	4170	2730	437	1150	373
18	538	1840	670	655	3590	1210	2270	4150	2630	424	968	357
19	563	1880	650	841	3580	1100	2140	4730	2410	430	561	412
20	607	1860	630	2730	3510	920	1850	5370	2290	468	527	416
21	571	1730	600	2500	3400	960	1640	6310	1920	1130	690	505
22	577	1440	520	2630	3350	1020	1610	7710	1560	1220	720	513
23	503	1200	410	2820	3300	1060	1620	8460	1330	1320	666	469
24	422	1020	350	2960	3190	1080	1560	8540	1060	1280	512	435
25	372	920	300	3020	3060	1100	1370	8000	776	931	383	370
26	342	820	240	3030	2950	1110	1080	7370	648	526	413	348
27	317	780	205	3040	2810	1140	800	6530	579	383	480	378
28	302	800	185	3010	2620	1110	622	5970	538	397	489	410
29	301	680	220	2970	---	1080	547	5710	480	438	507	415
30	332	500	500	2900	---	1170	488	5290	456	459	575	420
31	353	---	1300	2790	---	1450	---	4860	---	482	657	---
TOTAL	10418	26108	17670	49611	84690	41650	49597	112262	67827	22096	18086	12069
MEAN	336	870	570	1600	3025	1344	1653	3621	2261	713	583	402
MAX	705	1880	1300	3040	3590	2410	2350	8540	4420	1320	1150	558
MIN	159	163	185	376	2620	920	488	480	456	383	274	229
CFSM	.41	1.06	.69	1.95	3.68	1.63	2.01	4.41	2.75	.87	.71	.49
IN.	.47	1.18	.80	2.25	3.83	1.88	2.24	5.08	3.07	1.00	.82	.55

CAL YR 1989 TOTAL 534345 MEAN 1464 MAX 10000 MIN 91 CFSM 1.78 IN. 24.18
WTR YR 1990 TOTAL 512084 MEAN 1403 MAX 8540 MIN 159 CFSM 1.71 IN. 23.17

03377500 WABASH RIVER AT MOUNT CARMEL, IL

LOCATION.--Lat 38°24'07", long 87°45'10", in SE¼NW¼ sec.28, T.1 S., R.12 W., Wabash County, Illinois, Hydrologic Unit 05120113, on right bank on downstream side of Southern Railway bridge at Mount Carmel, 0.2 mi downstream from Patoka River, and at mile 94.4.

DRAINAGE AREA.--28,635 mi^2.

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 U.S. Army Corps of Engineers and since June 1884, are contained in reports of National Weather Service.

REVISED RECORDS.--WDR IN-73-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 369.46 ft above National Geodetic Vertical Datum of 1929. Oct. 1, 1949, to Feb. 8, 1977, at datum 2.00 ft higher. See WSP 1725 for history of changes prior to Sept. 30, 1949.

REMARKS.--Estimated daily discharges: Dec. 20 to Jan. 3. Records good. Flow partially regulated by upstream reservoirs.

AVERAGE DISCHARGE.--63 years, 27,724 ft^3/s, 13.14 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 305,000 ft^3/s May 25, 1943; maximum gage height, 30.62 ft Feb. 5, 6, 1969, present datum; minimum daily discharge, 1,650 ft^3/s Sept. 27, 28, 1941.

EXTREMES OUTSIDE THE PERIOD OF RECORD.--(1874-78, 1884 to 1985) Maximum discharge, 428,000 ft^3/s Mar. 30, 1913, from rating curve extended above 310,000 ft^3/s, gage height, 33.0 ft, present site and datum.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 199,000 ft^3/s May. 23, gage height, 30.43 ft; minimum daily, 6,250 ft^3/s Dec. 22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17900	11500	17000	10800	26400	80600	40500	25400	57000	23300	27600	24000
2	17200	11000	16300	13600	30400	81000	41600	24000	49500	22500	26700	23900
3	16500	10700	16200	17600	40100	80500	43600	23100	46600	23500	22600	24600
4	15800	10400	16000	21300	48500	78700	43800	25300	43100	24100	19000	25500
5	15200	10200	15500	23800	57700	75500	42200	32200	39800	22500	17400	24100
6	14500	9900	14900	27200	63800	71300	40400	36300	38200	21400	17500	20600
7	13800	10100	14300	31300	67400	66900	38000	39400	47300	23000	17300	18000
8	13300	11400	13900	32500	68600	62400	35200	41800	62300	19100	17200	16600
9	12900	13600	13500	31800	69300	57800	32300	43400	67800	16800	16100	16300
10	12700	14400	13300	29600	69700	53100	33000	44400	68400	15400	14700	18300
11	12400	14300	12900	26800	69600	48600	43700	43600	65600	14300	13800	17500
12	12000	14100	12700	24400	69400	45000	50900	41000	59700	18700	12800	15400
13	11700	14400	12400	22500	67600	45000	54900	46600	55100	25000	11800	15100
14	11400	14400	11800	20900	63400	48500	55700	57200	52600	29900	11800	15200
15	11100	15400	11100	20000	62000	54300	55700	64200	50800	32900	15900	14400
16	10900	23200	9780	18800	69300	61800	55800	78800	47700	32500	16600	14100
17	12600	29600	8530	17500	74800	71200	54100	102000	41500	33300	18300	13400
18	15500	34300	7120	16900	79400	81800	50000	122000	37300	32900	19300	12300
19	15300	38800	7060	16900	83400	88600	45000	145000	39600	30500	16900	11400
20	14200	41800	7000	26200	87200	88900	39900	165000	39600	27200	15500	10900
21	13800	43100	6800	36800	90500	81900	38000	183000	44000	26500	15600	11000
22	13600	42700	6250	40600	94000	72600	42400	194000	48200	27600	21000	11200
23	13500	39800	6300	42400	97700	64800	44100	199000	49400	28800	24800	11100
24	13600	34900	6540	41000	100000	57800	42200	196000	47800	32700	27200	10900
25	13700	29600	6620	39700	101000	50900	39500	186000	41500	33800	29100	10900
26	14300	25700	6740	39400	97100	45100	37700	171000	36000	32100	32200	10600
27	14500	23500	6870	38100	88900	41300	35100	150000	32600	31000	34500	10100
28	14100	21800	6910	35100	82400	38700	31900	130000	29800	29900	34000	9600
29	13400	20300	6920	32200	---	36700	28800	110000	27300	27700	31000	9320
30	12600	18600	7270	29900	---	36000	27000	88600	25000	25100	27300	9090
31	12000	---	8370	27900	---	38400	---	69600	---	25300	25200	---
TOTAL	426000	653500	326880	853500	2019600	1905700	1263000	2877900	1391100	809300	650700	455410
MEAN	13740	21780	10540	27530	72130	61470	42100	92840	46370	26110	20990	15180
MAX	17900	43100	17000	42400	101000	88900	55800	199000	68400	33800	34500	25500
MIN	10900	9900	6250	10800	26400	36000	27000	23100	25000	14300	11800	9090
CFSM	.48	.76	.37	.96	2.52	2.15	1.47	3.24	1.62	.91	.73	.53
IN.	.55	.85	.42	1.11	2.62	2.48	1.64	3.74	1.81	1.05	.85	.59

CAL YR 1989 TOTAL 12352290 MEAN 33840 MAX 127000 MIN 6250 CFSM 1.18 IN. 16.05
WTR YR 1990 TOTAL 13632590 MEAN 37350 MAX 199000 MIN 6250 CFSM 1.30 IN. 17.71

03378500 WABASH RIVER AT NEW HARMONY, IN

LOCATION.--Lat 38°07'55", long 87°56'25" in SE¼SE¼ sec.35, T.4 S., R.14 W., Posey County, Hydrologic Unit 05120113, at bridge on U.S. Highway 460 at New Harmony, at Indiana-Illinois state line, and at mile 51.5.

DRAINAGE AREA.--29,234 mi^2.

PERIOD OF RECORD.--August 1988 to current year. Water discharge published October 1938 to September 1947.

GAGE.--Water-stage recorder. Datum of gage is 353.30 ft. above National Geodetic Vertical Datum of 1929. (Furnished by National Weather Service).

REMARKS.--Estimated 2400 hr. gage height: Sept. 18. Data missing for entire day Mar. 9-13. Records good. Water-quality data collected October 1974 to September 1986.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 23.84 ft. May 26, 1943. Minimum gage height was not published prior to August 1988.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 1913 reached a stage of 27.7 ft. Flood of Jan. 31, 1937, reached a stage of 24.4 ft.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 21.03 ft. May 24; Minimum gage height, 1.59 ft., Dec. 23.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.17	2.83	3.92	3.70	6.04	15.22	9.03	5.70	13.36	5.32	6.07	5.32
2	4.01	2.72	3.75	4.02	7.02	15.20	9.18	5.42	11.73	5.08	5.92	5.30
3	3.87	2.65	3.72	4.61	8.80	15.18	9.46	5.28	10.93	5.32	5.11	5.45
4	3.73	2.60	3.66	4.74	10.56	15.05	9.48	5.92	10.00	5.35	4.40	5.60
5	3.60	2.56	3.59	5.26	12.03	14.78	9.20	7.19	9.14	4.96	4.06	5.25
6	3.47	2.49	3.48	5.91	13.05	14.42	8.84	8.00	9.01	4.93	4.06	4.59
7	3.32	2.54	3.36	6.75	13.60	13.92	8.38	8.50	10.52	5.11	4.00	4.12
8	3.21	2.88	3.27	7.05	13.83	13.26	7.79	8.94	12.78	4.30	3.98	3.84
9	3.14	3.24	3.21	6.91	14.06	---	7.23	9.27	13.67	3.90	3.76	3.80
10	3.09	3.36	3.15	6.50	14.14	---	7.97	9.44	13.86	3.63	3.48	4.22
11	3.02	3.36	3.08	5.87	14.06	---	9.69	9.32	13.56	3.40	3.30	4.03
12	2.94	3.32	3.02	5.38	14.02	---	10.95	8.94	12.71	4.21	3.09	3.58
13	2.88	3.36	2.97	4.96	13.83	---	11.70	10.06	11.87	5.55	2.90	3.64
14	2.82	3.38	2.86	4.68	13.33	10.30	11.83	11.75	11.38	6.50	2.86	3.58
15	2.74	3.77	2.71	4.46	13.79	11.30	11.76	13.09	11.00	7.12	3.69	3.40
16	2.82	5.25	1.91	4.24	14.25	12.49	11.77	15.33	10.39	7.06	3.80	3.34
17	3.04	6.51	2.07	4.01	14.74	13.75	11.53	16.72	9.22	7.21	4.21	3.20
18	3.62	7.38	1.89	3.90	15.12	14.76	10.82	17.66	8.27	7.17	4.40	3.00
19	3.58	8.18	1.66	4.17	15.40	15.41	9.88	18.36	8.64	6.70	3.93	2.79
20	3.35	8.77	1.97	6.75	15.64	15.66	8.89	19.33	8.76	6.04	3.65	2.72
21	3.28	9.08	1.66	8.33	15.85	15.37	8.50	20.36	9.65	5.98	3.60	2.79
22	3.24	9.08	1.60	8.96	16.07	14.66	9.25	20.76	10.32	6.10	4.71	2.77
23	3.20	8.58	1.59	9.32	16.31	13.68	9.63	20.86	10.53	6.31	5.50	2.73
24	3.23	7.65	1.93	9.02	16.41	12.60	9.33	21.03	10.02	7.10	5.98	2.70
25	3.25	6.59	1.82	8.64	16.48	11.33	8.68	20.81	8.85	7.32	6.39	2.68
26	3.36	5.75	1.99	8.54	16.45	10.11	8.24	20.38	7.90	6.98	7.02	2.62
27	3.40	5.27	1.94	8.32	15.99	9.21	7.73	19.73	7.21	6.77	7.40	2.52
28	3.34	4.89	2.01	7.76	15.46	8.64	7.08	18.90	6.62	6.55	7.26	2.42
29	3.20	4.58	2.06	7.20	---	8.21	6.42	17.96	6.08	6.20	6.67	2.36
30	3.06	4.24	2.21	6.70	---	8.18	6.04	16.82	5.63	5.60	5.96	2.30
31	2.92	---	2.82	6.31	---	8.61	---	15.24	---	5.60	5.56	---
MEAN	3.29	4.90	2.61	6.22	13.80	---	9.21	13.78	10.12	5.79	4.73	3.56
MAX	4.17	9.08	3.92	9.32	16.48	---	11.83	21.03	13.86	7.32	7.40	5.60
MIN	2.74	2.49	1.59	3.70	6.04	---	6.04	5.28	5.63	3.40	2.86	2.30

03378550 BIG CREEK NEAR WADESVILLE, IN

LOCATION.--Lat 38°04'58", long 87°46'10", in SW¼SW¼ sec.16, T.5 S., R.12 W., Posey County, Hydrologic Unit 05120113, on left bank at downstream side of bridge on State Highway 66, 0.6 mi northwest of Blairsville, and 1.6 mi southeast of Wadesville.

DRAINAGE AREA.--104 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 370.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 15-23 and Jan. 29 to Mar. 1. Records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--25 years, 118 ft^3/s, 15.41 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,880 ft^3/s May 1, 1983; maximum gage height, 19.72 ft Apr. 24, 1975; no flow at times most years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,400 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 20	1030	4,860	18.48	May 17	0015	*6,920	*19.32
Feb. 15	unknown	3,900 e	unknown	May 26	1130	4,190	18.12

e - estimate

Minimum daily discharge, 0.04 ft^3/s Sept. 8.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.52	1.7	4.1	88	340	54	251	39	63	7.2	2.9	.82
2	.33	1.5	4.1	49	800	52	200	49	55	6.8	1.9	.69
3	.43	1.3	3.1	41	1300	47	100	52	59	5.4	1.5	.49
4	.44	1.1	2.9	49	1800	37	76	258	37	4.5	100	.21
5	.48	1.2	4.1	47	1000	35	60	190	30	3.8	567	.09
6	.61	1.2	4.7	37	500	31	47	74	565	10	24	.65
7	2.8	1.9	3.4	31	450	27	37	59	576	4.6	4.6	.30
8	.91	21	2.6	29	400	30	32	44	95	3.5	2.6	.04
9	.30	13	2.6	27	610	31	30	36	59	2.7	1.8	.23
10	.18	4.4	3.1	21	1500	30	974	61	43	2.3	1.5	1.4
11	.16	2.5	3.6	19	890	33	563	32	31	1.9	1.2	9.1
12	.14	2.0	2.9	16	500	28	145	128	25	3.5	1.0	149
13	.11	1.9	2.0	11	290	25	96	375	21	4.7	1.4	37
14	.11	1.8	1.6	12	250	25	79	106	126	2.2	1.4	4.3
15	.11	817	1.3	13	3500	30	65	833	109	2.8	1.3	1.7
16	64	564	1.1	12	2600	59	60	3640	26	2.2	1.0	1.8
17	319	71	1.0	21	1500	38	56	6170	19	1.5	.88	1.1
18	20	41	1.2	61	800	28	48	2690	16	1.2	4.7	.63
19	18	28	1.5	100	350	31	42	465	12	6.3	2.2	.58
20	43	25	.82	4210	230	29	43	127	177	11	13	.47
21	21	18	.58	1200	160	26	355	592	74	190	16	2.7
22	10	14	.47	198	130	27	131	1160	31	41	2.1	23
23	6.3	11	.40	128	98	24	80	188	22	24	1.1	6.1
24	4.8	8.5	.36	97	87.0	29	59	96	16	10	.84	1.5
25	3.7	8.7	.61	82	79.0	59	45	71	12	6.3	.64	.70
26	3.1	8.6	1.4	60	73.0	51	37	2720	10	4.5	.51	.51
27	4.0	8.0	2.0	53	65.0	38	32	657	9.6	3.5	.37	.38
28	2.2	7.3	4.7	44	60.0	34	33	1510	8.5	2.9	.26	.22
29	1.9	4.4	24	100	---	43	42	368	7.4	2.6	.24	.15
30	1.7	3.8	215	700	---	100	30	133	6.9	48	.18	.13
31	1.9	---	711	510	---	189	---	86	---	7.5	.40	---
TOTAL	532.23	1694.8	1012.24	8066	20362.0	1320	3848	23009	2341.4	428.4	758.52	245.99
MEAN	17.2	56.5	32.7	260	727	42.6	128	742	78.0	13.8	24.5	8.20
MAX	319	817	711	4210	3500	189	974	6170	576	190	567	149
MIN	.11	1.1	.36	11	60	24	30	32	6.9	1.2	.18	.04
CFSM	.17	.54	.31	2.50	6.99	.41	1.23	7.14	.75	.13	.24	.08
IN.	.19	.61	.36	2.89	7.28	.47	1.38	8.23	.84	.15	.27	.09

CAL YR 1989 TOTAL 63622.40 MEAN 174 MAX 5350 MIN .11 CFSM 1.68 IN. 22.76
WTR YR 1990 TOTAL 63618.58 MEAN 174 MAX 6170 MIN .04 CFSM 1.68 IN. 22.76

04093000 DEEP RIVER AT LAKE GEORGE OUTLET AT HOBART, IN

LOCATION.--Lat 41°32'10", long 87°15'25", in NW¼NW¼ sec.32, T.36 N., R.7 W., Lake County, Hydrologic Unit 04040001, on left bank at upstream side of bridge on Center Street in Hobart, 300 ft upstream from Duck Creek, and 400 ft downstream from Lake George Dam.

DRAINAGE AREA.--124 mi^2.

PERIOD OF RECORD.--April 1947 to current year.

REVISED RECORDS.--WSP 1337: 1953. WSP 1507: 1956. WDR IN-72-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 588.17 ft above National Geodetic Vertical Datum of 1929 (levels by State of Indiana, Department of Natural Resources). 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.

REMARKS.--Estimated daily discharges: Oct. 4, 5, 7-9, 12, 13, 15, and May 30 to June 13. Records good. Flows subject to regulation by operation of Lake George dam.

AVERAGE DISCHARGE.--43 years, 110 ft^3/s, 12.05 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,000 ft^3/s June 14, 1981; maximum gage height, 19.48 ft, Oct. 11, 1954, present datum, site then in use; no flow Nov. 5, 1978, due to regulation of Lake George Dam.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 24	0400	1,110	10.04	May 14	0500	1,270	10.59
Mar. 11	2300	832	9.02	Aug. 19	0900	*2,450	*13.88

Minimum daily discharge, 12 ft^3/s Oct. 4, 12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	18	40	22	103	233	133	74	71	56	33	94
2	16	18	41	21	201	220	136	69	68	49	31	80
3	14	19	35	20	308	228	133	66	67	43	29	69
4	12	20	34	45	276	206	121	113	64	38	70	61
5	14	21	34	120	216	177	111	241	62	31	120	54
6	16	19	34	116	169	166	105	223	61	30	70	50
7	14	24	33	85	146	153	95	167	60	31	45	87
8	14	30	31	68	121	159	90	120	84	33	37	108
9	14	30	29	63	104	427	85	104	110	29	33	72
10	16	25	29	67	95	591	96	395	105	36	31	54
11	16	23	31	66	88	777	123	644	80	83	30	47
12	12	19	27	58	84	777	146	545	68	103	36	44
13	14	24	26	48	77	550	132	927	62	64	64	41
14	16	22	26	47	76	383	181	1210	66	51	55	49
15	18	71	24	44	83	289	253	879	81	46	40	54
16	14	223	21	46	86	231	226	613	64	43	32	46
17	18	221	18	124	88	191	178	888	57	41	35	40
18	22	143	17	226	89	161	146	1060	51	37	968	37
19	26	93	18	197	96	112	116	730	46	37	2340	36
20	69	71	18	157	103	99	110	485	45	102	2170	34
21	88	59	18	139	99	103	230	355	44	210	2000	44
22	58	53	16	120	252	116	244	265	50	225	1450	65
23	37	50	14	106	911	189	184	187	62	235	1020	52
24	30	45	13	95	1040	182	150	155	58	180	749	43
25	27	42	14	163	730	154	119	153	50	124	553	38
26	25	41	15	367	480	120	105	191	46	83	396	33
27	24	48	16	327	326	107	94	185	44	58	234	32
28	23	54	16	231	261	98	87	157	41	47	176	30
29	22	53	18	176	---	97	81	124	53	46	156	33
30	22	42	19	146	---	117	77	97	69	47	133	34
31	21	---	21	109	---	129	---	84	---	39	111	---
TOTAL	748	1621	746	3619	6708	7542	4087	11506	1889	2277	13247	1561
MEAN	24.1	54.0	24.1	117	240	243	136	371	63.0	73.5	427	52.0
MAX	88	223	41	367	1040	777	253	1210	110	235	2340	108
MIN	12	18	13	20	76	97	77	66	41	29	29	30
CFSM	.19	.44	.19	.94	1.93	1.96	1.10	2.99	.51	.59	3.45	.42
IN.	.22	.49	.22	1.09	2.01	2.26	1.23	3.45	.57	.68	3.97	.47

CAL YR 1989 TOTAL 39672 MEAN 109 MAX 3280 MIN 12 CFSM .88 IN. 11.90
WTR YR 1990 TOTAL 55551 MEAN 152 MAX 2340 MIN 12 CFSM 1.23 IN. 16.67

04093200 LITTLE CALUMET RIVER AT GARY, IN

LOCATION.--Lat 41°34'19", long 87°19'13", in NE¼SE¼ sec.15, T.36 N., R.8 W., Lake County, Hydrologic Unit 04040001, on right bank 100 ft upstream of Pennsylvania Railroad bridge, 800 ft upstream of Martin Luther King Avenue bridge at Gary, 1.3 mi downstream of highway 53, and 1.5 mi upstream from confluence with Deep River.

DRAINAGE AREA.--5.8 mi^2, approximately.

PERIOD OF RECORD.--June 1958 to September 1967, October 1968 to September 30, 1971 (discharge), December 13, 1984 to current year (gage heights only).

GAGE.--Water-stage recorder. Wooden control since Dec. 13, 1984. Datum of gage is 580.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Stage affected by backwater from Deep River during times of flood. Minimum gage height for the period of record may have been lower prior to December 13, 1984.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 13.21 ft, Jun. 3, 1989; minimum gage height, 5.71 ft, July 17, 18, 28-30, 1988. Minimum gage height was not published prior to December 13, 1984.

EXTREMES OUTSIDE PERIOD OF RECORD.-- Flood in October 1954 reached a stage of 13.09 ft, from flood mark.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 11.51 ft, Aug. 21; minimum gage height, 6.00 ft, Oct. 14-16.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.08	6.50	7.17	6.47	7.98	9.10	7.95	6.87	7.39	7.29	6.68	7.76
2	6.07	6.41	6.75	6.47	8.11	8.98	7.96	6.77	7.22	7.07	6.57	7.55
3	6.06	6.28	7.03	6.60	8.26	8.84	7.93	6.73	7.03	6.81	6.50	7.37
4	6.05	6.23	6.90	7.19	8.29	8.79	7.87	8.24	6.85	6.63	8.23	7.13
5	6.10	6.26	6.87	7.45	8.23	8.69	7.79	8.54	6.68	6.49	8.28	7.00
6	6.12	6.29	6.82	7.56	8.11	8.51	7.99	8.58	6.61	6.33	8.12	6.87
7	6.08	6.37	6.77	7.57	7.97	8.41	7.80	8.49	6.72	6.23	7.89	7.73
8	6.06	6.37	6.70	7.56	7.86	8.53	7.66	8.20	7.92	6.37	7.72	7.69
9	6.04	6.40	6.66	7.56	7.79	8.74	7.56	8.56	8.00	6.24	7.53	7.52
10	6.04	6.32	6.61	7.50	7.70	9.02	7.61	9.04	7.98	6.62	7.39	7.37
11	6.04	6.29	6.65	7.50	7.59	9.24	7.65	9.38	7.87	7.81	7.47	7.19
12	6.01	6.27	6.53	7.41	7.49	9.40	7.67	9.70	7.68	7.76	7.76	7.03
13	6.01	6.28	6.44	7.33	7.48	9.45	7.59	9.99	7.46	7.56	7.87	6.90
14	6.00	6.61	6.46	7.21	7.18	9.39	7.92	9.97	7.69	7.32	7.80	7.05
15	6.00	7.98	6.40	7.17	7.45	9.26	8.09	9.98	7.57	7.15	7.62	6.97
16	6.06	8.36	6.28	7.36	7.66	9.11	8.09	9.92	7.43	6.96	7.41	6.89
17	6.18	8.46	6.25	7.75	7.52	8.99	8.00	9.86	7.27	6.72	7.75	6.78
18	6.22	8.42	6.22	8.18	7.54	8.79	7.87	9.75	7.16	6.58	8.92	6.68
19	6.66	8.28	6.27	8.39	7.54	8.55	7.70	9.68	6.93	7.83	10.19	6.68
20	7.27	8.08	6.29	8.45	7.52	8.33	7.98	9.53	6.80	8.27	11.27	6.60
21	7.49	7.90	6.31	8.39	7.55	8.05	8.29	9.37	6.67	8.27	11.51	7.12
22	7.44	7.76	6.30	8.30	8.49	8.27	8.36	9.17	6.81	8.28	11.19	7.09
23	7.28	7.68	6.28	8.18	8.94	8.32	8.31	8.95	7.01	8.16	10.59	6.98
24	7.09	7.59	6.27	8.13	9.41	8.33	8.16	8.69	6.98	7.96	10.01	6.82
25	6.86	7.56	6.28	8.51	9.43	8.24	7.92	8.59	6.82	7.84	9.68	6.67
26	7.04	7.51	6.29	8.61	9.45	8.09	7.73	8.55	7.03	7.67	9.44	6.53
27	6.57	7.54	6.29	8.70	9.39	7.98	7.58	8.48	6.84	7.47	9.15	6.47
28	6.44	7.49	6.31	8.70	9.24	7.82	7.44	8.35	6.76	7.21	8.97	6.45
29	6.48	7.40	6.34	8.53	---	7.81	7.24	8.10	7.42	7.18	8.69	6.42
30	6.41	7.32	6.39	8.30	---	7.89	7.08	7.86	7.41	7.05	8.36	6.40
31	6.44	---	6.44	8.08	---	7.94	---	7.64	---	6.85	8.00	---
MEAN	6.41	7.14	6.50	7.78	8.11	8.61	7.83	8.76	7.20	7.23	8.53	6.99
MAX	7.49	8.46	7.17	8.70	9.45	9.45	8.36	9.99	8.00	8.28	11.51	7.76
MIN	6.00	6.23	6.22	6.47	7.18	7.81	7.08	6.73	6.61	6.23	6.50	6.40

WTR YR 1990 MEAN 7.59 MAX 11.51 MIN 6.00

04093500 BURNS DITCH AT GARY, IN

LOCATION.--Lat 41°34'30", long 87°17'20", in SE¼NW¼ sec.13, T.36 N., R.8 W., Lake County, Hydrologic Unit 04040001, on left bank at downstream side of bridge on Central Avenue, 0.4 mi east of Gary, and 0.4 mi downstream from confluence of Deep River and Little Calumet River.

DRAINAGE AREA.--160 mi^2. During times of floods flow may leave the basin by flowing west through Little Calumet River into the western portion of Calumet River basin; or during times of floods on Hart ditch, flow may enter the basin from western portion of the Little Calumet River basin.

PERIOD OF RECORD.--October 1943 to current year (since 1951 water year, backwater free periods only).

REVISED RECORDS.--WSP 1034: 1944. WSP 1337: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 577.04 ft above National Geodetic Vertical Datum of 1929. Prior to July 28, 1955, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Dec. 6-18, 21-27, and Aug. 15-17. Records fair, except estimated daily discharges, which are poor. Burns ditch is an artificial channel which reverses the direction of flow of part of Little Calumet River and flows into Lake Michigan at Ogden Dunes. During high levels on Lake Michigan, only periods free from backwater are shown.

AVERAGE DISCHARGE.--31 years (1943-50, 1955-73, 1977, 1978, 1982, 1988-1990), 143 ft^3/s, 12.14 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,430 ft^3/s Oct. 11, 1954; maximum gage height, 16.44 ft Mar. 16, 1944, from graph based on gage readings.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,220 ft^3/s Aug. 21, gage height, 14.05 ft; minimum daily 16 ft^3/s Oct. 12, 13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	27	52	32	170	424	202	95	128	101	46	182
2	20	27	55	32	254	392	218	81	114	83	40	153
3	21	27	63	32	396	390	212	81	113	71	37	126
4	20	27	51	65	396	363	187	163	104	53	168	108
5	22	28	57	150	325	318	169	325	98	50	211	94
6	27	31	52	174	257	289	155	346	98	40	168	82
7	25	35	49	134	213	260	147	274	96	39	105	174
8	18	39	47	104	182	267	124	207	158	42	71	188
9	18	42	45	97	160	506	114	171	224	45	56	141
10	19	40	46	99	142	706	133	485	205	48	49	106
11	19	36	47	95	124	857	164	742	156	138	48	87
12	16	34	42	86	113	955	189	788	120	181	62	77
13	16	34	40	75	105	832	181	1010	112	129	112	68
14	17	38	38	63	96	643	234	1350	118	95	109	91
15	20	91	36	60	108	513	345	1280	127	75	74	98
16	21	267	32	61	110	422	336	1020	113	65	49	94
17	27	317	27	124	122	350	275	997	96	60	54	69
18	32	236	23	271	121	302	218	1250	88	52	894	57
19	52	163	24	282	131	244	175	1120	78	66	1760	55
20	113	127	24	230	146	173	163	852	79	188	2090	52
21	139	102	23	200	141	173	308	649	78	300	2200	77
22	99	87	21	176	290	198	389	515	58	354	2040	108
23	71	80	20	150	857	294	311	396	90	357	1680	98
24	55	71	19	136	1160	301	248	314	87	293	1320	74
25	46	62	20	199	1040	255	197	290	74	206	998	59
26	41	59	22	454	781	213	159	340	71	151	749	50
27	36	63	23	472	587	179	130	329	65	108	541	45
28	32	79	25	385	481	153	114	284	65	80	379	42
29	30	75	26	295	---	147	110	238	89	72	327	46
30	29	67	28	239	---	178	101	190	111	74	273	47
31	28	---	30	194	---	195	---	154	---	59	227	---
TOTAL	1149	2411	1107	5166	9008	11492	6008	16336	3213	3675	16937	2748
MEAN	37.1	80.4	35.7	167	322	371	200	527	107	119	546	91.6
MAX	139	317	63	472	1160	955	389	1350	224	357	2200	188
MIN	16	27	19	32	96	147	101	81	58	39	37	42
CFSM	.23	.50	.22	1.04	2.01	2.32	1.25	3.29	.67	.74	3.41	.57
IN.	.27	.56	.26	1.20	2.09	2.67	1.40	3.80	.75	.85	3.94	.64

CAL YR 1989 TOTAL 58028 MEAN 159 MAX 2890 MIN 16 CFSM .99 IN. 13.49
WTR YR 1990 TOTAL 79250 MEAN 217 MAX 2200 MIN 16 CFSM 1.36 IN. 18.43

04094000 LITTLE CALUMET RIVER AT PORTER, IN

LOCATION.--Lat 41°37'18", long 87°05'13", in NE¼NE¼ sec.34, T.37 N., R.6 W., Porter County, Hydrologic Unit 04040001, on right bank at downstream end of county road bridge, 200 ft upstream from bridge on U.S. Highway 20, 0.8 mi northwest of Porter, and 4.5 mi upstream from Salt Creek.

DRAINAGE AREA.--66.2 mi^2.

PERIOD OF RECORD.--May 1945 to current year.

REVISED RECORDS.--WSP 1084: 1945. WSP 1337: 1946-47. WDR IN-72-1: Drainage area. WDR IN-83-1: 1982.

GAGE.--Water-stage recorder. Datum of gage is 603.48 ft above National Geodetic Vertical Datum of 1929. Prior to June 26, 1952, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Oct. 9-20, Nov. 3 to Jan. 2, Jan. 20-24, Feb. 15-21, and 24-26. Records good, except those for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--45 years, 75.0 ft^3/s, 15.39 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,220 ft^3/s Aug. 18, 1990, gage height, 10.51 ft; maximum gage height 11.66 ft, Oct. 10, 1954; minimum daily, 17 ft^3/s Aug. 24, 1965.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
May 14	0100	790	7.87	Aug. 21	0500	1,700	9.20
Aug. 18	2200	*3,220	*10.51				

Minimum daily discharge, 25 ft^3/s Oct. 2, 4, 5, 9-11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	45	44	39	64	131	96	50	59	81	36	63
2	25	44	42	42	155	142	104	47	58	60	34	57
3	26	43	41	44	189	174	108	46	66	48	33	55
4	25	45	40	97	120	141	95	115	55	41	134	51
5	25	46	39	183	90	120	89	208	51	37	164	50
6	26	46	38	109	77	124	80	130	51	35	81	49
7	26	52	37	79	70	110	72	92	48	33	55	64
8	26	46	36	71	65	116	69	71	58	32	44	62
9	25	44	37	76	63	283	66	64	68	31	40	53
10	25	43	38	96	58	292	103	252	52	33	38	50
11	25	41	36	83	54	286	142	327	46	83	37	49
12	26	40	35	72	52	263	113	205	44	90	42	47
13	27	40	35	59	50	186	93	426	40	54	60	46
14	28	42	34	52	49	145	143	578	45	49	45	61
15	29	130	34	51	50	122	156	268	44	47	40	73
16	31	190	34	55	50	108	114	201	40	49	37	57
17	33	98	33	105	52	96	103	409	38	44	59	50
18	32	70	33	142	52	86	88	450	37	39	1760	46
19	50	62	33	95	54	84	77	218	34	42	1820	46
20	100	64	32	74	56	78	81	164	36	156	856	47
21	163	58	32	68	58	75	192	131	37	163	1280	64
22	96	54	32	64	150	96	173	110	39	139	539	90
23	71	50	32	62	485	201	118	94	52	180	325	65
24	60	48	32	60	350	148	94	84	52	97	226	57
25	54	46	33	127	280	110	79	86	42	65	172	51
26	51	45	34	261	230	93	71	170	51	49	143	48
27	49	47	35	176	205	81	64	141	65	43	123	46
28	47	54	35	110	142	74	58	102	54	40	108	45
29	46	50	35	84	---	76	54	82	103	39	98	48
30	46	46	36	72	---	102	52	70	108	39	84	49
31	47	---	37	64	---	95	---	64	---	38	72	---
TOTAL	1366	1729	1104	2772	3370	4238	2947	5455	1573	1976	8585	1639
MEAN	44.1	57.6	35.6	89.4	120	137	98.2	176	52.4	63.7	277	54.6
MAX	163	190	44	261	485	292	192	578	108	180	1820	90
MIN	25	40	32	39	49	74	52	46	34	31	33	45
CFSM	.67	.87	.54	1.35	1.82	2.07	1.48	2.66	.79	.96	4.18	.83
IN.	.77	.97	.62	1.56	1.89	2.38	1.66	3.07	.88	1.11	4.82	.92

CAL YR 1989 TOTAL 24847 MEAN 68.1 MAX 1630 MIN 25 CFSM 1.03 IN. 13.96
WTR YR 1990 TOTAL 36754 MEAN 101 MAX 1820 MIN 25 CFSM 1.52 IN. 20.65

04094500 SALT CREEK NEAR McCOOL, IN

LOCATION.--Lat 41°35'48", long 87°08'40", in SE¼SE¼ sec.6, T.36 N., R.6 W., Porter County, Hydrologic Unit 04040001, on left bank on downstream side of highway bridge, 50 ft downstream from Conrail Railroad bridge, 1.2 mi north of McCool, and 1.6 mi upstream from Little Calumet River.

DRAINAGE AREA.--74.6 mi^2.

PERIOD OF RECORD.--May 1945 to current year.

REVISED RECORDS.--WSP 1337: 1946-48(M), 1950(M). WSP 1911: 1958. WDR IN-72-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 594.10 ft above National Geodetic Vertical Datum of 1929 (levels by State of Indiana, Department of Natural Resources). Prior to July 25, 1955, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Dec. 14-18, 21-26, and Jan. 5. Records fair except those for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--45 years, 75.9 ft^3/s, 13.82 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,180 ft^3/s Oct. 11, 1954, gage height, 14.12 ft; minimum daily, 10 ft^3/s Aug. 26, 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharges of 600 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 23	1900	643	4.42	May 18	0300	623	4.31
May 14	0600	853	5.57	Aug. 18	2100	*1,630	*9.56

Minimum daily discharge, 22 ft^3/s, Dec. 22.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	38	46	36	61	85	79	56	56	56	38	64
2	28	37	44	35	150	86	85	47	55	45	35	61
3	29	37	42	35	152	93	84	38	69	42	34	59
4	30	36	42	84	100	83	79	120	54	39	102	58
5	30	37	42	105	80	78	75	231	49	37	91	56
6	32	38	43	72	71	79	66	114	48	37	63	55
7	32	45	40	57	66	74	61	84	48	37	43	93
8	31	54	37	54	62	82	58	75	85	38	38	85
9	31	47	36	55	60	320	58	71	91	37	36	65
10	31	45	36	61	58	282	85	323	70	41	35	57
11	32	43	38	51	54	361	103	333	55	101	34	54
12	30	41	33	49	53	348	93	170	50	83	39	49
13	32	39	31	44	52	145	82	527	47	56	62	48
14	31	42	30	44	52	106	121	775	56	40	49	66
15	30	93	27	44	55	93	124	503	54	39	39	79
16	32	251	25	46	66	85	100	250	47	35	34	68
17	37	166	23	112	67	78	91	432	45	33	48	56
18	42	81	25	126	66	71	80	567	44	33	1070	53
19	44	64	26	91	80	70	73	294	42	34	1200	52
20	124	58	27	72	73	66	75	124	42	137	885	52
21	137	55	25	69	67	64	149	96	42	129	889	72
22	86	52	22	62	193	81	137	86	46	136	525	104
23	67	50	25	57	578	117	102	77	65	136	264	76
24	55	48	27	54	553	92	88	73	63	92	162	61
25	48	46	28	165	282	80	79	77	52	70	132	50
26	45	45	29	330	108	72	74	102	59	54	117	48
27	44	47	30	128	90	65	68	88	56	45	119	47
28	42	53	31	91	90	62	63	74	49	41	114	47
29	42	52	33	77	---	65	59	68	74	41	101	51
30	41	48	36	68	---	85	57	63	74	46	79	48
31	41	---	36	60	---	79	---	59	---	41	77	---
TOTAL	1383	1788	1015	2434	3439	3547	2548	5997	1687	1831	6554	1834
MEAN	44.6	59.6	32.7	78.5	123	114	84.9	193	56.2	59.1	211	61.1
MAX	137	251	46	330	578	361	149	775	91	137	1200	104
MIN	27	36	22	35	52	62	57	38	42	33	34	47
CFSM	.60	.80	.44	1.05	1.65	1.53	1.14	2.59	.75	.79	2.83	.82
IN.	.69	.89	.51	1.21	1.71	1.77	1.27	2.99	.84	.91	3.27	.91

CAL YR 1989 TOTAL 26542 MEAN 72.7 MAX 1470 MIN 21 CFSM .97 IN. 13.24
WTR YR 1990 TOTAL 34057 MEAN 93.3 MAX 1200 MIN 22 CFSM 1.25 IN. 16.98

04095300 TRAIL CREEK AT MICHIGAN CITY, IN

LOCATION.--Lat 41°43'00", long 86°51'35", in NE¼SE¼ sec.27, T.38 N., R.4 W., LaPorte County, Hydrologic Unit 04040001, on right upstream side of bridge on Springland Avenue in Michigan City, 1.0 mi upstream from Otter Creek, and 4.2 mi upstream from mouth.

DRAINAGE AREA.--54.1 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 584.02 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Nov. 30 to Dec. 8, Dec. 12 to Jan. 2, Jan. 6-12 and May 21-24. Records good except those for estimated daily discharges, which are fair.

AVERAGE DISCHARGE.--21 years, 73.5 ft^3/s, 18.45 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,430 ft^3/s July 15, 1986, gage height, 11.88 ft; minimum daily, 20 ft^3/s Aug. 1, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 22	2400	619	7.65	Aug. 18	1300	*2,300	*11.78
May 10	1000	575	7.28	Aug. 20	2000	807	9.43
May 13	1500	644	7.86	Aug. 22	0200	1,010	10.15
May 17	1300	687	8.23				

Minimum daily discharge, 30 ft^3/s Oct. 1, 2, 7, 8.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	39	45	40	61	91	76	57	57	63	50	55
2	30	39	44	41	175	113	90	55	61	56	48	53
3	31	40	43	45	119	142	96	55	58	50	46	52
4	31	42	43	185	83	98	79	188	53	46	228	51
5	31	41	42	165	68	89	78	161	53	46	105	50
6	32	41	42	84	65	95	69	90	52	43	67	54
7	30	51	42	72	62	82	64	74	50	42	61	72
8	30	46	41	64	59	130	60	66	71	41	55	56
9	31	42	41	68	58	394	60	74	60	41	52	52
10	32	42	41	80	54	270	120	487	52	45	51	51
11	31	41	43	75	53	320	134	255	49	77	64	50
12	31	40	41	73	50	222	93	205	47	59	84	49
13	31	40	40	57	51	140	75	520	45	52	116	47
14	31	42	40	53	49	102	138	310	51	54	66	71
15	31	130	40	52	56	86	106	159	47	54	58	62
16	33	203	40	56	62	78	80	145	44	53	52	60
17	37	89	39	96	60	71	92	527	43	54	118	54
18	36	62	39	106	59	66	75	247	42	53	1610	49
19	51	55	39	70	66	70	67	129	40	74	456	52
20	100	57	39	62	58	66	84	110	46	333	596	51
21	95	52	38	67	61	65	315	88	49	157	610	107
22	55	50	38	61	312	119	156	76	57	294	513	104
23	46	49	38	56	499	172	94	70	73	190	175	103
24	43	48	38	55	272	93	79	66	59	90	124	106
25	40	48	38	182	140	76	71	99	50	71	94	68
26	39	47	39	156	120	69	67	224	61	64	79	59
27	39	49	39	87	102	65	64	113	57	59	71	54
28	39	57	39	71	101	63	62	81	66	55	66	52
29	39	52	40	62	---	68	59	70	124	55	69	55
30	39	47	40	58	---	86	58	64	81	57	61	52
31	39	---	40	56	---	75	---	60	---	52	58	---
TOTAL	1233	1681	1251	2455	2975	3676	2761	4925	1698	2480	5903	1851
MEAN	39.8	56.0	40.4	79.2	106	119	92.0	159	56.6	80.0	190	61.7
MAX	100	203	45	185	499	394	315	527	124	333	1610	107
MIN	30	39	38	40	49	63	58	55	40	41	46	47
CFSM	.74	1.04	.75	1.46	1.96	2.19	1.70	2.94	1.05	1.48	3.52	1.14
IN.	.85	1.16	.86	1.69	2.05	2.53	1.90	3.39	1.17	1.71	4.06	1.27

CAL YR 1989 TOTAL 21686 MEAN 59.4 MAX 1190 MIN 27 CFSM 1.10 IN. 14.91
WTR YR 1990 TOTAL 32889 MEAN 90.1 MAX 1610 MIN 30 CFSM 1.67 IN. 22.61

04096100 GALENA RIVER NEAR LAPORTE, IN

LOCATION.--Lat 41°44'54", long 86°40'30", in SE¼NW¼ sec.17, T.38 N., R.2 W., LaPorte County, Hydrologic Unit 04040001, on left bank at downstream side of bridge on County Road 125 East, 1.3 mi upstream from Indiana-Michigan State line, and 9.8 mi north of Courthouse in LaPorte.

DRAINAGE AREA.--17.2 mi^2, of which 2.30 mi^2 does not contribute directly to surface runoff.

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

REVISED RECORDS.--WDR IN-80-1: 1970, 1971(P), 1972, 1973, 1974(P), 1975 (M), 1976 (P), and 1978 (P).

GAGE.--Water-stage recorder. Datum of gage is 625.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 5-18, Dec. 12 to Feb. 2. Records fair except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--21 years, 25.5 ft^3/s, 20.13 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 650 ft^3/s Mar. 4, 1979, gage height, 7.02 ft; minimum daily, 6.7 ft^3/s Sept. 13, 1973.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 23	0300	*182	*4.87	May 10	0900	181	4.85
Mar. 9	0900	122	3.97	May 13	1600	174	4.76
Mar. 10	1800	140	4.26	May 17	1400	150	4.41
Apr. 21	0700	110	3.78	Aug. 18	1800	122	3.98

Minimum daily discharge, 9.0 ft^3/s Oct. 4.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.1	14	19	15	23	29	28	20	18	24	13	15
2	9.2	14	19	16	56	34	33	19	18	20	12	15
3	9.1	17	19	19	35	39	35	19	18	18	11	14
4	9.0	19	18	60	27	30	29	50	16	16	31	14
5	9.1	18	19	56	23	28	29	43	16	15	26	13
6	9.4	17	19	30	21	29	26	29	16	14	18	13
7	9.2	25	18	26	20	26	24	25	15	14	16	20
8	9.2	24	17	23	19	35	23	22	21	13	15	17
9	9.4	19	18	23	19	104	23	24	20	13	14	15
10	9.6	21	17	27	18	115	40	150	17	13	15	15
11	9.4	21	17	25	17	93	39	64	15	19	15	14
12	9.4	18	16	24	17	64	31	51	14	17	23	14
13	9.4	18	16	20	17	46	27	133	13	15	29	14
14	9.4	17	15	18	16	41	39	68	14	16	20	19
15	9.6	47	15	18	24	35	33	42	14	15	17	20
16	10	70	15	19	22	30	28	41	13	14	15	23
17	12	38	14	30	20	27	33	117	12	16	17	19
18	14	28	14	34	19	26	27	53	11	15	86	16
19	16	26	14	23	19	28	24	35	15	19	59	17
20	34	28	14	21	18	25	32	33	12	75	70	17
21	51	24	13	22	18	25	88	28	18	39	62	30
22	29	22	13	20	72	34	43	24	19	46	39	33
23	22	26	13	19	140	44	34	23	36	37	30	33
24	19	24	13	18	62	31	29	21	28	27	23	33
25	18	23	13	58	53	28	25	29	22	21	21	22
26	17	21	14	50	52	26	24	55	19	19	19	19
27	16	21	14	30	33	25	23	31	20	17	19	17
28	15	24	14	24	32	24	22	25	29	15	20	17
29	15	22	14	23	---	26	21	23	45	15	25	18
30	15	20	15	21	---	33	20	20	33	14	18	18
31	15	---	15	20	---	28	---	19	---	13	17	---
TOTAL	457.5	726	484	832	912	1208	932	1336	577	644	815	564
MEAN	14.8	24.2	15.6	26.8	32.6	39.0	31.1	43.1	19.2	20.8	26.3	18.8
MAX	51	70	19	60	140	115	88	150	45	75	86	33
MIN	9.0	14	13	15	16	24	20	19	11	13	11	13
CFSM	.86	1.41	.91	1.56	1.89	2.27	1.81	2.51	1.12	1.21	1.53	1.09
IN.	.99	1.57	1.05	1.80	1.97	2.61	2.02	2.89	1.25	1.39	1.76	1.22

CAL YR 1989 TOTAL 8085.5 MEAN 22.2 MAX 195 MIN 9.0 CFSM 1.29 IN. 17.49
WTR YR 1990 TOTAL 9487.5 MEAN 26.0 MAX 150 MIN 9.0 CFSM 1.51 IN. 20.52

04099510 PIGEON CREEK NEAR ANGOLA, IN

LOCATION.--Lat 41°38'04", long 85°06'35", in NW¼SE¼ sec.26, T.37 N., R.12 E., Steuben County, Hydrologic Unit 04050001, on left bank 5 ft upstream from bridge on U.S. Highway 20, 1.3 mi downstream from outlet of Hogback Lake, 1.3 mi southeast of Flint, and 5.8 mi west of Angola.

DRAINAGE AREA.--106 mi^2, of which 22.5 mi^2 does not contribute directly to surface runoff.

PERIOD OF RECORD.--October 1945 to current year. Prior to October 1947, published as "near Flint". Published as Pigeon Creek at Hogback Lake Outlet near Angola, October 1947 to September 1971, and Pigeon Creek and Hogback Lake near Angola, October 1971 to September 1974.

REVISED RECORDS.--WSP 1144: 1948. WSP 2111: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 940.00 ft above National Geodetic Vertical Datum of 1929. Prior to October 1947, nonrecording gage at site 0.3 mi downstream at different datum. Oct. 1947 to Aug. 3, 1953, nonrecording gage at site 1.2 mi upstream at same datum. Aug. 4, 1953, to Apr. 3, 1974, recording gage at site 1.3 mi upstream at same datum. Apr. 18, 1974, to Sept. 2, 1974, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records good.

AVERAGE DISCHARGE.--45 years, 81.0 ft^3/s, 10.38 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 795 ft^3/s Mar. 22, 1982, gage height, 13.90 ft; minimum daily, 3.4 ft^3/s Oct. 25-27, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 522 ft^3/s Feb. 26, gage height; 10.81 ft; minimum daily, 28 ft^3/s Aug. 11.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46	42	75	37	120	433	124	90	151	89	31	57
2	44	40	70	39	127	393	128	85	142	84	30	55
3	42	39	67	42	154	357	131	82	151	82	29	50
4	41	39	65	53	178	324	132	85	172	83	31	46
5	40	38	61	91	187	294	130	89	186	75	33	42
6	39	37	58	131	183	265	125	91	186	66	33	40
7	37	39	55	156	176	236	119	92	175	59	33	43
8	37	40	53	160	167	213	113	90	169	55	32	43
9	36	40	50	153	161	205	108	87	176	51	30	42
10	36	41	48	147	154	216	110	84	180	48	29	41
11	36	41	47	144	147	249	125	81	176	49	28	39
12	35	41	45	139	139	286	147	80	163	48	30	38
13	34	41	43	131	131	310	159	97	149	46	46	36
14	34	41	42	121	123	311	163	139	136	46	71	32
15	34	50	40	110	122	298	162	181	124	45	97	33
16	33	69	39	103	116	282	159	258	114	44	107	35
17	33	98	38	106	110	267	151	381	105	43	103	35
18	33	123	36	131	106	251	143	446	95	41	95	34
19	34	137	35	162	100	234	134	466	87	39	87	35
20	36	138	35	181	97	214	128	460	81	39	81	35
21	37	135	34	185	93	197	129	431	76	40	82	36
22	40	129	33	178	130	183	134	389	72	44	88	38
23	42	122	32	168	290	172	136	343	70	48	97	39
24	44	114	31	159	426	163	135	301	68	49	101	40
25	45	106	31	157	489	155	129	268	67	48	98	39
26	47	98	30	163	517	146	122	251	66	46	92	38
27	46	93	30	164	507	138	115	238	63	43	83	37
28	46	87	30	161	475	130	108	221	68	40	78	35
29	45	83	30	153	---	125	102	202	81	38	73	35
30	44	78	31	141	---	123	96	183	89	35	68	33
31	43	---	34	130	---	122	---	166	---	33	62	---
TOTAL	1219	2219	1348	4096	5725	7292	3897	6457	3638	1596	1978	1181
MEAN	39.3	74.0	43.5	132	204	235	130	208	121	51.5	63.8	39.4
MAX	47	138	75	185	517	433	163	466	186	89	107	57
MIN	33	37	30	37	93	122	96	80	63	33	28	32
CFSM	.47	.89	.52	1.58	2.45	2.82	1.56	2.49	1.45	.62	.76	.47
IN.	.54	.99	.60	1.82	2.55	3.25	1.74	2.88	1.62	.71	.88	.53

CAL YR 1989 TOTAL 32836 MEAN 90.0 MAX 443 MIN 30 CFSM 1.08 IN. 14.63
WTR YR 1990 TOTAL 40646 MEAN 111 MAX 517 MIN 28 CFSM 1.33 IN. 18.11

04099750 PIGEON RIVER NEAR SCOTT, IN

LOCATION.--Lat 41°44'56", long 85°34'35", in SE¼NW¼ sec.14, T.38 N., R.8 E., Lagrange County, Hydrologic Unit 04050001, on right bank 20 ft downstream from bridge on County Road 750 North, 1,200 ft downstream from Page ditch, 0.7 mi south of Indiana-Michigan State line, and 1.2 mi northwest of Scott.

DRAINAGE AREA.--361 mi^2, of which 53.9 mi^2 does not contribute directly to surface runoff.

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

REVISED RECORDS.--WSP 2111: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 815.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 9, Dec. 12 to Jan. 8, and Feb. 25-28. Records good except for estimated daily discharges, which are fair.

AVERAGE DISCHARGE.--22 years, 367 ft^3/s, 13.81 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,370 ft^3/s Mar. 21, 1982, gage height, 7.85 ft; minimum daily, 42 ft^3/s Oct. 21, 1971.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,360 ft^3/s Feb. 26, gage height, 6.21 ft; minimum daily discharge, 145 ft^3/s Dec. 27.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	192	199	250	170	426	1210	531	378	524	333	189	201
2	190	196	273	185	480	1160	539	351	548	317	182	198
3	187	194	266	200	529	1110	530	348	570	302	176	196
4	181	191	240	250	513	1050	514	373	575	289	185	194
5	177	188	236	350	510	953	476	439	541	281	207	191
6	177	193	240	420	515	884	483	408	522	269	205	194
7	175	200	236	430	520	812	469	379	519	259	199	204
8	172	235	229	420	515	754	454	362	540	249	189	193
9	170	230	220	412	527	794	442	342	575	235	180	188
10	175	219	219	452	539	893	488	354	548	223	170	190
11	175	212	218	443	511	1050	566	358	521	233	167	187
12	170	205	210	418	483	1050	572	361	508	252	175	183
13	152	201	205	401	462	994	540	490	493	238	269	180
14	149	205	202	384	445	949	565	598	471	236	272	189
15	156	253	198	369	453	913	585	564	449	240	255	215
16	164	327	190	350	451	886	574	673	395	233	255	210
17	173	382	182	388	430	861	557	940	388	232	263	202
18	175	365	176	447	409	817	546	1180	373	221	271	193
19	180	357	172	458	379	752	518	1230	351	213	287	196
20	219	377	168	461	372	714	507	1190	342	247	291	199
21	263	402	166	508	361	679	538	1170	324	258	320	216
22	244	388	160	511	497	653	527	1120	319	295	307	272
23	223	363	156	505	963	651	504	1060	342	311	296	246
24	216	343	153	495	1280	613	491	982	337	280	293	230
25	163	330	150	515	1150	556	478	897	314	264	291	219
26	179	313	147	537	1200	545	464	876	302	253	284	210
27	212	307	145	521	1220	524	447	855	307	242	274	204
28	179	311	146	499	1230	502	429	761	324	233	271	199
29	188	297	147	482	---	496	412	707	342	224	259	200
30	210	282	150	462	---	533	395	655	343	215	245	199
31	209	---	160	440	---	526	---	603	---	201	221	---
TOTAL	5795	8265	6010	12883	17370	24884	15141	21004	13007	7878	7448	6098
MEAN	187	275	194	416	620	803	505	678	434	254	240	203
MAX	263	402	273	537	1280	1210	585	1230	575	333	320	272
MIN	149	188	145	170	361	496	395	342	302	201	167	180
CFSM	.61	.90	.63	1.35	2.02	2.61	1.64	2.21	1.41	.83	.78	.66
IN.	.70	1.00	.73	1.56	2.10	3.02	1.83	2.55	1.58	.95	.90	.74

CAL YR 1989 TOTAL 118457 MEAN 325 MAX 983 MIN 145 CFSM 1.06 IN. 14.35
WTR YR 1990 TOTAL 145783 MEAN 399 MAX 1280 MIN 145 CFSM 1.30 IN. 17.66

04099808 LITTLE ELKHART RIVER AT MIDDLEBURY, IN

LOCATION.--Lat 41°40'31", long 85°42'01", in NE¼SE¼ sec.10, T.37 N., R.7 E., Elkhart County, Hydrologic Unit 04050001, on left bank 15 ft downstream from bridge on County Road 16, 0.1 mi east of Middlebury, and 1.7 mi downstream from Rowe Eden ditch.

DRAINAGE AREA.--97.6 mi^2, of which 5.89 mi^2 does not contribute directly to surface runoff.

PERIOD OF RECORD.--October 1979 to current year.

REVISED RECORDS.--WRD IN-82-1: 1980, 1981.

GAGE.--Water-stage recorder. Datum of gage is 810.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 14 to Jan. 3. Records good below 300 ft^3/s and fair above except for estimated daily discharges, which are fair.

AVERAGE DISCHARGE.--11 years, 101 ft^3/s, 14.05 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,470 ft^3/s, Feb. 24, 1985, gage height, 10.52 ft; minimum daily, 24 ft^3/s July 9, 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 23	0200	*1,450	*9.23	May 17	1400	1,040	8.52
Mar. 11	0400	547	7.29				

Minimum daily discharge, 34 ft^3/s Dec. 25, 26.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	45	55	44	81	233	141	81	119	69	48	66
2	41	45	55	45	186	253	143	79	118	67	45	63
3	41	45	53	45	163	288	131	77	153	64	45	61
4	40	44	53	175	128	219	123	92	132	62	55	60
5	40	44	52	196	110	195	116	100	120	61	56	58
6	40	45	51	124	103	176	109	87	114	56	53	57
7	40	53	50	98	96	162	103	80	108	54	51	63
8	39	54	49	88	91	167	99	77	177	51	49	60
9	39	50	48	86	111	440	97	74	183	50	47	58
10	42	48	48	98	107	427	158	83	139	51	43	57
11	40	46	48	86	94	486	219	78	120	62	42	56
12	39	45	46	79	87	357	162	85	110	60	50	55
13	38	44	45	72	83	277	141	262	104	59	90	54
14	39	48	42	68	79	237	171	209	99	59	71	65
15	39	80	42	66	87	208	160	157	95	58	61	70
16	40	129	41	71	81	195	140	440	91	56	57	71
17	42	108	40	120	76	177	131	714	88	54	54	67
18	42	90	39	162	73	163	120	479	84	50	56	62
19	46	81	38	118	72	155	114	311	80	47	53	64
20	52	87	38	105	69	144	117	252	83	65	120	63
21	59	82	37	111	68	140	143	213	81	69	172	78
22	59	75	36	100	535	142	124	189	82	130	152	104
23	55	70	35	93	1030	142	113	172	91	116	119	88
24	52	66	35	91	572	131	106	159	82	87	102	81
25	50	64	34	128	413	125	100	161	76	75	90	75
26	48	62	34	139	324	119	97	222	74	69	82	70
27	47	62	35	110	278	114	93	183	74	65	76	67
28	46	61	35	99	255	111	90	160	76	62	74	65
29	45	59	37	91	---	115	87	145	78	59	81	65
30	45	57	38	85	---	134	84	133	73	56	73	65
31	45	---	41	80	---	126	---	125	---	50	68	---
TOTAL	1371	1889	1330	3073	5452	6358	3732	5679	3104	1993	2235	1988
MEAN	44.2	63.0	42.9	99.1	195	205	124	183	103	64.3	72.1	66.3
MAX	59	129	55	196	1030	486	219	714	183	130	172	104
MIN	38	44	34	44	68	111	84	74	73	47	42	54
CFSM	.48	.69	.47	1.08	2.12	2.24	1.36	2.00	1.13	.70	.79	.72
IN.	.56	.77	.54	1.25	2.21	2.58	1.51	2.30	1.26	.81	.91	.81

CAL YR 1989 TOTAL 28083 MEAN 76.9 MAX 470 MIN 34 CFSM .84 IN. 11.39
WTR YR 1990 TOTAL 38204 MEAN 105 MAX 1030 MIN 34 CFSM 1.14 IN. 15.50

04099850 PINE CREEK NEAR ELKHART, IN

LOCATION.--Lat 41°40'53", long 85°52'57", in NE¼NW¼ sec.7, T.37 N., R.6 E., Elkhart County, Hydrologic Unit 04050001, on right bank 50 ft upstream from bridge on County Road 14, 0.3 mi east of the intersection of County Roads 17 and 14, and 3.1 mi east of Elkhart.

DRAINAGE AREA.--31.0 mi^2, of which 8.75 mi^2 does not contribute directly to surface runoff.

PERIOD OF RECORD.--October 1979 to current year.

GAGE.--Water-stage recorder. Datum of gage is 755.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good.

AVERAGE DISCHARGE.--11 years, 18.6 ft^3/s, 8.15 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 577 ft^3/s Feb. 24, 1985, gage height, 7.45 ft; maximum gage height, 9.74 ft July 26, 1981; minimum daily discharge, 3.8 ft^3/s July 26, 1980, and July 6, 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 170 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 23	0200	*250	*5.72

Minimum daily discharge, 4.6 ft^3/s Dec. 24.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.6	7.2	9.1	7.2	14	25	23	16	17	15	15	13
2	6.6	7.2	9.0	7.1	30	28	25	16	17	14	14	12
3	6.7	7.3	8.9	7.3	25	32	23	16	18	14	13	12
4	6.6	7.2	8.9	26	20	25	22	19	17	14	16	12
5	6.7	7.0	8.8	23	18	23	20	22	16	14	16	11
6	6.6	6.9	8.7	16	17	22	20	18	16	13	15	11
7	6.6	8.1	8.5	14	16	20	19	17	15	13	14	12
8	6.7	8.7	8.2	13	15	24	18	16	23	14	14	12
9	6.6	8.2	7.9	13	17	82	18	16	22	13	13	11
10	6.7	8.0	8.1	15	17	87	31	18	18	13	13	11
11	6.6	7.8	8.0	14	15	90	36	19	16	16	13	11
12	6.5	7.6	7.4	13	14	53	26	20	15	15	14	11
13	6.5	7.4	7.3	12	14	39	23	79	14	14	18	11
14	6.4	7.4	7.0	12	13	34	31	49	14	14	15	13
15	6.3	12	6.6	12	21	31	28	33	14	14	14	16
16	6.3	19	6.4	13	16	29	24	57	13	14	13	16
17	6.6	16	6.0	22	14	27	22	91	12	14	13	14
18	6.7	13	5.6	29	14	25	20	60	12	13	15	13
19	7.2	12	5.7	20	14	25	19	36	12	13	14	13
20	8.1	13	5.8	18	13	23	21	31	13	17	45	13
21	10	12	5.8	19	13	23	27	27	14	18	52	18
22	11	11	6.2	17	84	23	22	25	14	73	42	39
23	9.4	10	5.5	16	199	25	20	23	16	85	28	23
24	8.5	9.8	4.6	16	68	23	19	21	15	38	23	22
25	8.1	9.5	4.9	22	40	21	19	21	14	28	20	18
26	7.8	9.3	4.9	21	32	21	18	33	14	24	18	16
27	7.6	9.4	5.2	18	29	20	18	25	14	21	16	15
28	7.5	11	5.6	16	27	20	17	22	15	20	15	15
29	7.4	10	6.1	15	---	21	17	20	15	18	15	14
30	7.3	9.5	6.6	14	---	25	17	18	15	17	14	14
31	7.3	---	7.5	13	---	23	---	18	---	17	13	---
TOTAL	225.5	292.5	214.8	493.6	829	989	663	902	460	640	573	442
MEAN	7.27	9.75	6.93	15.9	29.6	31.9	22.1	29.1	15.3	20.6	18.5	14.7
MAX	11	19	9.1	29	199	90	36	91	23	85	52	39
MIN	6.3	6.9	4.6	7.1	13	20	17	16	12	13	13	11
CFSM	.23	.31	.22	.51	.96	1.03	.71	.94	.49	.67	.60	.48
IN.	.27	.35	.26	.59	.99	1.19	.80	1.08	.55	.77	.69	.53

CAL YR 1989 TOTAL 4882.8 MEAN 13.4 MAX 71 MIN 4.6 CFSM .43 IN. 5.86
WTR YR 1990 TOTAL 6724.4 MEAN 18.4 MAX 199 MIN 4.6 CFSM .59 IN. 8.07

04100222 NORTH BRANCH ELKHART RIVER AT COSPERVILLE, IN

LOCATION.--Lat 41°28'54", long 85°28'32", in NE¼NW¼ sec.22, T.35 N., R.9 E., Noble County, Hydrologic Unit 04050001, on right bank at downstream side of bridge on County Road 900 North at Cosperville, 1,300 ft downstream from Boyd ditch, 1.7 mi upstream from Hustin ditch, and 3.1 mi downstream from Waldron Lake.

DRAINAGE AREA.--142 mi^2.

PERIOD OF RECORD.--October 1971 to current year.

GAGE.--Water-stage recorder. Datum of gage is 880.12 ft above National Geodetic Vertical Datum of 1929 (levels by State of Indiana, Department of Natural Resources).

REMARKS.--Estimated daily discharges: Dec. 9, Dec. 12 to Jan. 4, and Jan. 25. Records good except for Dec. 12 to Jan. 4, which are fair. Flow regulated at times by dam at Waldron Lake.

AVERAGE DISCHARGE.--19 years, 140 ft^3/s, 13.39 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 919 ft^3/s Mar. 23, 1982, gage height, 8.12 ft; minimum daily, 2.2 ft^3/s July 7, 1988 (regulation).

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 545 ft^3/s Feb. 26, gage height, 6.38 ft; minimum daily, 37 ft^3/s Oct. 14.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	49	87	59	193	526	212	158	262	111	96	137
2	58	48	84	62	216	514	212	148	247	110	91	131
3	55	49	82	67	230	500	212	140	248	108	86	125
4	51	49	81	82	235	480	208	139	241	104	87	118
5	49	48	79	124	231	459	203	141	231	99	88	112
6	47	48	77	135	229	436	196	139	220	94	86	106
7	44	52	75	138	225	410	188	134	209	89	84	108
8	42	56	73	138	220	389	181	128	298	84	81	106
9	40	55	71	140	218	388	174	122	344	79	78	105
10	41	56	69	143	213	398	184	117	358	75	74	102
11	41	55	68	147	208	421	206	115	355	82	71	100
12	39	54	65	144	200	420	215	116	343	85	78	96
13	39	53	65	143	192	414	216	153	324	86	109	93
14	37	55	64	140	189	404	222	178	306	86	123	96
15	39	73	62	138	192	391	227	190	283	84	128	100
16	38	95	61	155	187	382	227	250	258	83	129	104
17	40	105	60	192	185	367	223	340	233	82	127	103
18	41	107	59	216	183	353	218	382	207	79	127	101
19	43	107	57	222	179	340	211	403	184	77	124	102
20	49	105	56	227	175	325	210	405	166	78	128	100
21	55	105	55	228	171	311	230	403	149	81	129	101
22	58	104	54	228	278	297	232	393	137	97	128	103
23	60	102	53	223	426	285	229	378	125	112	127	104
24	60	99	51	230	498	273	222	361	114	120	126	103
25	59	97	50	240	526	258	214	349	107	123	123	101
26	58	96	49	232	542	246	206	360	101	123	119	98
27	55	96	48	229	542	232	198	353	96	120	115	94
28	52	93	48	224	537	220	190	339	95	115	123	92
29	50	92	49	217	---	213	180	322	103	112	147	89
30	49	89	50	208	---	212	169	302	109	107	146	85
31	48	---	54	199	---	210	---	281	---	101	143	---
TOTAL	1497	2292	1956	5270	7620	11074	6215	7739	6453	2986	3421	3115
MEAN	48.3	76.4	63.1	170	272	357	207	250	215	96.3	110	104
MAX	60	107	87	240	542	526	232	405	358	123	147	137
MIN	37	48	48	59	171	210	169	115	95	75	71	85
CFSM	.34	.54	.44	1.20	1.92	2.52	1.46	1.76	1.51	.68	.78	.73
IN.	.39	.60	.51	1.38	2.00	2.90	1.63	2.03	1.69	.78	.90	.82

CAL YR 1989 TOTAL 42854 MEAN 117 MAX 362 MIN 24 CFSM .83 IN. 11.23
WTR YR 1990 TOTAL 59638 MEAN 163 MAX 542 MIN 37 CFSM 1.15 IN. 15.62

04100252 FORKER CREEK NEAR BURR OAK, IN

LOCATION.--Lat 41°19'58", long 85°25'25", in SE¼NE¼ sec.12, T.33 N., R.9 E., Noble County, Hydrologic Unit 04050001, on right bank 300 ft downstream from bridge on State Highway 9, 400 ft downstream from Miller Lake Outlet, 0.8 mi northeast of Burr Oak, and 4.5 mi south of Albion.

DRAINAGE AREA.--19.2 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 889.00 ft above National Geodetic Vertical Datum of 1929 (Indiana Department of Highways bench mark).

REMARKS.--Estimated daily discharges: Dec. 10 to Jan. 3, Jan. 6, 7, 15-24, and Mar. 8-13. Records good except those for estimated daily discharges, which are poor. Occasional regulation at Miller Lake Outlet.

AVERAGE DISCHARGE.--21 years, 18.1 ft^3/s, 12.80 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 480 ft^3/s Feb. 24, 1985, gage height, 7.00 ft; minimum daily, 0.13 ft^3/s Sept. 10, 1972.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 218 ft^3/s Feb. 24, gage height, 5.77 ft; minimum daily, 0.76 ft^3/s Dec. 29.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	5.4	6.5	.96	9.6	71	28	13	13	11	10	101
2	1.9	5.3	6.1	1.2	20	66	38	12	11	9.1	8.7	76
3	1.9	5.2	5.9	1.5	36	61	39	11	17	9.9	7.2	59
4	1.8	5.0	5.7	3.4	45	55	35	12	20	11	8.6	47
5	1.8	4.7	5.3	15	41	47	30	13	18	8.6	10	38
6	1.9	4.6	4.8	38	34	41	24	14	15	7.6	8.8	33
7	1.9	4.7	4.3	41	30	33	19	13	13	6.8	7.8	36
8	2.0	4.5	3.7	28	25	23	16	12	16	5.9	6.8	37
9	2.2	3.9	3.4	24	21	32	14	12	32	5.4	5.8	35
10	2.5	3.9	3.3	23	17	43	19	11	42	4.7	5.2	32
11	2.4	4.0	3.0	21	14	60	42	11	38	5.7	5.0	30
12	2.4	4.0	2.8	18	11	82	55	11	28	6.3	5.2	28
13	2.2	3.7	2.6	14	9.1	64	52	16	19	6.4	18	26
14	2.1	3.7	2.3	12	8.6	53	46	25	14	6.5	43	26
15	2.2	5.4	2.1	10	11	46	42	35	11	6.2	55	30
16	2.3	7.4	1.9	9.6	11	40	38	62	12	5.7	47	31
17	2.5	8.9	1.8	17	15	35	32	119	7.8	5.2	37	29
18	2.5	11	1.7	33	19	30	26	132	4.7	4.6	34	28
19	3.0	13	1.7	49	21	26	22	107	3.8	4.0	26	27
20	3.8	13	1.7	45	22	22	21	86	3.7	4.4	34	27
21	4.3	13	1.5	40	21	19	29	71	3.5	5.0	52	26
22	4.5	13	1.4	35	77	17	36	57	3.8	20	65	25
23	5.1	12	1.2	30	191	15	34	43	4.0	53	64	24
24	5.8	11	1.2	26	201	14	29	33	3.9	63	50	24
25	5.8	9.4	1.0	24	153	13	24	26	3.7	53	39	23
26	6.2	8.4	.92	26	117	12	21	38	3.6	46	29	22
27	6.1	7.9	.82	26	96	11	18	47	3.8	38	23	21
28	6.1	8.0	.78	23	81	9.8	16	44	4.5	27	30	21
29	5.9	7.5	.76	20	---	9.9	15	35	6.9	21	111	21
30	6.0	6.8	.80	15	---	12	14	25	9.7	16	148	20
31	5.6	---	.84	11	---	17	---	17	---	13	135	---
TOTAL	106.6	218.3	81.82	680.66	1357.3	1079.7	874	1163	386.4	490.0	1129.1	1003
MEAN	3.44	7.28	2.64	22.0	48.5	34.8	29.1	37.5	12.9	15.8	36.4	33.4
MAX	6.2	13	6.5	49	201	82	55	132	42	63	148	101
MIN	1.8	3.7	.76	.96	8.6	9.8	14	11	3.5	4.0	5.0	20
CFSM	.18	.38	.14	1.14	2.52	1.81	1.52	1.95	.67	.82	1.90	1.74
IN.	.21	.42	.16	1.32	2.63	2.09	1.69	2.25	.75	.95	2.19	1.94

CAL YR 1989 TOTAL 5004.32 MEAN 13.7 MAX 128 MIN .76 CFSM .71 IN. 9.70
WTR YR 1990 TOTAL 8569.88 MEAN 23.5 MAX 201 MIN .76 CFSM 1.22 IN. 16.60

04100295 RIMMELL BRANCH NEAR ALBION, IN

LOCATION.--Lat 41°23'07", long 85°22'14", in NE¼SE¼ sec.21, T.34 N., R.10 E., Noble County, Hydrologic Unit 04050001, on right bank 900 ft downstream from culvert on County Road 300 East, 0.75 mi south of State Highway 8, 3.0 mi east of intersection of State Highway 9 and State Highway 8 in Albion.

DRAINAGE AREA.--10.7 mi^2.

PERIOD OF RECORD.--November 1979 to current year.

GAGE.--Water-stage recorder. Datum of gage is 935.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 11 to Jan. 11 and June 5 to July 5. Records fair except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--10 years, 11.1 ft^3/s, 14.09 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 418 ft^3/s July 16, 1986, gage height, 11.55 ft; maximum gage height, 12.82 ft, Apr. 14, 1981, minimum daily discharge, 0.14 ft^3/s, many days during 1980.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 100 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 22	1600	*345	*10.81	Aug. 13	0715	109	7.65
May 16	0800	210	9.21	Aug. 28	2200	195	9.01
July 22	1045	152	8.38				

Minimum daily, 0.20 ft^3/s Oct. 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.20	.42	1.4	1.2	5.4	26	24	5.5	7.0	14	2.7	9.5
2	.25	.39	1.2	1.3	46	26	21	5.0	9.0	11	2.2	7.4
3	.28	.38	1.3	1.5	27	24	16	4.8	23	8.0	2.0	5.8
4	.26	.37	1.2	3.0	19	17	13	7.4	11	6.5	6.2	4.9
5	.31	.37	1.1	10	14	14	11	8.8	9.4	5.4	6.8	4.1
6	.37	.38	1.1	39	13	11	9.5	6.8	7.0	4.8	4.2	3.6
7	.35	.42	.99	27	11	9.4	8.5	5.8	8.0	3.7	3.2	7.2
8	.33	.42	.87	19	9.6	9.0	7.9	5.0	11	2.3	2.5	5.9
9	.36	.40	.97	15	8.9	28	7.6	4.5	9.2	2.1	2.2	4.6
10	.58	.38	.98	12	7.6	39	41	5.5	6.5	1.9	2.0	3.9
11	.53	.35	.96	9.4	6.4	57	48	5.2	4.0	26	2.1	3.5
12	.44	.35	.96	7.1	5.6	32	27	5.8	3.5	17	16	3.2
13	.36	.32	.96	5.6	5.4	22	19	35	8.0	8.0	90	2.8
14	.34	.38	.96	5.1	4.9	17	25	22	15	7.0	45	7.4
15	.35	5.7	.95	4.7	6.3	13	22	30	10	5.9	27	8.8
16	.38	17	.93	7.1	10	15	16	152	7.0	4.9	15	7.7
17	.63	7.3	.91	33	11	12	13	129	4.5	4.2	9.4	5.8
18	.70	4.3	.95	58	11	9.6	11	67	3.0	3.3	8.3	4.6
19	.84	3.1	1.0	23	13	9.1	9.6	42	6.0	2.7	6.3	5.7
20	1.3	3.5	.98	16	9.9	7.9	16	30	17	24	9.5	5.5
21	2.0	3.1	.90	17	11	7.3	36	22	21	21	15	4.8
22	3.1	2.3	.90	13	224	7.2	21	15	25	92	15	5.7
23	2.0	1.8	.90	12	202	7.1	15	11	19	55	10	6.2
24	1.3	1.8	.90	11	96	6.2	11	9.8	14	24	7.9	5.5
25	.96	1.4	.90	18	66	5.8	9.7	15	10	13	6.5	4.7
26	.74	1.3	.93	15	49	5.4	8.7	50	18	8.7	5.2	4.0
27	.63	1.3	.93	9.7	38	5.0	7.8	25	30	6.8	4.5	3.4
28	.56	2.4	.97	8.2	32	4.7	7.2	16	26	5.4	46	3.0
29	.52	1.9	.99	7.2	---	5.3	6.8	12	22	4.5	84	3.0
30	.49	1.9	1.0	5.9	---	12	6.1	9.4	16	3.9	28	3.0
31	.49	---	1.1	5.2	---	16	---	8.2	---	3.4	14	---
TOTAL	21.95	65.43	31.09	420.2	963.0	480.0	495.4	770.5	380.1	400.4	498.7	155.2
MEAN	.71	2.18	1.00	13.6	34.4	15.5	16.5	24.9	12.7	12.9	16.1	5.17
MAX	3.1	17	1.4	58	224	57	48	152	30	92	90	9.5
MIN	.20	.32	.87	1.2	4.9	4.7	6.1	4.5	3.0	1.9	2.0	2.8
CFSM	.07	.20	.09	1.27	3.21	1.45	1.54	2.32	1.18	1.21	1.50	.48
IN.	.08	.23	.11	1.46	3.35	1.67	1.72	2.68	1.32	1.39	1.73	.54

CAL YR 1989 TOTAL 2396.19 MEAN 6.56 MAX 106 MIN .20 CFSM .61 IN. 8.33
WTR YR 1990 TOTAL 4681.97 MEAN 12.8 MAX 224 MIN .20 CFSM 1.20 IN. 16.28

04100377 SOLOMON CREEK NEAR SYRACUSE, IN

LOCATION.--Lat 41°27'30", long 85°43'12", in NW¼SE¼ sec.28, T.35 N., R.7 E., Elkhart County, Hydrologic Unit 04050001, on right bank 40 ft upstream from County Road 52 East bridge over Solomon Creek, and 2.5 mi northeast of Syracuse.

DRAINAGE AREA.--36.1 mi^2.

PERIOD OF RECORD.--October 1987 to current year.

GAGE.--Water-stage recorder. Datum of gage is 840.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimates daily discharges: Dec. 14-26. Records fair, except those for estimated daily discharges, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 161 ft^3/s Feb. 22, 1990, gage height, 5.53 ft; minimum daily, 7.9 ft^3/s Aug. 9, 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 80 ft^3/s and maximum(*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 22	2100	*161	*5.53	May 26	0700	90	3.98
Feb. 27	0100	84	3.85	June 8	1800	112	4.49
Mar. 11	0800	80	3.77	Aug. 29	0700	107	4.37
May 17	1200	119	4.64				

Minimum daily discharge, 10 ft^3/s Dec. 17, 21.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	16	17	16	28	74	47	43	51	44	24	56
2	17	16	17	16	43	73	47	42	52	43	24	51
3	16	16	16	16	46	71	46	42	57	42	21	45
4	16	16	17	27	41	66	44	45	52	41	24	42
5	16	16	17	35	38	63	43	46	51	37	27	39
6	16	16	16	31	36	60	41	43	49	34	25	37
7	16	18	16	27	34	57	40	42	47	32	24	39
8	16	18	15	25	33	57	39	41	90	32	24	37
9	16	18	15	25	33	63	38	41	97	32	23	36
10	16	17	15	25	32	66	45	42	82	29	23	34
11	16	17	15	25	30	79	56	40	71	43	22	33
12	16	16	15	24	29	75	53	41	64	47	23	32
13	15	17	17	23	29	70	51	68	60	41	37	31
14	15	17	16	22	28	67	54	69	58	40	31	38
15	15	21	14	22	29	63	55	65	56	38	28	44
16	15	31	13	26	29	61	53	88	55	36	26	42
17	15	30	10	45	28	59	50	111	54	34	25	39
18	15	27	12	56	27	56	47	97	53	32	27	36
19	16	25	14	49	28	54	46	86	52	30	27	36
20	17	25	15	44	27	52	48	75	52	32	30	35
21	17	23	10	42	27	52	60	64	51	36	37	34
22	18	23	11	39	100	51	57	58	52	56	37	35
23	18	22	12	36	143	50	54	55	52	63	34	34
24	17	21	12	33	115	48	52	52	50	52	32	33
25	17	21	13	37	96	47	51	55	48	45	29	32
26	17	20	14	40	87	46	49	87	47	41	27	31
27	16	20	19	36	82	44	48	75	47	38	26	29
28	16	19	15	33	78	43	47	64	47	35	38	29
29	16	19	16	31	---	44	46	58	47	33	102	28
30	16	17	16	30	---	45	44	55	46	32	85	28
31	16	---	18	28	---	45	---	52	---	29	68	---
TOTAL	501	598	458	964	1376	1801	1451	1842	1690	1199	1030	1095
MEAN	16.2	19.9	14.8	31.1	49.1	58.1	48.4	59.4	56.3	38.7	33.2	36.5
MAX	18	31	19	56	143	79	60	111	97	63	102	56
MIN	15	16	10	16	27	43	38	40	46	29	21	28
CFSM	.45	.55	.41	.86	1.36	1.61	1.34	1.65	1.56	1.07	.92	1.01
IN.	.52	.62	.47	.99	1.42	1.86	1.50	1.90	1.74	1.24	1.06	1.13

CAL YR 1989 TOTAL 10588 MEAN 29.0 MAX 115 MIN 10 CFSM .80 IN. 10.91
WTR YR 1990 TOTAL 14005 MEAN 38.4 MAX 143 MIN 10 CFSM 1.06 IN. 14.43

04100500 ELKHART RIVER AT GOSHEN, IN

LOCATION.--Lat 41°35'36", long 85°50'55", in NE¼NE¼ sec.8, T.36 N., R.6 E., Elkhart County, Hydrologic Unit 04050001, on right bank 20 ft downstream from River Avenue bridge at Goshen, 0.4 mi upstream from Rock Run, and at mile 16.1.

DRAINAGE AREA.--594 mi^2.

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

REVISED RECORDS.--WSP 1337: 1939(M). WSP 1557: 1954. WSP 2111: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 769.43 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 20, 1931, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Dec. 14 to Jan. 3, Feb. 24 to Mar. 1, and Mar. 3, 4. Records good except for estimated daily discharges, which are fair. Occasional low-flow regulation at Goshen Dam, 3.4 mi upstream.

AVERAGE DISCHARGE.--59 years, 527 ft^3/s, 12.05 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,360 ft^3/s Feb. 24, 1985; maximum gage height, 11.94 ft Mar. 14, 1982; minimum daily discharge, 7.0 ft^3/s Aug. 11, 1964, result of extreme regulation.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 1,800 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 23	1600	*3,900	*8.66	May 18	0600	2,810	7.01
Mar. 11	2200	1,950	5.61				

Minimum daily discharge, 157 ft^3/s Oct. 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	221	200	306	255	726	1900	811	707	956	517	485	878
2	218	197	308	260	793	1810	837	670	912	490	430	842
3	214	199	304	270	1030	1770	835	638	962	479	392	824
4	211	200	286	384	953	1670	813	671	954	471	406	806
5	208	200	294	746	853	1540	788	725	860	462	442	786
6	204	211	295	673	806	1430	768	668	814	442	398	754
7	198	234	286	554	792	1320	751	628	775	419	370	772
8	198	256	274	522	781	1270	734	603	954	400	350	772
9	193	251	252	526	797	1490	722	577	1570	382	330	708
10	186	247	251	572	826	1720	793	602	1390	367	313	661
11	179	241	281	588	776	1880	1030	571	1160	465	298	619
12	173	237	252	572	746	1830	1010	574	1060	629	308	592
13	174	235	203	537	717	1570	906	950	990	530	566	564
14	170	245	220	520	693	1400	938	1410	945	485	592	596
15	162	297	210	528	709	1310	1030	1130	910	472	483	758
16	157	510	200	536	690	1260	982	1290	860	457	443	749
17	163	574	190	713	662	1210	944	2400	806	445	424	710
18	163	482	190	980	641	1160	908	2630	757	424	512	628
19	173	431	190	1040	643	1110	873	1960	703	404	607	626
20	196	429	190	888	630	1060	868	1630	671	446	682	630
21	227	427	175	846	622	1020	977	1470	651	511	783	628
22	240	402	167	858	1160	998	1060	1390	629	818	799	700
23	245	386	165	834	3430	975	971	1350	645	1330	746	676
24	237	369	165	816	3100	928	911	1290	598	1250	688	648
25	230	356	175	840	2400	891	871	1250	549	942	646	585
26	225	350	190	947	2530	860	841	1400	537	788	620	544
27	221	346	195	929	2330	827	811	1490	544	743	600	505
28	212	338	200	844	2090	799	784	1320	535	719	630	481
29	207	327	205	804	---	792	763	1190	540	679	1120	466
30	205	317	210	780	---	811	738	1100	542	622	1270	458
31	204	---	220	748	---	800	---	1020	---	545	998	---
TOTAL	6214	9494	7049	20910	32926	39411	26068	35304	24779	18133	17731	19966
MEAN	200	316	227	675	1176	1271	869	1139	826	585	572	666
MAX	245	574	308	1040	3430	1900	1060	2630	1570	1330	1270	878
MIN	157	197	165	255	622	792	722	571	535	367	298	458
CFSM	.34	.53	.38	1.14	1.98	2.14	1.46	1.92	1.39	.98	.96	1.12
IN.	.39	.59	.44	1.31	2.06	2.47	1.63	2.21	1.55	1.14	1.11	1.25

CAL YR 1989 TOTAL 178390 MEAN 489 MAX 3530 MIN 157 CFSM .82 IN. 11.17
WTR YR 1990 TOTAL 257985 MEAN 707 MAX 3430 MIN 157 CFSM 1.19 IN. 16.16

04101000 ST. JOSEPH RIVER AT ELKHART, IN

LOCATION.--Lat 41°41'30", long 85°58'30", in SW¼NE¼ sec.5, T.37 N., R.5 E., Elkhart County, Hydrologic Unit 04050001, on left bank 200 ft downstream from Elkhart River, 200 ft upstream from Main Street bridge in Elkhart, 2,000 ft downstream from Christiana Creek, 0.5 mi downstream from Elkhart Hydroelectric Plant, and at mile 76.5.

DRAINAGE AREA.--3,370 mi^2.

PERIOD OF RECORD.--August 1947 to current year. Gage heights at site 0.8 mi downstream at different datum from September 1924 to March 1926 are available from the district office.

REVISED RECORDS.--WSP 2111: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 700.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. The flow is regulated by Elkhart Hydroelectric Plant.

AVERAGE DISCHARGE.--43 years, 3,230 ft^3/s, 13.02 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 18,800 ft^3/s Feb. 27, 1985; maximum gage height, 27.91 ft Mar. 21, 1982; minimum daily discharge, 336 ft^3/s Aug. 5, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 9,620 ft^3/s May 18, gage height, 23.28 ft; minimum daily, 1,420 ft^3/s Oct. 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1650	2280	2880	2230	3750	7960	5120	4020	4730	3360	2530	2670
2	1820	2220	2660	2610	3990	7760	5280	3940	4660	3370	1710	2580
3	1980	1750	2880	2350	4350	7780	5240	3620	4470	3380	1740	2540
4	1860	1850	2750	2730	4600	7160	4990	3730	4310	3310	2210	2310
5	1770	1810	2720	3350	4180	6780	5200	3840	4090	2960	2420	2410
6	1780	1780	2650	3430	4090	6830	5030	3820	4050	2860	1800	2360
7	1900	2160	2620	3420	4320	6050	5050	3780	3990	2670	2340	2400
8	1670	2210	2530	3340	3870	6190	4680	3670	4130	2560	1700	2310
9	1460	2260	2190	3420	3980	6720	4510	3500	4690	2210	2080	2150
10	1800	2260	2270	3570	4080	7170	4910	3730	4600	1940	1710	2050
11	1750	2260	2860	3530	4090	8210	5310	3700	4310	2540	1630	2460
12	1720	2210	2390	3680	4030	8310	5470	3720	4110	2460	1810	1990
13	1750	2190	2220	3410	3890	8960	5640	4950	3900	2410	2460	1970
14	1720	2250	1920	3480	3770	9210	5840	5550	3820	2310	2890	2210
15	1590	2550	1850	3320	3790	9000	5640	5370	3620	2130	2440	2470
16	1420	3210	1620	3330	3910	8880	5660	5550	3600	1970	2140	2540
17	1870	3260	1790	3510	3550	8460	5730	7410	3430	2530	2230	2640
18	1820	3250	1950	4050	3680	8130	5350	8900	3180	2740	2340	2820
19	1750	3590	2090	4390	3680	7690	5380	8460	3030	2370	2370	2240
20	1820	3370	2270	4180	3450	7060	5110	8470	2800	2760	2910	2380
21	1980	3430	2370	4200	3410	6890	5560	8070	2960	3120	3690	2570
22	2350	3470	2270	4280	4410	6500	5510	7650	2940	3280	3150	2780
23	2230	3310	2540	4250	7420	6340	5540	7260	3110	4180	3330	2770
24	2100	3210	2390	4010	8550	6340	5520	6900	3120	4200	3120	3020
25	2220	3120	2240	4160	7570	6040	5100	6590	2660	3660	3020	2970
26	2240	3070	2700	4330	7750	5780	5170	6740	2540	3320	3000	2480
27	2170	3080	2210	4290	7910	5290	4530	6430	2820	3100	2940	2680
28	2170	3100	2090	4340	7970	5520	4760	6050	2830	2840	2590	2610
29	2120	2950	2300	4410	---	5030	4360	5900	2880	2800	2700	2350
30	1930	2830	2600	4030	---	5260	4180	4890	2990	2530	3160	2180
31	2180	---	2320	3850	---	5340	---	5010	---	2760	2850	---
TOTAL	58590	80290	73140	113480	134040	218640	155370	171220	108370	88630	77010	73910
MEAN	1890	2676	2359	3661	4787	7053	5179	5523	3612	2859	2484	2464
MAX	2350	3590	2880	4410	8550	9210	5840	8900	4730	4200	3690	3020
MIN	1420	1750	1620	2230	3410	5030	4180	3500	2540	1940	1630	1970
CFSM	.56	.79	.70	1.09	1.42	2.09	1.54	1.64	1.07	.85	.74	.73
IN.	.65	.89	.81	1.25	1.48	2.41	1.72	1.89	1.20	.98	.85	.82

CAL YR 1989 TOTAL 1242290 MEAN 3404 MAX 15000 MIN 1420 CFSM 1.01 IN. 13.71
WTR YR 1990 TOTAL 1352690 MEAN 3706 MAX 9210 MIN 1420 CFSM 1.10 IN. 14.93

04177720 FISH CREEK AT HAMILTON, IN

LOCATION.--Lat 41°31'55", long 84°54'12", in SE¼SW¼ sec.34, T.36 N., R.14 E., Steuben County, Hydrologic Unit 04100003, on left bank 6 ft upstream from bridge on County Road 7/5 South, 0.5 mi downstream from Hamilton Lake outlet, and 0.5 mi southeast of Hamilton.

DRAINAGE AREA.--37.5 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 876.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 11-27. Records good, except those for estimated daily discharges which are poor.

AVERAGE DISCHARGE.--21 years, 33.1 ft^3/s, 11.99 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 654 ft^3/s Feb. 24, 1985, gage height, 11.95 ft; minimum daily, 0.52 ft^3/s Aug. 31, 1971.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 160 ft^3/s (revised) and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 18	0900	166	5.85	May 16	2000	533	8.71
Feb. 23	0500	*639	*9.43	Aug. 13	1200	181	6.01

Minimum daily discharge, 2.3 ft^3/s Oct. 7, 8.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	7.2	11	18	32	91	68	21	28	41	4.2	9.3
2	4.3	7.0	12	16	112	82	64	17	28	29	3.8	8.5
3	3.7	5.8	11	15	118	77	54	16	93	22	3.7	6.7
4	2.7	5.1	9.3	72	89	64	47	32	74	18	11	5.2
5	2.4	5.3	9.5	119	71	57	41	44	55	15	14	5.2
6	3.1	6.7	10	84	64	51	34	34	45	11	9.2	5.6
7	2.3	7.2	8.8	63	58	44	31	27	38	9.1	6.0	13
8	2.3	7.9	8.1	51	51	41	27	23	90	8.0	4.6	10
9	2.5	8.4	7.7	50	49	69	26	20	113	7.6	4.3	8.3
10	4.7	7.8	7.7	64	44	100	73	21	71	6.4	4.1	7.4
11	3.5	6.8	7.6	53	37	146	116	16	52	14	8.3	6.6
12	3.4	5.9	7.5	43	32	124	82	19	38	14	22	6.0
13	3.0	6.2	7.4	36	30	99	64	112	30	9.2	160	5.7
14	3.3	8.2	7.3	30	29	82	62	118	26	11	114	15
15	3.3	32	7.2	28	41	70	58	93	23	10	70	20
16	3.5	74	7.2	33	41	90	50	397	19	8.6	51	20
17	4.9	60	7.2	82	36	78	46	457	17	8.2	37	16
18	4.5	45	7.2	155	33	61	36	291	15	7.2	39	11
19	6.9	34	8.0	111	35	54	32	181	11	6.8	30	16
20	11	33	7.2	84	31	46	43	131	11	16	34	15
21	15	27	7.2	75	29	40	80	91	11	20	47	16
22	13	22	7.2	65	311	40	66	75	15	37	52	22
23	12	19	7.2	61	607	43	55	63	20	40	44	17
24	11	16	8.0	60	435	35	48	53	14	26	35	12
25	10	15	9.1	79	260	32	42	52	11	19	28	9.7
26	9.8	15	11	82	180	29	36	90	10	14	23	9.0
27	9.3	15	9.5	63	137	27	32	71	12	12	19	8.1
28	8.9	19	9.0	52	110	25	28	57	85	9.9	18	7.7
29	8.7	14	8.1	45	---	28	25	48	96	8.6	16	7.9
30	8.2	13	11	37	---	43	24	37	58	7.7	13	8.0
31	9.0	---	20	32	---	51	---	32	---	5.6	10	---
TOTAL	193.2	548.5	276.2	1858	3102	1919	1490	2739	1209	471.9	935.2	327.9
MEAN	6.23	18.3	8.91	59.9	111	61.9	49.7	88.4	40.3	15.2	30.2	10.9
MAX	15	74	20	155	607	146	116	457	113	41	160	22
MIN	2.3	5.1	7.2	15	29	25	24	16	10	5.6	3.7	5.2
CFSM	.17	.49	.24	1.60	2.95	1.65	1.32	2.36	1.07	.41	.80	.29
IN.	.19	.54	.27	1.84	3.08	1.90	1.48	2.72	1.20	.47	.93	.33

CAL YR 1989 TOTAL 10427.0 MEAN 28.6 MAX 405 MIN 1.6 CFSM .76 IN. 10.34
WTR YR 1990 TOTAL 15069.9 MEAN 41.3 MAX 607 MIN 2.3 CFSM 1.10 IN. 14.95

04178000 ST. JOSEPH RIVER NEAR NEWVILLE, IN

LOCATION.--Lat 41°23'08", long 84°48'06", in SW¼SW¼ sec.18, T.5 N., R.1 E., Defiance County, Ohio, Hydrologic Unit 04100003, on left bank at bridge on Ohio State Highway 249, 3.5 mi northeast of Newville, 6.5 mi northwest of Hicksville, Ohio, and at mile 42.3.

DRAINAGE AREA.--610 mi^2.

PERIOD OF RECORD.--October 1946 to current year. Monthly discharge only for some periods, published in WSP 1307.

REVISED RECORDS.--WSP 2112: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 795.40 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 22, 1947, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Oct. 30, Dec. 9 to Jan. 3 and Feb. 25-27. Records good, except for estimated daily discharges, which are fair.

AVERAGE DISCHARGE.--44 years, 532 ft^3/s, 11.84 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,710 ft^3/s Apr. 6, 1950, gage height, 17.05 ft; maximum gage height, 17.96 ft Mar. 17, 1982; minimum daily discharge, 14 ft^3/s Sept. 10, 16, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,910 ft^3/s Feb. 25, gage height, 15.28 ft; minimum daily, 79 ft^3/s Oct. 8, 18.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	102	115	289	150	578	2420	1030	356	437	813	95	165
2	100	113	267	170	972	2110	1140	330	391	594	88	142
3	93	111	249	200	1540	1880	1080	316	757	423	84	125
4	90	108	223	443	1630	1660	959	350	1210	321	88	114
5	89	104	219	1140	1560	1500	782	611	1270	263	97	105
6	86	100	211	1300	1440	1360	589	709	1200	225	104	100
7	80	99	201	1310	1280	1170	495	659	1000	196	106	109
8	79	106	170	1260	1090	987	496	536	1110	176	104	123
9	80	108	160	1170	955	998	486	435	1500	160	95	112
10	80	127	150	1260	859	1270	686	369	1320	146	87	104
11	80	183	140	1240	781	1870	1450	333	1010	170	125	99
12	83	184	135	1130	715	2150	1530	314	715	166	213	96
13	87	174	130	916	643	2330	1440	508	532	140	839	91
14	88	180	125	747	578	2420	1330	1120	427	142	1080	91
15	85	224	120	651	558	2290	1170	1330	369	148	1000	109
16	81	494	120	561	675	2100	977	2040	324	197	674	136
17	80	883	120	909	762	1910	854	3100	284	198	432	129
18	79	1040	120	1620	722	1690	754	4550	258	169	320	118
19	86	1010	125	1780	811	1460	653	4590	233	147	262	114
20	96	936	130	1730	735	1260	581	3500	215	158	261	126
21	108	831	130	1580	617	1100	700	2640	198	183	577	124
22	159	723	130	1430	1760	961	937	2080	194	308	530	143
23	219	614	130	1240	3770	874	970	1590	213	365	520	153
24	222	516	130	1080	5410	827	882	1160	226	273	402	164
25	202	435	130	1070	5400	794	747	889	242	215	308	172
26	174	378	130	1260	4700	745	628	1060	227	177	251	154
27	155	341	135	1250	3800	686	545	1060	205	151	214	134
28	143	348	135	1160	3010	627	484	875	228	133	190	117
29	132	365	135	1040	---	578	434	720	693	121	185	107
30	125	321	135	869	---	660	392	597	948	112	205	101
31	118	---	140	696	---	847	---	505	---	103	185	---
TOTAL	3481	11271	4864	32362	47351	43534	25201	39232	17936	7093	9721	3677
MEAN	112	376	157	1044	1691	1404	840	1266	598	229	314	123
MAX	222	1040	289	1780	5410	2420	1530	4590	1500	813	1080	172
MIN	79	99	120	150	558	578	392	314	194	103	84	91
CFSM	.18	.62	.26	1.71	2.77	2.30	1.38	2.07	.98	.38	.51	.20
IN.	.21	.69	.30	1.97	2.89	2.65	1.54	2.39	1.09	.43	.59	.22

CAL YR 1989 TOTAL 184267 MEAN 505 MAX 7700 MIN 79 CFSM .83 IN. 11.24
WTR YR 1990 TOTAL 245723 MEAN 673 MAX 5410 MIN 79 CFSM 1.10 IN. 14.99

04180000 CEDAR CREEK NEAR CEDARVILLE, IN

LOCATION.--Lat 41°13'08", long 85°04'35", in NW¼NW¼ sec.19, T.32 N., R.13 E., Allen County, Hydrologic Unit 04100003, on left bank at downstream side of bridge on State Highway 427, 3 mi northwest of Cedarville, 5.8 mi upstream from mouth, and 10 mi south of Auburn.

DRAINAGE AREA.--270 mi^2.

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

REVISED RECORDS.--WSP 1912: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 780.09 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 4, 1947, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Dec. 9, and Dec. 12 to Jan. 3. Records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--44 years, 249 ft^3/s, 12.52 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,340 ft^3/s Mar. 14, 1982, gage height, 12.98 ft; minimum daily, 13 ft^3/s Oct. 3, 1949.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 23	1700	*4,580	*11.66	June 9	1200	2,410	7.26
May 17	0800	2,910	8.43	July 23	0600	2,290	6.97

Minimum daily discharge, 37 ft^3/s Oct. 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	59	93	84	194	800	808	141	195	246	101	233
2	42	58	85	88	743	679	741	134	178	179	91	168
3	44	56	77	90	1160	631	528	128	1220	148	83	135
4	44	53	75	440	700	502	399	184	945	127	103	116
5	43	49	77	1240	516	420	331	330	505	113	167	103
6	43	48	74	658	436	362	283	235	348	103	120	95
7	43	54	68	401	371	309	243	186	271	95	99	145
8	39	58	64	307	323	292	215	160	720	89	86	167
9	37	52	62	275	297	519	195	146	2250	85	77	118
10	49	51	61	407	272	685	469	142	1460	82	70	100
11	49	49	59	346	244	1360	1520	145	782	267	65	91
12	45	47	58	277	223	1020	893	140	517	451	98	84
13	45	46	57	224	209	660	537	466	391	208	1260	80
14	45	49	56	197	197	498	455	776	305	162	1300	139
15	42	118	55	177	252	404	470	474	259	158	573	390
16	40	476	54	178	516	493	374	1580	214	132	320	230
17	47	391	54	482	623	466	314	2820	185	116	218	184
18	56	245	53	1390	459	355	260	2210	165	102	212	135
19	56	170	52	996	572	314	229	1260	147	91	179	128
20	86	150	52	560	453	275	226	826	141	181	189	136
21	105	142	51	524	354	251	516	581	137	349	478	117
22	142	122	51	449	1640	238	474	441	154	1260	537	135
23	114	106	50	393	4350	237	340	357	206	1920	320	133
24	99	95	50	365	3950	210	281	296	153	894	226	120
25	86	90	50	417	2400	193	238	274	133	481	174	107
26	77	85	51	574	1630	181	212	996	122	299	142	95
27	71	83	52	371	1200	172	190	690	133	219	123	85
28	67	112	56	299	993	171	172	416	311	172	215	78
29	64	118	62	263	---	166	158	311	740	140	1390	75
30	59	100	71	234	---	408	146	253	375	122	757	72
31	61	---	78	209	---	640	---	216	---	112	368	---
TOTAL	1883	3332	1908	12915	25277	13911	12217	17314	13662	9103	10141	3994
MEAN	60.7	111	61.5	417	903	449	407	559	455	294	327	133
MAX	142	476	93	1390	4350	1360	1520	2820	2250	1920	1390	390
MIN	37	46	50	84	194	166	146	128	122	82	65	72
CFSM	.22	.41	.23	1.54	3.34	1.66	1.51	2.07	1.69	1.09	1.21	.49
IN.	.26	.46	.26	1.78	3.48	1.92	1.68	2.39	1.88	1.25	1.40	.55

CAL YR 1989 TOTAL 75392 MEAN 207 MAX 3230 MIN 37 CFSM .77 IN. 10.39
WTR YR 1990 TOTAL 125657 MEAN 344 MAX 4350 MIN 37 CFSM 1.28 IN. 17.31

04180500 ST. JOSEPH RIVER NEAR FORT WAYNE, IN

LOCATION.--Lat 41°10'41", long 85°03'19", in NW¼NE¼ sec.3, T.31 N., R.13 E., Allen County, Hydrologic Unit 04100003, on left bank 0.8 mi downstream from Ely Run, 1.3 mi upstream from Ely Bridge and Mayhew Road, 8.0 mi northeast of the Fort Wayne Court House.

DRAINAGE AREA.--1,060 mi^2.

PERIOD OF RECORD.--October 1983 to current year. July 1941 to September 1955 gage located 1.3 mi downstream at Ely Bridge.

GAGE.--Water-stage recorder. Datum of gage is 750.00 ft above National Geodetic Vertical Datum of 1929 (levels by State of Indiana).

REMARKS.--Estimated daily discharges: Oct. 17-19, Nov. 17, 22-25, Dec. 2-4, Dec. 11 to Jan. 3, Jan. 31, Feb. 1, 26, Mar. 3, 4, 6, 18, 22-28, Apr. 8, 12, 18, 19, 23, 24. Records good except for estimated daily discharges, which are fair. Flow regulated by Cedarville Reservoir and some flow diverted into storage of Hurshtown Reservoir.

AVERAGE DISCHARGE.--7 years, 1,076 ft^3/s, 13.78 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,200 ft^3/s Feb. 26, 1985 and June 5, 1989; maximum gage height, 17.86 ft, June 5, 1989; minimum daily discharge, 45 ft^3/s Aug. 4, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,100 ft^3/s Feb. 24, gage height, 15.08 ft; minimum daily, 61 ft^3/s Nov. 5, (regulation).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	193	148	421	170	986	5060	2080	654	859	1420	247	285
2	189	110	310	250	2060	3930	2350	804	738	997	245	249
3	181	82	350	350	2980	3250	1940	570	1360	650	235	364
4	178	70	305	907	2750	2720	1690	781	2250	767	269	580
5	148	61	604	3430	2440	2400	1520	1310	1720	379	390	410
6	112	64	186	2020	2270	1900	1200	1240	1740	382	304	241
7	212	124	483	1800	2080	1990	1060	1140	1470	431	265	291
8	182	229	274	1740	1730	1950	940	991	1790	341	236	216
9	155	209	127	1530	1680	1500	827	843	3960	286	223	219
10	156	170	117	1850	1350	2100	1290	785	3310	290	240	650
11	165	258	110	1810	1360	3170	3670	776	1970	467	226	132
12	151	248	107	1660	1150	3180	2700	679	1580	1240	347	183
13	175	262	102	1400	1230	3870	2480	1110	1150	561	1760	571
14	183	227	99	1120	884	2980	2030	1860	1060	437	2260	146
15	185	502	97	1020	1530	3490	1970	1960	670	416	1990	404
16	529	1660	95	994	1840	2990	1710	4550	441	442	1450	432
17	640	1900	93	1410	2390	3160	1490	6550	881	429	1120	733
18	310	1350	94	3710	1660	2400	1200	6710	464	368	384	319
19	220	1460	95	3220	1870	2250	1100	6480	532	293	814	227
20	245	1150	94	2770	1770	1990	1210	6530	404	273	973	705
21	260	1530	91	2590	1230	1770	1380	4830	437	837	783	165
22	362	1200	89	2210	5360	1500	2150	3590	436	3690	1040	170
23	356	1000	87	2210	9100	1390	1800	2520	576	3310	1100	391
24	368	800	86	1790	9910	1290	1500	1900	432	1640	825	753
25	359	650	86	1730	9170	1190	919	1540	464	1120	233	153
26	329	497	87	2220	8400	1100	1130	2610	399	754	440	147
27	309	508	87	1680	7380	1020	1030	2150	449	472	921	159
28	297	455	88	1790	6270	940	898	1750	544	459	344	122
29	273	507	92	1730	---	873	867	1140	1490	394	1710	172
30	202	519	99	1430	---	1490	748	1140	1380	350	1070	246
31	229	---	120	1200	---	2010	---	874	---	284	731	---
TOTAL	7853	17950	5175	53741	92830	70853	46879	70367	34956	24179	23175	9835
MEAN	253	598	167	1734	3315	2286	1563	2270	1165	780	748	328
MAX	640	1900	604	3710	9910	5060	3670	6710	3960	3690	2260	753
MIN	112	61	86	170	884	873	748	570	399	273	223	122
CFSM	.24	.56	.16	1.64	3.13	2.16	1.47	2.14	1.10	.74	.71	.31
IN.	.28	.63	.18	1.89	3.26	2.49	1.65	2.47	1.23	.85	.81	.35

CAL YR 1989 TOTAL 318719 MEAN 873 MAX 12500 MIN 61 CFSM .82 IN. 11.19
WTR YR 1990 TOTAL 457793 MEAN 1254 MAX 9910 MIN 61 CFSM 1.18 IN. 16.07

04181500 ST. MARYS RIVER AT DECATUR, IN

LOCATION.--Lat 40°50'55", long 84°56'16", in SW¼SW¼ sec.27, T.28 N., R.14 E., Adams County, Hydrologic Unit 04100004, on right bank 10 ft downstream from bridge on U.S. Highway 27, 0.5 mi upstream from Holthouse ditch, 1.3 mi north of Decatur, and at mile 29.1.

DRAINAGE AREA.--621 mi^2.

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 mi upstream January 1932 to November 1954, and at present site thereafter are contained in reports of National Weather Service.

REVISED RECORDS.--WSP 1174: 1948. WSP 1337: 1947. WSP 1627: 1950. WSP 1912: 1955, drainage area.

GAGE.--Water-stage recorder. Datum of gage is 760.44 ft above National Geodetic Vertical Datum of 1929. Prior to July 27, 1948, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Oct. 1 to Nov. 28 and Dec. 13 to Jan. 2. Records good except for estimated daily discharges, which are poor. Flow regulated by Grand Lake. Slight diversion from or into Wabash River basin and into Miami and Erie Canals.

AVERAGE DISCHARGE.--44 years, 494 ft^3/s, 10.80 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,300 ft^3/s Feb. 10, 11, 1959; maximum gage height, 24.40 ft Mar. 14, 1982; minimum daily discharge, 5.4 ft^3/s Oct. 18, 1960.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 2,900 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 3	0400	3,300	16.73	May 17	0800	*5,840	*20.48
Feb. 17	0400	4,020	18.20	July 26	1000	4,400	18.83
Feb. 23	1000	5,600	20.22				

Minimum daily discharge, 33 ft^3/s Dec. 26-28.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	62	126	80	227	955	555	153	232	274	156	279
2	45	56	124	200	2330	809	998	137	227	281	118	240
3	43	54	104	675	3230	727	817	126	796	222	102	163
4	37	52	73	1590	3150	605	679	310	1210	139	106	116
5	36	54	97	2140	3210	496	640	1400	735	96	266	90
6	36	60	89	1450	3100	396	589	969	551	70	353	75
7	38	68	77	899	2860	300	495	687	604	56	197	74
8	40	82	60	856	2390	270	372	664	758	47	160	76
9	39	110	58	751	2000	282	279	680	1790	43	124	530
10	38	100	72	997	1830	331	366	601	2120	45	98	1580
11	41	86	65	849	1230	1440	1330	447	2310	51	81	1220
12	43	76	48	656	886	1320	1080	353	2400	150	71	925
13	47	90	48	492	692	875	903	1780	2040	671	326	707
14	43	110	46	399	560	778	1410	2080	1390	682	468	508
15	42	150	45	306	1420	733	1700	1370	848	1550	292	546
16	46	1000	43	251	3420	846	1310	3370	461	2260	346	348
17	70	1300	42	368	3930	880	883	5650	284	2610	306	278
18	60	760	40	998	3680	705	579	4870	199	2390	1190	233
19	50	620	38	851	3770	675	402	3710	145	1600	2450	177
20	90	660	37	773	3550	693	321	2860	128	882	1570	171
21	180	780	35	1650	2680	660	393	2130	113	478	1170	152
22	160	720	35	1400	3320	526	502	1390	101	1320	1870	139
23	130	500	34	1070	5420	373	523	833	97	2910	1390	139
24	180	320	34	1090	4520	270	545	499	103	3430	1030	204
25	170	230	34	1050	3220	227	528	337	94	4040	771	234
26	140	160	33	882	1970	196	440	403	92	4350	520	177
27	110	140	33	630	1330	167	339	659	86	3850	316	131
28	92	130	33	457	1180	147	271	554	131	2570	220	105
29	84	120	34	332	---	144	227	517	186	977	565	88
30	74	118	37	273	---	218	181	421	211	410	658	77
31	66	---	52	239	---	353	---	305	---	238	317	---
TOTAL	2315	8768	1726	24654	71105	17397	19657	40265	20442	38692	17607	9782
MEAN	74.7	292	55.7	795	2539	561	655	1299	681	1248	568	326
MAX	180	1300	126	2140	5420	1440	1700	5650	2400	4350	2450	1580
MIN	36	52	33	80	227	144	181	126	86	43	71	74
CFSM	.12	.47	.09	1.28	4.09	.90	1.06	2.09	1.10	2.01	.91	.53
IN.	.14	.53	.10	1.48	4.26	1.04	1.18	2.41	1.22	2.32	1.05	.59

CAL YR 1989 TOTAL 182384 MEAN 500 MAX 5150 MIN 33 CFSM .80 IN. 10.93
WTR YR 1990 TOTAL 272410 MEAN 746 MAX 5650 MIN 33 CFSM 1.20 IN. 16.32

04182000 ST. MARYS RIVER NEAR FORT WAYNE, IN

LOCATION.--Lat 40°59'16", long 85°06'03", in A. LaFontaine Reserve, T.29 N., R.12 E., Allen County, Hydrologic Unit 04100004, on left bank 130 ft downstream from Anthony Boulevard Extension, 0.8 mi downstream from Houk ditch, 5 mi south of Fort Wayne, and 10.8 mi upstream from mouth.

DRAINAGE AREA.--762 mi^2.

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 from the District Office.

REVISED RECORDS.--WSP 974: 1942. WSP 1337: 1933, 1947. WSP 1912: 1954, 1955, 1960, drainage area. WDR IN-82-1: 1973, 1974, 1978, 1979.

GAGE.--Water-stage recorder. Datum of gage is 748.97 ft above National Geodetic Vertical Datum of 1929 (levels by State of Indiana, Department of Natural Resources). Prior to Apr. 13, 1939, nonrecording gage on upstream highway bridge at same datum.

REMARKS.--Estimated daily discharges: Dec. 3, 4, 8, 9, Dec. 12 to Jan. 2, June 1, 9, and Sept. 24, 25. Records good except for estimated daily discharges, which are poor. The flow is sometimes regulated by Grand Lake. Slight diversion from or into Wabash River basin and into Miami and Erie Canal. During extreme floods, some water bypasses gage and flows through Houk ditch and Paul Trier ditch into the Maumee River.

AVERAGE DISCHARGE.--60 years, 582 ft^3/s, 10.37 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,600 ft^3/s Feb. 11, 1959; maximum gage height, 19.66 ft, Mar. 14, 1982; minimum daily discharge, 3.4 ft^3/s Oct. 19, 1934.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater then base discharge of 4,000 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 4	1000	4,280	10.65	May 18	0900	6,170	13.10
Feb. 17	0500	4,850	11.43	July 27	0500	4,670	11.18
Feb. 23	0900	*7,520	*14.66				

Minimum daily discharge, 44 ft^3/s Oct. 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	71	136	100	284	1150	604	277	282	252	208	296
2	50	65	143	250	2400	1000	991	243	220	311	151	275
3	49	63	130	796	4120	923	1020	221	375	279	122	206
4	45	62	100	1870	4190	823	861	412	1160	199	117	148
5	44	63	106	3060	3970	700	794	1550	896	139	134	111
6	45	68	113	2470	3780	601	743	1320	612	102	384	89
7	47	74	104	1560	3490	499	668	875	557	79	271	81
8	48	94	100	1260	2940	432	565	757	616	67	181	80
9	48	137	86	1060	2370	449	463	759	1370	59	153	88
10	48	130	90	1070	2170	515	557	728	1990	58	122	1290
11	52	107	93	1050	1500	1540	1370	591	2200	80	97	1350
12	54	92	78	783	1030	1670	1360	454	2410	109	85	1010
13	54	105	72	602	798	1110	1020	1420	2230	407	119	790
14	55	129	68	482	652	944	1200	2420	1590	656	494	582
15	52	181	64	404	1330	893	1620	1630	1050	1110	347	570
16	52	1300	62	291	3940	968	1440	3080	622	1990	325	458
17	84	1600	58	422	4820	1040	1090	5450	387	2580	344	316
18	74	958	56	1310	4560	906	825	6090	272	2680	590	262
19	63	743	54	1160	4300	840	609	5300	190	1970	2200	203
20	113	832	54	883	4250	825	489	3880	162	1130	1820	167
21	227	969	52	1650	3640	820	507	2580	153	661	1010	165
22	197	865	50	1740	4740	730	622	1600	147	1110	1520	149
23	161	616	50	1240	7450	586	653	995	143	2920	1390	140
24	224	408	50	1170	6980	463	674	621	126	3520	1010	148
25	216	282	50	1160	5370	383	672	424	119	3990	851	215
26	180	201	49	1040	3010	346	616	408	111	4470	633	203
27	143	165	49	774	1570	317	514	597	110	4610	415	156
28	116	158	50	575	1320	286	425	582	109	3860	276	123
29	98	144	52	448	---	275	365	525	179	1630	361	101
30	86	137	56	371	---	335	319	465	198	607	817	87
31	78	---	66	320	---	460	---	372	---	335	464	---
TOTAL	2853	10819	2341	31371	90974	22829	23656	46626	20586	41970	17011	9859
MEAN	92.0	361	75.5	1012	3249	736	789	1504	686	1354	549	329
MAX	227	1600	143	3060	7450	1670	1620	6090	2410	4610	2200	1350
MIN	44	62	49	100	284	275	319	221	109	58	85	80
CFSM	.12	.47	.10	1.33	4.26	.97	1.03	1.97	.90	1.78	.72	.43
IN.	.14	.53	.11	1.53	4.44	1.11	1.15	2.28	1.00	2.05	.83	.48

CAL YR 1989 TOTAL 222266 MEAN 609 MAX 6890 MIN 44 CFSM .80 IN. 10.85
WTR YR 1990 TOTAL 320895 MEAN 879 MAX 7450 MIN 44 CFSM 1.15 IN. 15.67

04182590 HARBER DITCH AT FORT WAYNE, IN

LOCATION.--Lat 41°00'27", long 85°10'58", in NE¼SW¼ sec.33, T.30 N., R.12 E., Allen County, Hydrologic Unit 04100004, on left bank 50 ft upstream from bridge on Baer Road in Fort Wayne, 3.2 mi upstream from mouth. The stream name changes to Fairfield ditch 0.7 mi downstream at bridge on Lower Huntington Road.

DRAINAGE AREA.--21.9 mi^2.

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 0.7 mi downstream.

REVISED RECORDS.--WDR IN-82-1: 1980 (P), 1981 (P).

GAGE.--Water-stage recorder. Datum of gage is 757.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 13, to Jan. 31. Records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--26 years, 18.3 ft^3/s, 11.35 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,040 ft^3/s June 3, 1989 gage height, 13.70 ft; minimum daily, 0.04 ft^3/s June 29, July 4-7, 1988.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 250 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 18	unknown	a352	unknown	Mar. 22	1700	*800	*11.47
Feb. 2	1100	341	7.08	May 4	2345	264	6.41
Feb. 16	1800	312	6.83	May 16	0845	427	7.87

a--estimated

Minimum daily discharge, 0.23 ft^3/s Oct. 5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.30	3.9	2.8	25	12	17	23	3.4	3.4	6.5	.73	3.0
2	.32	3.1	2.5	15	241	15	28	3.0	3.5	2.7	.64	2.0
3	.30	2.9	2.0	25	102	12	17	3.5	5.2	2.0	.59	1.9
4	.25	2.7	1.9	230	117	8.7	13	73	3.7	1.6	22	1.9
5	.23	2.5	1.9	110	52	7.5	11	144	2.5	1.3	4.2	1.7
6	.25	2.5	2.0	36	34	6.2	8.1	35	2.5	.95	1.8	1.9
7	.25	5.6	1.2	24	29	4.9	6.6	16	2.5	.81	1.1	5.1
8	.25	3.2	1.0	16	23	6.9	5.7	11	6.7	.65	.65	1.9
9	.25	3.0	.86	25	43	13	5.5	8.1	3.0	.59	.51	1.9
10	1.3	2.8	.65	50	31	47	70	8.3	2.0	2.1	.50	1.5
11	.41	2.5	.68	28	19	147	84	5.3	1.6	26	.48	1.4
12	.36	2.2	.72	20	13	46	29	11	1.5	13	8.7	1.6
13	.31	2.1	.69	15	12	23	18	79	1.5	4.8	18	1.7
14	.30	6.4	.67	12	9.8	17	17	27	11	6.9	3.4	5.7
15	.30	45	.65	10	134	15	13	16	3.0	9.2	1.6	3.5
16	.33	84	.64	12	254	27	10	257	1.7	3.9	1.1	3.1
17	3.2	26	.64	59	116	18	8.3	83	1.4	2.2	5.0	1.9
18	3.3	12	.65	320	51	12	6.2	28	1.2	1.6	116	1.3
19	3.9	7.3	.74	150	37	17	5.9	15	1.1	1.1	19	1.9
20	7.9	6.8	.72	50	23	12	11	11	8.4	6.8	6.5	1.2
21	59	6.1	.69	70	17	11	12	7.6	6.9	2.2	5.4	1.2
22	40	4.7	.66	43	547	11	9.0	6.2	20	65	4.1	2.3
23	17	4.0	.64	32	448	7.6	8.0	5.2	12	16	3.0	1.9
24	11	3.1	.64	26	132	5.8	6.9	4.6	4.8	5.3	2.1	1.6
25	8.1	3.1	.73	64	57	5.6	6.0	13	2.8	2.8	1.6	1.1
26	6.7	3.0	.74	39	28	5.2	5.6	16	3.2	1.8	1.2	1.2
27	5.7	2.7	.76	28	20	4.7	5.3	9.8	20	1.3	1.0	1.3
28	5.0	5.1	.84	22	23	4.7	5.3	7.1	17	1.0	22	1.3
29	4.5	3.3	1.3	16	---	10	4.7	5.9	7.8	.98	46	1.2
30	4.0	2.6	5.4	12	---	21	3.8	4.4	6.8	.84	12	1.3
31	4.1	---	40	9.9	---	17	---	3.7	---	.75	5.1	---
TOTAL	189.11	264.2	76.01	1593.9	2624.8	575.8	456.9	921.1	168.7	192.67	316.00	60.5
MEAN	6.10	8.81	2.45	51.4	93.7	18.6	15.2	29.7	5.62	6.22	10.2	2.02
MAX	59	84	40	320	547	147	84	257	20	65	116	5.7
MIN	.23	2.1	.64	9.9	9.8	4.7	3.8	3.0	1.1	.59	.48	1.1
CFSM	.28	.40	.11	2.35	4.28	.85	.70	1.36	.26	.28	.47	.09
IN.	.32	.45	.13	2.71	4.46	.98	.78	1.56	.29	.33	.54	.10

CAL YR 1989 TOTAL 5363.10 MEAN 14.7 MAX 540 MIN .23 CFSM .67 IN. 9.11
WTR YR 1990 TOTAL 7439.69 MEAN 20.4 MAX 547 MIN .23 CFSM .93 IN. 12.64

04182810 SPY RUN CREEK AT FORT WAYNE, IN

LOCATION.--Lat 41°06'18", long 85°09'12", in SW¼SW¼ sec.26, T.31 N., R.12 E., Allen County, Hydrologic Unit 04100004, on right bank 50 ft upstream from Sherman Boulevard bridge in Fort Wayne, and at mile 2.2.

DRAINAGE AREA.--14.0 mi^2.

PERIOD OF RECORD.--October 1983 to current year.

GAGE.--Water-stage recorder. Datum of gage is 760.00 ft above National Geodetic Vertical Datum of 1929 (levels by City of Fort Wayne).

REMARKS.--Estimated daily discharges: Dec. 11-27. Records fair except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--7 years, 17.0 ft^3/s, 16.49 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,370 ft^3/s Feb. 22, 1990, gage height, 10.68 ft; minimum daily, .93 ft^3/s July 9, 1990.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 14, 1982 reached a stage of 10.75 ft, present site and datum.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 18	0215	705	8.13	May 16	0930	723	8.21
Feb. 2	0745	615	7.72	July 22	1115	906	8.98
Feb. 22	1615	*1,370	*10.68				

Minimum daily discharge, .93 ft^3/s July 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	3.2	3.5	8.7	6.9	16	28	4.6	2.9	2.4	2.2	3.6
2	2.1	3.0	3.2	5.5	155	14	24	5.9	4.3	2.0	2.0	2.9
3	2.5	3.0	2.9	14	28	13	15	4.8	7.8	1.9	2.0	2.4
4	2.4	2.8	2.8	143	43	9.1	11	102	4.4	1.7	98	2.3
5	2.1	3.0	3.0	29	23	8.3	9.3	45	2.9	1.8	19	2.2
6	2.0	3.3	3.0	12	19	7.7	7.6	14	2.7	1.8	6.5	2.1
7	1.7	4.5	3.0	7.5	15	7.1	6.5	8.4	2.7	1.5	4.3	54
8	1.7	4.4	2.7	6.5	12	10	5.8	6.1	73	1.1	3.1	9.0
9	2.0	3.1	2.4	11	12	31	5.6	5.1	13	.93	2.5	4.5
10	3.6	3.0	2.4	22	9.3	43	190	6.8	5.3	1.8	2.2	3.4
11	2.8	2.6	2.4	9.9	7.2	68	56	5.5	3.5	51	2.2	3.0
12	2.8	2.4	2.3	7.2	6.2	25	21	16	2.7	13	23	2.8
13	2.9	2.6	2.3	4.9	5.9	16	14	100	2.4	3.8	119	2.7
14	3.2	18	2.2	4.1	6.3	13	22	19	3.6	17	14	39
15	4.3	146	2.1	4.3	171	12	14	14	3.4	11	5.8	15
16	4.9	72	2.1	5.3	160	48	11	248	2.2	3.6	3.8	7.7
17	9.2	19	2.0	51	48	18	8.4	48	2.0	2.4	6.5	4.3
18	5.1	9.2	2.0	204	29	12	6.8	17	2.0	2.0	153	3.4
19	15	6.4	2.3	20	24	25	5.8	9.6	2.0	1.9	16	8.2
20	20	6.4	2.1	24	15	12	22	7.5	4.5	39	10	4.5
21	28	6.2	2.0	31	11	9.5	46	5.9	3.2	9.8	22	3.3
22	12	5.5	1.9	17	748	9.1	15	5.0	35	358	10	3.4
23	4.3	4.7	1.9	12	114	10	9.3	4.3	16	31	6.3	3.0
24	2.9	4.3	1.8	13	42	7.0	7.5	4.0	5.7	14	4.7	2.8
25	2.4	4.2	1.9	29	27	6.2	6.3	26	3.1	9.4	3.7	2.4
26	2.2	4.2	1.9	15	21	5.7	5.3	43	4.5	5.7	3.2	2.4
27	2.2	5.6	1.9	8.1	25	5.2	5.0	11	6.7	4.0	2.9	2.4
28	1.9	8.5	1.9	6.8	24	5.2	4.7	6.2	23	3.4	66	2.5
29	2.0	4.1	2.4	6.0	---	13	5.0	4.8	8.2	2.9	44	2.5
30	2.3	3.5	3.6	5.1	---	36	5.1	3.7	3.5	2.7	8.6	2.6
31	3.0	---	22	4.8	---	28	---	3.3	---	2.4	5.1	---
TOTAL	155.3	368.7	93.9	741.7	1807.8	543.1	593.0	804.5	256.2	604.93	671.6	204.3
MEAN	5.01	12.3	3.03	23.9	64.6	17.5	19.8	26.0	8.54	19.5	21.7	6.81
MAX	28	146	22	204	748	68	190	248	73	358	153	54
MIN	1.7	2.4	1.8	4.1	5.9	5.2	4.7	3.3	2.0	.93	2.0	2.1
CFSM	.36	.88	.22	1.71	4.61	1.25	1.41	1.85	.61	1.39	1.55	.49
IN.	.41	.98	.25	1.97	4.80	1.44	1.58	2.14	.68	1.61	1.78	.54

CAL YR 1989 TOTAL 5169.9 MEAN 14.2 MAX 481 MIN 1.7 CFSM 1.01 IN. 13.74
WTR YR 1990 TOTAL 6845.03 MEAN 18.8 MAX 748 MIN .93 CFSM 1.34 IN. 18.19

04183000 MAUMEE RIVER AT NEW HAVEN, IN

LOCATION.--Lat 41°05'06", long 85°01'20", in SE¼NE¼ sec.2, T.30 N., R.13 E., Allen County, Hydrologic Unit 04100005, on left bank 600 ft upstream from bridge on Landin Road, 1,400 ft upstream from the Norfolk and Western Railroad bridge, 1.1 mi northwest of New Haven, 2.8 mi upstream from Sixmile Creek and at mile 129.0.

DRAINAGE AREA.--1,967 mi^2.

PERIOD OF RECORD.--December 1946 to September 1956 (high-water records only), October 1956 to current year.

REVISED RECORDS.--WSP 2112: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 724.51 ft above National Geodetic Vertical Datum of 1929. 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.

REMARKS.--Estimated daily discharges: Dec. 11 to Jan. 3. Records good except for estimated daily discharges, which are fair. Flow regulated by hydro-powerplant on the St. Joseph River 10.3 mi. upstream from station. Flow slightly regulated by upstream reservoirs.

AVERAGE DISCHARGE.--34 years (1956 to current year), 1,705 ft^3/s, 11.77 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 26,600 ft^3/s Mar. 17, 1982, gage height, 25.49 ft; minimum daily, 48 ft^3/s Oct. 6, 13, 1963.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 9,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 24	1400	*16,700	*20.34	May 18	1900	12,500	17.35

Minimum daily discharge, 129 ft^3/s Nov. 7, regulation.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	282	298	692	350	1530	7210	3060	875	1190	1680	540	719
2	275	253	501	450	4390	5830	3810	963	1100	1410	468	579
3	286	219	588	800	7610	4820	3530	885	1380	1010	416	610
4	267	193	512	2490	7690	4090	3030	1560	3340	930	1030	870
5	241	177	660	5060	7180	3460	2590	3440	2970	693	838	608
6	181	161	567	4840	6700	3020	2360	3270	2500	435	695	417
7	190	129	587	3260	6130	2730	1650	2400	2150	531	684	1130
8	292	174	544	2990	5350	2980	1760	1990	2710	447	516	438
9	185	249	335	2800	4590	2320	1290	1730	4900	370	436	328
10	213	297	304	3180	4120	3240	2380	1590	5880	375	421	1500
11	209	319	280	3350	3330	5120	5540	1470	4700	881	380	1610
12	216	384	270	2780	2690	5980	5180	1280	4220	1620	381	1270
13	165	597	270	2330	2210	5340	4080	2700	3680	873	2370	1540
14	199	527	280	1780	2010	4750	3730	4680	2880	1210	2810	975
15	202	1280	280	1490	3040	4400	4020	4280	2180	1440	2710	1060
16	328	3220	280	1450	6970	4870	3830	7470	1190	2210	1980	922
17	881	3610	280	1670	8050	4780	3080	11300	1280	2910	1740	1330
18	679	2660	280	5660	6960	3950	2490	12400	847	3060	1770	659
19	400	2500	270	5520	6530	3530	1880	12200	757	2570	2680	488
20	554	2280	270	4280	6570	3180	1830	11400	659	1870	3490	996
21	763	2440	270	4750	5530	2790	2180	9380	681	1560	2040	385
22	838	2330	275	4760	9760	2520	2820	6440	846	5430	2440	367
23	658	1720	280	4000	16500	2250	2640	4410	855	7330	2890	368
24	649	1430	280	3390	16600	1910	2290	2950	697	5790	2060	1160
25	667	1210	280	3390	15600	1730	1370	2250	625	5120	1190	379
26	599	846	280	3520	14100	1620	1890	3450	599	5100	1100	394
27	533	839	275	3060	11800	1500	1590	3210	638	5040	1610	368
28	470	795	270	2580	8800	1380	1390	2610	751	4650	843	278
29	419	763	270	2470	---	1430	1220	1930	1620	2770	2290	267
30	374	894	265	2000	---	1770	1130	1680	1650	1220	2110	343
31	337	---	300	1720	---	2930	---	1400	---	775	1490	---
TOTAL	12552	32794	11095	92170	202340	107430	79640	127593	59475	71310	46418	22358
MEAN	405	1093	358	2973	7226	3465	2655	4116	1982	2300	1497	745
MAX	881	3610	692	5660	16600	7210	5540	12400	5880	7330	3490	1610
MIN	165	129	265	350	1530	1380	1130	875	599	370	380	267
CFSM	.21	.56	.18	1.51	3.67	1.76	1.35	2.09	1.01	1.17	.76	.38
IN.	.24	.62	.21	1.74	3.83	2.03	1.51	2.41	1.12	1.35	.88	.42

CAL YR 1989 TOTAL 623357 MEAN 1708 MAX 17000 MIN 129 CFSM .87 IN. 11.79
WTR YR 1990 TOTAL 865175 MEAN 2370 MAX 16600 MIN 129 CFSM 1.21 IN. 16.36

05515000 KANKAKEE RIVER NEAR NORTH LIBERTY, IN

LOCATION.--Lat 41°33'50", long 86°29'50", in NW¼NE¼ sec.23, T.36 N., R.1 W., St. Joseph County, Hydrologic Unit 07120001, on left bank at downstream side of bridge on county highway named "New Road", 2.7 mi upstream from Little Kankakee River, 4 mi northwest of North Liberty, and at mile 126.9.

DRAINAGE AREA.--174 mi^2, of which 58.2 mi^2 does not contribute directly to surface runoff.

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

REVISED RECORDS.--WSP 1915: 1952, 1956-59. WSP 2115: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 680.04 ft above National Geodetic Vertical Datum of 1929 (levels by State of Indiana, Department of Natural Resources). Prior to June 26, 1956, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Dec. 15-28, Feb. 23-26, May 17-22, and Aug. 20-23. Records good below 300 ft^3/s and fair above.

AVERAGE DISCHARGE.--39 years, 154 ft^3/s, 12.02 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 908 ft^3/s Mar. 17, 1982, gage height, 9.01 ft; maximum gage height, 9.04 ft June 27, 1968; minimum daily discharge, 44 ft^3/s Aug. 4, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 694 ft^3/s May 17, gage height, 7.33 ft; minimum daily, 108 ft^3/s Dec. 24-26.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	117	114	148	113	176	272	189	173	217	210	160	168
2	116	113	147	112	211	263	198	169	214	195	157	164
3	114	113	144	113	243	258	212	167	206	185	154	158
4	114	111	145	144	223	239	208	182	198	179	172	153
5	115	110	142	202	204	227	198	201	201	171	183	150
6	115	110	140	186	192	218	188	190	199	164	166	147
7	112	117	137	169	184	207	180	180	192	161	157	156
8	112	129	136	161	178	208	174	172	207	156	150	155
9	112	127	135	166	174	322	173	166	209	146	144	148
10	114	126	132	184	167	362	201	231	192	145	144	144
11	112	126	131	183	162	431	256	261	187	184	140	141
12	110	121	129	175	158	402	243	253	184	195	140	140
13	110	119	127	163	156	335	226	393	181	176	166	138
14	112	120	125	156	151	292	241	443	178	172	158	141
15	113	176	122	151	159	263	252	360	175	167	145	147
16	114	280	120	156	154	245	235	389	170	164	139	147
17	116	266	119	208	149	231	223	600	168	168	145	147
18	114	232	117	249	146	219	207	580	160	158	312	141
19	117	210	115	225	145	211	204	440	159	157	381	141
20	123	231	113	202	142	204	202	370	165	232	450	138
21	146	219	111	196	142	199	219	330	178	273	500	142
22	164	198	110	189	234	202	219	310	184	336	420	168
23	151	184	109	179	540	214	209	297	218	426	340	182
24	141	174	108	175	520	205	200	277	240	331	301	198
25	134	167	108	207	410	198	193	271	218	268	253	180
26	128	162	108	298	340	190	186	321	214	233	223	165
27	124	160	109	253	317	187	181	305	232	211	205	154
28	121	162	110	222	293	182	179	279	229	196	194	148
29	118	157	112	203	---	181	179	256	240	185	197	147
30	116	154	113	191	---	192	177	237	237	177	184	145
31	114	---	115	180	---	188	---	225	---	167	174	---
TOTAL	3739	4788	3837	5711	6270	7547	6152	9028	5952	6288	6754	4593
MEAN	121	160	124	184	224	243	205	291	198	203	218	153
MAX	164	280	148	298	540	431	256	600	240	426	500	198
MIN	110	110	108	112	142	181	173	166	159	145	139	138
CFSM	.69	.92	.71	1.06	1.29	1.40	1.18	1.67	1.14	1.17	1.25	.88
IN.	.80	1.02	.82	1.22	1.34	1.61	1.32	1.93	1.27	1.34	1.44	.98

CAL YR 1989 TOTAL 54862 MEAN 150 MAX 481 MIN 93 CFSM .86 IN. 11.73
WTR YR 1990 TOTAL 70659 MEAN 194 MAX 600 MIN 108 CFSM 1.11 IN. 15.11

05515500 KANKAKEE RIVER AT DAVIS, IN

LOCATION.--Lat 41°24'00", long 86°42'04", in SE¼NE¼ sec.13, T.34 N., R.3 W., Starke County, Hydrologic Unit 07120001, on left bank at downstream side of bridge on U.S. Highway 30 at Davis, 0.5 mi downstream from Mill Creek, 4 mi east of Hanna, and at mile 110.9.

DRAINAGE AREA.--537 mi^2, of which 137 mi^2 does not contribute directly to surface runoff.

PERIOD OF RECORD.--July 1905 to July 1906 and October 1924 to current year. Monthly discharge only for some periods, published in WSP 1308.

REVISED RECORDS.--WSP 1338: 1953. WSP 2115: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 664.68 ft above National Geodetic Vertical Datum of 1929. 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 mi downstream at different datum. Apr. 19, 1931, to Nov. 3, 1953, nonrecording gage at present site and datum.

REMARKS.--Estimated daily discharges: Dec. 15 to Jan. 3. Records good.

AVERAGE DISCHARGE.--66 years, (1924 to current year), 508 ft^3/s, 12.85 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,920 ft^3/s Mar. 20, 1982; maximum gage height, 13.52 ft Mar. 5, 1985; minimum daily discharge, 154 ft^3/s Aug. 30 to Sept. 3, 1941.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,430 ft^3/s Aug. 21; gage height, 13.06 ft; minimum daily, 294 ft^3/s Oct. 13.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	312	315	445	340	563	1010	728	557	685	737	532	700
2	310	316	434	330	660	977	737	544	671	663	502	660
3	305	314	425	330	800	965	766	532	655	607	484	627
4	303	315	421	389	778	922	767	567	628	562	535	594
5	302	312	421	570	711	886	752	646	612	528	618	572
6	308	313	416	584	663	860	715	623	606	495	575	554
7	304	325	406	519	629	827	681	587	596	477	532	598
8	301	353	399	485	596	815	654	557	640	463	502	619
9	300	357	395	481	578	967	643	536	712	446	480	581
10	303	354	391	508	551	1070	691	645	658	450	468	557
11	301	348	387	517	530	1170	821	723	613	547	475	540
12	297	339	380	502	514	1180	831	718	588	735	499	528
13	294	331	371	472	506	1140	783	944	565	672	556	518
14	295	335	368	456	495	1070	798	1150	549	609	553	532
15	296	442	352	440	504	1020	848	1100	541	577	503	576
16	295	683	350	443	514	973	820	1100	522	554	474	566
17	299	742	348	563	499	941	786	1260	508	540	472	549
18	306	683	345	762	487	902	736	1310	499	517	1100	531
19	308	611	340	777	483	866	698	1280	481	491	1370	530
20	332	599	335	700	474	829	683	1220	486	590	1360	531
21	388	602	330	647	468	799	726	1140	492	751	1420	530
22	442	561	328	610	641	790	749	1060	521	912	1390	597
23	433	517	325	573	1170	808	716	981	591	1110	1330	627
24	406	485	325	545	1260	793	684	914	628	1070	1260	688
25	389	468	325	585	1220	775	656	871	610	959	1170	665
26	362	461	322	828	1170	748	631	919	578	846	1070	615
27	346	451	320	820	1100	726	608	919	644	750	988	575
28	337	479	320	752	1060	704	590	866	705	680	910	551
29	329	477	330	682	---	698	584	810	780	637	857	544
30	325	460	332	630	---	724	575	765	806	605	800	535
31	321	---	335	588	---	730	---	718	---	566	745	---
TOTAL	10149	13348	11321	17428	19624	27685	21457	26562	18170	20146	24530	17390
MEAN	327	445	365	562	701	893	715	857	606	650	791	580
MAX	442	742	445	828	1260	1180	848	1310	806	1110	1420	700
MIN	294	312	320	330	468	698	575	532	481	446	468	518
CFSM	.61	.83	.68	1.05	1.31	1.66	1.33	1.60	1.13	1.21	1.47	1.08
IN.	.70	.92	.78	1.21	1.36	1.92	1.49	1.84	1.26	1.40	1.70	1.20

CAL YR 1989 TOTAL 172063 MEAN 471 MAX 1340 MIN 291 CFSM .88 IN. 11.92
WTR YR 1990 TOTAL 227810 MEAN 624 MAX 1420 MIN 294 CFSM 1.16 IN. 15.78

05516500 YELLOW RIVER AT PLYMOUTH, IN

LOCATION.--Lat 41°20'25", long 86°18'16", in SE¼NW¼ sec.13, T.33 N., R.2 E., Marshall County, Hydrologic Unit 07120001, on left bank 50 ft upstream from LaPorte Street footbridge in Plymouth, 1.1 mi downstream from Elmer Seltenright (formerly Baker) ditch, 8.1 mi upstream from Wolf Creek, and at mile 40.3.

DRAINAGE AREA.--294 mi^2, of which 22 mi^2 does not contribute directly to surface runoff.

PERIOD OF RECORD.--July 1948 to current year.

REVISED RECORDS.--WSP 1338: 1950-51. WSP 2115: Drainage area. WDR IN-73-1: 1972(M).

GAGE.--Water-stage recorder. Datum of gage is 764.78 ft above National Geodetic Vertical Datum of 1929 (levels by State of Indiana, Department of Natural Resources). Prior to Aug. 27, 1959, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Dec. 14 to Jan. 3. Records good except estimated daily discharges, which are fair.

AVERAGE DISCHARGE.--42 years, 259 ft^3/s, 11.96 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,390 ft^3/s Oct. 12, 13, 1954, gage height, 17.13 ft; minimum daily, 13 ft^3/s Dec. 3, 7, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,460 ft^3/s Feb. 25, gage height, 13.26 ft; minimum daily, 34 ft^3/s Oct. 14-16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	42	87	58	192	1020	256	175	194	198	127	152
2	35	42	82	61	355	829	282	164	187	155	114	139
3	35	41	78	64	663	775	298	155	200	133	105	129
4	35	41	76	140	582	718	276	174	197	121	120	122
5	35	40	80	455	364	530	254	247	169	109	141	117
6	35	44	78	365	291	424	232	229	160	103	122	112
7	35	53	77	223	263	352	211	199	151	96	104	142
8	36	56	75	188	240	341	197	182	221	89	95	152
9	36	61	68	183	245	626	189	167	555	86	91	128
10	39	57	76	219	253	1060	251	166	368	87	85	116
11	38	54	72	221	222	1370	574	174	222	156	82	109
12	39	51	63	193	197	1570	625	179	187	408	92	105
13	37	51	58	160	184	1460	419	531	166	257	193	101
14	34	52	55	148	173	1100	435	1020	150	178	200	120
15	34	78	51	140	156	749	608	1200	140	155	133	190
16	34	224	50	153	194	517	509	1040	130	139	108	188
17	36	285	50	402	171	410	392	1200	122	126	156	170
18	36	213	50	682	165	338	326	1440	116	111	1020	147
19	39	167	51	751	176	299	284	1420	109	102	1270	142
20	43	178	51	489	172	272	283	1070	109	140	1160	142
21	56	197	51	355	166	256	467	641	122	284	1050	139
22	71	155	50	343	611	252	590	373	153	439	1040	201
23	76	130	50	288	1470	271	435	299	168	923	784	244
24	62	114	50	262	2170	260	328	264	214	1220	476	303
25	54	106	50	308	2430	237	277	244	171	1060	318	243
26	50	100	50	568	2330	221	247	388	147	555	261	195
27	46	96	50	458	1860	207	228	516	208	269	226	164
28	45	93	50	308	1340	196	214	357	221	209	200	147
29	44	106	50	254	---	199	205	280	261	176	197	136
30	43	93	50	227	---	229	186	235	255	158	197	131
31	43	---	52	201	---	249	---	209	---	143	169	---
TOTAL	1316	3020	1881	8867	17635	17337	10078	14938	5773	8385	10436	4626
MEAN	42.5	101	60.7	286	630	559	336	482	192	270	337	154
MAX	76	285	87	751	2430	1570	625	1440	555	1220	1270	303
MIN	34	40	50	58	156	196	186	155	109	86	82	101
CFSM	.14	.34	.21	.97	2.14	1.90	1.14	1.64	.65	.92	1.15	.52
IN.	.17	.38	.24	1.12	2.23	2.19	1.28	1.89	.73	1.06	1.32	.59

CAL YR 1989 TOTAL 68988 MEAN 189 MAX 2300 MIN 34 CFSM .64 IN. 8.73
WTR YR 1990 TOTAL 104292 MEAN 286 MAX 2430 MIN 34 CFSM .97 IN. 13.20

05517000 YELLOW RIVER AT KNOX, IN

LOCATION.--Lat 41°18'10", long 86°37'14", in SW¼SW¼ sec.14, T.33 N., R.2 W., Starke County, Hydrologic Unit 07120001, on right bank 40 ft upstream from bridge on U.S. Highway 35 in Knox, 1.4 mi downstream from Eagle Creek, and at mile 11.6.

DRAINAGE AREA.--435 mi^2, of which 51 mi^2 does not contribute directly to surface runoff.

PERIOD OF RECORD.--August 1905 to July 1906, August 1943 to current year.

REVISED RECORDS.--WSP 1278: 1952. WSP 2115: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 679.93 ft above National Geodetic Vertical Datum of 1929 (levels by State of Indiana, Department of Natural Resources). 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.

REMARKS.--Estimated daily discharges: Dec. 9, Dec. 12 to Jan. 6, and Feb. 24-26. Records good except Dec. 12 to Jan. 6, which are poor.

AVERAGE DISCHARGE.--47 years (water years 1944 to current year), 398 ft^3/s, 12.42 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,660 ft^3/s Oct. 15, 16, 1954, gage height, 13.75 ft; minimum daily, 50 ft^3/s Jan. 21-31, 1963.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 2,440 ft^3/s Feb. 26, gage height, 9.54 ft; minimum daily, 103 ft^3/s Oct. 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	114	125	181	121	331	1760	443	353	377	393	271	332
2	113	124	176	132	360	1460	458	339	360	328	247	309
3	111	124	172	140	548	1210	487	325	364	282	233	289
4	109	124	168	150	789	1100	493	333	363	255	242	274
5	110	123	167	200	750	1020	460	382	349	237	265	263
6	109	128	168	450	542	850	425	420	327	222	263	251
7	110	136	165	451	444	700	396	389	318	213	240	264
8	109	152	165	327	406	617	377	353	344	202	223	303
9	109	150	160	293	387	754	359	330	535	196	211	293
10	109	152	157	289	387	1020	375	327	737	193	201	266
11	112	148	160	315	383	1390	544	324	542	219	194	251
12	108	142	140	311	352	1670	813	329	395	322	201	246
13	108	137	125	284	326	1770	850	468	345	487	284	237
14	108	138	115	255	312	1760	711	890	319	365	384	244
15	105	162	108	239	314	1530	777	1120	303	303	337	296
16	103	215	106	233	307	1140	873	1360	286	276	265	333
17	105	324	106	270	332	869	773	1410	273	254	240	317
18	109	356	107	526	310	715	626	1390	259	232	790	297
19	116	304	109	748	303	611	533	1530	249	219	1700	281
20	130	263	110	836	310	548	491	1610	244	249	1910	278
21	139	264	110	668	302	500	614	1430	243	346	1780	274
22	154	276	109	515	479	479	811	1000	267	493	1570	271
23	164	243	108	479	1250	478	862	666	315	824	1390	334
24	167	221	107	421	1500	481	693	543	326	1030	1190	387
25	157	206	107	416	1800	452	570	484	344	1210	856	420
26	146	196	106	502	2100	426	489	474	298	1240	621	361
27	139	191	106	682	2400	404	436	642	286	811	509	314
28	133	188	106	604	2160	386	407	709	345	448	441	283
29	130	183	106	450	---	378	390	551	383	362	401	267
30	128	190	108	391	---	397	375	458	408	322	385	256
31	126	---	110	356	---	424	---	405	---	295	365	---
TOTAL	3790	5685	4048	12054	20184	27299	16911	21344	10504	12828	18209	8791
MEAN	122	189	131	389	721	881	564	689	350	414	587	293
MAX	167	356	181	836	2400	1770	873	1610	737	1240	1910	420
MIN	103	123	106	121	302	378	359	324	243	193	194	237
CFSM	.28	.44	.30	.89	1.66	2.02	1.30	1.58	.80	.95	1.35	.67
IN.	.32	.49	.35	1.03	1.73	2.33	1.45	1.83	.90	1.10	1.56	.75

CAL YR 1989 TOTAL 112135 MEAN 307 MAX 2430 MIN 103 CFSM .71 IN. 9.59
WTR YR 1990 TOTAL 161647 MEAN 443 MAX 2400 MIN 103 CFSM 1.02 IN. 13.82

05517500 KANKAKEE RIVER AT DUNNS BRIDGE, IN

LOCATION.--Lat 41°13'17", long 86°57'52", in NE¼SE¼ sec.15, T.32 N., R.5 W., Jasper County, Hydrologic Unit 07120001, on left bank at downstream side of abandoned bridge at Dunns Bridge, 1.8 mi north of Tefft, 3.6 mi upstream from Davis ditch, and at mile 90.8.

DRAINAGE AREA.--1,352 mi^2, of which 192 mi^2 does not contribute directly to surface runoff.

PERIOD OF RECORD.--July 1948 to current year.

REVISED RECORDS.--WSP 1728: 1954(m). WSP 2115: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 649.65 ft above National Geodetic Vertical Datum of 1929 (levels by State of Indiana, Department of Natural Resources). Prior to July 17, 1956, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Dec. 13-29, Jan. 6, 7, and Feb. 25-28. Records good except for estimated daily discharges, which are fair.

AVERAGE DISCHARGE.--42 years, 1,341 ft^3/s, 13.47 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,870 ft^3/s Mar. 23, 1982; maximum gage height, 13.38 ft Mar. 20, 1982; minimum daily discharge, 280 ft^3/s Jan. 25-29, 1963.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,250 ft^3/s Aug. 23, gage height, 11.77 ft; minimum daily, 638 ft^3/s Oct. 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	732	719	1030	1280	1530	3610	1980	1590	1900	1760	1520	2130
2	730	719	1020	1070	1590	3620	2000	1530	1820	1650	1390	1930
3	720	700	1010	868	1750	3540	2000	1490	1770	1490	1290	1780
4	704	701	1010	899	1910	3400	2010	1500	1710	1370	1340	1680
5	699	702	1030	1060	2020	3250	2010	1620	1640	1270	1490	1590
6	715	718	1050	1100	2010	3120	1940	1690	1590	1190	1480	1500
7	702	711	1030	1200	1910	2920	1850	1670	1540	1120	1380	1500
8	689	756	992	1270	1790	2750	1800	1590	1610	1080	1290	1550
9	679	786	978	1280	1700	2780	1730	1520	1880	1040	1220	1520
10	672	802	967	1310	1620	2910	1730	1510	1990	1020	1180	1450
11	672	805	956	1310	1560	3160	1900	1590	1980	1110	1150	1380
12	675	806	917	1300	1500	3330	2120	1610	1790	1340	1170	1340
13	670	784	880	1240	1450	3480	2250	1860	1610	1510	1370	1320
14	653	796	870	1190	1400	3590	2320	2370	1510	1540	1530	1310
15	641	874	860	1140	1380	3640	2360	2660	1440	1430	1510	1310
16	638	1090	850	1120	1400	3610	2400	2880	1370	1340	1360	1350
17	649	1280	840	1230	1360	3490	2420	3120	1320	1270	1260	1340
18	660	1340	830	1480	1330	3280	2320	3280	1270	1210	2440	1330
19	680	1310	820	1720	1320	3060	2150	3340	1220	1150	3420	1320
20	735	1280	800	1820	1310	2830	2030	3390	1200	1380	3840	1300
21	792	1280	780	1840	1300	2620	2010	3440	1180	1810	4100	1270
22	843	1260	770	1750	1530	2500	2110	3390	1220	2220	4210	1280
23	877	1240	760	1650	2480	2430	2210	3210	1340	2650	4230	1320
24	880	1190	750	1590	2980	2340	2200	2960	1420	2820	4130	1410
25	868	1140	740	1560	3130	2270	2080	2700	1470	2870	4030	1470
26	851	1110	730	1680	3300	2190	1960	2520	1420	2880	3800	1450
27	818	1070	720	1850	3400	2100	1860	2410	1350	2820	3510	1370
28	788	1070	710	1890	3550	2000	1770	2390	1440	2510	3220	1290
29	759	1070	900	1800	---	1960	1700	2330	1620	2120	2930	1250
30	743	1050	1120	1690	---	1950	1650	2180	1740	1850	2640	1230
31	727	---	1230	1590	---	1960	---	2030	---	1690	2360	---
TOTAL	22661	29159	27950	43777	53510	89690	60870	71370	46360	52510	71790	43270
MEAN	731	972	902	1412	1911	2893	2029	2302	1545	1694	2316	1442
MAX	880	1340	1230	1890	3550	3640	2420	3440	1990	2880	4230	2130
MIN	638	700	710	868	1300	1950	1650	1490	1180	1020	1150	1230
CFSM	.54	.72	.67	1.04	1.41	2.14	1.50	1.70	1.14	1.25	1.71	1.07
IN.	.62	.80	.77	1.20	1.47	2.47	1.67	1.96	1.28	1.44	1.98	1.19

CAL YR 1989 TOTAL 443833 MEAN 1216 MAX 3450 MIN 638 CFSM .90 IN. 12.21
WTR YR 1990 TOTAL 612917 MEAN 1679 MAX 4230 MIN 638 CFSM 1.24 IN. 16.86

05517530 KANKAKEE RIVER NEAR KOUTS, IN

LOCATION.--Lat 41°15'14", long 87°02'02", in SW¼NE¼ sec.6, T.32 N., R.5 W., Jasper County, Hydrologic Unit 07120001, on left bank, 20 ft downstream from bridge on State Highway 49, 4.5 mi south of Kouts, 0.7 mi upstream from Cook ditch, and at mile 86.7.

DRAINAGE AREA.--1,376 mi^2, of which 194 mi^2 does not contribute directly to surface runoff.

PERIOD OF RECORD.--October 1974 to current year.

REVISED RECORDS.--WDR IN-77-1: 1975(M).

GAGE.--Water-stage recorder. Datum of gage is 645.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 15-29 and Jan. 6-8. Records poor.

AVERAGE DISCHARGE.--16 years, 1,480 ft^3/s, 14.61 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,420 ft^3/s Mar. 24, 1982, gage height, 14.52 ft; minimum daily, 292 ft^3/s Aug. 5, 6, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,360 ft^3/s Aug. 22, gage height, 13.02 ft; minimum daily, 597 ft^3/s Oct. 15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	686	676	1010	1300	1550	3620	2040	1650	1960	1820	1620	2260
2	685	710	996	1210	1620	3630	2070	1540	1890	1740	1450	2020
3	685	699	1020	1040	1780	3550	2020	1500	1820	1550	1310	1860
4	688	673	1010	953	1920	3400	2070	1530	1780	1470	1350	1810
5	670	659	998	1080	2020	3290	2070	1660	1720	1300	1520	1750
6	680	713	1090	1120	2070	3190	1970	1710	1670	1270	1550	1610
7	676	750	1080	1210	1990	2970	1900	1710	1610	1150	1410	1630
8	669	737	1020	1270	1850	2780	1870	1670	1680	1110	1300	1630
9	670	741	1010	1270	1760	2900	1800	1600	1980	1070	1230	1610
10	643	747	977	1300	1650	3020	1770	1580	2100	1060	1190	1600
11	609	784	959	1300	1590	3300	1990	1630	2070	1150	1180	1440
12	652	850	955	1290	1530	3420	2210	1680	1900	1330	1130	1390
13	660	811	909	1260	1470	3540	2320	1950	1690	1500	1350	1410
14	610	790	864	1210	1430	3620	2390	2470	1640	1570	1570	1320
15	597	879	860	1130	1400	3660	2470	2710	1540	1490	1550	1320
16	629	1130	850	1100	1420	3620	2490	2920	1410	1330	1440	1400
17	660	1300	840	1250	1380	3530	2520	3270	1370	1320	1340	1380
18	656	1350	830	1480	1360	3350	2430	3350	1320	1230	2830	1330
19	650	1320	820	1700	1380	3140	2220	3360	1230	1120	3940	1380
20	733	1300	810	1810	1390	2930	2090	3410	1260	1400	4180	1350
21	792	1310	800	1870	1360	2700	2060	3450	1210	1870	4300	1270
22	799	1250	790	1830	1660	2590	2150	3400	1220	2280	4340	1280
23	834	1250	780	1720	2760	2510	2270	3240	1340	2800	4320	1360
24	837	1230	770	1630	3150	2380	2250	2990	1430	2930	4210	1390
25	838	1170	760	1610	3260	2310	2120	2740	1540	2920	4160	1460
26	861	1120	750	1730	3430	2250	2030	2550	1480	2900	3940	1490
27	828	1060	740	1880	3530	2140	1940	2450	1380	2900	3700	1410
28	796	1060	730	1890	3570	2040	1830	2420	1430	2630	3450	1280
29	741	1090	920	1800	---	2030	1760	2380	1610	2230	3160	1220
30	698	1050	1190	1710	---	2020	1740	2230	1750	1950	2840	1210
31	684	---	1350	1610	---	1990	---	2050	---	1820	2530	---
TOTAL	21916	29209	28488	44563	55280	91420	62860	72800	48030	54210	75390	44870
MEAN	707	974	919	1438	1974	2949	2095	2348	1601	1749	2432	1496
MAX	861	1350	1350	1890	3570	3660	2520	3450	2100	2930	4340	2260
MIN	597	659	730	953	1360	1990	1740	1500	1210	1060	1130	1210
CFSM	.51	.71	.67	1.04	1.43	2.14	1.52	1.71	1.16	1.27	1.77	1.09
IN.	.59	.79	.77	1.20	1.49	2.47	1.70	1.97	1.30	1.47	2.04	1.21

CAL YR 1989 TOTAL 456970 MEAN 1252 MAX 3500 MIN 597 CFSM .91 IN. 12.35
WTR YR 1990 TOTAL 629036 MEAN 1723 MAX 4340 MIN 597 CFSM 1.25 IN. 17.01

05517890 COBB DITCH NEAR KOUTS, IN

LOCATION.--Lat 41°20'19", long 87°04'30", in NW¼SE¼ sec. 2, T.33 N., R.6 W., Porter County, Hydrologic Unit 07120001, on left bank 15 ft upstream from bridge on County Road 50 West, 1.6 mi upstream from mouth, and 3 mi northwest of Kouts.

DRAINAGE AREA.--30.3 mi^2.

PERIOD OF RECORD.--July 1968 to current year. Prior to October 1971, published as State ditch near Kouts.

GAGE.--Water-stage recorder. Datum of gage is 652.00 ft above National Geodetic Vertical Datum of 1929 (Indiana Department of Highways bench mark). Prior to Oct. 19, 1978, water-stage recorder at site 1.4 mi downstream at same datum.

REMARKS.--Estimated daily discharges: Dec. 4, 13-28, Jan. 13, and 14. Records fair.

AVERAGE DISCHARGE.--22 years, 33.1 ft^3/s, 14.83 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,070 ft^3/s Nov. 19, 1985, Aug. 18, 1990; maximum gage height, 17.95 ft Mar. 29, 1985; minimum daily discharge, 8.9 ft^3/s Sept. 11, 12, 1977.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 300 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 23	0300	426	11.93	Aug. 18	1600	*1,070	*16.82
May 13	1500	506	12.65	Aug. 20	1700	448	12.13

Minimum daily discharge, 11 ft^3/s Dec. 27-31.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	15	18	12	24	37	28	22	28	23	24	34
2	15	15	18	13	78	38	30	22	28	22	23	33
3	15	15	17	15	55	40	29	21	27	22	23	31
4	15	16	17	25	39	33	27	58	25	21	42	30
5	15	16	17	26	32	31	26	60	26	21	31	30
6	15	15	17	21	28	31	25	41	26	21	26	29
7	15	16	17	19	26	29	24	33	25	21	24	31
8	15	16	17	19	25	40	23	27	55	21	24	29
9	15	16	17	19	24	151	23	25	41	20	23	29
10	15	16	17	19	23	108	28	130	32	25	22	28
11	15	15	17	19	22	156	42	58	29	26	22	27
12	15	15	16	18	21	78	35	52	28	24	24	27
13	15	16	15	16	21	58	29	336	27	23	27	27
14	15	16	15	16	20	47	64	140	27	22	23	30
15	15	28	14	16	22	41	51	77	26	22	22	29
16	15	52	14	19	23	36	38	109	25	22	22	27
17	16	33	14	38	23	33	32	193	25	22	23	26
18	15	25	14	47	23	30	29	92	24	21	876	26
19	16	23	14	32	26	28	27	66	24	22	562	26
20	18	22	13	26	24	27	27	59	24	120	361	26
21	19	20	13	25	23	27	46	51	24	65	204	28
22	17	20	13	24	175	30	36	45	25	88	129	30
23	17	19	12	23	270	42	30	40	25	56	98	27
24	16	19	12	22	117	32	28	37	24	41	78	26
25	16	19	12	70	78	29	26	36	23	46	65	28
26	16	18	12	70	63	27	25	39	23	34	57	27
27	16	19	11	44	40	26	24	36	23	29	51	25
28	16	19	11	35	42	25	23	33	22	27	46	25
29	16	18	11	28	---	25	23	30	25	27	42	25
30	16	18	11	25	---	31	22	29	23	26	38	25
31	16	---	11	23	---	29	---	28	---	25	36	---
TOTAL	487	590	447	824	1387	1395	920	2025	809	1005	3068	841
MEAN	15.7	19.7	14.4	26.6	49.5	45.0	30.7	65.3	27.0	32.4	99.0	28.0
MAX	19	52	18	70	270	156	64	336	55	120	876	34
MIN	15	15	11	12	20	25	22	21	22	20	22	25
CFSM	.50	.62	.45	.84	1.56	1.42	.97	2.06	.85	1.02	3.12	.88
IN.	.57	.69	.52	.97	1.63	1.64	1.08	2.38	.95	1.18	3.60	.99

CAL YR 1989 TOTAL 10507 MEAN 28.8 MAX 603 MIN 11 CFSM .91 IN. 12.33
WTR YR 1990 TOTAL 13798 MEAN 37.8 MAX 876 MIN 11 CFSM 1.19 IN. 16.19

05518000 KANKAKEE RIVER AT SHELBY, IN

LOCATION.--Lat 41°10'58", long 87°20'33", in SW¼NE¼ sec.33, T.32 N., R.8 W., Lake County, Hydrologic Unit 07120001, on right bank 25 ft upstream from Monon Railroad bridge, 1 mi south of Shelby, 7.7 mi upstream from Beaver Lake ditch, and at mile 67.9.

DRAINAGE AREA.--1,779 mi^2, of which 201 mi^2 does not contribute directly to surface runoff.

PERIOD OF RECORD.--October 1922 to current year. Monthly discharge only for some periods, published in WSP 1308.

REVISED RECORDS.--WSP 1005: 1928(M). WSP 2115: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 628.13 ft above National Geodetic Vertical Datum of 1929. 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.

REMARKS.--Estimated daily discharges: Dec. 15-30, and Jan. 2-8. Records good except for estimated daily discharges, which are fair.

AVERAGE DISCHARGE.--68 years, 1,636 ft^3/s, 12.49 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 7,650 ft^3/s Mar. 26, 1982; maximum gage height, 12.98 ft Mar. 24, 1982; minimum daily discharge, 260 ft^3/s Jan. 13-15, 1954.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,150 ft^3/s Aug. 23; gage height, 11.92 ft; minimum daily, 794 ft^3/s Oct. 15.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1010	877	1370	1650	2060	4070	2720	2110	2600	2070	2220	3540
2	985	878	1340	1500	2160	4100	2730	2010	2500	2070	1960	3180
3	950	893	1320	1400	2320	4120	2740	1940	2400	1930	1720	2880
4	933	874	1350	1250	2400	4070	2690	2040	2320	1760	1780	2630
5	927	845	1330	1300	2460	3990	2680	2240	2250	1610	1990	2460
6	921	851	1360	1430	2500	3900	2630	2240	2150	1490	2000	2290
7	915	931	1410	1580	2500	3800	2530	2250	2070	1370	1890	2190
8	904	917	1330	1620	2420	3690	2440	2200	2180	1270	1730	2160
9	891	941	1300	1690	2320	3770	2390	2140	2560	1230	1600	2080
10	888	919	1320	1670	2210	3910	2380	2170	2610	1190	1510	2010
11	843	918	1260	1670	2110	4140	2490	2230	2610	1380	1470	1930
12	845	993	1230	1650	2030	4260	2640	2190	2520	1620	1430	1820
13	860	1010	1250	1600	1960	4260	2770	2540	2310	1710	1560	1780
14	840	972	1160	1570	1900	4270	2890	3150	2150	1840	1760	1740
15	794	1080	1150	1490	1870	4290	3050	3320	2040	1820	1850	1700
16	818	1460	1120	1440	1890	4270	3080	3500	1890	1710	1790	1680
17	826	1740	1100	1550	1850	4220	3110	3850	1750	1600	1680	1690
18	872	1810	1080	1820	1810	4150	3110	4060	1690	1510	2940	1640
19	841	1780	1060	2010	1810	4040	2970	4090	1570	1370	4430	1630
20	909	1740	1040	2150	1830	3890	2810	4060	1540	1840	4820	1640
21	1020	1700	1020	2220	1810	3740	2700	4030	1530	2610	5090	1590
22	1040	1650	1000	2260	2120	3590	2650	4040	1510	2840	5070	1580
23	1060	1620	990	2210	3300	3480	2660	3970	1570	3480	5140	1600
24	1070	1630	970	2130	3810	3360	2730	3820	1650	3640	5120	1630
25	1070	1580	960	2110	3980	3200	2700	3650	1710	3620	5080	1660
26	1080	1500	940	2250	3960	3100	2600	3490	1740	3560	5020	1690
27	1070	1420	930	2300	3970	3010	2500	3310	1650	3480	4880	1680
28	1040	1400	920	2330	4020	2900	2400	3140	1610	3350	4700	1610
29	1010	1410	980	2300	---	2840	2270	3050	1790	3080	4480	1530
30	933	1420	1280	2220	---	2840	2170	2940	1990	2750	4200	1500
31	888	---	1560	2120	---	2770	---	2770	---	2450	3880	---
TOTAL	29053	37759	36430	56490	69380	116040	80230	92540	60460	67250	94790	58740
MEAN	937	1259	1175	1822	2478	3743	2674	2985	2015	2169	3058	1958
MAX	1080	1810	1560	2330	4020	4290	3110	4090	2610	3640	5140	3540
MIN	794	845	920	1250	1810	2770	2170	1940	1510	1190	1430	1500
CFSM	.53	.71	.66	1.02	1.39	2.10	1.50	1.68	1.13	1.22	1.72	1.10
IN.	.61	.79	.76	1.18	1.45	2.43	1.68	1.94	1.26	1.41	1.98	1.23

CAL YR 1989 TOTAL 573467 MEAN 1571 MAX 4770 MIN 726 CFSM .88 IN. 11.99
WTR YR 1990 TOTAL 799162 MEAN 2189 MAX 5140 MIN 794 CFSM 1.23 IN. 16.71

05519000 SINGLETON DITCH AT SCHNEIDER, IN

LOCATION.--Lat 41°12'44", long 87°26'44", in SW¼NW¼ sec.22, T.32 N., R.9 W., Lake County, Hydrologic Unit 07120001, on left bank 15 ft upstream from bridge on Ackerman Avenue, 0.5 mi upstream from Bruce ditch, 1.5 mi downstream from Cedar Creek, 1.6 mi north of Schneider, and at mile 10.1.

DRAINAGE AREA.--123 mi^2.

PERIOD OF RECORD.--July 1948 to current year.

REVISED RECORDS.--WSP 1915: 1956-59. WSP 2115: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 623.67 ft above National Geodetic Vertical Datum of 1929. 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.

REMARKS.--Estimated daily discharges: Dec. 12 to Jan. 3. Records good except those for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--42 years, 110 ft^3/s, 12.14 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,550 ft^3/s Mar. 5, 1976; maximum gage height, 12.37 ft June 25, 1975; minimum daily discharge, 3.6 ft^3/s Sept. 7, 8, 10, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 730 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 23	0600	*1,300	*8.50	May 13	1400	*1,300	*8.50
Mar. 11	0500	943	6.94	May 17	1400	1,020	7.31
May 10	1100	952	6.98	Aug. 20	1900	1,050	7.43

Minimum daily discharge, 37 ft^3/s Oct. 15, 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47	41	61	52	129	272	135	87	112	91	65	115
2	46	41	59	54	304	255	142	84	109	79	60	104
3	45	42	67	64	320	242	141	81	111	68	56	96
4	44	42	64	69	248	214	133	158	101	64	100	91
5	43	55	55	105	205	196	129	293	94	58	119	85
6	44	56	53	84	179	189	121	207	91	52	85	81
7	42	54	50	73	163	174	114	162	86	50	73	83
8	42	51	48	69	150	187	109	141	181	47	66	80
9	41	48	47	69	142	583	104	128	296	50	58	76
10	40	45	48	71	132	553	114	766	204	51	57	72
11	40	44	47	69	123	861	155	567	162	76	55	69
12	39	42	47	68	115	597	150	394	138	89	56	66
13	38	41	47	64	111	435	137	1010	123	73	74	64
14	38	41	47	60	107	345	200	838	118	69	63	66
15	37	65	46	57	111	290	237	549	114	65	57	67
16	37	159	46	60	120	247	193	577	104	63	53	64
17	39	149	46	123	119	217	166	882	99	59	52	61
18	39	115	45	193	116	192	145	691	91	54	530	61
19	40	99	45	164	132	170	133	483	81	52	898	64
20	52	94	45	135	131	157	129	386	80	202	956	63
21	59	87	45	128	126	147	134	315	78	265	908	63
22	56	80	44	125	504	148	131	263	82	234	674	68
23	52	76	43	116	1170	177	123	206	87	255	491	64
24	49	72	43	113	872	162	116	188	80	173	358	61
25	46	70	43	188	575	150	111	183	73	134	258	60
26	44	67	44	312	418	141	107	202	68	112	231	57
27	42	65	45	226	333	130	102	183	67	93	208	55
28	41	70	46	189	306	123	100	163	80	84	185	54
29	41	65	47	162	---	122	101	147	100	78	177	62
30	40	62	49	146	---	137	93	132	116	76	183	67
31	41	---	52	132	---	139	---	121	---	70	143	---
TOTAL	1344	2038	1514	3540	7461	7952	4005	10587	3326	2986	7349	2139
MEAN	43.4	67.9	48.8	114	266	257	133	342	111	96.3	237	71.3
MAX	59	159	67	312	1170	861	237	1010	296	265	956	115
MIN	37	41	43	52	107	122	93	81	67	47	52	54
CFSM	.35	.55	.40	.93	2.17	2.09	1.09	2.78	.90	.78	1.93	.58
IN.	.41	.62	.46	1.07	2.26	2.40	1.21	3.20	1.01	.90	2.22	.65

CAL YR 1989 TOTAL 43170 MEAN 118 MAX 1920 MIN 25 CFSM .96 IN. 13.06
WTR YR 1990 TOTAL 54241 MEAN 149 MAX 1170 MIN 37 CFSM 1.21 IN. 16.40

05521000 IROQUOIS RIVER AT ROSEBUD, IN

LOCATION.--Lat 41°02'00", long 87°10'49", in NW¼SW¼ sec.24, T.30 N., R.7 W., Jasper County, Hydrologic Unit 07120002, on right bank 100 ft downstream from bridge on county road, 0.5 mi north of Rosebud, 0.5 mi downstream from confluence of Swain and Dexter ditches, 1.5 mi upstream from Davidson ditch, 2 mi east of Parr, and at mile 93.5.

DRAINAGE AREA.--35.6 mi^2.

PERIOD OF RECORD.--July 1948 to current year.

REVISED RECORDS.--WSP 1338: 1950-53. WSP 1728: 1959-60(M). WSP 1915: 1949-60. WSP 2115: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 661.47 ft above National Geodetic Vertical Datum of 1929 (levels by State of Indiana, Department of Natural Resources). Prior to Oct. 1, 1953, nonrecording gage on downstream side of county road bridge at same datum.

REMARKS.--Estimated daily discharges: Dec. 9-12, 16-19, Dec. 30 to Jan. 5, and Feb. 4 to Mar. 3. Records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--42 years, 27.3 ft^3/s, 10.41 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 504 ft^3/s May 19, 1987; maximum gage height, 8.86 ft Feb. 10, 1959; minimum daily discharge, 0.5 ft^3/s Oct. 11, 12, 19, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges above base of 150 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 22	2200	*444	*6.25	July 20	2200	195	3.81
Mar. 9	1000	220	4.09	July 22	2100	344	5.35
Mar. 11	0100	402	5.88				

Minimum daily discharge, 8.6 ft^3/s Dec. 26.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	16	20	13	31	74	53	31	23	17	23	16
2	20	16	20	15	86	69	54	30	24	15	23	15
3	20	15	22	22	66	64	48	31	24	14	21	14
4	19	15	20	41	51	57	46	42	22	13	28	14
5	19	15	19	35	43	55	43	47	21	13	30	14
6	19	15	19	26	39	55	40	40	21	12	25	14
7	18	17	17	23	37	50	37	36	20	12	23	17
8	17	17	17	22	35	68	36	34	28	11	21	16
9	17	16	21	23	36	192	36	32	32	11	19	14
10	17	16	17	22	34	207	53	35	26	19	18	14
11	16	16	15	22	31	347	66	31	23	24	18	13
12	15	14	14	20	29	207	59	36	21	26	25	13
13	15	14	13	25	29	156	53	90	20	22	60	13
14	15	19	12	18	26	122	82	74	20	23	35	15
15	15	53	12	17	31	98	69	54	19	21	27	15
16	15	87	11	17	32	86	58	72	18	22	23	14
17	16	55	11	25	31	72	50	71	18	24	29	13
18	15	40	10	43	32	62	44	53	17	20	49	12
19	17	35	9.6	32	39	57	42	46	16	17	33	13
20	29	36	9.2	30	35	53	43	41	17	97	38	13
21	36	31	8.9	32	38	52	49	37	16	135	34	13
22	29	29	8.8	30	277	55	46	32	19	227	30	13
23	26	27	8.8	28	378	56	43	32	18	222	27	13
24	23	26	8.8	26	239	52	40	29	17	114	25	13
25	22	26	8.8	34	147	48	38	32	16	73	21	12
26	21	24	8.6	34	106	45	41	35	14	53	19	12
27	19	24	9.0	31	86	42	38	32	15	42	18	12
28	19	23	9.4	28	83	42	37	30	14	35	19	12
29	18	21	9.8	27	---	45	35	28	18	31	20	12
30	18	21	10	26	---	54	34	25	20	30	18	12
31	18	---	11	23	---	52	---	24	---	27	16	---
TOTAL	604	779	410.7	810	2127	2694	1413	1262	597	1422	815	406
MEAN	19.5	26.0	13.2	26.1	76.0	86.9	47.1	40.7	19.9	45.9	26.3	13.5
MAX	36	87	22	43	378	347	82	90	32	227	60	17
MIN	15	14	8.6	13	26	42	34	24	14	11	16	12
CFSM	.55	.73	.37	.73	2.13	2.44	1.32	1.14	.56	1.29	.74	.38
IN.	.63	.81	.43	.85	2.22	2.82	1.48	1.32	.62	1.49	.85	.42

CAL YR 1989 TOTAL 10393.2 MEAN 28.5 MAX 238 MIN 7.5 CFSM .80 IN. 10.86
WTR YR 1990 TOTAL 13339.7 MEAN 36.5 MAX 378 MIN 8.6 CFSM 1.03 IN. 13.94

05522000 IROQUOIS RIVER NEAR NORTH MARION, IN

LOCATION.--Lat 40°58'12", long 87°06'50", in NE¼NW¼ sec.16, T.29 N., R.6 W., Jasper County, Hydrologic Unit 07120002, on downstream side of county highway bridge, 1.2 mi upstream from Ryan ditch, 2 mi east of North Marion, 3.5 mi northeast of Rensselaer, and at mile 87.7.

DRAINAGE AREA.--144 mi^2.

PERIOD OF RECORD.--December 1948 to current year.

REVISED RECORDS.--WSP 2115: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 646.68 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 6, 1955, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Oct. 5 to Nov. 7, Dec. 3-5, Dec. 8 to Jan. 15, Feb. 23 to Mar. 1, Mar. 11-16, and July 23-25. Records good except for estimated daily discharges, which are poor. Water from Oliver ditch, an upstream tributary, can be diverted to Ryan ditch and thus enter the Iroquois River below station. Streamflow affected by irrigation. Variable backwater conditions exist on some rises.

AVERAGE DISCHARGE.--41 years (water years 1950 to current year), 134 ft^3/s, 12.64 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,040 ft^3/s June 10, 1958, gage height, 15.09 ft; minimum daily, 1.6 ft^3/s Sept. 15, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,300 ft^3/s Feb. 24, maximum gage height, 13.03 ft; minimum daily, 35 ft^3/s July 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	74	72	94	53	130	600	237	119	102	66	110	78
2	72	68	90	61	286	524	245	111	103	58	96	72
3	69	66	75	78	390	436	234	110	103	53	85	67
4	66	64	80	120	335	363	207	140	93	48	107	64
5	64	63	97	200	254	313	192	186	85	45	131	62
6	64	62	84	170	208	297	171	157	87	43	111	58
7	65	66	76	140	189	273	154	140	82	41	99	65
8	62	70	72	128	176	267	143	124	103	37	88	65
9	57	70	70	124	176	614	141	116	136	35	79	59
10	56	68	82	126	172	893	183	120	107	52	72	56
11	55	63	80	120	160	1160	301	116	92	86	69	55
12	54	61	70	100	145	1120	315	119	85	118	91	52
13	54	56	65	91	146	1000	268	326	78	96	379	51
14	55	66	61	108	140	840	321	474	71	99	365	53
15	56	131	57	95	132	720	412	399	76	92	200	60
16	52	290	54	85	197	540	359	339	65	95	128	54
17	53	312	50	111	182	458	293	362	66	139	123	51
18	56	231	48	188	175	358	235	319	61	101	248	47
19	54	172	46	185	201	300	203	250	57	84	426	51
20	70	164	44	157	197	260	198	211	61	315	449	51
21	110	153	43	163	193	235	252	179	63	600	379	49
22	145	137	41	159	661	225	256	161	73	708	281	54
23	130	129	41	146	1200	234	221	148	80	810	211	48
24	110	117	41	142	1300	223	193	139	73	770	166	46
25	100	116	41	150	1200	200	174	141	67	600	138	44
26	92	112	41	180	1000	185	172	165	60	565	118	43
27	88	108	41	164	860	172	163	156	58	360	104	42
28	84	115	41	147	720	167	152	140	55	193	96	42
29	81	100	43	136	---	168	139	126	64	148	110	42
30	80	90	45	130	---	205	128	113	76	152	97	42
31	77	---	48	117	---	226	---	105	---	136	86	---
TOTAL	2305	3392	1861	4074	11125	13576	6662	5811	2382	6745	5242	1623
MEAN	74.4	113	60.0	131	397	438	222	187	79.4	218	169	54.1
MAX	145	312	97	200	1300	1160	412	474	136	810	449	78
MIN	52	56	41	53	130	167	128	105	55	35	69	42
CFSM	.52	.79	.42	.91	2.76	3.04	1.54	1.30	.55	1.51	1.17	.38
IN.	.60	.88	.48	1.05	2.87	3.51	1.72	1.50	.62	1.74	1.35	.42

CAL YR 1989 TOTAL 49645 MEAN 136 MAX 979 MIN 25 CFSM .94 IN. 12.82
WTR YR 1990 TOTAL 64798 MEAN 178 MAX 1300 MIN 35 CFSM 1.23 IN. 16.74

05522500 IROQUOIS RIVER AT RENSSELAER, IN

LOCATION.--Lat 40°56'00", long 87°07'44", in NW¼SE¼ sec.29, T.29 N., R.6 W., Jasper County, Hydrologic Unit 07120002, on right bank 20 ft downstream from bridge on State Highway 114, 0.8 mi east of Rensselaer, 1.5 mi downstream from Ryan ditch, 5.5 mi upstream from Slough Creek, and at mile 84.9.

DRAINAGE AREA.--203 mi^2.

PERIOD OF RECORD.--July 1948 to current year.

REVISED RECORDS.--WSP 2115: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 642.29 ft above National Geodetic Vertical Datum of 1929 (levels by State of Indiana, Department of Natural Resources). Prior to July 8, 1949, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Dec. 13 to Jan. 3. Records good except for estimated daily discharges, which are poor. Streamflow affected by irrigation.

AVERAGE DISCHARGE.--42 years, 170 ft^3/s, 11.37 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,550 ft^3/s June 10, 1958, gage height, 16.54 ft; minimum daily, 2.2 ft^3/s Sept. 9, 15, 16, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,890 ft^3/s Feb. 23, gage height, 14.24 ft; minimum daily, 44 ft^3/s July 9.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	93	86	117	66	282	735	286	152	124	89	154	102
2	93	83	113	74	527	611	300	144	131	76	130	94
3	87	81	91	88	496	501	290	133	135	68	112	88
4	81	79	123	180	382	416	254	169	118	62	136	83
5	81	77	114	246	298	381	235	230	107	57	171	80
6	81	80	104	215	262	359	207	195	109	54	141	76
7	81	78	92	171	241	321	187	172	106	51	122	86
8	72	87	88	150	232	571	170	153	139	48	107	87
9	71	87	87	156	231	1020	164	140	181	44	98	80
10	71	84	104	154	217	1410	204	145	140	69	88	74
11	69	77	93	150	197	1670	385	138	118	125	84	71
12	68	75	85	127	189	1610	412	143	109	165	169	68
13	67	70	80	109	191	1490	345	464	102	117	607	67
14	71	83	76	133	171	1300	407	616	92	120	523	68
15	66	172	72	111	237	1020	553	499	94	111	297	77
16	64	405	66	108	271	773	481	445	83	113	188	70
17	66	405	62	140	243	580	370	464	87	173	178	65
18	70	301	58	241	262	440	286	406	78	125	364	61
19	68	226	56	241	283	357	249	320	73	100	574	65
20	109	219	54	207	263	305	242	270	78	531	611	65
21	178	200	52	215	479	275	319	225	80	823	530	62
22	174	179	50	212	1570	264	320	201	93	925	399	73
23	154	167	50	193	1860	269	272	182	109	1140	308	62
24	137	150	50	181	1860	261	239	170	96	1090	240	59
25	119	149	50	237	1680	234	210	172	85	892	197	57
26	111	143	50	229	1410	216	190	204	78	667	166	56
27	109	138	50	208	1140	202	177	195	74	438	144	55
28	103	147	52	184	914	193	167	174	71	255	131	55
29	103	127	54	176	---	195	160	156	82	198	149	55
30	99	113	56	159	---	235	154	137	104	236	133	55
31	92	---	60	149	---	269	---	127	---	202	114	---
TOTAL	2908	4368	2309	5210	16388	18483	8235	7341	3076	9164	7365	2116
MEAN	93.8	146	74.5	168	585	596	274	237	103	296	238	70.5
MAX	178	405	123	246	1860	1670	553	616	181	1140	611	102
MIN	64	70	50	66	171	193	154	127	71	44	84	55
CFSM	.46	.72	.37	.83	2.88	2.94	1.35	1.17	.51	1.46	1.17	.35
IN.	.53	.80	.42	.95	3.00	3.39	1.51	1.35	.56	1.68	1.35	.39

CAL YR 1989 TOTAL 60962 MEAN 167 MAX 1200 MIN 29 CFSM .82 IN. 11.17
WTR YR 1990 TOTAL 86963 MEAN 238 MAX 1860 MIN 44 CFSM 1.17 IN. 15.94

05523000 BICE DITCH NEAR SOUTH MARION, IN

LOCATION.--Lat 40°52'00", long 87°05'32", in NE¼NW¼ sec.22, T.28 N., R.6 W., Jasper County, Hydrologic Unit 07120002, on left bank at upstream side of bridge on State Highway 16, 2.3 mi upstream from mouth, 3 mi southeast of South Marion, and 5 mi southeast of Rensselaer.

DRAINAGE AREA.--21.8 mi^2.

PERIOD OF RECORD.--December 1948 to current year.

REVISED RECORDS.--WSP 1508: 1956. WSP 2115: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 651.30 ft above National Geodetic Vertical Datum of 1929. 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.

REMARKS.--No estimated daily discharges. Records good.

AVERAGE DISCHARGE.--41 years (water years 1950 to current year), 17.4 ft^3/s, 10.84 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,080 ft^3/s Mar. 4, 1979; maximum gage height, 14.02 ft June 13, 1958, at present datum; no flow at times during 1952, 1955, and 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 340 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 22	1700	*631	*10.74	Mar. 10	2300	600	10.46

Minimum daily discharge, 1.2 ft^3/s Dec. 24.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.6	6.1	5.2	3.1	19	46	23	8.4	6.8	8.8	4.5	3.1
2	4.6	5.7	4.9	3.0	91	42	23	7.9	9.4	6.1	3.7	2.8
3	3.8	5.1	4.3	3.6	64	37	19	7.9	20	4.8	3.1	2.5
4	3.4	5.1	4.5	19	48	29	18	13	10	3.7	28	2.4
5	3.4	5.1	5.1	17	37	27	16	22	8.3	3.2	93	2.2
6	3.9	4.8	4.5	12	31	25	13	17	7.5	2.8	32	2.1
7	3.6	5.1	3.5	9.5	28	22	12	14	6.4	2.6	17	2.5
8	3.4	6.6	3.1	9.6	25	30	11	12	10	2.5	10	2.6
9	3.4	6.5	3.3	11	24	107	11	11	10	2.5	6.4	2.3
10	3.4	5.7	3.6	11	21	207	30	12	7.2	10	4.8	2.1
11	3.3	4.8	3.2	11	18	430	54	11	5.9	16	4.0	2.0
12	3.2	4.4	2.6	8.0	15	172	39	16	5.6	18	4.2	2.0
13	3.1	4.2	2.5	5.4	16	98	30	54	5.3	15	15	1.9
14	3.3	5.1	2.4	5.5	13	73	58	38	5.1	24	12	2.3
15	3.5	14	2.1	5.2	27	54	48	28	4.7	21	6.8	3.5
16	3.5	39	1.7	5.5	56	43	35	50	4.5	19	5.0	3.1
17	3.8	25	1.5	9.4	50	34	27	53	4.4	13	4.8	2.8
18	3.7	16	1.5	17	46	26	20	34	4.2	8.5	7.7	2.8
19	3.9	13	1.6	14	61	22	19	26	4.1	7.2	6.7	3.0
20	7.2	15	1.8	15	47	19	20	20	5.2	24	127	3.0
21	24	12	1.8	20	47	19	32	15	5.0	30	88	3.0
22	27	10	1.5	18	399	19	28	12	5.7	31	80	3.0
23	19	9.0	1.4	15	419	18	22	11	6.8	30	46	3.1
24	15	8.1	1.2	14	185	16	19	9.5	6.1	15	27	3.1
25	13	8.3	1.3	24	93	15	16	12	5.2	9.7	17	3.1
26	11	7.7	1.5	25	64	13	15	20	5.0	6.8	11	3.2
27	10	7.6	1.6	21	54	12	14	16	5.7	5.3	8.3	3.2
28	9.1	7.6	1.7	16	55	12	13	13	5.9	4.4	6.6	3.2
29	8.3	5.3	1.8	15	---	14	11	10	11	6.1	5.3	3.3
30	7.8	5.3	1.9	13	---	20	9.8	8.3	14	11	4.3	3.4
31	7.5	---	2.5	11	---	22	---	7.3	---	6.6	3.6	---
TOTAL	227.7	277.2	81.1	386.8	2053	1723	705.8	589.3	215.0	368.6	692.8	82.6
MEAN	7.35	9.24	2.62	12.5	73.3	55.6	23.5	19.0	7.17	11.9	22.3	2.75
MAX	27	39	5.2	25	419	430	58	54	20	31	127	3.5
MIN	3.1	4.2	1.2	3.0	13	12	9.8	7.3	4.1	2.5	3.1	1.9
CFSM	.34	.42	.12	.57	3.36	2.55	1.08	.87	.33	.55	1.03	.13
IN.	.39	.47	.14	.66	3.50	2.94	1.20	1.01	.37	.63	1.18	.14

CAL YR 1989 TOTAL 4544.88 MEAN 12.5 MAX 320 MIN .27 CFSM .57 IN. 7.76
WTR YR 1990 TOTAL 7402.9 MEAN 20.3 MAX 430 MIN 1.2 CFSM .93 IN. 12.63

05524500 IROQUOIS RIVER NEAR FORESMAN, IN

LOCATION.--Lat 40°52'14", long 87°18'24", in NE¼SE¼ sec.15, T.28 N., R.8 W., Newton County, Hydrologic Unit 07120002, on right bank at downstream side of bridge on State Highway 55, 0.2 mi north of intersection of State Highways 16 and 55, 0.5 mi downstream from Mosquito Creek, 0.6 mi west of Foresman, 3 mi east of Brook, and at mile 72.7.

DRAINAGE AREA.--449 mi^2.

PERIOD OF RECORD.--December 1948 to current year.

REVISED RECORDS.--WSP 1338: 1953. WSP 1438: 1955. WSP 1508: 1956. WSP 2115: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 624.00 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 7, 1955, nonrecording gage 2.5 mi upstream at datum 3.54 ft higher.

REMARKS.--Estimated daily discharges: Dec. 13 to Jan. 3. Records good except for estimated daily discharges, which are fair.

AVERAGE DISCHARGE.--41 years (water years 1950 to current year), 387 ft^3/s, 11.70 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,930 ft^3/s June 14, 1958, gage height, 24.42 ft; minimum daily, 6.3 ft^3/s Sept. 10, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,260 ft^3/s Feb. 24; gage height, 20.99 ft; minimum daily, 88 ft^3/s Dec. 23-25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	228	197	217	118	326	2270	581	309	280	288	367	183
2	227	181	214	130	736	1870	618	282	277	224	297	167
3	215	173	188	160	1020	1580	609	270	322	177	252	157
4	196	168	213	289	1060	1340	563	305	328	151	247	147
5	187	168	226	494	986	1150	517	465	281	131	564	142
6	194	169	205	486	852	972	459	494	260	116	578	137
7	193	169	183	413	726	826	399	432	246	106	398	141
8	181	181	167	364	624	738	354	372	255	98	278	156
9	171	191	175	355	561	1050	333	330	346	89	215	152
10	167	186	192	338	508	1390	394	325	330	121	180	142
11	165	173	191	317	451	2770	705	331	275	281	160	135
12	160	163	151	291	388	3500	812	323	241	533	184	130
13	156	154	140	236	359	3460	785	679	223	443	536	125
14	154	161	130	271	342	3130	791	948	206	432	722	124
15	153	267	126	245	346	2740	908	975	194	406	644	132
16	147	639	118	215	551	2240	922	946	184	354	446	135
17	145	773	110	242	694	1810	857	995	175	394	315	126
18	147	709	103	374	692	1470	743	996	168	327	412	117
19	147	567	99	458	736	1220	633	896	154	251	546	115
20	176	478	95	427	762	985	564	772	159	612	704	120
21	290	419	93	436	726	788	608	643	164	1050	876	118
22	375	359	90	452	1420	661	673	529	166	1290	901	119
23	361	326	88	421	3380	594	655	442	194	1550	831	124
24	323	298	88	393	4170	546	594	388	197	1600	683	113
25	284	284	88	382	4110	504	525	365	176	1500	517	107
26	256	277	89	482	3610	460	474	429	161	1360	377	104
27	238	265	89	484	3130	420	441	466	153	1170	300	101
28	226	272	91	433	2730	391	410	433	147	922	258	99
29	220	247	95	380	---	391	375	382	173	645	239	100
30	214	219	100	354	---	451	334	330	265	520	240	103
31	209	---	109	318	---	528	---	297	---	484	208	---
TOTAL	6505	8833	4263	10758	35996	42245	17636	16149	6700	17625	13475	3871
MEAN	210	294	138	347	1286	1363	588	521	223	569	435	129
MAX	375	773	226	494	4170	3500	922	996	346	1600	901	183
MIN	145	154	88	118	326	391	333	270	147	89	160	99
CFSM	.47	.66	.31	.77	2.86	3.04	1.31	1.16	.50	1.27	.97	.29
IN.	.54	.73	.35	.89	2.98	3.50	1.46	1.34	.56	1.46	1.12	.32

CAL YR 1989 TOTAL 140163 MEAN 384 MAX 2290 MIN 64 CFSM .86 IN. 11.61
WTR YR 1990 TOTAL 184056 MEAN 504 MAX 4170 MIN 88 CFSM 1.12 IN. 15.25

05536179 HART DITCH AT DYER, IN

LOCATION.--Lat 41°30'28", long 87°30'36", in NE¼NE¼ sec.12, T.35 N., R.10 W., Lake County, Hydrologic Unit 07120003, on right bank 50 ft upstream from 213th Street in Dyer, 0.8 mi upstream from Dyer ditch.

DRAINAGE AREA.--37.6 mi^2.

PERIOD OF RECORD.--October 1989 to current year.

GAGE.--Water-stage recorder. Datum of gage is 607.38 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 11-18. Records good below 300 ft^3/s and fair above except for Oct. 11-18, which are poor. Low-flow affected by sewage effluent.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 927 ft^3/s Aug. 18, 1990, gage height, 7.95 ft; minimum daily, 2.3 ft^3/s Dec. 23-25, 1989.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 200 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 25	2300	277	5.02	May 13	1000	612	6.58
Feb. 23	0500	579	6.43	Aug. 18	0400	*927	*7.95
Mar. 9	1000	488	6.03	Aug. 20	1200	334	5.25
May 10	1500	648	6.75				

Minimum daily discharge, 2.3 ft^3/s Dec. 23-25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.5	6.8	9.8	4.4	27	55	27	9.8	13	10	4.5	9.4
2	4.9	6.3	8.5	5.8	123	62	29	8.5	11	7.0	4.3	7.4
3	3.7	6.0	8.2	4.6	99	83	27	8.1	10	5.4	3.9	7.0
4	3.1	5.7	8.2	17	68	57	25	78	9.0	4.6	24	7.1
5	3.3	5.8	8.7	41	49	46	23	90	8.6	4.4	16	6.9
6	3.3	6.6	8.4	33	38	55	21	51	7.9	3.6	7.5	6.6
7	3.5	7.9	7.5	23	33	47	17	34	8.0	3.2	5.6	9.6
8	3.4	6.6	7.3	18	29	109	15	23	29	3.5	4.8	6.9
9	3.7	7.1	6.4	18	31	405	15	26	70	2.7	4.4	5.9
10	4.1	5.9	6.8	20	23	270	20	575	37	4.5	4.0	5.9
11	3.7	6.1	7.0	19	20	355	24	216	21	14	4.0	5.1
12	3.6	5.7	5.9	14	17	173	20	154	15	11	8.6	4.3
13	3.5	5.7	5.6	13	16	103	18	490	12	5.9	15	4.3
14	3.5	7.7	4.8	12	15	71	71	243	13	4.7	7.7	6.2
15	3.5	64	4.0	10	15	55	67	129	12	4.6	5.1	6.1
16	4.0	136	3.2	12	16	43	42	147	9.2	4.8	4.8	6.0
17	6.6	65	2.5	93	16	34	32	191	8.1	4.5	10	5.3
18	3.8	37	2.4	136	16	26	25	124	6.9	4.0	312	5.3
19	13	27	2.6	67	19	23	21	80	6.0	5.8	54	5.0
20	24	25	2.8	45	20	18	28	72	5.5	15	203	5.4
21	30	22	2.7	40	23	17	76	52	6.2	20	124	11
22	22	19	2.4	33	201	36	40	40	6.3	14	70	9.3
23	15	17	2.3	28	499	81	28	31	8.3	12	46	6.7
24	11	15	2.3	27	230	44	23	24	7.7	8.5	34	5.7
25	9.6	14	2.3	131	119	32	19	30	5.8	6.4	28	4.9
26	8.3	12	2.7	179	92	29	18	61	4.6	5.6	24	4.8
27	8.5	13	2.8	88	64	21	15	43	4.6	5.5	20	4.3
28	7.3	12	3.2	60	61	19	13	30	4.5	5.1	17	4.1
29	7.7	10	3.5	42	---	20	12	23	9.5	5.9	16	4.2
30	6.2	10	3.7	33	---	34	11	18	17	7.4	15	5.9
31	6.9	---	4.1	26	---	30	---	15	---	5.0	11	---
TOTAL	239.2	587.9	152.6	1292.8	1979	2453	822	3116.4	386.7	218.6	1108.2	186.6
MEAN	7.72	19.6	4.92	41.7	70.7	79.1	27.4	101	12.9	7.05	35.7	6.22
MAX	30	136	9.8	179	499	405	76	575	70	20	312	11
MIN	3.1	5.7	2.3	4.4	15	17	11	8.1	4.5	2.7	3.9	4.1
CFSM	.21	.52	.13	1.11	1.88	2.10	.73	2.67	.34	.19	.95	.17
IN.	.24	.58	.15	1.28	1.96	2.43	.81	3.08	.38	.22	1.10	.18

WTR YR 1990 TOTAL 12543.0 MEAN 34.4 MAX 575 MIN 2.3 CFSM .91 IN. 12.41

05536190 HART DITCH AT MUNSTER, IN

LOCATION.--Lat 41°33'40", long 87°28'50", in SE¼NW¼ sec.20, T.36 N., R.9 W., Lake County, Hydrologic Unit 07120003, on left bank at city limits of Munster, 0.2 mi downstream from Ridge Road, and 0.4 mi upstream from mouth.

DRAINAGE AREA.--70.7 mi^2.

PERIOD OF RECORD.--September 1942 to current year.

REVISED RECORDS.--WDR IN-72-1: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 591.27 ft above National Geodetic Vertical Datum of 1929 (levels by State of Indiana, Department of Natural Resources). Since Sept. 11, 1959, auxiliary water-stage recorder 1,200 ft upstream from base gage, at same datum.

REMARKS.--Estimated daily discharges: Dec. 15-30, Feb. 23, 24, Mar. 9-12, May 10, 11, 13-15, and Aug. 18-22. Records good below 200 ft^3/s and poor above. Estimated daily discharges are poor. High flow occasionally in backwater from Little Calumet River.

AVERAGE DISCHARGE.--48 years, 63.3 ft^3/s, 12.16 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,670 ft^3/s Apr. 28, 1959; maximum gage height, 8.10 ft June 1, 1989; minimum daily discharge, 1.6 ft^3/s Dec. 24-26, 31, 1963, Jan. 1, 2, Sept. 4-9, 14-17, 1964.

EXTREMES FOR CURRENT YEAR.--Peak discharge greater than base discharge of 800 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 22	2400	1,210	4.36	May 13	1000	a 1,200	5.15
May 10	0800	1,340	4.70	Aug. 18	0200	*2,170	*6.77

a - Estimated.

Minimum daily discharge, 7.2 ft^3/s Dec. 23-25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	26	27	13	62	110	76	38	32	27	16	29
2	14	26	25	16	199	120	80	36	29	21	17	25
3	14	26	23	17	164	147	67	34	26	17	17	23
4	12	25	23	85	113	108	64	237	23	15	236	22
5	19	26	22	70	88	97	61	182	22	13	67	23
6	17	29	23	56	73	104	54	103	22	12	36	20
7	14	38	20	45	65	91	47	75	28	11	26	122
8	16	28	20	38	60	245	43	58	164	10	22	36
9	16	27	19	39	60	700	46	161	115	9.5	18	27
10	15	26	19	41	50	520	69	1100	64	43	24	24
11	14	26	20	39	45	670	66	500	41	136	20	22
12	13	25	18	32	41	350	58	424	32	39	57	20
13	13	24	18	28	41	213	52	1000	26	25	41	18
14	14	49	16	26	42	146	157	580	56	26	26	36
15	13	219	13	25	41	110	128	400	30	22	19	24
16	17	273	11	36	48	90	88	405	25	20	17	21
17	36	122	9.0	155	44	75	75	474	33	17	49	19
18	19	70	7.6	215	48	65	60	287	19	15	1000	17
19	51	55	7.8	109	54	58	53	184	16	82	420	18
20	87	51	8.8	80	50	50	100	149	18	148	900	17
21	63	45	8.7	74	56	47	228	105	24	65	600	52
22	47	40	7.7	64	560	124	116	81	35	82	440	32
23	37	39	7.2	56	1000	160	86	66	26	48	249	22
24	32	35	7.2	53	530	96	70	54	23	51	128	19
25	30	35	7.2	290	262	74	60	108	19	37	85	16
26	28	34	8.2	330	174	67	55	140	22	25	65	15
27	27	38	9.0	153	128	55	49	93	16	22	56	14
28	26	35	9.5	102	120	50	46	66	16	20	49	17
29	27	31	10	73	---	66	42	53	58	28	42	15
30	26	28	11	58	---	85	40	42	34	24	40	15
31	27	---	12	49	---	75	---	37	---	19	33	---
TOTAL	800	1551	447.9	2467	4218	4968	2236	7272	1094	1129.5	4815	780
MEAN	25.8	51.7	14.4	79.6	151	160	74.5	235	36.5	36.4	155	26.0
MAX	87	273	27	330	1000	700	228	1100	164	148	1000	122
MIN	12	24	7.2	13	41	47	40	34	16	9.5	16	14
CFSM	.37	.73	.20	1.13	2.13	2.27	1.05	3.32	.52	.52	2.20	.37
IN.	.42	.82	.24	1.30	2.22	2.61	1.18	3.83	.58	.59	2.53	.41

CAL YR 1989 TOTAL 25379.0 MEAN 69.5 MAX 1900 MIN 7.2 CFSM .98 IN. 13.35
WTR YR 1990 TOTAL 31778.4 MEAN 87.1 MAX 1100 MIN 7.2 CFSM 1.23 IN. 16.72

05536195 LITTLE CALUMET RIVER AT MUNSTER, IN

LOCATION.--Lat 41°34'07", long 87°31'18", in SE¼NW¼ sec.13, T.36 N., R.10 W., Lake County, Hydrologic Unit 07120003, on left bank 200 ft upstream from Hohman Street bridge at north city limits of Munster, 0.4 mi upstream from Indiana-Illinois State line, and 4.6 mi upstream from Thorn Creek.

DRAINAGE AREA.--90.0 mi^2. During times of floods on Deep River, flow may enter basin from eastern portion of Little Calumet River basin; or, during times of floods on Hart ditch, flow may leave the basin and enter eastern portion of the Little Calumet River basin.

PERIOD OF RECORD.--June 1958 to current year.

GAGE.--Water-stage recorder. Datum of gage is 580.72 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 1-4, Dec. 12 to Jan. 3, Jan. 5-16, Feb. 24-27, and Sept. 2-6, 17-20, 25-30. Records fair below 200 ft^3/s and poor above and those for estimated daily discharges, which are poor. Flow from eastern portion of Little Calumet River basin is diverted to Lake Michigan by Burns ditch.

AVERAGE DISCHARGE.--32 years, 73.5 ft^3/s, 11.09 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,510 ft^3/s Apr. 28, 1959, gage height, 13.67 ft; maximum gage height, 16.40 ft June 14, 1981; minimum daily discharge, 1.9 ft^3/s Aug. 20, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 664 ft^3/s Aug. 18, gage height, 12.09 ft; minimum daily, 8.0 ft^3/s Dec. 24, 25.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	21	28	14	61	129	62	30	37	31	21	31
2	15	19	26	16	130	120	69	29	33	21	20	28
3	14	19	22	18	136	123	62	27	29	19	21	27
4	13	17	27	97	105	109	58	175	28	17	161	25
5	16	17	21	78	88	97	56	163	26	17	99	24
6	20	19	22	62	74	95	52	97	26	16	64	23
7	16	31	21	50	65	88	47	73	29	15	43	106
8	16	24	21	42	58	146	44	57	127	14	27	52
9	15	20	20	41	55	386	44	88	96	15	21	30
10	15	20	21	43	51	350	57	585	67	44	21	23
11	14	17	22	42	47	428	57	528	49	137	34	21
12	13	17	19	35	45	309	55	333	35	60	67	20
13	12	15	19	31	42	221	53	585	27	38	65	20
14	13	28	17	27	44	179	96	566	60	28	41	42
15	12	192	14	27	61	147	102	375	36	26	27	30
16	13	212	12	35	49	119	84	312	26	22	22	24
17	34	131	9.4	93	46	96	74	311	31	20	42	22
18	18	97	8.3	143	48	80	63	278	22	18	547	20
19	28	76	8.4	99	52	69	56	240	19	64	368	19
20	79	61	9.2	80	49	56	69	210	18	190	465	20
21	60	54	9.2	70	51	49	159	172	19	96	454	50
22	51	49	8.6	62	244	88	108	138	33	113	374	48
23	41	46	8.2	55	507	118	86	112	26	75	311	30
24	33	39	8.0	50	400	90	70	90	22	59	256	24
25	29	37	8.0	172	280	72	61	105	20	60	206	21
26	26	35	8.8	248	208	63	55	132	34	35	164	19
27	24	39	9.2	147	168	54	47	102	19	26	132	17
28	24	40	10	115	147	48	40	80	18	21	107	20
29	24	35	11	95	---	55	35	65	62	28	87	24
30	23	30	12	77	---	67	31	52	39	31	68	21
31	23	---	13	63	---	64	---	43	---	26	48	---
TOTAL	750	1457	473.3	2227	3311	4115	1952	6153	1113	1382	4383	881
MEAN	24.2	48.6	15.3	71.8	118	133	65.1	198	37.1	44.6	141	29.4
MAX	79	212	28	248	507	428	159	585	127	190	547	106
MIN	12	15	8.0	14	42	48	31	27	18	14	20	17
CFSM	.27	.54	.17	.80	1.31	1.47	.72	2.21	.41	.50	1.57	.33
IN.	.31	.60	.20	.92	1.37	1.70	.81	2.54	.46	.57	1.81	.36

CAL YR 1989 TOTAL 23247.3 MEAN 63.7 MAX 1050 MIN 8.0 CFSM .71 IN. 9.61
WTR YR 1990 TOTAL 28197.3 MEAN 77.3 MAX 585 MIN 8.0 CFSM .86 IN. 11.65

The following table lists all discontinued stream-gaging stations in Indiana. Continuous daily streamflow records were collected and published for the period of record, shown in water years, for each station.

Station no.	Station name	County	Drainage area (mi^2)	Period of record
03275500	East Fork Whitewater River at Richmond	Wayne	121	1949-78
03277000	Laughery Creek near Farmers Retreat	Ohio	248	1941-73[a]
03303276	Friday Branch tributary near Saint Meinrad	Dubois	.096	1981[b]
03304000	Little Pigeon Creek near Tennyson	Warrick	187	1944-47
03322100	Pigeon Creek at Evansville	Vanderburgh	323	1960-85
03322500	Wabash River near New Corydon	Jay	262	1951-88
03326000	Mississinewa River near Eaton	Delaware	310	1952-71[b]
03329500	Wabash River at Delphi	Carroll	4,072	1940-71
03331000	Tippecanoe River near Warsaw	Kosciusko	126	1943-49
03332000	Tippecanoe River at Pulaski	Pulaski	1,089	1928-31
03332300	Little Indian Creek near Royal Center	White	35.0	1959-73[a]
03332400	Big Monon Creek near Francesville	Pulaski	152	1959-73[a]
03332500	Tippecanoe River near Monticello	White	1,732	1932-81[c]
03333500	Wildcat Creek at Greentown	Howard	168	1945-61
03335700	Big Pine Creek near Williamsport	Warren	323	1955-87
03339120	Coal Creek at Coal Creek	Fountain	214	1965-72
03339150	Little Vermilion River near Newport	Vermillion	237	1965-72
03339855	Sugar Creek tributary near Deer Mill	Montgomery	.45	1981[b]
03340000	Sugar Creek near Byron	Parke	670	1941-71[b]
03341000	Big Raccoon Creek at Mansfield	Parke	248	1939-58[d]
03341200	Little Raccoon Creek near Catlin	Parke	134	1957-71[d,e]
03341420	Brouilletts Creek near Universal	Vermillion	321	1966-71[b]
03341470	North Coal Creek near Terre Haute	Vigo	1.91	1974-76
03341570	Honey Creek near Riley	Vigo	5.79	1981[b]
03342150	West Fork Busseron Creek near Hymera	Sullivan	14.4	1966-86
03342250	Mud Creek near Dugger	Sullivan	11.9	1966-81
03342300	Busseron Creek near Sullivan	Sullivan	138	1966-86
03342350	Buttermilk Creek near Paxton	Sullivan	16.5	1966-73
03342360	Buttermilk Creek near Sullivan	Sullivan	17.6	1975-78
03342800	South Fork Smalls Creek at Bruceville	Knox	4.94	1972-75[b,e]
03348100	Killbuck Creek near Anderson	Madison	97.8	1964-68
03348500	White River near Noblesville	Hamilton	828	1915-26, 1929-74[b]
03349500	Cicero Creek near Arcadia	Hamilton	131	1955-76[a]
03349700	Little Cicero Creek near Arcadia	Hamilton	40.4	1956-76[a]
03350000	Cicero Creek near Cicero	Hamilton	196	1946-54
03350100	Hinkle Creek near Cicero	Hamilton	18.5	1956-76[a]
03351400	Sugar Creek near Middletown	Madison	5.80	1968-89
03352000	Lawrence Creek at Fort Benjamin Harrison	Marion	2.74	1952-56, 1958-69
03352200	Mud Creek at Indianapolis	Marion	42.4	1958-76[a]
03353160	Pleasant Run at Brookville Road at Indianapolis	Marion	10.1	1960-81
03353660	White River at Waverly	Morgan	2,026	1986-88
03355000	Bear Creek near Trevlac	Brown	6.94	1952-73[a]
03356000	Beanblossom Creek at Dolan	Monroe	100	1946-78
03356500	Beanblossom Creek near Bloomington	Monroe	112	1931-33
03357420	Big Walnut Creek at Greencastle	Putnam	216	1975-1982
03359500	Deer Creek near Putnamville	Putnam	59.0	1955-65, 1968-72
03359980	Jordan Creek near Jordan	Owen	25.9	1981[b]
03365000	Sand Creek near Brewersville	Jennings	155	1948-86
03366000	Graham Creek near Vernon	Jennings	77.2	1955-73
03367000	Muscatatuck River near Austin	Jackson	359	1932-43, 1944-71[f]
03367500	Stucker Creek near Austin	Scott	127	1932-33
03370000	Vernon Fork near Crothersville	Jackson	391	1932-33
03370500	Muscatatuck River near Tampico	Washington	960	1939
03371000	Muscatatuck River near Vallonia	Jackson	1,134	1932-33
03371600	South Fork Salt Creek at Kurtz	Jackson	38.2	1961-71[g]
03371650	North Fork Salt Creek at Nashville	Brown	76.1	1962-76[a]
03372000	North Fork Salt Creek near Belmont	Brown	120	1946-71
03372700	Clear Creek near Harrodsburg	Monroe	55.2	1960-71
03373000	Salt Creek near Peerless	Lawrence	573	1939-50, 1957-71[d]
03373200	Indian Creek near Springville	Lawrence	60.7	1961-73[a]
03374100	White River at Hazleton	Gibson	11,305	1928-38[h]
03376000	Patoka River near Jasper	Dubois	348	1944-47[e]
03376260	Flat Creek near Otwell	Pike	21.3	1965-1982
03376279	Little Flat Creek near Otwell	Dubois	6.56	1981[b]
03376350	South Fork Patoka River near Spurgeon	Pike	42.8	1964-86
03378500	Wabash River at New Harmony	Posey	29,234	1939-47[h]

Station no.	Station name	County	Drainage area (mi^2)	Period of record
	STREAMS TRIBUTARY TO LAKE MICHIGAN			
04090500	Dunes Creek at Porter	Porter	3.40	1979-1982
04095100	Derby ditch at Beverly Shores	Porter	4.64	1980
04097970	Lime Lake outlet at Panama	Steuben	17.5	1969-86
04098000	Fawn River at Orland	Steuben	86.4	1943-47
04099500	Pigeon Creek and Hogback Lake near Angola	Steuben	103	1946-74
04099610	Pretty Lake Inlet near Stroh	Lagrange	1.96	1963-80
04100000	Christiana Creek at Elkhart	Elkhart	127	1947-52
04100220	North Branch Elkhart River near Cosperville	Noble	134	1951-71
04100465	Turkey Creek at Syracuse	Kosciusko	43.8	1969-87
	STREAMS TRIBUTARY TO LAKE ERIE			
04178500	St. Joseph River at Hursh	Allen	734	1950-54
04179000	St. Joseph River at Cedarville	Allen	763	1931-32, 1956-81
04179500	Cedar Creek near Auburn	DeKalb	87.3	1943-73[a]
04182700	St. Marys River at Fort Wayne	Allen	810	1905-06
	UPPER MISSISSIPPI RIVER BASIN			
05515400	Kingsbury Creek near LaPorte	LaPorte	7.08	1970-86
05516000	Yellow River near Bremen	Marshall	135	1955-73[a]
05518500	Singleton ditch near Hebron	Lake	34.2	1949-51
05519500	West Creek near Schneider	Lake	54.7	1948-52, 1954-72
05520000	Singleton ditch at Illinoi, IL	Kankakee, IL	220	1945-77
05521500	Oliver ditch near Aix	Jasper	79.6	1948-51
05523500	Slough Creek near Collegeville	Jasper	83.7	1948-52 1953-82
05524000	Carpenter Creek at Egypt	Jasper	44.8	1948-52 1953-82

[a]Continued as a crest-stage and low-flow partial-record station through 1984.
[b]Some quality of water data available.
[c]Records of daily discharges furnished by Northern Indiana Public Service Company.
[d]Continued as a stage only station through 1984.
[e]Some record fragmentary.
[f]High-water records only.
[g]Stage only station 1972-75.
[h]Some quality of water data available after station discontinued for stream-gaging records.

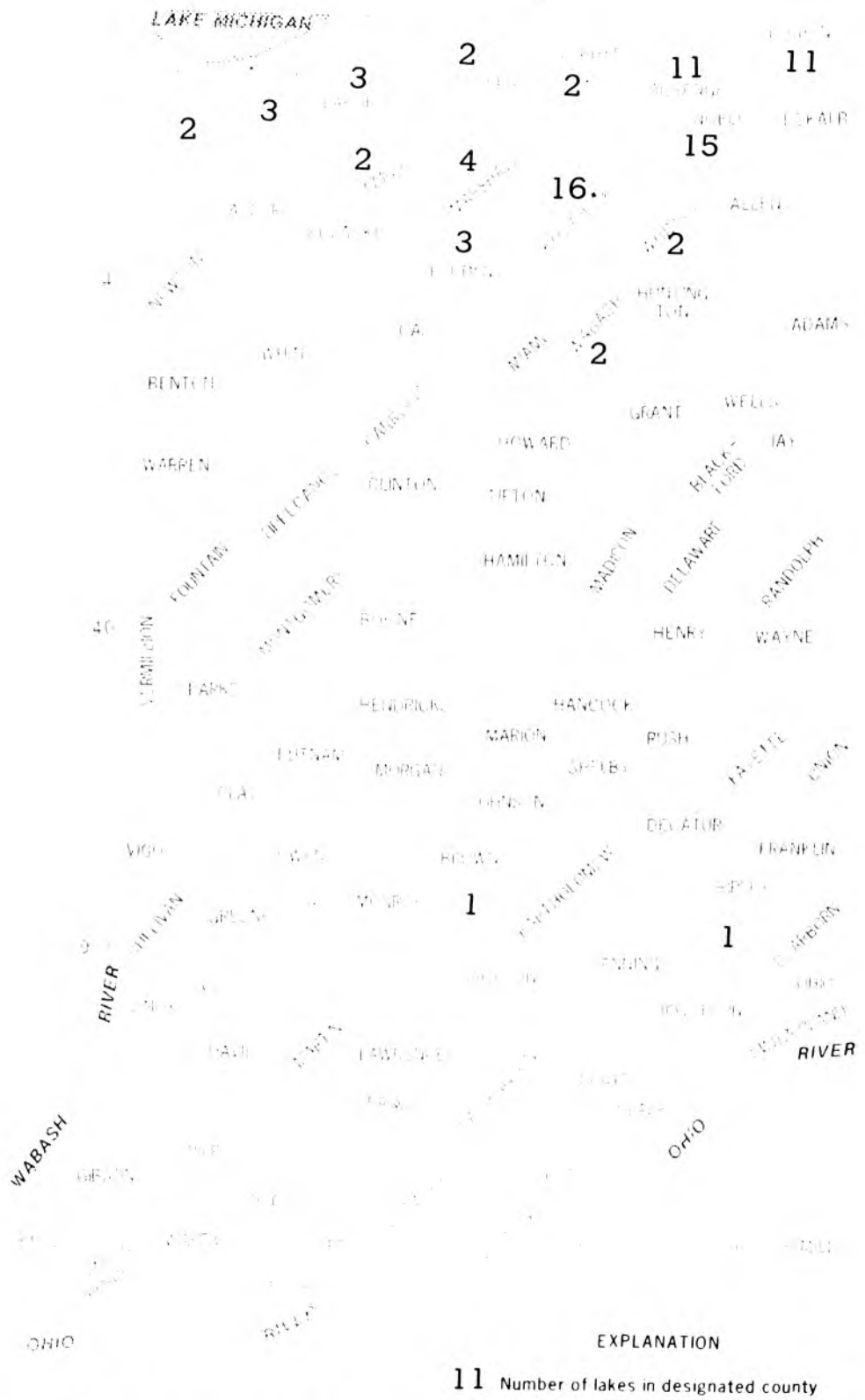


Figure 6.-- Number of lakes by county having 1990 water-level records.

04100030 ADAMS LAKE NEAR WOLCOTTVILLE, IN

LOCATION.--Lat 41°33'15", long 86°19'11", in NE¼NE¼NW¼ sec.25, T.36 N., R.10 E., Lagrange County, Hydrologic Unit 04050001 (WOLCOTTVILLE, IN quadrangle). The gage is on the east side of the lake on a dredged inlet, at the public access site, and 3.1 mi northeast of Wolcottville.

SURFACE AREA.--308 acres.

DRAINAGE AREA.--5.62 mi^2.

PERIOD OF RECORD.--1946 to current year.

DATUM OF GAGE.--949.90 ft above National Geodetic Vertical Datum of 1929, as corrected on the basis of levels of the Indiana Department of Natural Resources, 1976.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage is attached to the southwest wall of the dam on the outlet channel about 500 ft downstream from the lake.

ESTABLISHED LEGAL LEVEL.--3.59 ft gage datum or 953.59 ft above National Geodetic Vertical Datum of 1929 as decreed on December 17, 1949, by the Lagrange County Circuit Court. Minor errors were subsequently discovered in the establishment of the datum of the gage (see "DATUM OF GAGE") and the correct elevation of the legal level should be 3.59 ft gage datum or 953.49 ft above National Geodetic Vertical Datum of 1929.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete dam with a fixed crest "V" notch weir.

INLET AND OUTLET.--One inlet enters on the east side from Blackman Lake 2.3 mi upstream. The other inlet enters on the northeastern shore from Eve Lake. The outlet flows from the lake on the southern shore and into Little Elkhart Creek 1.7 mi downstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 5.32 ft June 15, 1981; minimum stage, 2.12 ft Jan. 8, 1954.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	3.74	3.65	3.77	3.77	4.16	4.43	4.14	4.10	4.48	4.14	3.86	3.94
10	3.69	3.68	3.76	3.77	4.14	4.43	4.14	4.08	4.52	3.98	3.77	3.99
15	3.66	3.81	3.77	3.77	4.13	4.47	4.17	4.26	4.40	3.96	3.93	4.03
20	3.69	3.85	3.77	4.15	4.10	4.36	4.16	4.64	4.21	3.93	4.06	3.98
25	3.70	3.82	3.77	4.12	4.68	4.22	4.18	4.56	4.12	3.95	4.11	3.94
EOM	3.68	3.81	3.77	4.06	4.61	4.17	4.12	4.46	4.23	3.84	4.03	3.90

WTR YR 1990 MEAN 4.04 MAX 4.68 MIN 3.62

STREAMS TRIBUTARY TO LAKE ERIE

04177680 BALL LAKE NEAR HAMILTON, IN

LOCATION.--Lat 41°32'12", long 84°56'18", in SE¼SW¼NE¼ sec.32, T.36 N., R.14 E., Steuben County, Hydrologic Unit 04100003 (HAMILTON, IN quadrangle). The gage is on the northeastern shore of the lake, south of the bridge over the outlet, and 1.3 mi west of Hamilton.

SURFACE AREA.--87 acres.

DRAINAGE AREA.--11.6 mi^2.

PERIOD OF RECORD.--1961 to current year.

DATUM OF GAGE.--889.81 ft above National Geodetic Vertical Datum of 1929, as corrected on the basis of levels of the Indiana Department of Natural Resources in February 1972.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage is driven into the lake bed near the recording gage and a high-water staff gage is attached to the control dam.

ESTABLISHED LEGAL LEVEL.--4.95 ft gage datum or 894.76 ft above National Geodetic Vertical Datum of 1929 as decreed on September 20, 1974, by the Steuben County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete sill with movable boards.

INLET AND OUTLET.--Fish Creek flows through the lake, entering at the western end and leaving at the northeastern end. Fish Creek empties into the St. Joseph River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 10.02 ft Dec. 26, 1965; minimum stage, 3.96 ft Oct. 19-31, Nov. 1-12, 1978.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.79	4.81	4.83	4.84	4.86	4.96	4.90	4.91	4.92	4.79	4.79	4.79
10	4.81	4.82	4.83	4.84	4.90	5.22	5.24	4.83	4.98	4.78	4.76	4.79
15	4.81	5.0.	4.84	4.84	4.91	4.97	4.94	5.23	4.84	4.78	4.97	4.83
20	4.84	4.88	4.84	4.84	4.89	4.90	4.99	5.02	4.80	4.81	4.98	4.82
25	4.83	4.85	4.84	4.84	5.50	4.88	4.89	5.00	4.80	4.81	4.85	4.80
EOM	4.82	4.84	4.84	4.85	5.36	4.94	4.85	4.86	4.90	4.76	4.80	4.79

WTR YR 1990 MEAN 4.89 MAX 6.71 MIN 4.75

05517200 BASS LAKE AT BASS LAKE, IN

LOCATION.--Lat 41°12'28", long 86°36'07", in NW¼NW¼SW¼ sec.24, T.32 N., R.2 W., Starke County, Hydrologic Unit 07120001 (BASS LAKE, IN quadrangle). The gage is on the southern shore of the lake, just north of the junction of U.S. Highway 35 and State Highway 10, at the town of Bass Lake.

SURFACE AREA.--1,400 acres.

DRAINAGE AREA.--5.18 mi^2.

PERIOD OF RECORD.--1943 to current year.

DATUM OF GAGE.--699.83 ft above National Geodetic Vertical Datum of 1929, as corrected from the unadjusted elevations.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage in two sections is at the site.

ESTABLISHED LEGAL LEVEL.--13.65 ft gage datum or 713.65 ft above National Geodetic Vertical Datum of 1929 as decreed on August 10, 1948, by the Starke County Circuit Court. Minor errors were subsequently discovered in the establishment of the datum of the gage (see "DATUM OF GAGE") and the correct elevation of the legal level should be 13.65 ft gage datum or 713.48 ft above National Geodetic Vertical Datum of 1929.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a steel sheet piling dam.

INLET AND OUTLET.--Several small unnamed ditches enter the lake at various locations. The outlet flows from the western shore, into Cedar Lake ditch, and eventually into the Kankakee River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 15.03 ft June 18, 1981; minimum stage, 10.52 ft Nov. 12, 13, 1964.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	13.25	13.05	13.09	13.13	13.31	13.69	13.91	14.02	14.01	13.92	13.99	14.08
10	13.19	13.06	13.08	13.14	13.36	13.84	13.96	13.96	14.08	13.87	13.89	14.07
15	13.10	13.23	13.07	13.12	13.45	13.89	14.01	14.10	14.00	13.90	13.96	14.04
20	13.13	13.17	13.09	13.20	13.42	13.84	14.06	14.14	13.91	14.06	14.27	14.00
25	13.13	13.13	13.11	13.26	13.66	13.83	14.07	14.13	13.92	14.08	14.22	13.96
EOM	13.08	13.10	13.11	13.24	13.67	13.90	14.01	14.06	14.02	14.00	14.15	13.91

WTR YR 1990 MEAN 13.66 MAX 14.27 MIN 13.01

STREAMS TRIBUTARY TO LAKE MICHIGAN

04100260 BEAR LAKE NEAR WOLFLAKE, IN

LOCATION.--Lat 41°19'07", long 85°30'49", in SW¼NW¼ sec.17, T.33 N., R.9 E., Noble County, Hydrologic Unit 04050001 (ORMAS, IN quadrangle). The gage is on the southern shore of the lake on a dredged channel, at the end of the gravel lane to the Merry Lea Nature Center, 1.1 mi southwest of the town of Wolflake.

SURFACE AREA.--136 acres.

DRAINAGE AREA.--6.98 mi^2.

PERIOD OF RECORD.--1943 to current year.

DATUM OF GAGE.--889.90 ft above National Geodetic Vertical Datum of 1929, as corrected on the basis of levels of the Indiana Department of Natural Resources, 1974-75.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well on the west side of the dredged channel.

ESTABLISHED LEGAL LEVEL.--4.60 ft gage datum or 894.60 ft above National Geodetic Vertical Datum of 1929 as decreed on September 23, 1959, by the Noble County Circuit Court. Minor errors were subsequently discovered in the establishment of the datum of the gage (see "DATUM OF GAGE") and the correct elevation of the legal level should be 4.60 ft gage datum or 894.50 ft above National Geodetic Vertical Datum of 1929.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a steel sheet piling dam.

INLET AND OUTLET.--There are two inlets to the lake, one enters on the southwest shore from High Lake, 0.6 mi upstream, and the other enters from the northeast. The outlet, Carrol Creek, leaves the lake on the southeast tip, flows into Muncie Lake, 3.1 mi downstream, and eventually into the Elkhart River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 8.25 ft Dec. 30, 1942 (before dredging of the outlet channel). Maximum stage, 6.61 ft Apr. 12, 1944 (after dredging); minimum stage, 2.90 ft Oct. 31, Nov. 1-3, 7-17, 1952, October 22-24, 29-31, Nov. 1-3, 6, 7, 1966.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.25	4.32	4.37	4.54	4.66	4.69	4.52	4.52	4.56	4.37	4.48	4.72
10	4.22	4.33	4.36	4.52	4.59	4.71	4.59	4.48	4.61	4.32	4.37	4.69
15	4.19	4.49	4.36	4.46	4.59	4.61	4.61	4.80	4.48	4.45	4.59	4.63
20	4.27	4.47	4.36	4.64	4.54	4.48	4.59	4.90	4.37	4.50	4.87	4.56
25	4.34	4.42	4.34	4.55	5.05	4.36	4.50	4.78	4.39	4.74	4.83	4.48
EOM	4.35	4.41	4.42	4.41	4.87	4.60	4.44	4.57	4.44	4.49	5.00	4.40

WTR YR 1990 MEAN 4.52 MAX 5.11 MIN 4.19

03331010 BIG CHAPMAN LAKE NEAR WARSAW, IN

LOCATION.--Lat 41°16'53", long 85°46'47", in NW¼SE¼SW¼ sec.25, T.33 N., R.6 E., Kosciusko County, Hydrologic Unit 05120106 (LEESBURG, IN quadrangle). The gage is on the southeastern shore of the lake, at the public fishing site, 4.9 mi northeast of Warsaw.

SURFACE AREA.--581 acres.

DRAINAGE AREA.--4.17 mi^2.

PERIOD OF RECORD.--1945-68, 1971, 1976 to current year.

DATUM OF GAGE.--820.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder and an electric tape gage (ETG) are installed in an aluminum shelter over a 15-inch diameter stilling well.

ESTABLISHED LEGAL LEVEL.--7.75 ft gage datum or 827.75 ft above National Geodetic Vertical Datum of 1929 as established on October 18, 1949, by the Kosciusko County Circuit Court. Little Chapman Lake has the same control structure and established level and hence the same lake levels for the period of record.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete dam with a fixed crest at the outlet channel downstream from Little Chapman Lake.

INLET AND OUTLET.--Several small ditches enter the lake at various points. The outlet flows into Little Chapman Lake to the south, then into Deeds Creek, and eventually into the Tippecanoe River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 9.37 ft Oct. 11, 1954; minimum stage, 6.75 ft Oct. 20, 1953.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.35	7.46	7.65	7.67	7.76	7.82	7.73	7.55	7.49	7.55	7.50	7.50
10	7.33	7.49	7.63	7.67	7.73	7.91	7.78	7.51	7.57	7.44	7.41	7.63
15	7.32	7.74	7.64	7.65	7.79	7.87	7.77	7.71	7.51	7.49	7.56	7.67
20	7.44	7.73	7.60	7.77	7.76	7.75	7.81	7.86	7.45	7.59	7.82	7.59
25	7.44	7.68	7.58	7.78	8.13	7.70	7.68	7.70	7.49	7.70	7.75	7.55
EOM	7.47	7.67	7.60	7.69	7.99	7.73	7.55	7.55	7.58	7.50	7.61	7.54

WTR YR 1990 MEAN 7.63 MAX 8.29 MIN 7.32

WABASH RIVER BASIN

03330040 BIG LAKE NEAR WOLFLAKE, IN

LOCATION.--Lat 41°16'33", long 85°30'43", in NW¼SE¼NW¼ sec.32, T.33 N., R.9 E., Noble County, Hydrologic Unit 05120106 (ORMAS, IN quadrangle). The gage is at the head of the outlet channel, approximately 20 feet north of the control structure and 4 mi southwest of the town of Wolflake.

SURFACE AREA.--228 acres.

DRAINAGE AREA.--8.89 mi^2.

PERIOD OF RECORD.--1943-74, 1978 to current year.

DATUM OF GAGE.--890.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well.

ESTABLISHED LEGAL LEVEL.--8.40 ft gage datum or 898.40 ft above National Geodetic Vertical Datum of 1929 as decreed on July 18, 1956, by the Noble County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a steel sheet piling dam with a fixed crest.

INLET AND OUTLET.--The main inlet enters from Crooked Lake to the east. Three other inlets flow from Crane Lake to the east, Green Lake to the north, and Sell Brook to the south. The outlet leaves the lake at the extreme west end and forms the headwaters of the Tippecanoe River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 12.76 ft Apr. 4, 1950; minimum stage, 7.12 ft Aug. 24, 1987.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.02	8.08	8.17	8.20	8.42	8.72	8.33	8.28	8.43	8.20	8.34	8.46
10	7.99	8.09	8.17	8.33	8.31	8.53	8.45	8.24	8.58	8.17	8.21	8.33
15	7.96	8.22	8.17	8.26	8.37	8.51	8.47	8.49	8.26	8.25	8.52	8.37
20	8.04	8.20	8.17	8.48	8.37	8.31	8.39	9.15	8.19	8.31	8.49	8.27
25	8.09	8.18	8.17	8.36	10.11	8.26	8.32	8.58	8.24	8.65	8.33	8.21
EOM	8.10	8.18	8.17	8.26	9.57	8.37	8.24	8.25	8.37	8.24	9.23	8.18

WTR YR 1990 MEAN 8.35 MAX 10.11 MIN 7.96

04099600 BIG LONG LAKE NEAR STROH, IN

LOCATION.--Lat 41°33'17", long 85°13'47", in NE¼NW¼NW¼ sec.26, T.36 N., R.11 E., Lagrange County, Hydrologic Unit 04050001 (STROH, IN quadrangle). The gage is on the northeast shore near the east end of the Shady Nook Addition in the vicinity of the Shady Nook Tavern, 2.4 mi southwest of Stroh.

SURFACE AREA.--388 acres.

DRAINAGE AREA.-- 4.77 mi^2.

PERIOD OF RECORD.--1954 to current year.

DATUM OF GAGE.--950.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well.

ESTABLISHED LEGAL LEVEL.--6.21 ft gage datum or 956.21 ft above National Geodetic Vertical Datum of 1929 as decreed on July 22, 1965, by the Lagrange County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete dam with a fixed sill and removable boards.

INLET AND OUTLET.--The one inlet is a small ditch that enters at the extreme western tip. The outlet flows from the extreme northern tip, northeastward to Mud and Little Turkey Lakes, thence to Turkey Creek.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 7.49 ft Mar. 31, 1978; minimum stage, 4.58 ft Nov. 27, 1964.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.07	5.96	6.12	6.24	6.30	6.36	6.26	6.22	6.29	6.18	6.17	6.11
10	6.03	6.00	6.11	6.23	6.27	6.41	6.33	6.21	6.32	6.09	6.00	6.14
15	5.97	6.21	6.11	6.19	6.31	6.42	6.30	6.40	6.20	6.15	6.20	6.16
20	6.10	6.20	6.12	6.30	6.26	6.35	6.34	6.45	6.15	6.21	6.33	6.17
25	6.00	6.15	6.12	6.29	6.59	6.31	6.25	6.45	6.12	6.21	6.26	6.13
EOM	6.00	6.14	6.24	6.21	6.49	6.33	6.17	6.24	6.30	6.08	6.17	6.12

WTR YR 1990 MEAN 6.21 MAX 6.63 MIN 5.96

STREAMS TRIBUTARY TO LAKE MICHIGAN

04100140 BIXLER LAKE AT KENDALLVILLE, IN

LOCATION.--Lat 41°26'13", long 85°15'10", in NE¼NE¼NE¼ sec.4, T.34 N., R.11 E., Noble County, Hydrologic Unit 04050001 (KENDALLVILLE, IN quadrangle). The gage is on the south bank of the outlet channel on the southwest shore of the lake and 0.7 mi southeast of City Hall in Kendallville.

SURFACE AREA.--120 acres.

DRAINAGE AREA.--5.28 mi^2.

PERIOD OF RECORD.--1946 to current year.

DATUM OF GAGE.--960.10 ft above National Geodetic Vertical Datum of 1929, as corrected on the basis of levels of the Indiana Department of Natural Resources, 1974-75.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage is bolted to a concrete pier 20 ft upstream from from the control dam.

ESTABLISHED LEGAL LEVEL.--3.65 ft gage datum or 963.65 ft above National Geodetic Vertical Datum of 1929 as decreed on April 25, 1952, by the Noble County Circuit Court. Minor errors were subsequently discovered in the establishment of the datum of the gage (see "DATUM OF GAGE") and the correct elevation of the legal level should be 3.65 ft gage datum or 963.75 ft above National Geodetic Vertical Datum of 1929.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a fixed deep-notch concrete dam with two flood gates.

INLET AND OUTLET.--Riddle ditch enters the lake from the north, Sherman ditch from the east, Shaffer ditch from the southeast, and an unnamed ditch from the southwest. The outlet leaves at the southwest corner and flows into Henderson Lake 1.9 mi downstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 6.26 ft Feb. 24, 1985; minimum stage, 1.24 ft Jan. 13-15, 18, 1954.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	3.85	3.82	3.14	3.76	4.17	---	---	3.73	4.04	3.77	4.15	3.86
10	3.79	3.82	3.01	3.64	3.95	---	---	3.69	5.00	3.73	4.07	4.01
15	3.73	4.11	3.03	3.37	3.72	---	---	4.66	4.19	4.09	4.56	4.10
20	3.81	4.20	3.02	4.15	3.64	---	---	4.93	3.60	4.24	3.75	4.14
25	3.90	3.79	3.01	4.13	---	---	---	4.34	3.71	4.25	3.54	4.14
EOM	3.87	3.44	3.10	3.81	---	---	---	3.84	4.34	3.99	3.88	4.09

WTR YR 1990 MEAN 3.89 MAX 5.72 MIN 3.01

03327600 BLUE LAKE NEAR CHURUBUSCO, IN

LOCATION.--Lat 41°14'30", long 85°21'04", in SW¼NE¼SE¼ sec.10, T.32 N., R.10 E., Whitley County, Hydrologic Unit 05120104 (CHURUBUSCO, IN quadrangle). Gage is located on a dredged channel at the extreme east end of the lake, approximately 2.0 mi west of Churubusco.

SURFACE AREA.--239 acres.

DRAINAGE AREA.--3.58 mi^2.

PERIOD OF RECORD.--1946-68, 1976 to current year.

DATUM OF GAGE.--840.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder installed in an aluminum shelter over a 15-inch diameter stilling well.

ESTABLISHED LEGAL LEVEL.--10.28 ft gage datum or 850.28 ft above National Geodetic Vertical Datum of 1929 as decreed on July 23, 1948, by the Whitley County Circuit Court.

LAKE-LEVEL CONTROL.--A concrete dam with a fixed crest is located in the outlet channel about 300 ft downstream from the lake.

INLET AND OUTLET.--Maloney ditch enters at the eastern tip of the lake. The outlet flows from the lake at the northwest end and joins Carter Creek (Blue River) 0.2 mi downstream. Carter Creek eventually flows into Eel River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 15.80 ft Dec. 10, 1966; minimum stage, 7.64 ft Nov. 19, 20, 1952.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	9.64	9.86	10.00	10.15	10.98	10.01	9.91	10.25	9.79	9.91	10.27
10	---	9.63	9.83	9.99	10.08	10.71	10.09	9.87	10.50	9.69	9.77	10.08
15	---	9.78	9.83	9.92	10.14	10.50	10.11	9.94	10.21	9.77	9.97	10.14
20	---	9.81	9.79	10.11	10.28	10.23	10.03	10.16	10.02	9.88	10.10	10.04
25	9.70	9.80	9.76	10.08	11.79	9.99	9.99	10.07	9.97	10.03	10.32	9.94
EOM	9.69	9.85	9.80	9.99	11.52	10.03	9.89	9.97	9.96	9.89	10.75	9.94

WTR YR 1990 MEAN 10.06 MAX 11.85 MIN 9.61

STREAMS TRIBUTARY TO LAKE MICHIGAN

04099250 BOWER LAKE NEAR PLEASANT LAKE, IN

LOCATION.--Lat 41°36'03", long 85°03'24", in SW¼SW¼SE¼ sec.5, T.36 N., R.13 E., Steuben County, Hydrologic Unit 04050001 (ASHLEY, IN quadrangle). The gage is located at the public fishing site on the northwestern edge of the lake, 3.9 mi southwest of Angola.

SURFACE AREA.--25 acres.

DRAINAGE AREA.--84.6 mi^2.

PERIOD OF RECORD.--1946-1970, 1977 to current year.

DATUM OF GAGE.--940.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary wire-weight gage is attached to the bridge over the outlet.

ESTABLISHED LEGAL LEVEL.--8.50 ft gage datum or 948.50 ft above National Geodetic Vertical Datum of 1929, as decreed on October 28, 1959, by Steuben County Circuit Court. Golden Lake near Pleasant Lake has the same established level and hence the same lake levels for the period of record.

LAKE-LEVEL CONTROL.--The lake level is controlled by the outlet channel or the outlet of Golden Lake.

INLET AND OUTLET.--Pigeon Creek flows through the lake, entering at the southern shore and leaving at the western end to flow into Golden Lake and eventually into the St. Joseph River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 17.13 ft Mar. 22, 1982; minimum stage, 7.88 ft Sept. 14, 15, 1964.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.69	8.63	9.00	10.21	10.86	12.79	10.08	9.64	---	---	8.68	8.65
10	8.61	8.72	8.84	10.29	10.38	11.35	10.05	9.48	---	---	8.54	8.63
15	8.56	9.14	8.73	9.70	9.95	11.76	10.49	11.17	---	---	9.85	8.65
20	8.63	10.16	8.63	10.88	9.64	10.94	10.10	13.25	---	8.75	9.32	8.67
25	8.80	9.59	8.56	10.53	13.65	10.36	10.08	11.45	---	8.84	9.51	8.72
EOM	8.71	9.23	8.73	9.98	13.54	10.01	9.59	10.37	---	8.59	8.91	8.59

WTR YR 1990 MEAN 9.76 MAX 13.65 MIN 8.52

04099810 CASS LAKE NEAR SHIPSHEWANA, IN

LOCATION.--Lat 41°41'42", long 85°38'18", in SW¼NW¼NW¼ sec.5, T.37 N, R.8 E., Lagrange County, Hydrologic Unit 04050001 (MIDDLEBURY, IN quadrangle). The gage is on the northeast shore of the lake, at the beach area in the Foxwood Hills Addition, and 3.3 mi northwest of Shipshewana.

SURFACE AREA.--89 acres.

DRAINAGE AREA.--0.68 mi^2.

PERIOD OF RECORD.--1971 to current year.

DATUM OF GAGE.--840.95 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well.

ESTABLISHED LEGAL LEVEL.--Not established.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by the outlet channel.

INLET AND OUTLET.--A small unnamed ditch enters on the northwestern shore. The outlet leaves the lake at the southwest and flows into Mather ditch 1.0 mi downstream. Mather ditch eventually empties into the Little Elkhart River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 3.81 ft July 28, 1981; minimum stage, 1.80 ft May 15, 1971.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	2.96	3.05	2.87	2.98	3.11	3.14	3.00	3.16	3.25	3.10	3.20	3.03
10	2.97	3.06	2.92	2.98	3.08	3.32	3.14	3.20	3.21	3.06	3.14	3.05
15	2.97	2.89	2.98	2.98	3.13	3.13	3.22	3.35	3.17	3.08	3.23	3.09
20	3.06	2.78	2.98	3.19	3.06	2.92	3.27	3.19	3.14	3.14	3.04	3.06
25	3.08	2.71	2.98	3.24	3.25	2.84	3.11	3.29	3.14	3.34	3.08	3.14
EOM	3.07	2.79	2.98	3.10	3.26	2.88	3.11	3.28	3.16	3.22	3.07	3.12

WTR YR 1990 MEAN 3.08 MAX 3.47 MIN 2.70

ILLINOIS RIVER BASIN

05518700 CEDAR LAKE AT CEDAR LAKE, IN

LOCATION.--Lat 41°21'58", long 87°25'36", in NE¼SW¼SW¼ sec.26, T.34 N., R.9 W., Lake County, Hydrologic Unit 07120001 (LOWELL, IN quadrangle). The gage is on the south bank of the outlet channel on the east shore of the lake, upstream from the first bridge over the outlet, and 0.5 mi east of the town of Cedar Lake.

SURFACE AREA.--781 acres.

DRAINAGE AREA.--8.14 mi^2.

PERIOD OF RECORD.--1943 to current year.

DATUM OF GAGE.--690.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 24-inch diameter stilling well. An auxiliary staff gage is driven into the channel bed.

ESTABLISHED LEGAL LEVEL.--Not established.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a fixed-crest concrete dam.

INLET AND OUTLET.--Several small ditches enter the lake at various points. The outlet, Cedar Creek, flows from the lake on the eastern shore of the center lobe, into Dalecarlia Lake, 1.5 mi downstream, and eventually into the Kankakee River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 4.30 ft May 15, 1970; below 1.22 ft during July, August, September, and October 1988.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	2.87	2.89	2.95	2.93	3.25	3.28	3.14	3.09	3.03	2.93	2.88	2.98
10	2.81	2.83	2.94	3.00	3.19	3.46	3.14	3.34	3.18	2.88	2.79	2.93
15	2.77	3.04	2.95	2.99	3.24	3.46	3.19	3.50	3.13	2.87	2.80	2.87
20	2.89	2.96	2.95	3.12	3.16	3.25	3.18	3.51	3.03	3.01	3.38	2.81
25	2.88	2.97	2.83	3.24	3.45	3.20	3.12	3.32	2.99	2.96	3.24	2.78
EOM	2.90	2.96	2.87	3.16	3.39	3.17	3.02	3.13	3.03	2.87	3.07	2.76

WTR YR 1990 MEAN 3.05 MAX 3.58 MIN 2.76

03331160 CENTER LAKE AT WARSAW, IN

LOCATION.--Lat 41°15'02", long 85°51'32", in NE¼SW¼SW¼ sec.5, T.32 N., R.6 E., Kosciusko County, Hydrologic Unit 05120106 (LEESBURG, IN quadrangle). The gage is on the northwestern side of the lake, mounted on a sea wall behind the house at 300 Gilliam Drive, 0.8 mi north of the court house, Warsaw.

SURFACE AREA.--120 acres.

DRAINAGE AREA.--0.73 mi^2.

PERIOD OF RECORD.--1943-1968, 1971 to current year.

DATUM OF GAGE.--800.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage is attached to the control dam at the outlet.

ESTABLISHED LEGAL LEVEL.--3.86 ft gage datum or 803.86 ft above National Geodetic Vertical Datum of 1929 as decreed on December 3, 1963, by the Kosciusko County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete dam at the western end of the lake.

INLET AND OUTLET.--The one inlet flows through a 24-inch diameter tile from Pike Lake and enters the lake on the southeastern side. The outlet flows from the western shore and joins Walnut Creek 0.65 mi downstream, which in turn flows into the Tippecanoe River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 7.24 ft Oct. 15, 1954; minimum stage, 0.17 ft Oct. 4, 1955.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	3.84	3.65	3.96	4.05	4.86	6.10	4.40	4.24	4.62	4.07	4.65	4.88
10	3.78	3.68	3.91	4.08	4.77	5.73	4.38	4.18	4.67	3.98	4.25	4.89
15	3.75	3.97	3.91	4.29	4.76	5.50	4.36	4.35	4.64	4.27	4.50	4.86
20	3.80	4.09	3.91	4.70	4.82	4.95	4.37	4.71	4.24	4.38	5.46	4.76
25	3.77	4.06	3.91	4.84	5.84	4.64	4.36	4.92	4.39	5.14	5.75	4.69
EOM	3.72	4.00	3.93	4.79	6.15	4.51	4.24	4.95	4.32	4.73	5.07	4.39

WTR YR 1990 MEAN 4.49 MAX 6.38 MIN 3.64

STREAMS TRIBUTARY TO LAKE ERIE

04177200 CLEAR LAKE AT CLEAR LAKE, IN

LOCATION.--Lat 41°44'52", long 84°50'25", in SW¼SW¼ sec.17, T.38 N., R.15 E., Steuben County, Hydrologic Unit 04100003 (CLEAR LAKE, IN-OH-MI quadrangle). The gage is on the northern shore of the lake, at the channel between Clear and Round Lakes, and 4.75 mi northeast of Fremont.

SURFACE AREA.--800 acres.

DRAINAGE AREA.--6.86 mi^2.

PERIOD OF RECORD.--1943 to current year.

DATUM OF GAGE.--1030.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in a wooden shelter over a 24-inch stilling well. An auxiliary staff gage is attached to the north end of the upstream culvert.

ESTABLISHED LEGAL LEVEL.--7.38 ft gage datum or 1037.38 ft above National Geodetic Vertical Datum of 1929 as decreed on June 1, 1950, by the Steuben County Circuit Court. Round Lake at Clear Lake has the same established level and hence the same lake levels for the period of record.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a fixed-crest concrete dam with an auxiliary slide gate at the outlet of Round Lake.

INLET AND OUTLET.--Two unnamed ditches enter the lake on the southern shore. The outlet is a short channel connecting Clear and Round Lakes. The outlet of Round Lake flows from the northeast end and eventually into the West Branch of the St. Joseph River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 9.24 ft May 20, 1943 (from high-water mark); maximum recorded stage, 8.49 ft Mar. 20, 21, 1982; minimum stage, 6.24 ft Sept. 30, 1962.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.69	7.72	7.83	7.85	8.04	8.13	7.98	7.91	8.03	7.82	7.76	7.76
10	7.66	7.79	7.80	7.92	8.01	8.20	8.02	7.87	8.02	7.76	7.71	7.75
15	7.66	7.97	7.80	7.89	8.04	8.23	8.02	8.17	7.92	7.77	7.83	7.72
20	7.70	7.97	7.80	8.04	7.96	8.09	8.01	8.24	7.83	7.78	7.85	7.72
25	7.71	7.91	7.80	8.03	8.37	8.03	8.01	8.12	7.80	7.79	7.85	7.73
EOM	7.73	7.86	7.80	7.96	8.26	8.01	7.91	7.99	7.91	7.73	7.82	7.73

WTR YR 1990 MEAN 7.90 MAX 8.38 MIN 7.64

05515240 CLEAR LAKE AT LAPORTE, IN

LOCATION.--Lat 41°37'25", long 86°43'11", in NE¼SE¼SE¼ sec.26, T.37 N., R.3 W., LaPorte County, Hydrologic Unit 07120001 (LAPORTE EAST, IN quadrangle). The gage is on the northeast shore of the lake, 100 ft south of the entrance to Fox Memorial Park, in LaPorte.

SURFACE AREA.--106 acres.

DRAINAGE AREA.--0.65 mi^2.

PERIOD OF RECORD.--1942-49, 1952-75, 1979 to current year.

DATUM OF GAGE.--790.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage is attached to the north wingwall of the inlet culvert on the west side of the lake.

ESTABLISHED LEGAL LEVEL.--8.20 ft gage datum or 798.20 ft above National Geodetic Vertical Datum of 1929 as decreed on August 31, 1949, by the LaPorte County Circuit Court.

LAKE-LEVEL CONTROL.--During periods of high water, water may be released through the main sewer system of the city of LaPorte and diverted into the Kankakee River.

INLET AND OUTLET.--A small ditch enters on the west shore. There is no outlet during periods of low and medium water levels. When water levels are high, water may flow from the lake into the city sewer system.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 11.20 ft Apr. 23, 1973; minimum stage, 3.98 ft Nov. 27, 1964.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	---	7.27	7.26	7.43	7.42	7.41	7.53	7.44	7.45	---
10	---	---	---	7.26	7.25	7.49	7.43	7.44	7.48	7.40	7.42	---
15	---	---	7.29	7.24	7.25	7.48	7.41	7.63	7.44	7.43	7.43	---
20	---	---	7.28	7.23	7.22	7.45	7.45	7.68	7.42	7.45	---	---
25	---	---	7.24	7.27	7.45	7.45	7.42	7.66	7.42	7.48	---	---
EOM	---	---	7.23	7.26	7.45	7.42	7.40	7.64	7.48	7.43	---	---

WTR YR 1990 MEAN 7.41 MAX 7.68 MIN 7.22

STREAMS TRIBUTARY TO LAKE MICHIGAN

04097850 CROOKED LAKE AT CROOKED LAKE, IN

LOCATION.--Lat 41°40'14", long 85°02'04", in NE¼NW¼NE¼ sec.16, T.37 N., R.13 E., Steuben County, Hydrologic Unit 04050001 (ANGOLA WEST, IN quadrangle). The gage is on an inlet channel on the lower eastern shore of the lake, 3.1 mi northwest of Angola.

SURFACE AREA.--828 acres.

DRAINAGE AREA.--10.4 mi^2.

PERIOD OF RECORD.--1946-70, 1972 to current year.

DATUM OF GAGE.--980.26 ft above National Geodetic Vertical Datum of 1929, as corrected on the basis of levels of Indiana Department of Natural Resources, 1977-78.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage is driven into the channel bed between the Second and Third Basins under County Road 400 West.

ESTABLISHED LEGAL LEVEL.--8.17 ft gage datum or 988.17 ft above National Geodetic Vertical Datum of 1929 as decreed on June 17, 1948, by the Steuben County Circuit Court. Minor errors were subsequently discovered in the establishment of the datum of the gage (see "DATUM OF GAGE") and the correct elevation of the legal level should be 8.17 ft gage datum or 988.43 ft above National Geodetic Vertical Datum of 1929.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a fixed-crest dam with an adjustable gate at the western end of the Third Basin.

INLET AND OUTLET.--The principal inlets enter the lake from the south, from Loon and Buck Lakes, and the southeast, from Center Lake. Another ditch enters from the east. The outlet flows from the western end of the Third Basin into Lake Gage 1.4 mi downstream and eventually into the St. Joseph River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 10.07 ft Apr. 6, 1985; minimum stage, 7.05 ft Nov. 13-15, 1964.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.94	8.84	8.87	8.93	9.17	9.44	9.26	9.01	9.27	9.04	8.94	9.11
10	8.93	8.85	8.84	8.93	9.16	9.55	9.18	9.07	9.26	8.94	8.94	9.09
15	8.85	8.97	8.82	8.93	9.17	9.54	9.20	9.32	9.13	8.96	9.16	9.06
20	8.93	8.93	8.80	9.07	9.13	9.44	9.21	9.54	9.05	8.96	9.17	9.05
25	8.87	8.93	8.79	9.13	9.54	9.37	9.13	9.49	9.04	8.98	9.25	9.07
EOM	8.84	8.91	8.92	9.05	9.53	9.33	9.02	9.32	9.10	8.94	9.19	9.00

WTR YR 1990 MEAN 9.09 MAX 9.59 MIN 8.78

04100470 DEWART LAKE NEAR LEESBURG, IN

LOCATION.--Lat 41°22'27", long 85°47'07", in NW¼SW¼NW¼ sec.25, T.34 N., R.6 E., Kosciusko County, Hydrologic Unit 04050001 (LEESBURG, IN quadrangle). The gage is on the west shore of the lake, 0.1 mi east of County Road 300 East at the Dewart Lake Marina, and 4.5 mi northeast of Leesburg.

SURFACE AREA.--551 acres.

DRAINAGE AREA.--8.05 mi^2.

PERIOD OF RECORD.--1945 to current year.

DATUM OF GAGE.--859.87 ft above National Geodetic Vertical Datum of 1929, as corrected on the basis of levels of Indiana Department of Natural Resources, 1973-74.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 24-inch diameter stilling well.

ESTABLISHED LEGAL LEVEL.--7.70 ft gage datum or 867.70 ft above National Geodetic Vertical Datum of 1929 as decreed on October 18, 1949, by the Kosciusko County Circuit Court. Minor errors were subsequently discovered in the establishment of the datum of the gage (see "DATUM OF GAGE") and the correct elevation of the legal level should be 7.70 ft gage datum or 867.57 ft above National Geodetic Vertical Datum of 1929.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a steel sheet piling dam.

INLET AND OUTLET.--Cable Run enters the lake on the southeastern tip, and an unnamed ditch enters on the eastern shore. The outlet, Hammond ditch, flows from the lake on the northwestern shore and into Wabee Lake 2.3 mi downstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 9.57 ft June 14, 1981; minimum stage, 3.95 ft Dec. 21-24, 1964.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.72	7.54	7.58	8.13	8.40	8.96	9.07	8.84	8.87	8.71	8.77	8.78
10	7.66	7.54	7.55	8.12	8.41	9.08	9.15	8.76	8.89	8.65	8.70	8.75
15	7.61	7.72	7.55	8.13	8.50	9.05	9.07	8.94	8.78	8.76	8.82	8.75
20	7.65	7.68	7.55	8.23	8.50	8.97	9.09	9.13	8.71	8.82	8.88	8.71
25	7.63	7.63	7.55	8.31	9.10	8.98	8.99	9.11	8.75	8.92	8.89	8.66
EOM	7.58	7.61	7.55	8.31	9.06	9.04	8.87	8.94	8.78	8.77	8.91	8.62

WTR YR 1990 MEAN 8.48 MAX 9.22 MIN 7.52

WABASH RIVER BASIN

03331320 DIAMOND LAKE NEAR SILVER LAKE, IN

LOCATION.--Lat 41°06'23", long 85°56'05", in SW¼NW¼SE¼ sec.26, T.31 N., R.5 E., Kosciusko County, Hydrologic Unit 05120106 (SILVER LAKE, IN quadrangle). The gage is on the inlet channel on the northern shore of the lake, 2.2 mi northwest of the town of Silver Lake.

SURFACE AREA.--79 acres.

DRAINAGE AREA.--3.92 mi^2.

PERIOD OF RECORD.--1954-72, 1975 to current year.

DATUM OF GAGE.--849.90 ft above National Geodetic Vertical Datum of 1929, as corrected on the basis of levels of Indiana Department of Natural Resources, 1976.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well.

ESTABLISHED LEGAL LEVEL.--Not established.

LAKE-LEVEL CONTROL.--The lake level is controlled by Yellow Creek Lake, 0.3 mi downstream.

INLET AND OUTLET.--There are two inlets. One enters from the north and east from Hill Lake, one enters from the southeast. The one outlet flows from the western shore and into Yellow Creek Lake, 0.3 mi downstream. Yellow Creek Lake flows into Yellow Creek, which eventually discharges into the Tippecanoe River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 13.47 July 9, 1964; minimum stage, 9.78 ft Sept. 18-19, 23, 27-30, Oct. 10-12, 1988.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.39	10.48	10.60	10.68	10.77	10.87	10.75	10.69	10.69	10.44	10.71	10.62
10	10.37	10.47	10.50	10.61	10.69	11.15	10.88	10.65	10.80	10.42	10.50	10.58
15	10.37	10.90	10.51	10.56	10.86	11.00	10.81	10.83	10.60	10.45	10.84	10.64
20	10.49	10.60	10.50	10.74	10.81	10.76	10.77	11.07	10.53	10.83	12.04	10.58
25	10.51	10.50	10.50	10.76	11.73	10.68	10.72	10.92	10.53	10.86	11.33	10.52
EOM	10.50	10.53	10.50	10.62	11.25	10.70	10.65	10.71	10.58	10.62	10.80	10.48

WTR YR 1990 MEAN 10.70 MAX 12.15 MIN 10.36

04100350 DIAMOND LAKE NEAR WAWAKA, IN

LOCATION.--Lat 41°26'15", long 85°31'05", in NE¼NW¼NW¼, sec.5, T.34 N., R.9 E., Noble County, Hydrologic Unit 04050001 (LIGONIER, IN quadrangle). The gage is located on the southeastern edge of the lake at a public fishing site, 2.5 mi southwest of the town of Wawaka.

SURFACE AREA.--105 acres.

DRAINAGE AREA.--4.80 mi^2.

PERIOD OF RECORD.--1946 to current year.

DATUM OF GAGE.--870.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage is mounted on a piling driven into the lake bed on the northern edge of the lake.

ESTABLISHED LEGAL LEVEL.--Not established.

LAKE-LEVEL CONTROL.--The lake level is controlled by a riffle at the head of the outlet channel.

INLET AND OUTLET.--Willets Ditch enters at the southwestern tip of the lake from Eagle Lake, 0.6 mi upstream. One unnamed ditch enters the lake from the south. The outlet flows from the lake at the southeastern edge and joins the South Branch of the Elkhart River 0.8 mi downstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 7.83 ft Mar. 20, 1982; minimum stage, 2.29 ft Oct. 17, 1946.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.61	4.72	4.85	4.88	5.22	5.70	5.02	4.91	5.15	4.95	5.18	5.59
10	4.56	4.75	4.79	4.98	5.13	5.49	5.05	4.83	5.53	4.84	5.03	5.31
15	4.54	4.98	4.75	4.96	5.09	5.44	5.15	5.10	5.39	5.05	5.15	5.22
20	4.62	5.07	4.71	5.31	4.99	5.23	5.19	5.56	5.18	5.18	5.22	5.08
25	4.71	5.00	4.71	5.38	5.97	5.06	5.17	5.49	5.08	5.46	5.17	4.97
EOM	4.73	4.92	4.72	5.17	6.11	5.01	4.98	5.29	5.07	5.29	5.71	4.85

WTR YR 1990 MEAN 5.10 MAX 6.13 MIN 4.53

STREAMS TRIBUTARY TO LAKE MICHIGAN

04100370 ENGLE LAKE NEAR LIGONIER, IN

LOCATION.--Lat 41°26'08", long 85°34'30", in SE¼NW¼NW¼ sec.2, T.34 N., R.8 E., Noble County, Hydrologic Unit 04050001 (LIGONIER, IN quadrangle). The gage is located at a public access site on the eastern side of the lake, 2.2 mi south of the town of Ligonier.

SURFACE AREA.--48 acres.

DRAINAGE AREA.--4.19 mi^2.

PERIOD OF RECORD.--1956-67, 1977 to current year.

DATUM OF GAGE.--870.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well.

ESTABLISHED LEGAL LEVEL.--8.90 ft gage datum or 878.90 ft above National Geodetic Vertical Datum of 1929 as decreed on October 23, 1984, by the Noble County Circuit Court.

LAKE-LEVEL CONTROL.--The lake level is controlled by the outlet channel at low water and the first culvert downstream at higher stages.

INLET AND OUTLET.--Sparta Lake ditch feeds the lake from the south, flowing from Sparta Lake. The outlet flows from the northern shore through Indian Lake and into the Elkhart River 1.7 mi downstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage 10.53 ft Mar. 29, 1985; minimum stage, 7.48 ft Nov. 17, 1964.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.93	8.95	---	---	9.35	9.54	9.46	9.44	9.43	9.18	9.25	9.40
10	8.91	8.98	---	9.03	9.32	9.60	9.54	9.37	9.60	9.12	9.15	9.38
15	8.89	9.17	---	9.03	9.35	9.54	9.53	9.56	9.43	9.28	9.28	9.43
20	8.99	---	---	9.45	9.32	9.45	9.54	9.56	9.31	9..	9.35	9.35
25	9.01	---	---	9.42	9.66	9.42	9.47	9.60	9.31	9.42	9.32	9.31
EOM	8.96	---	---	9.28	9.58	9.49	9.38	9.45	9.32	9.24	9.59	9.26

WTR YR 1990 MEAN 9.33 MAX 9.90 MIN 8.89

STREAMS TRIBUTARY TO LAKE MICHIGAN

04099670 FISH LAKE NEAR PLATO, IN

LOCATION.--Lat 41°37'27", long 85°19'56", in SW¼NE¼ sec.35, T.37 N., R.10 E., Lagrange County, Hydrologic Unit 04050001 (WOLCOTTVILLE, IN quadrangle). The gage is on the northeast bank of the outlet channel, approximately 15 ft downstream of the lake on the northwest side, and 1.2 mi south of Plato.

SURFACE AREA.--100 acres.

DRAINAGE AREA.--10.6 mi^2.

PERIOD OF RECORD.--1945 to current year.

DATUM OF GAGE.--930.75 ft above National Geodetic Vertical Datum of 1929, as corrected on the basis of levels of the U.S. Geological Survey, 1966.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage is mounted on a tree stump on the northern bank of the outlet channel at the same site.

ESTABLISHED LEGAL LEVEL.--6.50 ft gage datum or 936.50 ft above National Geodetic Vertical Datum of 1929 as decreed on May 7, 1959, by the Lagrange County Circuit Court. Minor errors were subsequently discovered in the establishment of the datum of the gage (see "DATUM OF GAGE") and the correct elevation of the legal level should be 6.50 ft gage datum or 937.25 ft above National Geodetic Vertical Datum of 1929.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by the outlet channel.

INLET AND OUTLET.--One inlet enters at the extreme southern tip from Royer Lake 700 ft upstream. The other enters on the north shore of the east lobe from Grass Lake, approximately 1.4 mi upstream. The outlet, East Fly Creek, flows from the lake on the northwest shore and joins Fly Creek, which empties into Pigeon River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 9.23 ft June 14, 15, 1981; minimum stage, 5.32 ft Nov. 17-20, 1953.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.69	6.81	6.93	6.96	7.18	7.31	7.07	6.96	7.13	6.75	6.54	6.56
10	6.67	6.88	6.86	7.06	7.12	7.69	7.11	6.93	7.17	6.65	6.47	6.56
15	6.69	7.08	6.81	7.01	7.09	7.60	7.19	7.42	6.91	6.63	6.72	6.56
20	6.81	7.19	6.81	7.24	6.94	7.23	7.14	8.03	6.76	6.66	6.81	6.55
25	6.90	7.09	6.81	7.18	8.20	7.10	7.10	7.49	6.74	6.68	6.80	6.60
EOM	6.85	7.02	6.81	7.00	7.64	7.08	6.94	7.18	6.95	6.55	6.67	6.55

WTR YR 1990 MEAN 6.97 MAX 8.43 MIN 6.46

STREAMS TRIBUTARY TO LAKE MICHIGAN

04099760 FISH LAKE NEAR SCOTT, IN

LOCATION.--Lat 41°45'25", long 85°38'54", in NW¼NW¼SE¼ sec.7, T.38 N.,R.8 E., Lagrange County, Hydrologic Unit 04050001 (MIDDLEBURY, IN quadrangle). The gage is on the northwest shore of the lake, on the north side of the outlet channel, 4.8 mi northwest of Scott.

SURFACE AREA.--139 acres.

DRAINAGE AREA.--6.21 mi^2.

PERIOD OF RECORD.--1954-69, 1978 to current year.

DATUM OF GAGE.--809.84 ft above National Geodetic Vertical Datum of 1929, as corrected on the basis of levels of Indiana Department of Natural Resources, 1975.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage is attached to the dam at the same site.

ESTABLISHED LEGAL LEVEL.--4.42 ft gage datum or 814.42 ft above National Geodetic Vertical Datum of 1929 as decreed on September 11, 1959, by the Lagrange County Circuit Court. Minor errors were subsequently discovered in the establishment of the datum of the gage (see "DATUM OF GAGE") and the correct elevation of the legal level should be 4.42 ft gage datum or 814.26 ft above National Geodetic Vertical Datum of 1929.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a fixed concrete sill with removable boards.

INLET AND OUTLET.--The inlet, Fetch ditch, enters on the southeastern shore. The outlet flows from the lake at the lower west shore and empties into Pigeon River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 5.61 ft Feb. 26, 1985; minimum stage, 1.54 ft Nov. 26, 1964.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	3.79	3.59	3.81	3.85	4.29	4.51	4.50	4.58	4.66	4.44	4.51	4.22
10	3.73	3.62	3.80	3.88	4.28	4.64	4.54	4.64	4.54	4.36	4.42	4.23
15	3.68	3.72	3.79	3.91	4.38	4.73	4.56	4.86	4.40	4.38	4.45	4.23
20	3.71	3.77	3.79	4.04	4.31	4.57	4.55	4.80	4.40	4.42	4.46	4.19
25	3.71	3.76	3.79	4.16	4.63	4.50	4.50	4.62	4.44	4.59	4.42	4.21
EOM	3.65	3.80	3.81	4.20	4.56	4.54	4.46	4.57	4.50	4.52	4.33	4.19

WTR YR 1990 MEAN 4.24 MAX 4.95 MIN 3.59

05517700 FLINT LAKE NEAR VALPARAISO, IN

LOCATION.--Lat 41°30'41", long 87°02'23", in NE¼SW¼ sec.6, T.35 N., R.5 W., Porter County, Hydrologic Unit 07120001 (CHESTERTON, IN quadrangle). The gage is on the southeast shore of the lake, at the outlet and the Valparaiso Water Works, 3.2 mi northeast of Valparaiso.

SURFACE AREA.--86 acres.

DRAINAGE AREA.--3.80 mi^2, revised.

PERIOD OF RECORD.--1946 to current year. From Jan. 1, 1911, to Aug. 14, 1946, readings of the lake level were taken approximately once per week by Water Works personnel. These data are available upon request.

DATUM OF GAGE.--780.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed inside the Valparaiso Water Works. An auxiliary staff gage is located lakeward of the concrete block pumping station.

ESTABLISHED LEGAL LEVEL.--17.66 ft gage datum or 797.66 ft above National Geodetic Vertical Datum of 1929 as decreed on August 19, 1963, by the Porter County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by the outlet channel and two 30-inch corrugated metal pipes under the road, 600 ft downstream.

INLET AND OUTLET.--There are three inlets. One drains long lake to the northwest and another drains Loomis Lake to the west and Listenberger drain enters from the south. The outlet flows from the lake at the southeast corner and into the West Branch of Crooked Creek approximately 5.0 mi downstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 21.18 ft July 2, 1983 as recorded by the Valparaiso Water Company; minimum stage, 12.59 ft Dec. 29, 1948.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	18.11	17.47	17.65	17.18	18.39	19.16	---	19.54	19.47	19.16	19.15	19.55
10	17.90	17.42	17.65	17.12	18.39	19.59	---	19.68	19.47	19.05	19.01	19.51
15	17.72	17.66	17.58	17.02	18.46	19.53	---	19.98	19.35	19.17	18.99	19.41
20	17.88	17.74	17.46	17.38	18.46	19.57	---	19.99	19.26	19.28	20.35	19.28
25	17.86	17.68	17.33	17.83	19.08	19.66	19.52	19.88	19.25	19.25	20.10	19.23
EOM	17.60	17.77	17.17	18.07	19.09	19.60	19.45	19.63	19.28	19.10	19.79	19.16

WTR YR 1990 MEAN 18.72 MAX 20.35 MIN 17.02

WABASH RIVER BASIN

03330160 GILBERT LAKE NEAR WASHINGTON CENTER, IN

LOCATION.--Lat 41°19'50", long 85°35'48", in NE¼NE¼SE¼ sec.9, T.33 N., R.8 E., Noble County, Hydrologic Unit 05120106 (URMAS, IN quadrangle). The gage is at the extreme west end of the lake on the east side of County Road 925 West, approximately 400 ft south of Gilbert Lake Road, and 0.4 mi north of Washington Center.

SURFACE AREA.--28 acres.

DRAINAGE AREA.--0.37 mi^2.

PERIOD OF RECORD.--1954-59, 1961 to current year.

DATUM OF GAGE.--884.85 ft above National Geodetic Vertical Datum of 1929, as corrected on the basis of levels of the Indiana Department of Natural Resources, 1974-75.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage in one section is driven into the lake bed approximately 100 ft south of the primary gage.

ESTABLISHED LEGAL LEVEL.--Not established.

LAKE-LEVEL CONTROL.--The level is controlled by the outlet through the swamp, east of the lake.

INLET AND OUTLET.--The lake has no inlet. The outlet leaves from the southeastern side and flows into Stump Lake.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 6.81 ft Dec. 4-5, 1987; minimum stage, 3.53 ft Nov. 1, 1963.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.98	5.09	5.08	5.09	5.33	5.31	5.19	5.45	5.71	5.67	5.88	5.66
10	4.40	5.11	5.09	5.08	5.24	5.43	5.37	5.47	5.74	5.70	5.86	5.82
15	4.49	5.27	5.09	5.08	5.34	5.34	5.34	5.64	5.73	5.69	5.96	5.19
20	4.73	5.11	5.09	5.38	5.33	5.32	5.39	5.61	5.76	5.81	5.13	4.67
25	4.92	5.07	5.09	5.42	5.33	5.28	5.36	5.75	5.81	5.79	5.36	4.93
EOM	5.04	5.09	5.09	5.27	5.27	5.23	5.37	5.64	5.81	5.78	5.70	5.11

WTR YR 1990 MEAN 5.35 MAX 6.06 MIN 4.40

04100110 HACKENBURG LAKE NEAR WOLCOTTVILLE, IN

LOCATION.--Lat 41°33'25", long 85°26'17", in NE¼SW¼SW¼ sec.24, T.36 N., R.9 E., Lagrange County, Hydrologic Unit 04050001 (OLIVER LAKE, IN quadrangle). The gage is on the north shore of the outlet channel at the bridge on County Road 75 West, and 4.2 mi northwest of Wolcottville.

SURFACE AREA.--42 acres.

DRAINAGE AREA.--55.4 mi^2.

PERIOD OF RECORD.--1945 to current year.

DATUM OF GAGE.--890.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in a wooden shelter over a 24-inch diameter stilling well. An auxiliary staff gage is bolted to the downstream side of the bridge at the same site.

ESTABLISHED LEGAL LEVEL.--7.36 ft gage datum or 897.36 ft above National Geodetic Vertical Datum of 1929 as decreed on February 2, 1954, by the Lagrange County Circuit Court. Witmer, Westler, Dallas, and Messick Lakes, all near Wolcottville, have the same established level and hence the same lake levels for the period of record.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete sill with removable stop logs located at the outlet of Messick Lake.

INLET AND OUTLET.--One inlet enters on the north shore from Oliver Lake 1.6 mi upstream. The other inlet enters on the east shore from Dallas Lake 0.5 mi upstream, which is part of a chain of lakes including Westler and Witmer Lakes. The outlet flows from the lake on the southwest shore and into Messick Lake about 0.5 mi downstream. Messick Lake empties into the North Branch of the Elkhart River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 11.17 ft Apr. 7, 1978; minimum stage, 6.34 ft Oct. 10, 1953.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.65	7.48	7.72	7.59	8.40	9.26	8.32	7.94	8.54	7.81	7.64	7.93
10	7.51	7.52	7.59	7.85	8.37	9.12	8.28	7.81	8.56	7.65	7.57	7.89
15	7.43	7.68	7.51	7.89	8.36	9.16	8.37	8.18	8.46	7.64	7.84	7.86
20	7.45	7.93	7.40	8.26	8.17	8.94	8.38	9.01	8.25	7.65	8.03	7.87
25	7.51	7.96	7.30	8.36	9.28	8.65	8.34	9.03	8.05	7.74	8.09	7.89
EOM	7.53	7.85	7.33	8.27	9.43	8.41	8.10	8.74	7.96	7.65	8.08	7.79

WTR YR 1990 MEAN 8.06 MAX 9.43 MIN 7.26

STREAMS TRIBUTARY TO LAKE ERIE

04177700 HAMILTON LAKE AT HAMILTON, IN

LOCATION.--Lat 41°32'10", long 84°54'45", in SW¼SW¼NW¼ sec.34, T.36 N., R.14 E., Steuben County, Hydrologic Unit 04100003 (HAMILTON, IN quadrangle). The gage is on the eastern shore of the southern lobe at the outlet, in the town of Hamilton.

SURFACE AREA.--802 acres.

DRAINAGE AREA.--16.5 mi^2.

PERIOD OF RECORD.--1943 to current year.

DATUM OF GAGE.--890.12 ft above National Geodetic Vertical Datum of 1929, as corrected on the basis of levels of Indiana Department of Natural Resources, 1978.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well.

ESTABLISHED LEGAL LEVEL.--8.83 ft gage datum or 898.83 ft above National Geodetic Vertical Datum of 1929 as decreed on July 3, 1947, by the Steuben County Circuit Court. Minor errors were subsequently discovered in the establishment of the datum of the gage (see "DATUM OF GAGE") and the correct elevation of the legal level should be 8.83 ft gage datum or 898.95 ft above National Geodetic Vertical Datum of 1929.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by two dams. The northernmost dam is concrete and steel sheet piling with a fixed crest. The southern dam has a fixed concrete sill.

INLET AND OUTLET.--Black Creek enters the lake on the northeast shore. Two small ditches enter from the east and the north. There are two outlets, both on the southern lobe, that flow into Fish Creek thence into the St. Joseph River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 10.14 ft Dec. 30, 1965; minimum stage, 7.27 ft Jan. 4-9, 1953.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	8.46	8.51	8.52	8.72	8.68	8.61	8.63	8.70	8.53	8.50	8.49
10	---	8.47	8.51	8.67	8.63	8.84	8.74	8.58	8.69	8.46	8.44	8.51
15	---	8.67	8.51	8.58	8.65	8.75	8.68	8.86	8.58	8.47	8.71	8.56
20	---	8.61	8.51	8.76	8.58	8.64	8.69	8.90	8.50	8.55	8.64	8.56
25	8.49	8.53	8.51	8.75	9.27	8.59	8.65	8.75	8.49	8.54	8.63	8.52
EOM	8.48	8.50	8.51	8.60	8.81	8.64	8.58	8.63	8.69	8.46	8.53	8.50

WTR YR 1990 MEAN 8.61 MAX 9.48 MIN 8.43

04099860 HEATON LAKE NEAR ELKHART, IN

LOCATION.--Lat 41°44'14", long 85°54'42", in NW¼NE¼NE¼ sec.23, T.38 N., R.5 E., Elkhart County, Hydrologic Unit 04050001 (ELKHART, IN quadrangle). The gage is on the east bank of the inlet on the north shore of the lake, 4.7 mi northeast of the main Post Office in Elkhart.

SURFACE AREA.--87 acres.

DRAINAGE AREA.--9.33 mi^2.

PERIOD OF RECORD.--1946-53, 1970-75, 1977 to current year.

DATUM OF GAGE.--760.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well.

ESTABLISHED LEGAL LEVEL.--7.30 ft gage datum or 767.30 ft above National Geodetic Vertical Datum of 1929 as decreed on September 25, 1950, by the Elkhart County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a fixed-crest concrete dam.

INLET AND OUTLET.--The one inlet enters the lake at the extreme northern point of the lake. The outlet, Puterbaugh Creek, flows from the west end of the lake and enters the St. Joseph River approximately 4.0 mi downstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 9.73 ft Feb. 26, 1985; minimum stage, 4.55 ft Nov. 12-18, 1971.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.81	7.54	8.12	8.08	8.19	8.34	8.31	8.26	8.20	7.97	7.84	7.26
10	7.71	7.59	8.07	8.08	8.18	8.55	8.34	8.26	8.19	7.88	7.67	7.11
15	7.60	7.78	8.08	8.08	8.17	8.42	8.34	8.39	8.11	7.82	7.69	7.10
20	7.57	8.07	8.08	8.24	8.15	8.33	8.32	8.39	8.05	7.93	7.67	7.06
25	7.66	8.08	8.08	8.24	8.42	8.33	8.28	8.35	8.08	8.03	7.68	7.20
EOM	7.61	8.15	8.08	8.16	8.34	8.33	8.21	8.27	8.08	7.89	7.50	7.16

WTR YR 1990 MEAN 7.99 MAX 8.59 MIN 7.05

STREAMS TRIBUTARY TO LAKE MICHIGAN

04100258 HIGH LAKE NEAR WOLFLAKE, IN

LOCATION.--Lat 41°18'51", long 85°31'49", in SW¼NE¼SW¼ sec.18, T.33 N., R.9 E., Noble County, Hydrologic Unit 04050001 (ORMAS, IN quadrangle). The gage is on a dredged channel on the west shore of the east lobe, 2.1 mi southwest of Wolflake.

SURFACE AREA.--123 acres.

DRAINAGE AREA.--4.43 mi^2.

PERIOD OF RECORD.--1961-68, 1970 to current year.

DATUM OF GAGE.--890.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage is driven into the lake bed at the same site.

ESTABLISHED LEGAL LEVEL.--6.35 ft gage datum or 896.35 ft above National Geodetic Vertical Datum of 1929 as decreed on February 25, 1963, by the Noble County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete, fixed-crest dam with a rectangular notch.

INLET AND OUTLET.--The one inlet, Beal Branch, enters the lake on the southeast shore. The outlet flows from the east side of the north lobe, through Bear Lake, 0.6 mi downstream, into Carrol Creek, and eventually into the Elkhart River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 7.70 ft June 28, 1968; minimum stage, 5.30 ft Nov. 15, 25-28, 1964, Oct. 13, 26-31, Nov. 1-3, 1966.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	6.55	6.57	6.56	7.01	6.89	6.77	6.77	6.73	6.63	6.67	---
10	---	6.55	6.55	6.56	6.77	6.93	6.86	6.67	6.81	6.57	6.58	---
15	---	6.67	6.56	6.56	6.78	6.89	6.86	6.92	6.65	6.66	6.81	---
20	---	6.66	6.56	6.59	6.79	6.88	6.80	7.16	6.58	6.70	---	---
25	---	6.60	6.56	6.86	7.41	6.97	6.88	6.92	6.62	6.95	---	---
EOM	6.59	6.59	6.56	6.95	7.16	6.91	6.81	6.73	6.77	6.64	---	---

WTR YR 1990 MEAN 6.75 MAX 7.48 MIN 6.54

03331300 HILL LAKE NEAR SILVER LAKE, IN

LOCATION.--Lat 41°06'16", long 85°54'35", in SE¼NE¼SE¼ sec.25, T.31 N., R.5 E., Kosciusko County, Hydrologic Unit 05120106 (SILVER LAKE, IN quadrangle). The gage is located on the northern shore of the southwestern lobe of the lake, 2.5 mi northwest of the town of Silver Lake.

SURFACE AREA.--67 acres.

DRAINAGE AREA.--0.85 mi^2.

PERIOD OF RECORD.--1952 to current year.

DATUM OF GAGE.--860.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage is located on the southernmost tip of the lake. The staff is mounted on a board driven into the lake bed.

ESTABLISHED LEGAL LEVEL.--11.50 ft gage datum or 871.50 ft above National Geodetic Vertical Datum of 1929 as decreed on September 10, 1959, by the Kosciusko County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete fixed sill with removable boards.

INLET AND OUTLET.--There are no surface inlets. The one outlet flows from the western edge of the lake and empties into Diamond Lake 1.5 mi downstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 12.54 ft July 21, 1963; minimum stage, 9.86 ft Jan. 18, 19, 1954.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	11.15	11.10	11.45	11.40	11.51	11.62	11.46	11.43	11.38	11.28	11.44	11.33
10	11.11	11.10	11.39	11.45	11.46	11.75	11.54	11.39	11.42	11.25	11.34	11.33
15	11.09	11.38	11.38	11.40	11.55	11.71	11.54	11.52	11.32	11.28	11.51	11.37
20	11.14	11.47	11.38	11.49	11.54	11.54	11.52	11.51	11.29	11.47	11.87	11.32
25	11.14	11.48	11.38	11.49	12.03	11.45	11.48	11.42	11.30	11.59	11.56	11.28
EOM	11.13	11.51	11.38	11.42	11.99	11.48	11.40	11.33	11.35	11.39	11.40	11.28

WTR YR 1990 MEAN 11.42 MAX 12.03 MIN 11.08

STREAMS TRIBUTARY TO LAKE MICHIGAN

04099500 HOGBACK LAKE NEAR ANGOLA, IN

LOCATION.--Lat 41°37'39", long 85°04'59", in SE¼SE¼SE¼ sec.25, T.37 N., R.12 E., Steuben County, Hydrologic Unit 04050001 (ANGOLA WEST, IN quadrangle). The gage is on the northeast shore, 0.5 mi south of the Tri-State Airport, on County Road 500 West, and 4.4 mi southwest of Angola.

SURFACE AREA.--146 acres.

DRAINAGE AREA.--103 mi^2.

PERIOD OF RECORD.--1946-73, 1977 to current year.

DATUM OF GAGE.--940.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage in one section is attached to a tree at the same site.

ESTABLISHED LEGAL LEVEL.--8.50 ft gage datum or 948.50 ft above National Geodetic Vertical Datum of 1929 as decreed on October 28, 1959, by the Steuben County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by the outlet channel (Pigeon Creek).

INLET AND OUTLET.--There are three inlets to the lake. One unnamed ditch enters from the north. A small tributary enters on the eastern tip from Silver Lake, 0.7 mi upstream. Pigeon Creek flows through the lake, entering at the southeastern shore from Golden Lake, 1.2 mi upstream and leaving at the north end of the western lobe. Pigeon Creek joins Turkey Creek to become Pigeon River and eventually empties into the St. Joseph River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 17.07 ft Mar. 22, 1982; minimum stage, 7.24 ft Sept. 9, 10, 1953.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.60	8.50	8.84	8.66	10.44	11.23	9.72	9.24	10.32	8.92	8.42	8.44
10	8.51	8.54	8.69	9.88	10.03	10.74	9.51	9.14	10.23	8.62	8.36	8.42
15	8.48	8.73	8.66	9.42	9.66	11.40	10.11	10.50	9.53	8.56	9.35	8.37
20	8.48	9.85	8.66	10.32	9.37	10.61	9.72	12.80	9.07	8.49	9.01	8.41
25	8.62	9.41	8.66	10.06	13.00	10.01	9.75	11.11	8.94	8.60	9.23	8.47
EOM	8.56	9.05	8.66	9.71	12.68	9.65	9.31	10.06	9.16	8.41	8.70	8.38

WTR YR 1990 MEAN 9.39 MAX 13.04 MIN 8.35

05514741 HUDSON LAKE AT HUDSON LAKE, IN

LOCATION.--Lat 41°42'42", long 86°32'13", in SE¼SW¼ sec.28, T.38 N., R.1 W., LaPorte County, Hydrologic Unit 07120001 (NEW CARLISLE, IN quadrangle). The gage is on the southeast shore of the lake, and 0.7 mi west of the town line of New Carlisle.

SURFACE AREA.--432 acres.

DRAINAGE AREA.--7.92 mi^2.

PERIOD OF RECORD.--1946-76, 1978 to current year.

DATUM OF GAGE.--750.00 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1965, the datum of the gage was 760.00 ft above National Geodetic Vertical Datum of 1929. All levels listed below are at the present datum.

GAGE.--A water-stage recorder is installed in a wooden shelter over a 24-inch diameter stilling well. An auxiliary staff gage is driven into the lake bed.

ESTABLISHED LEGAL LEVEL.--13.09 ft gage datum or 763.09 ft above National Geodetic Vertical Datum of 1929 as decreed on August 31, 1949, by the St. Joseph County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a 24-inch reinforced concrete pipe with a gate chamber and slide gate.

INLET AND OUTLET.--The one inlet flows into the lake at the extreme northeast tip from Saugany Lake, approximately 1.7 mi upstream. The outlet flows from the lake on the east shore to Geyer ditch and eventually into the Kankakee River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 16.90 ft May 3, 1983; minimum stage, 7.60 ft Nov. 15, 1964.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	13.10	13.00	13.03	13.16	13.48	13.62	13.92	13.75	13.97	13.58	13.46	13.47
10	13.03	12.98	12.99	13.17	13.46	13.66	13.95	13.71	13.99	13.44	13.41	13.44
15	12.98	13.13	12.97	13.20	13.53	13.85	13.98	13.81	13.83	13.44	13.47	13.42
20	13.07	13.15	13.01	13.31	13.44	13.84	14.01	13.99	13.68	13.59	13.70	13.42
25	13.05	13.11	13.01	13.40	13.65	13.87	14.04	14.04	13.78	13.55	13.64	13.51
EOM	13.01	13.11	13.13	13.41	13.64	13.88	13.84	14.04	13.74	13.41	13.57	13.49

WTR YR 1990 MEAN 13.49 MAX 14.08 MIN 12.97

STREAMS TRIBUTARY TO LAKE MICHIGAN

04097680 JIMMERSON LAKE AT NEVADA MILLS, IN

LOCATION.--Lat 41°43'31", long 85°04'55", in SW¼NW¼ sec.30, T.38 N., R.13 E., Steuben County, Hydrologic Unit 04050001 (ANGOLA WEST, IN quadrangle). The gage is at the extreme west end of the lake on the abutment of the concrete spillway structure and dam in the town of Nevada Mills, 4.6 mi east of Orland.

SURFACE AREA.--434 acres.

DRAINAGE AREA --51.6 mi^2.

PERIOD OF RECORD.--1937-44, 1946 to current year. (Lake level readings were made once a week by employees of Northern Indiana Public Service Company from 1937 to 1944.)

DATUM OF GAGE.- 960.27 ft above National Geodetic Vertical Datum of 1929, as corrected on the basis of levels of Indiana Department of Natural Resources in June 1972.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 24-inch diameter stilling well attached to the control structure. An auxiliary staff gage is bolted to the same wall.

ESTABLISHED LEGAL LEVEL.--4.66 ft gage datum or 964.66 ft above National Geodetic Vertical Datum of 1929 as decreed on July 3, 1947, by the Steuben County Circuit Court. Minor errors were subsequently discovered in the establishment of the datum of the gage (see "DATUM OF GAGE") and the correct elevation of the legal level should be 4.66 ft gage datum or 964.93 ft above National Geodetic Vertical Datum of 1929.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete fixed-crest dam.

INLET AND OUTLET.--Crooked Creek flows through the lake, entering from Lake James at the extreme southeast end, and leaving from the northwest. Crooked Creek flows through Tamarack Lake and becomes Fawn River, which eventually empties into the St. Joseph River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 6.22 ft May 27, 1943; minimum stage, 3.71 ft Feb. 16, 17, 1948.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.81	4.83	4.96	5.09	5.26	5.52	5.28	5.14	5.28	4.94	4.85	4.92
10	4.79	4.93	4.93	5.15	5.25	5.52	5.29	5.08	5.25	4.87	4.81	4.89
15	4.78	4.99	4.93	5.11	5.28	5.62	5.33	5.40	5.15	4.89	5.13	4.86
20	4.84	5.03	4.93	5.24	5.19	5.48	5.32	5.64	5.03	4.90	5.10	4.86
25	4.86	5.04	4.93	5.21	5.70	5.39	5.29	5.52	4.99	4.94	5.11	4.90
EOM	4.84	4.99	4.97	5.17	5.65	5.32	5.15	5.31	5.02	4.86	5.01	4.88

WTR YR 1990 MEAN 5.10 MAX 5.70 MIN 4.75

03331438 KING LAKE NEAR DELONG, IN

LOCATION.--Lat 41°07'48", long 86°25'23", in NW¼SW¼SE¼ sec.16, T.31 N., R.1 E., Fulton County, Hydrologic Unit 05120106 (CULVER, IN quadrangle). The gage is located on the northern shore of the lake, on the lake access road, 0.6 mi southwest of Delong.

SURFACE AREA.--18 acres.

DRAINAGE AREA.--1.98 mi^2.

PERIOD OF RECORD.--1970-72, 1975 to current year.

DATUM OF GAGE.--730.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well.

ESTABLISHED LEGAL LEVEL.--Not established.

LAKE-LEVEL CONTROL.--The lake level is normally controlled by the outlet channel bed. At high stages the control changes to the outlet culvert under old State Highway 17. The culvert is located about 700 ft north of the lake.

INLET AND OUTLET.--The inlet is an unnamed ditch which enters the lake from the southeastern side. The outlet exits the lake on the northern side and flows north approximately 1.5 mi to the Tippecanoe River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 8.69 ft June 14, 1981; minimum stage, 3.60 ft Oct. 23-26, 28-31, November 1, 2, 1974.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.90	7.83	6.75	6.78	5.95	5.55	5.16	5.71	5.27	5.24	5.68	5.76
10	7.87	7.63	6.72	6.82	5.59	5.78	5.69	5.74	5.28	5.28	5.54	5.83
15	7.83	7.44	6.72	6.81	5.70	5.51	5.53	6.07	5.21	5.33	6.36	5.92
20	7.88	6.89	6.72	6.87	6.15	5.34	5.56	5.48	5.18	5.67	8.21	5.70
25	7.88	6.81	6.72	6.73	7.37	5.62	5.57	5.51	5.19	5.66	6.75	5.69
EOM	7.86	6.79	6.72	6.25	6.23	5.50	5.67	5.19	5.37	5.65	5.85	5.61

WTR YR 1990 MEAN 6.19 MAX 8.21 MIN 5.10

STREAMS TRIBUTARY TO LAKE MICHIGAN

04100390 KNAPP LAKE NEAR WASHINGTON CENTER, IN

LOCATION.--Lat. 41°20'36", long 85°36'17", in SW¼NE¼SW¼ sec.4, T.33 N., R.8 E., Noble County, Hydrologic Unit 04050001 (ORMAS, IN quadrangle). The gage is at a public fishing site on the east side of the lake, and 5.8 mi west of the town of Wolflake.

SURFACE AREA.--88 acres.

DRAINAGE AREA.--6.02 mi^2.

PERIOD OF RECORD.--1946-74, 1976 to current year.

DATUM OF GAGE.--870.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well.

ESTABLISHED LEGAL LEVEL.--8.25 ft gage datum or 878.25 ft above National Geodetic Vertical Datum of 1929 as decreed on October 7, 1954, by the Noble County Circuit Court. Harper Lake, Moss Lake, and Hindman Lake, all near Washington Center, have the same established level as Knapp Lake and hence the same lake levels for the period of record.

LAKE-LEVEL CONTROL.--The lake level is controlled by the outlet channel.

INLET AND OUTLET.--There are three inlets. The outlet of Little Knapp Lake enters at the southeastern corner, the outlet of Harper Lake enters at the southernmost tip, and Galloway ditch enters on the eastern shore. The outlet flows from the lake on the western shore, through a series of lakes, into Turkey Creek and eventually into the Elkhart River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 11.10 ft June 27, 1968; minimum stage, 6.87 ft Sept. 14, 15, 1983.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.18	7.76	7.13	7.55	7.73	8.15	7.96	7.54	7.92	7.31	7.55	8.23
10	7.25	7.48	7.10	7.44	7.54	8.12	8.13	7.49	8.01	7.27	7.41	8.08
15	7.20	7.46	7.07	7.30	7.55	8.11	8.34	7.95	7.67	7.50	7.62	7.88
20	7.17	7.45	7.04	7.70	7.62	7.89	8.08	8.68	7.46	7.57	7.96	7.76
25	7.36	7.28	7.04	7.69	9.51	7.79	7.86	8.33	7.41	7.96	8.25	7.62
EOM	7.61	7.19	7.07	7.46	9.16	7.90	7.56	8.09	7.43	7.62	9.04	7.47

WTR YR 1990 MEAN 7.71 MAX 9.63 MIN 7.00

05515600 KOONTZ LAKE AT KOONTZ LAKE, IN

LOCATION.--Lat 41°24'42", long 86°29'18", in SW¼SE¼NE¼ sec.11, T.34 N., R.1 W., Starke County, Hydrologic Unit 07120001 (WALKERTON, IN quadrangle). The gage is on the western tip of the lake, at the control dam on State Highway 23, at the town of Koontz Lake.

SURFACE AREA.--346 acres.

DRAINAGE AREA.--6.25 mi^2.

PERIOD OF RECORD.--1943 to current year.

DATUM OF GAGE.--710.12 ft above National Geodetic Vertical Datum of 1929, as corrected on the basis of levels of Indiana Department of Natural Resources, 1978.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well.

ESTABLISHED LEGAL LEVEL.--4.56 ft gage datum or 714.56 ft above National Geodetic Vertical Datum of 1929 as decreed on September 15, 1948, by the Strke County Circuit Court. Minor errors were subsequently discovered in the establishment of the datum of the gage (see "DATUM OF GAGE") and the correct elevation of the legal level should be 4.56 ft gage datum or 714.68 ft above National Geodetic Vertical Datum of 1929.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a steel sheet piling dam with a fixed crest.

INLET AND OUTLET.--Lawrence Pontius ditch and an unnamed ditch enter the lake on the south shore of the east lobe. The outlet flows from the lake at the western tip and into Robbins ditch 1400 ft downstream. Robbins ditch empties into the Kankakee River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 6.10 ft Oct. 11, 1954; minimum stage, 3.10 ft Oct. 12, 1970.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.39	4.47	4.49	4.49	4.57	4.61	4.59	4.58	4.51	4.50	4.54	4.49
10	4.38	4.48	4.48	4.49	4.54	4.77	4.65	4.55	4.55	4.50	4.49	4.52
15	4.37	4.57	4.49	4.49	4.59	4.68	4.65	4.67	4.51	4.53	4.52	4.54
20	4.46	4.53	4.49	4.69	4.54	4.58	4.63	4.64	4.47	4.60	4.92	4.51
25	4.48	4.49	4.49	4.64	4.81	4.56	4.58	4.61	4.54	4.60	4.62	4.53
EOM	4.46	4.49	4.49	4.55	4.68	4.59	4.53	4.53	4.58	4.51	4.53	4.50

WTR YR 1990 MEAN 4.55 MAX 5.04 MIN 4.37

ILLINOIS RIVER BASIN

05517800 LAKE ELIZA NEAR BEATRICE, IN

LOCATION.--Lat 41°25'55", long 87°10'33", in SW¼NE¼NW¼ sec.1, T.34 N., R.7 W., Porter County, Hydrologic Unit 07120001 (PALMER, IN quadrangle). The gage is on the east bank of a boat channel off the northernmost end of the lake, south of the bridge over the channel, and at the town of Lake Eliza.

SURFACE AREA.--45 acres.

DRAINAGE AREA.--1.70 mi^2.

PERIOD OF RECORD.--1954-74, 1976 to current year.

DATUM OF GAGE.--735.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage is attached to the bridge piling.

ESTABLISHED LEGAL LEVEL.--3.70 ft gage datum or 738.70 ft above National Geodetic Vertical Datum of 1929 as decreed on February 7, 1982, by the Porter County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a reinforced concrete dam with fixed crest.

INLET AND OUTLET.--Two small inlets enter the lake from the northwest and the northeast. The outlet flows from the lake on the south side through a dredged channel, forms the head waters of Wolf Creek, and eventually joins the Kankakee River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 7.24 ft June 14, 1981; minimum stage, 2.45 ft Oct. 13-15, 1988.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	3.65	3.61	3.87	---	4.02	3.98	3.97	4.17	4.13	3.97	4.56	3.95
10	3.59	3.63	3.85	---	3.97	4.34	4.03	4.53	4.19	3.94	4.48	4.02
15	3.53	3.94	---	---	4.01	3.99	4.03	4.62	4.14	3.97	4.52	4.05
20	3.69	3.92	---	---	3.98	3.94	4.05	4.28	4.03	4.34	5.91	4.03
25	3.68	3.90	---	---	4.22	3.98	3.98	4.22	4.06	4.62	4.32	4.00
EOM	3.65	3.89	---	---	4.00	3.99	3.93	4.19	4.10	4.50	4.00	3.96

WTR YR 1990 MEAN 4.07 MAX 6.25 MIN 3.52

STREAMS TRIBUTARY TO LAKE MICHIGAN

04097950 LAKE GAGE AT PANAMA, IN

LOCATION.--Lat 41°42'32", long 85°06'53", in SE¼SE¼NW¼ sec.35, T.38 N., R.12 E., Steuben County, Hydrologic Unit 04050001 (ANGOLA WEST, IN quadrangle). The gage is at the bridge over the outlet on the northern tip of the lake, 0.4 mi northwest of Panama, and 3.3 mi southeast of Orland.

SURFACE AREA.--332 acres.

DRAINAGE AREA.--17.3 mi^2.

PERIOD OF RECORD.--1946 to current year.

DATUM OF GAGE.--950.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in a wooden shelter over a 24-inch diameter stilling well at the downstream side of the bridge. An auxiliary staff gage is at the same site.

ESTABLISHED LEGAL LEVEL.--4.25 ft gage datum or 954.25 ft above National Geodetic Vertical Datum of 1929 as decreed on July 3, 1947, by the Steuben County Circuit Court. Lime Lake at Panama has the same established level and hence the same lake levels for the period of record.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete dam with a fixed crest and one adjustable gate at the outlet of Lime Lake.

INLET AND OUTLET.--The one inlet flows into the lake on the extreme eastern shore from the Third Basin of Crooked Lake, 1.4 mi upstream. The outlet flows from the northern tip into Lime Lake approximately 600 ft downstream, then eventually into the St. Joseph River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 5.55 ft Apr. 25, 1950; minimum stage, 3.41 ft Nov. 13, 15-20, 1953.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	3.95	---	---	---	4.17	4.57	4.38	4.52	4.48	4.44	4.34	4.40
10	3.85	---	---	---	4.17	4.62	4.38	4.50	4.63	4.37	4.27	4.42
15	3.79	---	---	3.91	4.26	4.66	4.34	4.72	4.45	4.37	4.53	4.42
20	3.88	---	---	4.03	4.18	4.58	4.35	4.71	4.36	4.39	4.57	4.41
25	---	---	---	4.12	4.51	4.50	4.31	4.67	4.41	4.40	4.37	4.41
EOM	---	---	---	4.10	4.55	4.45	4.32	4.52	4.49	4.33	4.41	4.49

WTR YR 1990 MEAN 4.36 MAX 4.83 MIN 3.77

STREAMS TRIBUTARY TO LAKE MICHIGAN

04092990 LAKE GEORGE AT HOBART, IN

LOCATION.--Lat 41°32'07", long 87°15'30", in NW¼NW¼NW¼ sec.32, T.36 N., R.7 W., Lake County, Hydrologic Unit 04040001 (GARY, IN quadrangle). The gage is on the northeast end of the lake, 70 ft northwest of the dam and 400 ft upstream of the Ridge Road bridge, in Hobart.

SURFACE AREA.--282 acres.

DRAINAGE AREA.--12.4 mi^2.

PERIOD OF RECORD.--1947 to current year.

DATUM OF GAGE.--600.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in a steel shelter over an 18-inch diameter clay stilling well.

ESTABLISHED LEGAL LEVEL.--2.23 ft gage datum or 602.23 ft above National Geodetic Vertical Datum of 1929 as decreed on September 18, 1959, by the Lake County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete dam with removable boards.

INLET AND OUTLET.--The two principal inlets are Turkey Creek, entering from the extreme southwestern tip, and Deep River, entering on the northeastern shore of the southern lobe. Three unnamed tributaries enter from the northwest, south, and southeast. The outlet, Deep River, flows from the lake at the northeast end and eventually joins the Calumet River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 7.14 ft Oct. 11, 1954; minimum stage, 0.27 ft Nov. 6, 1978 (while the lake was being drained).

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	2.02	2.04	2.11	2.43	2.59	2.53	2.38	2.81	2.21	2.02	2.37	2.17
10	2.01	2.02	2.08	2.25	2.32	3.29	2.37	3.31	2.35	2.05	2.09	2.17
15	2.02	2.44	2.04	2.15	2.27	2.47	2.80	3.36	2.25	2.11	2.09	2.06
20	2.33	2.22	2.02	2.46	2.37	2.34	2.47	2.91	2.09	2.57	5.01	2.00
25	2.08	2.14	2.02	2.79	3.35	2.46	2.39	2.56	2.11	2.37	2.84	2.04
EOM	2.02	2.15	2.05	2.36	2.76	2.43	2.23	2.30	2.23	2.11	2.35	2.09

WTR YR 1990 MEAN 2.37 MAX 5.40 MIN 1.98

04097550 LAKE GEORGE AT JAMESTOWN, IN

LOCATION.--Lat 41°44'58", long 85°01'01", in SE¼NW¼SE¼ sec.15, T.38 N., R.13 E., Steuben County, Hydrologic Unit 04050001 (ANGOLA WEST, IN quadrangle). The gage is 25 ft east of the outlet dam on the southwest end of the lake at Jamestown, 8.0 mi north of Angola.

SURFACE AREA.--488 acres.

DRAINAGE AREA.--14.7 mi^2.

PERIOD OF RECORD.--1946 to current year.

DATUM OF GAGE.--980.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well.

ESTABLISHED LEGAL LEVEL.--5.28 ft gage datum or 985.28 ft above National Geodetic Vertical Datum of 1929 as decreed on October 12, 1945, by the Steuben County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete dam with removable boards.

INLET AND OUTLET.--The inlet flows from Silver Lake, 0.8 mi upstream, and enters on the north shore. The outlet flows from the southwest end of the lake and forms Crooked Creek. Crooked Creek flows into Mud Lake 0.8 mi downstream, then enters Snow Lake.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 6.20 ft Apr. 4, 25, 1950; minimum stage, 4.20 ft Dec. 6, 7, 1946; Oct. 23-31, 1948.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.24	5.22	5.31	5.31	5.49	5.57	5.51	5.46	5.38	5.29	5.23	5.23
10	5.23	5.29	5.29	5.31	5.50	5.65	5.56	5.39	5.44	5.21	5.19	5.23
15	5.21	5.43	5.29	5.31	5.54	5.62	5.54	5.48	5.36	5.28	5.37	5.23
20	5.23	5.39	5.30	5.34	5.47	5.56	5.55	5.56	5.31	5.33	5.31	5.23
25	5.23	5.34	5.30	5.39	5.70	5.53	5.51	5.54	5.31	5.29	5.31	5.26
EOM	5.22	5.32	5.30	5.38	5.61	5.52	5.43	5.46	5.36	5.22	5.27	5.26

WTR YR 1990 MEAN 5.37 MAX 5.73 MIN 5.19

WABASH RIVER BASIN

03331380 LAKE MANITOU AT ROCHESTER, IN

LOCATION.--Lat 41°03'00", long 86°10'06", NW¼SW¼NW¼ sec.14, T.30 N., R.3 E., Fulton County, Hydrologic Unit 05120106 (ROCHESTER, IN quadrangle). The gage is located at the Public Fishing Site on the eastern side of the lake, and 2.6 mi southeast of the courthouse in Rochester.

SURFACE AREA.--1,158 acres.

DRAINAGE AREA.--44.2 mi^2.

PERIOD OF RECORD.--1943 to current year.

DATUM OF GAGE.--770.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in a aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage is located at the northwest end of the lake at the fish hatchery.

ESTABLISHED LEGAL LEVEL.--8.41 ft gage datum or 778.41 ft above National Geodetic Vertical Datum of 1929 as decreed on September 27, 1948, by the Fulton County Circuit Court.

LAKE-LEVEL CONTROL.--The lake level is controlled by a concrete dam and the gate of a feeder canal at the lake outlet.

INLET AND OUTLET.--Main Creek is the main inlet and enters at the southeastern edge of the lake. The other inlet is located on the eastern shore of the lake at the site of the gage. The outlet is Mill Creek, which exits at the northwestern tip of the lake and flows 3.5 mi to the Tippecanoe River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 10.87 ft Aug. 19, 1990; minimum stage, 6.48 ft Nov. 14, 25-27, 1964.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.31	8.35	8.40	---	---	8.75	8.69	8.63	8.60	8.55	8.67	8.80
10	8.28	8.35	8.39	---	8.59	8.98	8.74	8.57	8.70	8.50	8.55	8.75
15	8.27	8.57	---	---	8.64	8.94	8.77	8.64	8.53	8.74	8.86	8.73
20	8.39	8.53	---	---	8.70	8.74	8.71	8.78	8.49	8.76	10.72	8.67
25	8.40	8.43	---	---	9.25	8.68	8.65	8.64	8.52	8.82	9.38	8.63
EOM	8.37	8.42	---	---	8.95	8.73	8.57	8.54	8.62	8.60	8.93	8.61

WTR YR 1990 MEAN 8.67 MAX 10.87 MIN 8.27

03331440 LAKE MAXINKUCKEE AT CULVER, IN

LOCATION.--Lat 41°11'48", long 86°25'00", in NE¼SE¼NW¼ sec.28, T.32 N., R.1 E., Marshall County, Hydrologic Unit 05120106 (CULVER, IN quadrangle). The gage is on the lower west side of the lake, at the public fishing site, 1.4 mi south of the center of Culver.

SURFACE AREA.--1,864 acres.

DRAINAGE AREA.--13.7 mi^2.

PERIOD OF RECORD.--1943 to current year.

DATUM OF GAGE.--730.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage is attached to the upstream side of the north abutment of the outlet dam.

ESTABLISHED LEGAL LEVEL.--3.12 ft gage datum or 733.12 ft above National Geodetic Vertical Datum of 1929 as decreed on August 9, 1948, by the Marshall County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete dam with a fixed crest at the outlet channel.

INLET AND OUTLET.--Wilson ditch enters the lake at the northeast corner, Curtiss ditch enters at the east center, and Norris inlet enters at the southeast corner. The outlet leaves the lake at the western shore, north of the point, and flows into Lost Lake 1,600 ft downstream, thence into the Tippecanoe River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 5.48 ft June 14, 15, 1981; minimum stage, 2.12 ft Nov. 19, 1953 and Nov. 19, 1956.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	2.98	2.90	2.97	3.18	3.48	3.86	3.76	3.64	3.48	3.34	3.29	3.75
10	2.93	2.92	2.97	3.21	3.46	4.01	3.76	3.55	3.53	3.27	3.20	3.67
15	2.91	3.02	2.99	3.24	3.54	4.05	3.77	3.65	3.44	3.24	3.35	3.59
20	2.93	2.99	3.02	3.39	3.49	3.93	3.80	3.70	3.36	3.35	4.15	3.48
25	2.93	2.98	3.02	3.48	3.95	3.84	3.76	3.64	3.32	3.40	4.09	3.40
EOM	2.93	2.98	3.11	3.42	3.92	3.82	3.66	3.53	3.46	3.32	3.89	3.35

WTR YR 1990 MEAN 3.42 MAX 4.18 MIN 2.89

ILLINOIS RIVER BASIN

05516200 LAKE OF THE WOODS NEAR BREMEN, IN

LOCATION.--Lat 41°25'04", long 86°13'44", in SW¼NW¼NW¼ sec.7, T.34 N., R.3 E., Marshall County, Hydrologic Unit 07120001 (BREMEN, IN quadrangle). The gage is on the southwest shore of the lake, at the public fishing site, and 4.7 mi southwest of Bremen.

SURFACE AREA.--416 acres.

DRAINAGE AREA.--9.45 mi^2.

PERIOD OF RECORD.--1945 to current year.

DATUM OF GAGE.--800.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage is driven into the outlet channel.

ESTABLISHED LEGAL LEVEL.--3.85 ft gage datum or 803.85 ft above National Geodetic Vertical Datum of 1929 as decreed on August 9, 1948, by the Marshall County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete dam with a 13 ft by 1 ft notch. The dam is equipped with a lift gate.

INLET AND OUTLET.--Three ditches, Kimble, Martin, and Seltenright, enter the lake on the northwest shore. Scofield ditch enters at the west lobe. The outlet, Clark ditch, flows from the lake at the southern end and eventually into Yellow River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 7.68 ft Oct. 12, 1954; minimum stage, 2.75 ft Nov. 18-20, 1953.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	2.97	3.09	3.22	3.54	3.74	3.91	3.69	3.69	4.04	3.80	4.00	3.92
10	2.97	3.13	3.19	3.51	3.63	4.24	3.89	3.43	4.13	3.87	3.87	3.97
15	2.97	3.24	3.17	3.39	3.53	4.08	3.93	3.91	3.99	4.07	4.02	4.00
20	3.07	3.35	3.16	3.72	3.44	3.80	3.87	3.93	3.92	4.08	4.30	3.49
25	3.14	3.29	3.13	3.86	4.26	3.68	3.74	4.09	3.98	3.97	3.94	3.43
EOM	3.13	3.24	3.17	3.60	4.07	3.71	3.55	4.08	3.91	3.93	3.97	3.29

WTR YR 1990 MEAN 3.66 MAX 4.39 MIN 2.95

04099580 LAKE OF THE WOODS NEAR HELMER, IN

LOCATION.--Lat 41°32'30", long 85°11'42", in SE¼SE¼SE¼ sec.25, T.36 N., R.11 E., Lagrange County, Hydrologic Unit 04050001 (STROH, IN quadrangle). The gage is on the west shore of Duck Pond, a basin connecting Lake of the Woods and McClish Lake, approximately 100 ft south of the bridge over the channel, and 1.5 mi northwest of Helmer.

SURFACE AREA.--136 acres.

DRAINAGE AREA.--5.25 mi^2.

PERIOD OF RECORD.--1951-74, 1977 to current year.

DATUM OF GAGE.--940.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well.

ESTABLISHED LEGAL LEVEL.--11.09 ft gage datum or 951.09 ft above National Geodetic Vertical Datum of 1929 as decreed on July 21, 1960, by the Lagrange County Circuit Court. McClish Lake near Helmer has the same established level and hence the same lake levels for the period of record.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete dam with a fixed sill.

INLET AND OUTLET.--There are four inlets to the lake. Spectacle Lakes drain into the west shore, Maumee ditch enters from the south, Goose Pond flows through a short channel to the southwest shore, and McClish Lake drains into the lake on the southeast shore. The outlet flows to the north from the east end of the lake and through Taylor, Mud, and Little Turkey lakes to Turkey Creek, thence into Pigeon River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 13.00 ft Dec. 24, 25, 1967; minimum stage, 9.81 ft Nov. 17-20, 1953.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	11.28	11.34	11.42	11.41	11.63	---	---	11.52	11.53	11.39	11.32	11.29
10	11.26	11.37	11.41	11.35	11.55	---	---	11.47	11.72	11.37	11.24	11.32
15	11.26	11.57	11.41	11.41	11.54	---	---	11.79	11.49	11.48	11.37	11.33
20	11.34	11.59	11.41	11.72	11.47	---	11.69	11.98	11.36	11.40	11.50	11.33
25	11.42	11.49	11.41	11.62	---	---	11.66	11.73	11.32	11.49	11.49	11.33
EOM	11.36	11.43	11.41	11.48	---	---	11.53	11.56	11.51	11.32	11.37	11.29

WTR YR 1990 MEAN 11.46 MAX 12.24 MIN 11.23

STREAMS TRIBUTARY TO LAKE MICHIGAN

04097520 LAKE PLEASANT NEAR NEVADA MILLS, IN

LOCATION.--Lat 41°45'18", long 85°06'10", in NW¼SW¼NW¼ sec.13, T.38 N., R.12 E., Steuben County, Hydrologic Unit 04050001 (KINDERHOOK, MI-IN quadrangle). The gage is at a bridge over a boat channel on the south shore of the lake, 2.3 mi northwest of Nevada Mills.

SURFACE AREA.--424 acres.

DRAINAGE AREA.--3.18 mi^2.

PERIOD OF RECORD.--1954-69, 1971, 1976 to current year.

DATUM OF GAGE.--960.40 ft above National Geodetic Vertical Datum of 1929 as corrected on the basis of levels of Indiana Department of Natural Resources, 1977-78.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage is attached to the southwest bridge abutment at the site.

ESTABLISHED LEGAL LEVEL.--1.10 ft gage datum or 961.50 ft above National Geodetic Vertical Datum of 1929 as decreed on April 11, 1986, by the Steuben County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a metal plate welded across the bottom of a corrugated metal pipe.

INLET AND OUTLET.--The one inlet enters the lake on the west side. The outlet flows from the northern shore, enters Michigan, and eventually empties into Prairie River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 2.04 ft Mar. 17, 1980; minimum stage, -0.14 ft Nov. 6-14, 1964.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	1.37	1.38	1.51	---	.98	1.60	1.59	1.53	1.61	1.36	1.30	1.36
10	1.36	1.46	1.49	---	1.07	1.71	1.64	1.49	1.59	1.29	1.24	1.34
15	1.34	1.60	1.49	.60	1.22	1.72	1.63	1.65	1.53	1.31	1.45	1.36
20	1.39	1.59	1.49	.69	1.23	1.65	1.64	1.74	1.45	1.38	1.47	1.37
25	1.40	1.55	1.49	.80	1.62	1.62	1.60	1.71	1.42	1.40	1.50	1.44
EOM	1.39	1.52	1.47	.84	1.60	1.62	1.51	1.61	1.44	1.32	1.42	1.42

WTR YR 1990 MEAN 1.42 MAX 1.79 MIN .60

04100160 LITTLE LONG LAKE AT KENDALLVILLE, IN

LOCATION.--Lat 41°27'49", long 85°15'27", in SE¼NW¼NE¼ sec.28, T.35 N., R.11 E., Noble County, Hydrologic Unit 04050001 (KENDALLVILLE, IN quadrangle). The gage is on the south side of the lake at the bridge over the dredged channel in Wakeville Village, 1.6 mi northeast of City Hall in Kendallville.

SURFACE AREA.--71 acres.

DRAINAGE AREA.--4.55 mi^2.

PERIOD OF RECORD.--1954 to current year.

DATUM OF GAGE.--950.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage in one section is attached to the west wingwall on the south side of the bridge.

ESTABLISHED LEGAL LEVEL.--4.50 ft gage datum or 954.50 ft above National Geodetic Vertical Datum of 1929 as decreed on March 26, 1970. Round Lake at Kendallville has the same established level and hence the same lake levels for the period of record.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a fixed-crest concrete dam.

INLET AND OUTLET.--The one inlet enters on the east side from Round Lake. The outlet, Waterhouse ditch, flows from the lake at the southwest end and into Henderson Lake ditch, thence into Sylvan Lake 4.8 mi downstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 6.75 ft Jan. 31, 1969; minimum stage, 3.33 ft Nov. 17, 18, 1964.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.53	4.62	4.69	4.68	4.90	4.87	4.80	4.77	4.82	4.74	4.70	4.64
10	4.51	4.65	4.67	4.69	4.81	4.93	4.92	4.74	5.41	4.66	4.63	4.66
15	4.50	4.84	4.68	4.72	4.83	4.90	4.90	5.05	4.85	4.71	4.80	4.71
20	4.59	4.79	4.68	5.02	4.78	4.80	4.86	5.18	4.72	4.74	4.72	4.70
25	4.64	4.73	4.68	4.90	5.67	4.75	4.82	4.95	4.69	4.79	4.69	4.67
EOM	4.64	4.70	4.68	4.79	5.04	4.84	4.72	4.79	4.95	4.65	4.72	4.65

WTR YR 1990 MEAN 4.79 MAX 5.95 MIN 4.48

WABASH RIVER BASIN

03328100 LONG LAKE AT LAKETON, IN

LOCATION.--Lat 40°59'08", long 85°50'20", in NE¼NW¼NE¼ sec.10, T.29 N., R.6 E., Wabash County, Hydrologic Unit 05120104 (NORTH MANCHESTER SOUTH, IN quadrangle). The gage is located on the north shore of the lake, 0.3 mi west of Crill Road, and 0.8 mi north of Laketon.

SURFACE AREA.--48 acres.

DRAINAGE AREA.--0.55 mi^2.

PERIOD OF RECORD.--1946-51, 1959 to current year.

DATUM OF GAGE.--740.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage, driven into the lake bed, is located 50 ft lakeward of the primary gage.

ESTABLISHED LEGAL LEVEL.--11.19 ft gage datum or 751.19 ft above National Geodetic Vertical Datum of 1929 as decreed on July 26, 1951, by the Wabash County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by an 18-inch corrugated metal pipe draining into a clay tile.

INLET AND OUTLET.--Two tile ditches flow into the lake. The outlet flows from the west end of the lake, joins the outlet of Mud Lake, continues through Round Lake, then into Eel River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 13.66 ft Mar. 22, 1982; minimum stage, 8.68 ft Dec. 1-3, 1964.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	11.03	10.74	10.59	10.55	10.98	11.93	12.50	12.46	12.49	11.97	12.25	12.39
10	10.94	10.70	10.56	10.56	11.01	12.21	12.58	12.32	12.41	11.94	12.13	---
15	10.87	10.78	10.55	10.56	11.17	12.45	12.61	12.38	12.21	12.10	12.26	---
20	10.91	10.73	10.55	10.82	11.21	12.45	12.63	12.48	12.03	12.07	13.19	---
25	10.86	10.67	10.55	10.87	11.80	12.44	12.61	12.46	11.96	12.23	13.00	---
EOM	10.80	10.63	10.55	10.84	11.86	12.50	12.50	12.35	12.15	12.11	12.74	---

WTR YR 1990 MEAN 11.68 MAX 13.19 MIN 10.55

04099200 LONG LAKE AT MOONLIGHT, IN

LOCATION.--Lat 41°35'01", long 85°01'43", in NE¼NE¼NE¼ sec.16, T.36 N., R.13 E., Steuben County, Hydrologic Unit 04050001 (ASHLEY, IN quadrangle). The gage is located on the northern shore, 0.4 mi east of the lake outlet and 2.5 mi north of Steubenville.

SURFACE AREA.--92 acres.

DRAINAGE AREA.--67.9 mi^2.

PERIOD OF RECORD.--1946 to current year.

DATUM OF GAGE.--940.10 ft above National Geodetic Vertical Datum of 1929 as corrected on the basis of levels of Indiana Department of Natural Resources, 1977.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage is located near the gage in two sections. One section is mounted on a post which is driven into the lake bed. The other section is mounted to a tree near the gage.

ESTABLISHED LEGAL LEVEL.--Not established.

LAKE-LEVEL CONTROL.--The lake level is controlled by the downstream channel.

INLET AND OUTLET.--Pigeon Creek flows into Long Lake at the eastern end of the lake and exits at the western end.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 17.42 ft Mar. 22, 1982; minimum stage, 8.82 ft Oct. 14, 16, 1988.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.18	9.16	9.38	11.15	11.22	---	---	10.03	11.30	9.46	9.23	9.12
10	9.18	9.27	9.24	10.70	10.72	---	---	9.75	11.14	9.23	9.10	9.12
15	9.14	9.86	9.14	9.99	10.23	---	---	11.78	10.10	9.26	10.46	9.20
20	9.23	10.57	9.10	11.32	9.97	---	10.44	13.54	9.63	9.25	9.66	9.21
25	9.36	9.89	9.07	10.99	---	---	10.37	11.66	9.53	9.27	9.86	9.22
EOM	9.20	9.56	9.24	10.22	---	---	9.85	10.63	9.96	9.10	9.27	9.12

WTR YR 1990 MEAN 9.90 MAX 14.07 MIN 9.06

WABASH RIVER BASIN

03331460 LOST LAKE NEAR CULVER, IN

LOCATION.--Lat 41°12'02", long 86°25'17", in NE¼NW¼NW¼ sec.28, T.32 N., R.1 E., Marshall County, Hydrologic Unit 05120106 (CULVER, IN quadrangle). The gage is on the northern shore of the lake at the east end of West 19th Road (lake access road), 1.1 mi south of the center of Culver.

SURFACE AREA.--40 acres.

DRAINAGE AREA.--14.2 mi^2.

PERIOD OF RECORD.--1954-61, 1963-74, 1976 to current year. (Formerly published as Hawks Lake near Culver.)

DATUM OF GAGE.--720.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well.

ESTABLISHED LEGAL LEVEL.--12.00 ft gage datum or 732.00 ft above National Geodetic Vertical Datum of 1929 as decreed on February 17, 1960, by the Marshall County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete dam and sill with removable boards in the outlet channel approximately 850 ft downstream from the main body of the lake.

INLET AND OUTLET.--The one inlet flows into the lake from Maxinkuckee Lake and enters on the north shore. The outlet flows from the south end of the lake to the Tippecanoe River 3.7 mi downstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 13.05 ft June 15, 1981; minimum stage, 10.12 ft July 9, 1959.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	11.43	11.32	10.79	11.03	11.42	11.47	11.41	11.38	11.42	11.24	11.19	11.45
10	11.38	10.91	10.81	10.90	11.20	11.59	11.42	11.34	11.41	11.15	11.02	11.41
15	11.32	10.87	10.82	10.89	11.27	11.59	11.44	11.39	11.36	11.15	11.26	11.37
20	11.40	10.81	10.86	10.76	11.23	11.51	11.47	11.43	11.29	11.28	11.70	11.27
25	11.38	10.79	10.89	11.32	11.52	11.46	11.45	11.53	11.24	11.32	11.66	11.21
EOM	11.33	10.79	10.98	11.38	11.52	11.44	11.40	11.41	11.35	11.24	11.57	11.13

WTR YR 1990 MEAN 11.27 MAX 11.70 MIN 10.75

03328400 LUKENS LAKE NEAR DISKO, IN

LOCATION.--Lat 40°58'09", long 85°56'06", in SW¼NW¼NE¼ sec.14, T.29 N., R.5 E., Wabash County, Hydrologic Unit 05120104 (ROANN, IN quadrangle). The gage is 25 ft north of the outlet on the southwest side of the lake, 4.1 mi north of Roann.

SURFACE AREA.--46 acres.

DRAINAGE AREA.--1.76 mi^2.

PERIOD OF RECORD.--1948-49, 1959 to current year.

DATUM OF GAGE.--760.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage in one section is driven into the lake bed about 5 ft upstream from the outlet culvert.

ESTABLISHED LEGAL LEVEL.--3.60 ft gage datum or 763.60 ft above the National Geodetic Vertical Datum of 1929 as decreed on March 29, 1978, by the Wabash County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by two 18-inch corrugated metal culverts at the outlet.

INLET AND OUTLET.--The principal inlet is a tile drain from McColley Lake, 0.5 mi to the north. The outlet flows from the southwestern shore, into Bolley Ditch 0.7 mi downstream, thence into Squirrel Creek, and eventually into Eel River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 5.10 ft May 16, 1968; minimum stage, 2.32 ft Oct. 12, 1983.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	3.48	3.48	3.55	3.78	3.89	4.06	3.93	3.77	3.79	3.58	3.98	3.96
10	---	3.49	3.54	3.80	3.86	4.24	4.00	3.67	3.78	3.67	3.88	3.97
15	---	3.63	3.54	3.76	3.95	4.16	3.93	3.78	3.72	3.80	3.96	3.95
20	---	3.61	3.54	3.85	3.94	4.01	3.88	3.90	3.62	3.84	4.46	3.90
25	3.49	3.59	3.54	3.86	4.22	3.93	3.83	3.86	3.63	3.95	4.07	3.85
EOM	3.50	3.57	3.68	3.78	4.13	3.97	3.76	3.75	3.65	3.82	3.97	3.78

WTR YR 1990 MEAN 3.81 MAX 4.88 MIN 3.46

STREAMS TRIBUTARY TO LAKE MICHIGAN

04100280 MUNCIE LAKE NEAR BURR OAK, IN

LOCATION.--Lat 41°19'37", long 85°27'28", in NE¼SW¼SW¼ sec.11, T.33 N., R.9 E., Noble County, Hydrologic Unit 04050001 (MERRIAM, IN quadrangle). The gage is on the southwest shore of the lake, just north of the gravel road on the Addis farm, and 1.3 mi northwest of Burr Oak.

SURFACE AREA.--47 acres.

DRAINAGE AREA.--42.8 mi^2.

PERIOD OF RECORD.--1954 to current year.

DATUM OF GAGE.--880.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well.

ESTABLISHED LEGAL LEVEL.--Not established.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by the outlet channel.

INLET AND OUTLET.--There are three inlets to the lake. Forker Creek flows into the lake from the east, Brown Ditch from the southeast, and Carrol Creek from the west. The outlet flows from the northwest shore into Williams Lake, then into the South Branch of the Elkhart River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 9.47 ft Mar. 24, 25, 1978, Feb. 25, 26, 1985; minimum stage, 1.88 ft Aug. 6, 1988.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	2.38	2.37	2.58	3.48	4.01	4.39	3.61	3.32	4.36	3.01	3.02	4.32
10	2.33	2.34	2.47	3.47	3.46	4.07	3.71	3.29	4.88	2.67	2.70	3.81
15	2.31	2.49	2.40	3.46	3.20	4.26	4.20	4.32	4.09	2.95	4.00	3.57
20	2.40	2.96	2.34	4.12	3.53	3.48	3.63	5.95	3.39	2.94	4.31	3.31
25	2.53	2.76	2.34	3.67	7.41	3.04	3.57	4.77	3.19	4.59	4.24	3.01
EOM	2.49	2.70	2.40	3.05	6.14	3.42	3.15	4.41	3.41	3.12	6.03	2.79

WTR YR 1990 MEAN 3.49 MAX 7.41 MIN 2.24

04099700 NORTH TWIN LAKE NEAR HOWE, IN

LOCATION.--Lat 41°43'45", long 85°27'49", in SE¼SW¼SW¼ sec.23, T.38 N., R.9 E., Lagrange County, Hydrologic Unit 04050001 (LAGRANGE, IN quadrangle). The gage is in the channel between North and South Twin Lakes, 100 ft upstream from the county road bridge, and 2.2 mi northwest of Howe.

SURFACE AREA.--135 acres.

DRAINAGE AREA.--1.54 mi^2.

PERIOD OF RECORD.--1953 to current year.

DATUM OF GAGE.--840.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A staff gage is attached to the east concrete retaining wall of the control dam.

ESTABLISHED LEGAL LEVEL.--3.56 ft gage datum or 843.56 ft above National Geodetic Vertical Datum of 1929 as decreed on September 11, 1959, by the Lagrange County Circuit Court. South Twin Lake near Howe has the same established level and hence the same lake levels for the period of record.

LAKE-LEVEL CONTROL.--Prior to October 1, 1982, the low water control was a fixed-crest dam with removable boards at the upstream end of the channel between the two lakes. At high stages the outlet channel of South Twin Lake was the control. After October 1, 1982, a concrete dam with a fixed crest was installed in the outlet of South Twin Lake. This is now the control structure for both North and South Twin Lakes, although the original structure is still in place.

INLET AND OUTLET.--There are two inlets to the lake. One enters at the southeast shore from Still Lake 0.9 mi upstream, and the other, which drains the adjacent marsh land, enters on the northwest shore. The outlet flows from the southwest shore and into South Twin Lake approximately 200 ft downstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 5.20 ft Feb. 26, 1985; minimum stage, 2.97 ft Aug. 20, 1964.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	3.50	3.74	3.64	3.58	3.62	3.62	3.64	3.60	3.60	3.54	3.57	3.48
10	3.50	3.79	3.58	3.60	3.62	3.60	3.68	3.59	3.62	3.48	3.48	3.51
15	3.48	3.86	3.56	3.62	3.60	3.60	3.66	3.68	3.56	3.52	3.61	3.52
20	3.56	3.78	3.58	3.64	3.60	3.62	3.66	3.72	3.56	3.62	3.66	3.52
25	3.68	3.68	3.58	3.62	3.62	3.62	3.60	3.72	3.55	3.66	3.58	3.58
EOM	3.70	3.68	3.58	3.60	3.60	3.63	3.56	3.61	3.59	3.57	3.54	3.56

WTR YR 1990 MEAN 3.61 MAX 3.88 MIN 3.46

WABASH RIVER BASIN

03331400 NYONA LAKE NEAR GREENOAK, IN

LOCATION.--Lat 40°57'40", long 86°11'20", in SE¼SE¼NE¼ sec.16, T.29 N., R.3 E., Fulton County, Hydrologic Unit 05120106 (MACY, IN quadrangle). The gage is on the northwest shore of the southern lobe of the lake, at the public fishing site, and 2.4 mi south of Greenoak.

SURFACE AREA.--104 acres.

DRAINAGE AREA.--7.59 mi^2.

PERIOD OF RECORD.--1946 to current year.

DATUM OF GAGE.--790.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well.

ESTABLISHED LEGAL LEVEL.--3.91 ft gage datum or 793.91 ft above National Geodetic Vertical Datum of 1929 as decreed on September 27, 1948, by the Fulton County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete dam with a fixed crest.

INLET AND OUTLET.--The lake is fed by two small ditches entering from the east and northeast. The outlet flows from the lake at the southwest corner and into Mud Creek, which eventually joins the Tippecanoe River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 6.13 ft Aug. 18, 1990; minimum stage, 2.98 ft Oct. 12-19, 25, 26, 1953.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	3.97	4.01	4.05	4.32	4.33	4.28	4.24	4.24	4.19	4.07	4.34	4.17
10	3.97	4.01	4.03	4.14	4.22	4.70	4.44	4.17	4.28	4.46	4.10	4.14
15	3.98	4.36	4.01	4.07	4.40	4.41	4.35	4.24	4.12	4.44	4.36	4.10
20	4.05	4.20	4.01	4.29	4.32	4.24	4.30	4.29	4.08	4.30	5.28	4.07
25	4.05	4.10	4.01	4.25	4.72	4.19	4.23	4.22	4.13	4.33	4.54	4.04
EOM	4.01	4.07	4.08	4.13	4.47	4.30	4.17	4.11	4.27	4.12	4.29	4.04

WTR YR 1990 MEAN 4.23 MAX 6.13 MIN 3.96

03371700 OGLE LAKE NEAR NASHVILLE, IN

LOCATION.--Lat 39°09'35", long 86°14'54", in NE¼SE¼NE¼ sec.1, T.8 N., R.2 E., Brown County, Hydrologic Unit 05120208 (NASHVILLE, IN quadrangle). The gage is on the dam, near the concrete intake structure on the west side of the lake, 3.3 mi south of Nashville.

SURFACE AREA.--20 acres.

DRAINAGE AREA.--1.03 mi^2.

PERIOD OF RECORD.--1954 to current year.

DATUM OF GAGE.--710.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well.

ESTABLISHED LEGAL LEVEL.--Not established.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete flood spillway with a fixed crest.

INLET AND OUTLET.--Two ditches enter the lake, one from the east and one from the southeast. The outlet flows into Upper Schooner Creek, which joins Lower Schooner Creek, then flows into the North Fork of Salt Creek. The North Fork of Salt Creek empties into Monroe Reservoir.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 6.80 ft June 23, 1960; minimum stage, -2.70 ft Feb. 12, 13, 1977.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.37	4.56	4.60	4.68	4.73	4.66	4.67	4.72	4.50	4.07	3.60	2.83
10	4.28	4.65	4.63	4.63	4.70	4.70	4.90	4.68	4.57	3.86	3.45	2.84
15	4.17	5.10	4.63	4.61	5.00	4.69	4.68	4.84	4.45	3.89	3.35	2.84
20	4.45	4.64	4.62	4.77	4.67	4.68	4.65	4.70	4.45	3.79	3.22	2.84
25	4.51	4.62	4.62	4.65	4.69	4.67	4.64	4.61	4.38	3.73	3.12	2.74
EOM	4.49	4.62	4.87	4.66	4.69	4.70	4.61	4.59	4.24	3.58	3.00	2.66

WTR YR 1990 MEAN 4.29 MAX 5.31 MIN 2.66

STREAMS TRIBUTARY TO LAKE MICHIGAN

04100100 OLIVER LAKE NEAR VALENTINE, IN

LOCATION.--Lat 41°34'37", long 85°24'44", in SE¼SW¼NE¼ sec.18, T.36 N., R.10 E., Lagrange County, Hydrologic Unit 04050001 (OLIVER LAKE, IN quadrangle). The gage is at the public fishing site on the northwest side of the lake, and 1.6 mi southwest of Valentine.

SURFACE AREA.--362 acres.

DRAINAGE AREA.--11.1 mi^2.

PERIOD OF RECORD.--1945 to current year.

DATUM OF GAGE.--889.78 ft above National Geodetic Vertical Datum of 1929 as corrected on the basis of levels of Indiana Department of Natural Resources, 1975-76.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxillary staff gage is attached to the dam in the outlet.

ESTABLISHED LEGAL LEVEL.--9.45 ft gage datum or 899.45 ft above National Geodetic Vertical Datum of 1929 as decreed on September 29, 1952, by the Lagrange County Circuit Court. Minor errors were subsequently discovered in the establishment of the datum of the gage (see "DATUM OF GAGE") and the correct elevation of the legal level should be 9.45 ft gage datum or 899.23 ft above National Geodetic Vertical Datum of 1929. Martin and Olin Lakes near Valentine have have the same established level as Oliver Lake and hence the same lake levels for the period of record.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a fixed sill and dam with movable boards.

INLET AND OUTLET.--The lake has several inlets. Dove Creek enters on the northwest, the outlet of Holsinger Hole on the north, Hart ditch on the east, and the channel between Oliver and Olin Lakes on the southeast shore. The Oliver Lake outlet flows from the southwest lobe of the lake, through a wetland, into Hackenburg Lake 1.6 mi downstream, and eventually into the North Branch of the Elkhart River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 11.77 ft June 14, 1981; minimum stage, 8.42 ft Jan. 18, 19, and Feb. 3-5, 1961.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.73	9.81	9.70	9.91	9.89	10.09	9.73	9.76	10.01	9.64	9.77	9.76
10	9.72	9.86	9.68	9.85	9.85	10.19	9.80	9.74	10.07	9.63	9.71	9.79
15	9.73	10.02	9.69	9.79	9.82	10.15	9.82	10.01	9.91	9.73	9.91	9.81
20	9.82	9.91	9.70	9.91	9.70	9.90	9.79	10.45	9.75	9.86	10.09	9.82
25	9.85	9.76	9.70	9.91	10.60	9.75	9.74	10.26	9.67	9.87	10.02	9.81
EOM	9.81	9.72	9.77	9.81	10.35	9.75	9.67	10.06	9.70	9.74	9.87	9.78

WTR YR 1990 MEAN 9.86 MAX 10.64 MIN 9.62

03331180 PALESTINE LAKE AT PALESTINE, IN

LOCATION.--Lat 41°10'48", long 85°56'54", in NE¼NE¼SW¼ sec.33, T.32 N., R.5 E., Kosciusko County, Hydrologic Unit 05120106 (BURKET, IN quadrangle). The gage is near the extreme northwestern corner of the lake, at the public access site, in the town of Palestine.

SURFACE AREA.--290 acres.

DRAINAGE AREA.--32.4 mi^2.

PERIOD OF RECORD.--1954 to current year.

DATUM OF GAGE.--815.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage in one section is driven into the lake bed just north of the public access site.

ESTABLISHED LEGAL LEVEL.--1.62 ft gage datum or 816.62 ft above National Geodetic Vertical Datum of 1929 as decreed on August 5, 1965, by the Kosciusko County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by an old mill dam of stone and concrete (fixed crest) at the west lobe of the far northern shore.

INLET AND OUTLET.--There are four inlets to the lake. Magee ditch enters from the north, Williamson ditch from the west and the confluence of Adams and Sloan ditches from the southeast. Trimble Creek flows through the lake, entering on the extreme southeastern end, leaving at the northwestern lobe and flowing into the Tippecanoe River 7.5 mi downstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 4.35 ft June 13, 1981; minimum stage, below -0.90 ft, lake drained, 1988.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	1.77	1.81	1.81	1.84	2.03	2.07	2.02	2.01	1.94	1.86	2.06	1.97
10	1.79	1.86	1.80	1.98	1.95	2.36	2.11	1.93	2.09	1.89	1.90	1.97
15	1.79	2.00	1.80	1.95	2.04	2.15	2.10	2.07	1.90	1.89	2.10	2.09
20	1.87	1.87	1.80	1.99	2.08	2.05	2.08	2.11	1.88	2.23	2.60	2.00
25	1.88	1.83	1.80	1.98	2.48	1.99	2.03	2.03	1.89	2.04	2.20	1.87
EOM	1.83	1.83	1.80	1.90	2.25	2.05	1.94	1.92	1.89	1.95	2.03	1.88

WTR YR 1990 MEAN 1.98 MAX 3.10 MIN 1.76

WABASH RIVER BASIN

03331040 PIKE LAKE AT WARSAW, IN

LOCATION.--Lat 41°15'44", long 85°51'00", in NE¼NW¼NE¼ sec.5, T.32 N., R.6 E., Kosciusko County, Hydrologic Unit 05120106 (LEESBURG, IN quadrangle). The gage is on the extreme northwestern point of the lake at the bridge over the outlet, 1.6 mi north of Warsaw.

SURFACE AREA.--203 acres.

DRAINAGE AREA.--41.5 mi^2.

PERIOD OF RECORD.--1954 to current year.

DATUM OF GAGE.--800.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well attached to the upstream abutment of the control structure.

ESTABLISHED LEGAL LEVEL.--5.64 ft gage datum or 805.64 ft above National Geodetic Vertical Datum of 1929 as decreed on December 12, 1963, by the Kosciusko County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete dam with a fixed crest and removable boards.

INLET AND OUTLET.--The one inlet, Deeds Creek, flows from Little Chapman Lake 3.4 mi upstream, and enters the lake on the lower northern shore. The outlet flows to the west from the extreme northern end of the lake through Lones ditch and enters the Tippecanoe River 0.9 mi downstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 10.79 ft Oct. 15, 1954; minimum stage, 3.71 ft Sept. 21, 22, 1955.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.66	4.70	4.82	5.30	5.27	6.35	5.21	6.05	6.03	5.77	6.06	5.98
10	5.65	4.72	4.81	5.07	5.11	6.21	5.32	5.92	6.18	5.84	5.86	6.06
15	4.92	5.06	4.80	4.96	5.16	6.06	5.46	6.22	5.95	5.88	6.20	6.27
20	4.76	4.97	4.79	5.25	5.27	5.62	5.35	6.41	5.90	6.14	7.46	6.05
25	4.76	4.87	4.79	5.19	7.75	5.29	5.39	6.15	5.88	6.25	6.61	5.99
EOM	4.71	4.85	4.88	5.04	7.00	5.30	5.97	5.99	5.89	5.96	6.15	5.94

WTR YR 1990 MEAN 5.63 MAX 8.02 MIN 4.70

05515220 PINE LAKE AT LAPORTE, IN

LOCATION.--Lat 41°37'01", long 86°44'58", in NE¼SE¼NW¼ sec.34, T.37 N., R.3 W., LaPorte County, Hydrologic Unit 07120001 (LAPORTE EAST, IN quadrangle). The gage is at the highway bridge over the channel connecting Pine and Stone Lakes, on Waverly Beach Road, in LaPorte.

SURFACE AREA.--564 acres.

DRAINAGE AREA.--10.7 mi^2.

PERIOD OF RECORD.--1946-75, 1980 to current year.

DATUM OF GAGE.--780.00 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1964, the datum of the gage was 790.00 ft. All levels given below are at the present datum.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage is driven into the channel bed at the same site.

ESTABLISHED LEGAL LEVEL.--16.20 ft gage datum or 796.20 ft above National Geodetic Vertical Datum of 1929, as decreed on August 31, 1949, by the LaPorte County Circuit Court. Stone Lake at LaPorte has the same established level and hence the same lake levels during the periods of record when the channel between the two lakes is open and flowing, water years 1946-63 and 1968-85.

LAKE-LEVEL CONTROL.--Pine and Stone Lakes form a closed basin; however, there is a capability of pumping water from the lakes into the Little Kankakee River during times of high water.

INLET AND OUTLET.--Kabelin ditch enters Pine Lake from the northwest through a large drain tile. Pine Lake is connected to Stone Lake by a channel on the southern tip.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 20.81 ft May 7, 22, 1983; minimum stage, 9.00 ft Nov. 14, 1964.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	16.06	15.92	15.98	16.02	16.17	16.37	16.58	16.68	16.99	16.87	16.79	17.22
10	15.99	15.94	15.95	16.04	16.15	16.49	16.62	16.82	16.98	16.80	16.72	17.17
15	15.93	16.10	15.97	16.00	16.22	16.56	16.65	17.00	16.90	16.82	16.72	17.16
20	16.04	16.06	15.97	16.07	16.19	16.52	16.69	17.10	16.86	16.86	17.33	17.10
25	16.01	16.01	16.00	16.14	16.37	16.53	16.68	17.13	16.88	16.86	17.38	17.18
EOM	15.95	16.00	16.00	16.10	16.37	16.56	16.61	17.07	16.97	16.77	17.30	17.15

WTR YR 1990 MEAN 16.52 MAX 17.41 MIN 15.91

ILLINOIS RIVER BASIN

05516600 PRETTY LAKE NEAR PLYMOUTH

LOCATION.--Lat 41°19'39", long 86°22'15", in NW¼SE¼NE¼ sec. 11, T. 33 N., R. 1 E., Marshall County, Hydrologic Unit 07120001, the gage is on the north shore of the lake, 3.3 mi southwest of Plymouth.

SURFACE AREA.--97 acres.

DRAINAGE AREA.--0.85 mi^2.

PERIOD OF RECORD.--1954-66. 1989 to current year.

DATUM OF GAGE.--780.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A staff gage in one section is driven into the lake bed near house at 10099 Pretty Lake Trail.

ESTABLISHED LEGAL LEVEL.--7.36 ft gage datum or 787.36 ft above National Geodetic Vertical Datum of 1929 as decreed on July 16, 1965, by the Marshall County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by the banks. At times of very high water levels, water overflows the southeastern shore.

INLET AND OUTLET.--There are no inlets. There is no well-defined outlet.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 9.20 ft Aug. 25, 1990; minimum stage, 4.90 ft Nov. 26, 27, 1964.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.17	---	---	---	---	---	---	---	8.98	8.80	8.79	9.08
10	8.01	---	---	---	---	---	---	8.04	9.00	8.72	8.69	9.07
15	7.95	---	---	---	---	---	---	9.10	8.94	8.72	8.72	9.07
20	7.97	---	---	---	---	---	---	9.10	8.86	8.76	9.18	9.00
25	---	---	---	---	---	---	---	9.08	8.86	8.88	9.20	8.95
EOM	---	---	---	---	---	---	---	9.04	8.88	8.79	9.17	8.90

WTR YR 1990 MEAN 8.82 MAX 9.20 MIN 7.94

05515800 RIDDLES LAKE NEAR LAKEVILLE, IN

LOCATION.--Lat 41°30'19", long 86°15'31", in NW¼NE¼ sec.11, T.35 N., R.2 E., St. Joseph County, Hydrologic Unit 07120001 (LAKEVILLE, IN quadrangle). The gage is on the east side of the lake, about 1.4 mi southeast of Lakeville.

SURFACE AREA.--77 acres.

DRAINAGE AREA.--11.7 mi^2.

PERIOD OF RECORD.--1946-71, 1976 to current year.

DATUM OF GAGE.--810.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage is attached to a wingwall of the control dam.

ESTABLISHED LEGAL LEVEL.--7.50 ft gage datum or 817.50 ft above National Geodetic Vertical Datum of 1929 as decreed on July 3, 1953, by the St. Joseph County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a steel and concrete dam with a fixed crest. Boards may be added to raise the water level.

INLET AND OUTLET.--Heston ditch flows through the lake, entering on the northern shore and leaving on the southern. The outflow eventually enters Yellow River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 11.49 ft Apr. 5, 1950; minimum stage, 6.40 ft July 25-31, Aug. 1-9, 22-31, Sept. 1-30, 1971.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.96	6.99	7.22	7.35	7.37	7.39	7.32	7.33	7.30	7.25	7.31	7.24
10	6.92	7.05	7.21	7.32	7.30	7.75	7.44	7.33	7.33	7.21	7.23	7.26
15	6.89	7.25	7.20	7.26	7.32	7.44	7.41	7.47	7.26	7.29	7.23	7.26
20	6.99	7.28	7.19	7.36	7.27	7.33	7.37	7.55	7.26	7.48	7.47	7.25
25	7.02	7.22	7.20	7.58	7.53	7.35	7.30	7.50	7.29	7.40	7.31	7.31
EOM	7.00	7.22	7.23	7.31	7.44	7.34	7.34	7.35	7.35	7.26	7.28	7.29

WTR YR 1990 MEAN 7.29 MAX 7.96 MIN 6.88

WABASH RIVER BASIN

03330300 RIDINGER LAKE NEAR PIERCETON, IN

LOCATION.--Lat 41°15'07", long 85°39'34", in SW¼SW¼SE¼ sec.1, T.32 N., R.7 E., Kosciusko County, Hydrologic Unit 05120106 (NORTH WEBSTER, IN quadrangle). The gage is on the inlet channel, attached to the Adams Road bridge, 0.4 mi upstream from the lake and 4.4 mi northeast of Pierceton.

SURFACE AREA.--136 acres.

DRAINAGE AREA.--34.6 mi^2.

PERIOD OF RECORD.--1943 to current year.

DATUM OF GAGE.--840.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well attached to the right downstream wingwall of the bridge. An auxiliary staff gage in two sections is at the control dam.

ESTABLISHED LEGAL LEVEL.--3.12 ft gage datum or 843.12 ft above National Geodetic Vertical Datum of 1929, as decreed on April 11, 1949, by the Kosciusko County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete dam with a fixed crest and a sluice-way with a steel gate for controlling high water. The dam is located in the outlet, 300 ft downstream from the lake.

INLET AND OUTLET.--Grassy Creek flows through the lake, entering at the southwestern end. Grassy Creek is formed 1.5 mi upstream by the outlet of Robinson Lake and Cedar Lake Branch. Grassy Creek leaves the lake at the northwestern end and flows into Big Barbee Lake, 3.5 mi downstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 9.01 ft Feb. 24, 1985; minimum stage, 1.35 ft Jan. 17-19, 1944.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	3.01	3.58	3.15	3.82	3.45	3.31	3.18	3.09	3.02	2.74	3.23	2.80
10	3.08	3.66	3.16	3.28	3.25	4.08	3.71	2.92	3.29	2.71	2.77	2.88
15	3.15	3.35	3.16	3.14	3.40	3.43	3.32	3.27	2.86	2.77	3.37	3.22
20	3.29	3.24	3.16	3.48	3.41	3.30	3.29	3.42	2.82	3.23	4.13	2.78
25	3.38	3.15	3.16	3.48	4.61	3.09	3.15	3.12	2.82	3.38	3.14	2.69
EOM	3.45	3.15	3.16	3.14	3.75	3.36	3.04	2.90	2.88	2.80	3.25	2.63

WTR YR 1990 MEAN 3.23 MAX 6.27 MIN 2.63

03330460 SAWMILL LAKE NEAR NORTH WEBSTER, IN

LOCATION.--Lat 41°17'22", long 85°42'52", in NE¼SW¼NE¼ sec.28, T.33 N., R.7 E., Kosciusko County, Hydrologic Unit 05120106 (NORTH WEBSTER, IN quadrangle). The gage is near the southeastern corner of the county road bridge over the channel between Big Barbee Lake and Little Barbee Lake, 2.6 mi southwest of North Webster.

SURFACE AREA.--36 acres.

DRAINAGE AREA.--51.8 mi^2.

PERIOD OF RECORD.--1945-1970, 1972 to current year.

DATUM OF GAGE.--830.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage is attached to the stilling well.

ESTABLISHED LEGAL LEVEL.--7.50 ft gage datum or 837.50 ft above National Geodetic Vertical Datum of 1929 as decreed on October 18, 1949, by the Kosciusko County Circuit Court. All lakes in the Barbee Chain have the same established level and hence the same lake levels for the period of record. The lakes are as follows: Kuhn, Big Barbee, Little Barbee, Irish, Banning, Sechrist and Sawmill.

LAKE-LEVEL CONTROL.--The level of the lakes is controlled by a concrete dam with a fixed crest, located 600 ft upstream of the County Road 500 North bridge over the outlet of Sawmill Lake.

INLET AND OUTLET.--There are four inlets to the Barbee Chain. Grassy Creek flows into Big Barbee Lake at the south-eastern side. The outlet of Heron Lake flows into Kuhn Lake from the north. Puntney ditch enters Little Barbee Lake from the south. The outlet from Shoe Lake flows into Banning Lake on the northeastern shore. The outlet, Grassy Creek, leaves Sawmill Lake at the northwestern tip and flows into Tippecanoe Lake 1.7 mi downstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 10.53 ft Mar. 20, 1982; minimum stage, 5.45 ft Jan. 29-31, Feb. 1-28, Mar. 1, 2, 1978.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.24	7.29	7.39	7.64	7.82	8.38	7.75	7.63	7.73	7.40	7.64	7.98
10	7.21	7.26	7.32	7.63	7.66	8.14	7.77	7.56	7.95	7.35	7.57	7.98
15	7.21	7.43	7.34	7.47	7.63	8.14	7.89	7.81	7.65	7.46	8.08	7.89
20	7.32	7.45	7.34	7.75	7.71	7.83	7.80	8.40	7.52	7.55	8.84	7.76
25	7.36	7.32	7.34	7.68	9.19	7.65	7.78	8.08	7.51	8.31	8.67	7.60
EOM	7.32	7.36	7.36	7.59	8.90	7.72	7.62	7.73	7.53	7.73	8.44	7.50

WTR YR 1990 MEAN 7.71 MAX 9.19 MIN 7.20

WABASH RIVER BASIN

03331120 SHERBURN LAKE NEAR PIERCETON, IN

LOCATION.--Lat 41°09'40", long 85°44'43", in SE¼SE¼SE¼ sec.4, T.31 N., R.7 E., Kosciusko County, Hydrologic Unit 05120106 (PIERCETON, IN quadrangle). The gage is at the extreme northern end of the lake on the outlet channel just south of County Road 500 South, 3.4 mi southwest of Pierceton.

SURFACE AREA.--15 acres.

DRAINAGE AREA.--5.51 mi^2.

PERIOD OF RECORD.--1954 to current year. (Formerly published as Johnson Lake near Pierceton.)

DATUM OF GAGE.--870.00 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1980, the datum of the gage was 880.00 ft. All levels listed below are at the present datum.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage is driven into the lake bed just south of the western lobe of the lake, 400 ft south of County Road 500 South on the first drive west of the outlet.

ESTABLISHED LEGAL LEVEL.--11.00 ft gage datum or 881.00 ft above National Geodetic Vertical Datum of 1929 as decreed on December 19, 1974, by the Kosciusko County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by the invert of the culvert under the first east-west road north of the lake.

INLET AND OUTLET.--The one inlet flows from Sellers Lake 0.35 mi upstream. The outlet flows from the northern shore through Wyland ditch and into Winona Lake 6.7 mi downstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 15.10 ft Feb. 24, 1985; minimum stage, 9.20 ft Sept. 14-18, 1983.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.75	10.06	10.18	11.42	11.24	10.81	10.65	10.16	10.87	9.80	10.74	10.55
10	9.77	10.11	10.09	10.80	10.74	11.58	10.99	10.25	11.15	9.68	10.11	10.54
15	9.77	10.48	10.01	10.42	10.84	11.21	10.97	10.32	10.22	10.06	11.35	11.13
20	9.93	10.62	9.97	11.11	11.22	10.66	10.83	11.37	9.89	11.23	13.09	10.58
25	10.01	10.31	9.95	10.94	13.02	10.43	10.78	10.43	10.05	11.88	11.33	10.43
EOM	10.16	10.29	10.21	10.43	11.63	10.86	10.56	10.19	10.03	10.46	11.26	10.33

WTR YR 1990 MEAN 10.61 MAX 13.85 MIN 9.63

04099740 SHIPSHEWANA LAKE NEAR SHIPSHEWANA, IN

LOCATION.--Lat 41°40'53", long 85°36'03", in SE¼NE¼NE¼ sec.9, T.37 N., R.8 E., Lagrange County, Hydrologic Unit 04050001 (SHIPSHEWANA, IN quadrangle). The gage is on the south shore of the lake at the public fishing site, 1.1 mi northwest of Shipshewana.

SURFACE AREA.--202 acres.

DRAINAGE AREA.--6.74 mi^2.

PERIOD OF RECORD.--1951 to current year.

DATUM OF GAGE.--850.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage is attached to a wingwall of the control dam at the extreme eastern end of the lake.

ESTABLISHED LEGAL LEVEL.--2.04 ft gage datum or 852.04 ft above National Geodetic Vertical Datum of 1929 as decreed on March 8, 1956, by the Lagrange County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a sheet piling dam with a fixed crest at three elevations.

INLET AND OUTLET.--The principal inlet enters on the southern shore from Cotton Lake 2.0 mi upstream. Another small ditch enters on the western shore. The outlet is on the extreme eastern tip of the lake and flows to the northeast through Page ditch, which empties into Pigeon River, 6.1 mi downstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 3.33 ft Mar. 20, 1982; minimum stage, 1.39 ft Sept. 19-22, 1955.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	2.16	2.23	2.33	2.38	2.45	2.61	2.46	2.42	2.42	2.26	2.32	2.30
10	2.14	2.28	2.30	2.44	2.47	2.76	2.50	2.42	2.43	2.20	2.25	2.31
15	2.14	2.43	2.30	2.40	2.51	2.68	2.52	2.58	2.35	2.25	2.33	2.33
20	2.25	2.41	2.28	2.48	2.41	2.53	2.53	2.68	2.31	2.37	2.45	2.31
25	2.26	2.38	2.28	2.48	2.80	2.47	2.47	2.62	2.30	2.45	2.43	2.39
EOM	2.25	2.36	2.29	2.41	2.70	2.49	2.39	2.46	2.34	2.33	2.35	2.37

WTR YR 1990 MEAN 2.39 MAX 2.82 MIN 2.12

WABASH RIVER BASIN

03330380 SHOE LAKE NEAR OSWEGO, IN

LOCATION.--Lat 41°18'32", long 85°45'10", in SE¼SW¼SE¼ sec.18, T.33 N., R.7 E., Kosciusko County, Hydrologic Unit 05120106 (LEESBURG, IN quadrangle). The gage is on the extreme western end of the lake on County Road 475 East, 2.0 mi southeast of Oswego.

SURFACE AREA.--40 acres.

DRAINAGE AREA.--0.34 mi^2.

PERIOD OF RECORD.--1946-52, 1972-74, 1977 to current year.

DATUM OF GAGE.--830.00 ft above National Geodetic Vertical Datum of 1929. Prior to 1972, the datum of the gage was 840.00 ft above National Geodetic Vertical Datum of 1929. All levels listed below are at the present datum.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well.

ESTABLISHED LEGAL LEVEL.--11.57 ft gage datum or 841.57 ft above National Geodetic Vertical Datum of 1929 as decreed on October 18, 1948, by the Kosciusko County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by removable boards placed in wooden support posts in the outlet channel, upstream of the culvert under County Road 450 North.

INLET AND OUTLET.--There is no inlet except for small drainage ditches. The outlet leaves the lake at the southeastern end and flows into Banning Lake 0.3 mi downstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 12.95 ft Dec. 13-15, 1972; minimum stage, 10.50 ft Oct. 15, 16, 1988.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	11.36	11.15	11.19	11.20	11.41	11.93	12.14	12.15	12.15	11.99	12.04	12.09
10	11.29	11.15	11.16	11.22	11.42	12.07	12.20	12.11	12.17	11.92	11.96	12.16
15	11.24	11.30	11.16	11.20	11.52	12.10	12.21	12.24	12.09	12.01	12.07	12.18
20	11.27	11.28	11.16	11.30	11.49	12.08	12.25	12.25	12.04	12.09	12.30	12.14
25	11.24	11.24	11.16	11.36	11.85	12.07	12.21	12.26	12.06	12.13	12.27	12.11
EOM	11.20	11.22	11.18	11.33	11.88	12.14	12.15	12.18	12.09	12.05	12.16	12.08

WTR YR 1990 MEAN 11.77 MAX 12.33 MIN 11.11

03327650 SHRINER LAKE AT TRI-LAKES, IN

LOCATION.--Lat 41°14'37", long 85°26'24", in SE¼SW¼NW¼ sec.12, T.32 N., R.9 E., Whitley County, Hydrologic Unit 05120104 (COLUMBIA CITY, IN quadrangle). The gage is at the head of the outlet channel at the east end of the lake, 6.2 mi northeast of Columbia City.

SURFACE AREA.--111 acres.

DRAINAGE AREA.--0.94 mi^2.

PERIOD OF RECORD.--1943-74, 1976-78, 1980 to current year.

DATUM OF GAGE.--900.19 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage in one section is attached to the concrete head wall at the outlet.

ESTABLISHED LEGAL LEVEL.--7.04 ft gage datum or 907.04 ft above National Geodetic Vertical Datum of 1929 as decreed on May 22, 1949, by the Whitley County Circuit Court. Minor errors were subsequently discovered in the establishment of the datum of the gage (see "DATUM OF GAGE") and the correct elevation of the legal level should be 7.04 ft gage datum or 907.23 ft above National Geodetic Vertical Datum of 1929.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete dam in the outlet channel 300 ft downstream of the lake.

INLET AND OUTLET.--A ditch from Catfish Lake, 650 ft upstream, enters at the extreme western end of the lake. Two small ditches enter on the southern shore. The outlet is a dredged channel at the eastern edge of the lake that empties into Round Lake 930 ft downstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 8.16 ft Apr. 4, 5, 1950; minimum stage, 5.44 ft Dec. 9-11, 23-30, 1944.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.64	6.61	6.81	6.80	7.16	7.20	7.13	6.93	7.04	6.82	6.94	7.16
10	6.60	6.59	6.80	6.80	7.09	7.29	7.23	6.89	7.14	6.73	6.84	7.12
15	6.57	6.76	6.80	6.80	7.14	7.22	7.18	6.97	6.98	6.82	7.08	7.12
20	6.64	6.80	6.80	7.22	7.16	7.12	7.11	7.19	6.88	6.91	7.15	7.00
25	6.65	6.77	6.80	7.28	7.72	7.05	7.04	7.10	6.89	7.12	7.05	6.90
EOM	6.64	6.82	6.80	7.06	7.46	7.12	6.93	6.96	6.92	6.93	7.43	6.87

WTR YR 1990 MEAN 6.97 MAX 7.88 MIN 6.57

WABASH RIVER BASIN

03328350 SILVER LAKE AT SILVER LAKE, IN

LOCATION.--Lat 41°04'49", long 85°54'29", in SE¼SE¼NE¼ sec.1, T.30 N., R.5 E., Kosciusko County, Hydrologic Unit 05120104 (SILVER LAKE, IN quadrangle). The gage is located at the outlet channel on the west side of the lake, approximately 30 feet above the control structure and 1.1 mi northwest of the town of Silver Lake.

SURFACE AREA. -102 acres.

DRAINAGE AREA.--6.31 mi^2.

PERIOD OF RECORD.--1947 to current year.

DATUM OF GAGE.--859.85 ft above National Geodetic Vertical Datum of 1929, as corrected on the basis of levels of Indiana Department of Natural Resources, 1974.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage in one section is attached to the dam.

ESTABLISHED LEGAL LEVEL.--1.73 ft gage datum or 861.73 ft above National Geodetic Vertical Datum of 1929 as decreed on September 20, 1948, by the Kosciusko County Circuit Court. Minor errors were subsequently discovered in the establishment of the datum of the gage (see "DATUM OF GAGE") and the correct elevation of the legal level should be 1.73 ft gage datum or 861.58 ft above National Geodetic Vertical Datum of 1929. North Little Lake at Silver Lake has the same established level and hence the same lake levels for the period of record.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a steel sheet piling dam with a fixed crest.

INLET AND OUTLET.--The outlet from North Little Lake enters from the north and two ditches enter from the east and southeast. The outlet leaves from the western side and flows into South Little Lake, then into Silver Creek, which joins Eel River 12 mi downstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 3.80 ft Dec. 10, 1966; minimum stage, -0.20 ft Sept. 21, 1959.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	1.36	1.41	1.46	1.45	1.67	1.68	1.62	1.59	1.56	1.43	1.64	---
10	1.36	1.41	1.45	1.45	1.60	1.94	1.74	1.52	1.60	1.43	1.48	---
15	1.35	1.72	1.45	1.45	1.70	1.73	1.69	1.61	1.48	1.45	1.69	---
20	1.44	1.55	1.45	1.76	1.67	1.61	1.69	1.60	1.46	1.64	---	---
25	1.46	1.48	1.45	1.65	2.55	1.58	1.62	1.55	1.48	1.68	---	---
EOM	1.43	1.46	1.45	1.54	1.88	1.67	1.56	1.48	1.55	1.50	---	---

WTR YR 1990 MEAN 1.57 MAX 2.69 MIN 1.35

04099880 SIMONTON LAKE NEAR ELKHART, IN

LOCATION.--Lat 41°45'05", long 85°57'28", in NE¼NE¼NW¼ sec.16, T.38 N., R.5 E., Elkhart County, Hydrologic Unit 04050001 (ELKHART, IN quadrangle). The gage is on the southern shore between the two large lobes of the lake, at the public fishing site, 4.5 mi north of the main Post Office in Elkhart.

SURFACE AREA.--303 acres.

DRAINAGE AREA.--7.44 mi^2.

PERIOD OF RECORD.--1946 to current year.

DATUM OF GAGE.--770.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well.

ESTABLISHED LEGAL LEVEL.--2.19 ft gage datum or 772.19 ft above National Geodetic Vertical Datum of 1929 as decreed on September 25, 1950, by the Elkhart County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by the outlet channel.

INLET AND OUTLET.--Two small drainage ditches enter the lake on the eastern shore. The outlet, Osolo Township ditch, flows from the lake at the southeastern tip and into the St. Joseph River, 4.0 mi downstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 3.42 ft Feb. 24, 1985; minimum stage, 1.36 ft Sept. 7, 1946.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	2.59	2.57	2.86	2.96	2.95	3.03	3.05	3.01	2.94	2.69	2.72	2.59
10	2.57	2.65	2.84	2.99	2.89	3.21	3.10	3.09	2.94	2.62	2.64	2.58
15	2.54	2.79	2.84	2.97	2.93	3.11	3.10	3.17	2.76	2.66	2.69	2.62
20	2.61	2.85	2.84	2.99	2.89	3.06	3.09	3.14	2.74	2.78	2.77	2.60
25	2.67	2.82	2.84	3.02	3.17	3.05	3.03	3.09	2.75	2.78	2.74	2.68
EOM	2.60	2.86	2.84	2.93	3.08	3.07	2.96	2.97	2.78	2.68	2.67	2.66

WTR YR 1990 MEAN 2.85 MAX 3.25 MIN 2.53

STREAMS TRIBUTARY TO LAKE MICHIGAN

04100300 SKINNER LAKE NEAR ALBION, IN

LOCATION.--Lat 41°24'12", long 85°22'37", in SE¼SE¼NW¼ sec.16, T.34 N., R.10 E., Noble County, Hydrologic Unit 04050001 (ALBION, IN quadrangle). The gage is on the upstream side of the bridge over the outlet channel on the northwest lobe of the lake, and 2.5 mi northeast of Albion.

SURFACE AREA.--125 acres.

DRAINAGE AREA.--14.0 mi^2.

PERIOD OF RECORD.--1945-72, 1976 to current year.

DATUM OF GAGE.--920.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage is driven into the channel bed at the same site.

ESTABLISHED LEGAL LEVEL.--7.74 ft gage datum or 927.74 ft above National Geodetic Vertical Datum of 1929, as decreed on August 31, 1955, by the Noble County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a steel sheet piling dam with a fixed crest.

INLET AND OUTLET.--Rimmell Branch enters the lake on the southern shore, a small ditch enters on the southeast tip, and the outlet channel of Sweet Lake flows into the lake from the northeast. The outlet, Croft ditch, flows from the lake on the south shore of the northwest lobe, and into the South Branch of the Elkhart River 5.6 mi downstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 12.60 ft Apr. 5, 1950; minimum stage, 6.14 ft Oct. 16, 17, 1946.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.64	7.68	7.71	8.29	8.02	8.04	7.96	7.92	7.93	7.84	7.91	7.87
10	7.64	7.69	7.70	7.94	7.92	8.29	8.28	7.85	8.71	7.78	7.80	7.87
15	7.65	7.83	7.70	7.84	7.92	8.05	8.11	8.24	7.92	7.90	8.20	7.94
20	7.72	7.75	7.70	8.08	7.95	7.94	8.04	8.49	7.84	8.12	7.97	7.90
25	7.71	7.73	7.70	8.02	9.43	7.90	7.95	8.11	7.81	8.11	7.91	7.87
EOM	7.69	7.72	7.70	7.87	8.32	8.03	7.87	7.93	8.27	7.84	8.14	7.83

WTR YR 1990 MEAN 7.97 MAX 10.63 MIN 7.62

03330140 SMALLEY LAKE NEAR WASHINGTON CENTER, IN

LOCATION.--Lat 41°18'52", long 85°35'04", in SW¼NW¼SE¼ sec.15, T.33 N., R.8 E., Noble County, Hydrologic Unit 05120106 (UKMAS, IN quadrangle). The gage is located on the north side of the outlet channel, 300 ft upstream from the first bridge over the outlet, and 0.9 mi southeast of Washington Center.

SURFACE AREA.--69 acres.

DRAINAGE AREA.--27.1 mi^2.

PERIOD OF RECORD.--1943 to current year.

DATUM OF GAGE.--880.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 24-inch diameter stilling well. An auxiliary staff gage is driven into the channel bed.

ESTABLISHED LEGAL LEVEL.--Not established.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a riffle in the outlet channel 500 ft below the lake.

INLET AND OUTLET.--The Tippecanoe River flows through the lake, entering at the south end from Big Lake, 4.2 mi upstream, and flowing from the lake at the northwestern end into Baugher Lake, 1.2 mi downstream. Another inlet enters on the north shore from Gilbert Lake 0.9 mi upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 7.00 ft Mar. 24, 1978; minimum stage, 1.10 ft Aug. 7, 1963.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	1.75	1.45	1.59	2.51	2.66	2.84	2.29	2.09	2.30	1.73	2.08	2.60
10	1.68	1.52	1.52	2.31	2.30	2.73	2.36	1.94	2.52	1.47	1.77	2.55
15	1.54	1.74	1.52	2.06	2.27	2.80	2.62	2.50	2.04	1.83	2.76	2.68
20	1.70	1.86	1.48	2.71	2.48	2.31	2.32	3.27	1.67	1.82	2.99	2.21
25	1.76	1.68	1.45	2.42	4.40	2.09	2.38	2.59	1.84	2.89	2.35	1.91
EOM	1.54	1.65	1.66	2.08	3.64	2.30	2.06	2.07	2.21	1.90	3.57	1.76

WTR YR 1990 MEAN 2.18 MAX 4.63 MIN 1.44

STREAMS TRIBUTARY TO LAKE MICHIGAN

04099780 STONE LAKE NEAR SCOTT, IN

LOCATION.--Lat 41°44'32", long 85°39'03", in SE¼SE¼SW¼ sec.18, T.38 N., R.8 E., Lagrange County, Hydrologic Unit 04050001 (MIDDLEBURY, IN quadrangle). The gage is on the southeast shore of the lake approximately 200 ft west of the intersection of County Road 1150 West and the lake access road, and 5.4 mi northeast of Middlebury.

SURFACE AREA.--152 acres.

DRAINAGE AREA.--1.51 mi^2.

PERIOD OF RECORD.--1954-71, 1975-76, 1978 to current year.

DATUM OF GAGE.--810.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well.

ESTABLISHED LEGAL LEVEL.--8.76 ft gage datum or 818.76 ft above National Geodetic Vertical Datum of 1929 as decreed on July 28, 1966, by the Lagrange County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a fixed-crest concrete sill.

INLET AND OUTLET.--The inlet enters on the eastern end of the south shore from Brokesha Lake 0.2 mi upstream. The outlet flows from the lake at the northern shore.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 9.60 ft Apr. 16-30, 1969; minimum stage, 5.34 ft Nov. 26, 1964.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.58	7.27	7.38	7.45	7.61	7.92	8.08	8.27	8.59	8.37	8.21	8.06
10	7.50	7.30	7.39	7.45	7.60	8.01	8.13	8.38	8.63	8.24	8.12	8.07
15	7.44	7.40	7.42	7.44	7.71	8.06	8.17	8.57	8.57	8.25	8.19	8.08
20	7.44	7.39	7.45	7.49	7.69	8.03	8.20	8.63	8.56	8.30	8.22	8.03
25	7.34	7.39	7.46	7.55	7.92	8.03	8.20	8.71	8.46	8.31	8.19	8.06
EOM	7.30	7.38	7.49	7.54	7.91	8.07	8.15	8.65	8.51	8.20	8.13	8.04

WTR YR 1990 MEAN 7.93 MAX 8.71 MIN 7.26

04100180 SYLVAN LAKE AT ROME CITY, IN

LOCATION.--Lat 41°29'53", long 85°22'38", in SE¼SE¼SW¼ sec.9, T.35 N., R.10 E., Noble County, Hydrologic Unit 04050001 (ALBION, IN quadrangle). The gage is at the south, upstream side of the bridge over the outlet on the extreme western end of the lake, and at the northern edge of Rome City.

SURFACE AREA.--669 acres.

DRAINAGE AREA.--33.8 mi^2.

PERIOD OF RECORD.--1943 to current year.

DATUM OF GAGE.--907.00 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1978, the datum of the gage was 910.00 ft. All levels listed below are at the present datum.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage is attached to the north downstream wall of the footbridge.

ESTABLISHED LEGAL LEVEL.--9.20 ft present gage datum or 916.20 ft above National Geodetic Vertical Datum of 1929 as decreed on June 14, 1951, by the Noble County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete dam with movable gates.

INLET AND OUTLET.--Barr lake, 0.2 mi upstream, empties into Sylvan Lake on the southeast shore of the northwest lobe. Oviatt ditch and Henderson Lake ditch both enter the lake on the extreme eastern end. The outlet flows from the lake at the western tip, into Jones Lake 2.8 mi downstream and eventually into the North Branch of the Elkhart River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 10.76 ft Feb. 25 1985; minimum stage, 2.72 ft Nov. 8, 1979.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	---	---	---	---	---	6.48	6.58	6.49	6.38	6.31
10	---	---	---	---	---	---	---	6.44	7.26	6.36	6.30	6.32
15	---	---	---	---	---	---	---	6.78	6.79	6.45	6.62	6.36
20	---	---	---	---	---	---	---	7.20	6.55	6.46	6.55	6.36
25	---	---	---	---	---	---	---	6.86	6.43	6.62	6.41	6.33
EOM	---	---	---	---	---	---	---	6.66	6.74	6.38	6.42	6.31

WTR YR 1990 MEAN 6.54 MAX 7.35 MIN 6.29

STREAMS TRIBUTARY TO LAKE MICHIGAN

04100460 SYRACUSE LAKE AT SYRACUSE, IN

LOCATION.--Lat 41°25'26", long 85°44'59", in SW¼SW¼ sec.5, T.34 N., R.7 E., Kosciusko County, Hydrologic Unit 04050001 (LAKE WAWASEE, IN quadrangle). The gage is at the southwestern end of the lake, on the south abutment of the dam, and just west of the State Road 13 bridge in the town of Syracuse.

SURFACE AREA.--414 acres.

DRAINAGE AREA.--38.2 mi^2.

PERIOD OF RECORD.--1943 to current year.

DATUM OF GAGE.--849.85 ft above National Geodetic Vertical Datum of 1929 as corrected on the basis of levels of Indiana Department of Natural Resources, 1973-74.

GAGE.--A water-stage recorder is installed in a concrete shelter over a stilling well in the south abutment of the control structure. Two auxiliary staff gages are at the site. One is attached to the upstream side of the south abutment and the other is bolted to the seawall just west of the bridge over the outlet.

ESTABLISHED LEGAL LEVEL.--8.87 ft gage datum or 858.87 ft above National Geodetic Vertical Datum of 1929 as decreed on September 20, 1948, by the Kosciusko County Circuit Court. Minor errors were subsequently discovered in the establishment of the datum of the gage (see "DATUM OF GAGE") and the correct elevation of the legal level should be 8.87 ft gage datum or 858.72 ft above National Geodetic Vertical Datum of 1929.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete dam with two steel lift gates.

INLET AND OUTLET.--The one inlet is the outlet channel from Lake Wawasee on the southern shore of the lake. The outlet, Turkey Creek, flows from the lake at the southwest end and eventually into the Elkhart River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 10.15 ft Jan. 27, 28, 1950; minimum stage, 7.00 ft Nov. 19-21, 1953.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.56	8.59	8.63	8.62	8.73	9.07	8.63	8.62	8.75	8.92	---	---
10	8.54	8.57	8.62	8.81	8.68	9.11	8.58	8.59	8.89	8.87	---	---
15	8.54	8.64	8.62	8.72	8.69	9.09	8.60	8.85	8.94	9.00	---	---
20	8.58	8.68	8.62	8.81	8.58	8.94	8.63	9.05	8.93	---	---	---
25	8.62	8.68	8.62	8.83	9.10	8.80	8.66	9.02	8.95	---	---	---
EOM	8.61	8.66	8.62	8.72	9.11	8.69	8.65	8.86	8.99	---	---	---

WTR YR 1990 MEAN 8.75 MAX 9.15 MIN 8.50

03330480 TIPPECANOE LAKE AT OSWEGO, IN

LOCATION.--Lat 41°19'15", long 85°47'20", in NW¼NE¼NE¼ sec.14, T.33 N., R.6 E., Kosciusko County, Hydrologic Unit 05120106 (LEESBURG, IN quadrangle). The gage is on the south side of the dam at the extreme southwest end of the lake, in the outlet channel, at Oswego.

SURFACE AREA.--768 acres.

DRAINAGE AREA.--113 mi^2.

PERIOD OF RECORD.--1943 to current year.

DATUM OF GAGE.--830.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage is attached to the upstream side of the south abutment of the dam.

ESTABLISHED LEGAL LEVEL.--6.40 ft gage datum or 836.40 ft above National Geodetic Vertical Datum of 1929 as decreed on October 18, 1949, by the Kosciusko County Circuit Court. James Lake at Oswego and Oswego Lake at Oswego have the same established level and hence the same lake levels for the period of record.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete dam with multiple slide gates on the outlet channel of the lake.

INLET AND OUTLET.--The lake has two principal inlets. The Tippecanoe River flows from Webster Lake, enters James Lake, and flows into Tippecanoe Lake on the eastern side. The outlet from the Barbee Chain of Lakes enters from the southeast. The outlet, the Tippecanoe River, leaves the lake on the southwestern side.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 9.43 ft May 21, 1943; minimum stage, 4.90 ft Feb. 13-17, 1963.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.71	6.13	5.63	5.34	6.48	7.83	6.60	6.69	6.74	6.74	6.55	7.39
10	6.52	5.72	5.58	6.20	6.50	7.50	6.73	6.65	6.73	6.63	6.68	7.34
15	6.46	5.74	5.52	6.24	6.47	7.50	6.75	6.74	6.74	6.62	6.64	6.88	7.01
20	6.52	5.73	5.52	6.35	6.44	7.14	6.76	7.47	6.73	6.58	7.35	7.01
25	6.61	5.65	5.52	6.47	7.94	6.73	6.84	7.34	6.71	6.85	7.70	6.75
EOM	6.50	5.65	5.23	6.42	8.18	6.34	6.53	6.79	6.68	6.73	7.41	6.68

WTR YR 1990 MEAN 6.60 MAX 8.19 MIN 5.23

STREAMS TRIBUTARY TO LAKE MICHIGAN

04100320 UPPER LONG LAKE NEAR WOLFLAKE, IN

LOCATION.--Lat 41°21'33", long 85°29'09", in NE¼NE¼SE¼ sec.33, T.34 N., R.9 E., Noble County, Hydrologic Unit 04050001 (MERRIAM, IN quadrangle). The gage is on the northeast shore of the lake, at the northernmost boat slip, and 1.5 mi north-northeast of the town of Wolflake.

SURFACE AREA.--80 acres.

DRAINAGE AREA.--2.08 mi^2.

PERIOD OF RECORD.--1956 to current year.

DATUM OF GAGE.--880.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage is also located in the boat slip.

ESTABLISHED LEGAL LEVEL.--11.19 ft gage datum or 891.19 ft above National Geodetic Vertical Datum of 1929 as decreed on February 20, 1968, by Noble County Circuit Court.

LAKE-LEVEL CONTROL.--The lake level is controlled by a fixed-sill concrete dam.

INLET AND OUTLET.--There is one inlet that enters the lake from the eastern side. The outlet flows to the north through Dollar Lake, and eventually into the South Branch Elkhart River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 13.40 ft June 27, 1968; minimum stage, 9.95 ft May 11, 1970.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	11.36	11.38	11.54	11.57	11.60	11.47	11.46	11.46	11.36	11.49	11.63
10	---	11.38	11.38	11.50	11.51	11.66	11.60	11.45	11.51	11.33	11.42	11.61
15	---	11.47	11.38	11.45	11.57	11.64	11.59	12.01	11.43	11.44	11.55	11.59
20	---	11.42	11.38	11.60	11.54	11.48	11.54	11.64	11.38	11.49	11.72	11.55
25	---	11.38	11.39	11.56	12.48	11.42	11.50	11.64	11.38	11.67	11.64	11.51
EOM	11.38	11.38	11.44	11.47	11.80	11.48	11.42	11.49	11.43	11.47	11.96	11.47

WTR YR 1990 MEAN 11.52 MAX 12.49 MIN 11.33

03276800 VERSAILLES LAKE NEAR VERSAILLES, IN

LOCATION.--Lat 39°04'50", long 85°14'02", in NE¼NE¼SW¼ sec.6, T.7 N., R.12 E., Ripley County, Hydrologic Unit 05090203 (MILAN, IN quadrangle). The gage is on the eastern side of the lake, on the downstream side of the bridge over Falling Timber Creek in Versailles State Park.

SURFACE AREA.--232 acres.

DRAINAGE AREA.--168 mi^2.

PERIOD OF RECORD.--1958 to current year.

DATUM OF GAGE.--760.74 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder installed in an aluminum shelter over a 12-inch diameter stilling well.

ESTABLISHED LEGAL LEVEL.--Not established.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete spillway dam with a movable gate.

INLET AND OUTLET.--The inlets are Laughery Creek, Falling Timber Creek, and Cedar Creek. The outlet is Laughery Creek, which flows southeasterly and empties into the Ohio River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 36.43 ft Jan. 21, 1959, as determined by the U.S. Geological Survey from high-water marks during an indirect measurement of discharge; minimum stage, 18.05 ft Apr. 12, 1970.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	29.12	29.15	29.19	29.72	29.86	29.34	29.39	32.91	29.53	29.23	29.19	29.14
10	29.12	29.38	29.19	29.39	29.92	29.50	31.95	29.46	29.48	29.11	29.12	29.33
15	27.59	30.64	29.20	29.27	33.11	29.61	29.45	29.76	29.30	29.27	29.11	29.46
20	29.23	29.31	29.20	30.91	29.42	29.41	29.32	29.60	29.22	29.21	29.16	29.46
25	29.17	29.23	29.20	29.38	29.36	29.51	29.34	29.32	29.28	29.20	29.16	29.17
EOM	29.16	29.22	30.72	29.61	29.68	29.70	29.34	29.25	29.15	29.12	29.27	29.12

WTR YR 1990 MEAN 29.42 MAX 33.32 MIN 27.59

STREAMS TRIBUTARY TO LAKE MICHIGAN

04100220 WALDRON LAKE NEAR COSPERVILLE, IN

LOCATION.--Lat 41°29'34", long 85°26'55", in SE¼NW¼NE¼ sec.14, T.35 N., R.9 E., Noble County, Hydrologic Unit 04050001 (ALBION, IN quadrangle). The gage is on a dredged channel at the public fishing site west of County Road 125 West at Dukes Bridge, and 6.8 mi northwest of Albion.

SURFACE AREA.--216 acres.

DRAINAGE AREA.--134 mi^2.

PERIOD OF RECORD.--1948 to current year.

DATUM OF GAGE.--885.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary wire-weight gage is attached to the upstream side of Dukes Bridge.

ESTABLISHED LEGAL LEVEL.--5.55 ft gage datum or 885.55 ft above National Geodetic Vertical Datum of 1929 as decreed on May 6, 1968, by the Noble County Circuit Court. Jones, Steinbarger and Tamarack Lakes, all near Cosperville, have the same established level as Waldron Lake and hence the same lake levels for the period of record.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a fixed-crest concrete dam with removable boards.

INLET AND OUTLET.--The North Branch of the Elkhart River flows through the lake, entering through Jones Lake at the north and leaving at the west end of Waldron Lake. Another inlet enters at the southeast from Steinbarger Lake, 0.1 mi upstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 10.16 ft Mar. 22, 1982; minimum stage, 4.44 ft Aug. 9-11, Sept. 14-17, 1964.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	5.37	5.59	5.77	6.60	7.84	6.46	6.01	7.35	7.19	6.73	6.84
10	---	5.43	5.46	5.91	6.48	7.65	6.38	5.82	8.23	6.86	6.50	6.72
15	---	5.64	5.34	5.84	6.30	7.66	6.65	6.54	8.10	6.94	7.14	6.69
20	---	5.87	5.26	6.53	6.19	7.23	6.55	7.99	7.60	6.82	7.13	6.70
25	---	5.79	5.25	6.58	8.13	6.82	6.52	7.84	7.30	7.23	7.07	6.69
EOM	5.41	5.69	5.33	6.32	8.15	6.51	6.15	7.52	7.39	6.91	7.14	6.49

WTR YR 1990 MEAN 6.62 MAX 8.26 MIN 5.24

05517600 WAUHOB LAKE NEAR VALPARAISO, IN

LOCATION.--Lat 41°32'02", long 87°02'42", in NW¼NW¼NW¼ sec.31, T.36 N., R.5 W., Porter County, Hydrologic Unit 07120001 (CHESTERTON, IN quadrangle). The gage is on the northwest shore of the lake, 4.7 mi north of Valparaiso.

SURFACE AREA.--21 acres.

DRAINAGE AREA.--0.40 mi^2.

PERIOD OF RECORD.--1946 to current year.

DATUM OF GAGE.--790.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A staff gage in one section is driven into the lake bed, 75 ft from Arthur J. Knoblich's cottage. An auxiliary staff gage is 20 ft lakeward of the main gage.

ESTABLISHED LEGAL LEVEL.--Not established.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by the outlet channel.

INLET AND OUTLET.--The lake has one inlet entering on the northeast side from Mink Lake 0.3 mi upstream. The outlet flows from the southeast shore, southwesterly through a swamp to Canada Lake 0.3 mi downstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 11.05 ft Apr. 23, 1973; minimum stage, 6.58 ft Sept. 17, 1964.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.47	8.49	8.55	8.62	8.76	9.14	9.58	9.58	9.51	9.20	9.16	9.78
10	8.41	8.49	8.52	8.68	8.70	9.36	9.54	9.66	9.54	9.09	9.07	9.62
15	8.38	8.51	8.54	8.69	8.74	9.58	9.66	10.08	9.42	9.20	9.06	9.49
20	8.58	8.59	8.53	8.74	8.72	9.50	9.62	10.08	9.27	9.24	10.30	9.36
25	8.57	8.56	8.52	8.72	8.86	9.52	9.58	9.88	9.28	9.29	10.24	9.30
EOM	8.52	8.60	8.55	8.74	9.00	9.54	9.48	9.70	9.30	9.16	9.87	9.22

WTR YR 1990 MEAN 9.13 MAX 10.38 MIN 8.38

WABASH RIVER BASIN

03330240 WEBSTER LAKE AT NORTH WEBSTER, IN

LOCATION.--Lat 41°19'09", long 85°41'20", in NE¼SW¼NW¼ sec.14, T.33 N., R.7 E., Kosciusko County, Hydrologic Unit 05120106 (NORTH WEBSTER, IN quadrangle). The gage is on the southwest side of the lake at the outlet, 0.3 mi northeast of the intersection of State Road 13 and County Road 550 North and approximately 0.6 mi southeast of the center of North Webster.

SURFACE AREA.--774 acres.

DRAINAGE AREA.--49.2 mi^2.

PERIOD OF RECORD.--1943 to current year.

DATUM OF GAGE.--839.93 ft above National Geodetic Vertical Datum of 1929, as corrected on the basis of levels of Indiana Department of Natural Resources, 1973-74.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxillary staff gage in one section is bolted to the southeast face of the concrete wall of the approach channel to the control dam.

ESTABLISHED LEGAL LEVEL.--12.75 ft gage datum or 852.75 ft above National Geodetic Vertical Datum of 1929 as decreed July 2, 1945, by the Kosciusko County Circuit Court. Minor errors were subsequently discovered in the establishment of the datum of the gage (see "DATUM OF GAGE") and the correct elevation of the legal level should be 12.75 ft. gage datum or 852.68 ft above National Geodetic Vertical Datum of 1929.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete notch dam with seven adjustable gates at the head of the outlet channel. North of this dam is another which used to serve as a mill race. This dam has one metal gate.

INLET AND OUTLET.--The Tippecanoe River flows through Webster Lake, entering at the southeast end and leaving at the southwest side. The Tippecanoe River enters James Lake, 2.1 mi downstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 15.15 ft Feb. 11, 1984; minimum stage, 9.79 ft (during repair of the dam) Oct. 5, 1962.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	12.41	12.72	12.64	12.68	13.15	13.31	13.02	12.85	13.30	13.29	13.28	13.36
10	12.45	12.71	12.58	---	13.16	13.15	12.99	12.70	13.36	13.18	13.36	13.19
15	12.51	12.88	12.58	12.84	13.11	13.14	13.27	12.96	13.23	13.31	13.37	13.28
20	12.67	13.16	12.58	13.16	13.12	12.90	13.35	13.49	13.24	13.35	13.34	12.99
25	12.80	13.21	12.58	13.32	13.87	12.75	13.09	13.26	13.26	13.56	13.17	12.84
EOM	12.77	12.93	12.58	13.03	13.81	12.94	12.96	13.26	13.34	13.27	13.59	13.06

WTR YR 1990 MEAN 13.06 MAX 13.90 MIN 12.38

05514770 WHARTON LAKE NEAR SOUTH BEND, IN

LOCATION.--Lat 41°36'11", long 86°18'36", in NW¼SW¼NW¼ sec.4, T.36 N., R.2 E., St. Joseph County, Hydrologic Unit 07120001 (LAKEVILLE, IN quadrangle). The gage is on the east side of the lake, in a channel west of a storage shed at the Calvert Rod and Gun Club property, and 5.7 mi northwest of Lakeville.

SURFACE AREA.--18 acres (measured on U.S. Geological Survey topographic map, scale 1:24000).

DRAINAGE AREA.--1.85 mi^2.

PERIOD OF RECORD.--1960-76, 1982 to current year.

DATUM OF GAGE.--770.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well.

ESTABLISHED LEGAL LEVEL.--Not established.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a 48-inch round concrete tile in the outlet channel.

INLET AND OUTLET.--The one inlet enters the lake on the southeastern shore and drains the immediately surrounding area. The outlet flows from the lake on the western shore, and eventually into the Kankakee River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 8.51 ft Jan. 8, 9, 10, 1989; minimum stage, 4.97 ft Aug. 31, 1962.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.64	6.73	6.94	7.21	6.98	7.02	7.03	6.99	6.76	6.68	6.77	6.65
10	6.60	6.82	6.92	7.09	6.93	7.22	7.15	7.10	6.86	6.56	6.64	6.69
15	6.54	7.16	6.90	6.96	6.98	7.06	7.11	7.12	6.68	6.78	6.65	6.80
20	6.71	7.04	6.90	7.02	6.92	7.01	7.13	7.12	6.65	6.96	7.16	6.75
25	6.73	6.92	6.90	7.18	7.18	6.98	7.03	7.12	6.75	6.89	6.88	6.83
EOM	6.70	6.96	6.90	6.94	7.04	7.05	6.93	6.89	6.89	6.71	6.78	6.75

WTR YR 1990 MEAN 6.90 MAX 7.40 MIN 6.54

WABASH RIVER BASIN

03331140 WINONA LAKE AT WARSAW, IN

LOCATION.--Lat 41°13'34", long 85°50'46", in NW¼NE¼SE¼ sec.17, T.32 N., R.6 E., Kosciusko County, Hydrologic Unit 05120106 (WARSAW, IN quadrangle). The gage is on the western side of the lake, 20 ft east of the dam on the northern side of the outlet channel, 1.0 mi south of Warsaw.

SURFACE AREA.--562 acres.

DRAINAGE AREA.--32.1 mi^2.

PERIOD OF RECORD.--1943-78, 1980 to current year.

DATUM OF GAGE.--800.10 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 17, 1977, the datum of the gage was 810.10 ft above National Geodetic Vertical Datum of 1929 as corrected on the basis of levels of Indiana Department of Natural Resources, 1973-74. All levels listed below are at the present datum.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage is attached to the stilling well.

ESTABLISHED LEGAL LEVEL.--11.06 ft gage datum or 811.06 ft above National Geodetic Vertical Datum of 1929 as decreed on June 17, 1949, by the Kosciusko County Circuit Court. Minor errors were subsequently discovered in the establishment of the datum of the gage (see "DATUM OF GAGE") and the correct elevation of the legal level should be 11.06 ft gage datum or 811.16 ft above National Geodetic Vertical Datum of 1929.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete fixed-crest dam with steel lift gates.

INLET AND OUTLET.--There are three inlets to the lake. Wyland ditch enters on the eastern shore from Sherburn Lake 6.7 mi upstream. Keefer-Evans ditch enters on the southeastern shore and Paterson ditch on the southwestern shore. The outlet, Eagle Creek, flows from the western lobe of the lake into Walnut Creek 1.4 mi downstream, thence into the Tippecanoe River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 13.31 ft June 14, 1981; minimum stage, 9.40 ft Feb. 15, 1982.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.87	9.73	9.76	10.06	10.10	10.13	10.04	10.01	11.22	10.98	11.25	10.76
10	10.86	9.71	9.74	9.97	9.99	10.30	10.10	10.43	11.42	10.95	11.09	11.18
15	10.86	9.94	9.73	9.88	10.03	10.23	10.14	11.15	11.17	11.00	11.53	11.33
20	10.94	9.88	9.73	10.05	10.11	10.05	10.08	10.90	11.04	11.27	11.28	11.24
25	10.95	9.79	9.73	10.05	11.14	9.97	10.04	11.12	11.09	11.55	11.27	11.17
EOM	9.93	9.79	9.81	9.93	10.50	10.05	9.92	11.14	11.09	11.21	10.98	11.10

WTR YR 1990 MEAN 10.52 MAX 12.52 MIN 9.69

For many 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 before 1976 were based on once-daily readings of a staff gage by a local observer and consist of daily, monthly, and yearly mean water-surface elevations. Starting in 1976, water-stage recorders were installed at many stations which had previously been nonrecording gages. 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 the lake is that surface area and capacity at the established level. Depth contour maps are only those surveyed by the Water Resources Division of the Geological Survey. The inclusive years that records of stage have been collected at a lake are shown in the last column. If records are still being collected on a current basis, there is no closing date shown.

Lakes in the Ohio River basin for which records are available

	Lake	County	Drainage (square miles)	Surface area (acres)	Established level*	Capacity (acre-feet)	Contour map available	Records available
		LAUGHERY CREEK BASIN						
03276800	Versailles Lake near Versailles	Ripley	168.0	232	--------	------	-	1957-
		BAYOU DRAIN BASIN						
03322300	Hovey Lake near Mount Vernon	Posey	6.36	253	--------	------	-	1950-69
		WABASH RIVER BASIN						
03327550	Everett Lake at Levert	Allen	1.07	43	835.13	650	+	1946-66
03327600	Blue Lake near Churubusco	Whitley	3.58	239	850.28	5,010	+	1946-69, 1976-
03327650	Shriner Lake at Tri-Lakes	Whitley	.94	111	907.04	------	-	1943-
03327700	Cedar Lake at Tri-Lakes	Whitley	.79	131	901.90	------	-	1943-49
03327750	Round Lake at Tri-Lakes	Whitley	3.36	125	901.90	------	-	1943-53
03327800	Wilson Lake near Larwill	Whitley	.46	29	865.39	390	+	1946-52
03327850	Little Wilson Lake near Larwill	Whitley	.52	8	865.39	130	+	1946-52
03328100	Long Lake at Laketon	Wabash	.55	48	751.19	760	+	1946-51, 1959-
03328250	North Little Lake at Silver Lake	Kosciusko	2.89	12	861.73	170	+	1947-
03328350	Silver Lake at Silver Lake	Kosciusko	6.31	102	861.73	1,520	+	1947-
03328400	Lukens Lake near Disko	Wabash	1.76	46	763.60	1,010	+	1948-49, 1959-
03330020	Crooked Lake near Wolflake	Noble	1.51	206	905.69	9,040	+	1943-53
03330040	Big Lake near Wolflake	Noble	8.89	228	898.18	5,630	+	1943-75 1976-
03330060	Goose Lake near Lorane	Whitley	1.51	84	910.96	2,180	+	1945-53
03330080	Loon Lake at Ormas	Whitley	11.1	222	895.14	5,730	+	1943-66
03330100	New Lake near Etna	Whitley	.29	50	903.91	880	+	1945-53
03330120	Old Lake near Etna	Whitley	2.81	32	898.07	620	+	1949-66
03330140	Smalley Lake near Washington Center	Noble	27.1	69	--------	1,520	+	1943-
03330160	Gilbert Lake near Washington Center	Noble	.37	28	--------	490	+	1954-
03330180	Horseshoe Lake nr Washington Center	Noble	1.62	18	901.80	250	+	1945-66
03330200	Baugher Lake near Washington Center	Noble	31.0	32	878.52	390	+	1945-51
03330220	Wilmot Pond at Wilmot[1]	Noble	35.2	10	--------	------	-	1945-51
03330240	Webster Lake at North Webster	Kosciusko	49.2	774	852.75	7,170	+	1943-
03330243	James Lake at Oswego	Kosciusko	55.9	282	836.40	7,580	+	1943-
03330260	Robinson Lake near Pierceton	Kosciusko	7.15	59	851.09	1,170	+	1946-51
03330280	Troy Cedar Lake near Lorane	Whitley	5.33	93	905.41	2,540	+	1945-52
03330300	Ridinger Lake near Pierceton	Kosciusko	34.6	136	843.12	2,900	+	1943-
03330320	Kuhn Lake near North Webster	Kosciusko	3.85	137	837.50	1,290	+	1945-
03330340	Big Barbee Lake near North Webster	Kosciusko	44.7	304	837.50	5,640	+	1945-
03330360	Little Barbee Lake nr North Webster	Kosciusko	49.0	74	837.50	960	+	1945-
03330380	Shoe Lake near Oswego	Kosciusko	.34	40	841.57	------	-	1946-53, 1972,74, 1976-
03330400	Banning Lake near North Webster	Kosciusko	.48	12	837.50	110	+	1945-
03330420	Irish Lake near North Webster	Kosciusko	50.9	182	837.50	2,330	+	1945-
03330440	Sechrist Lake near North Webster	Kosciusko	.58	105	837.50	2,490	+	1945-
03330460	Sawmill Lake near North Webster	Kosciusko	51.8	36	837.50	370	+	1945-
03330480	Tippecanoe Lake at Oswego	Kosciusko	113	768	836.40	28,380	+	1943-
03330495	Oswego Lake at Oswego	Kosciusko	113	83	836.40	780	+	1943-
03331010	Big Chapman Lake near Warsaw[2]	Kosciusko	4.17	581	827.75	6,080	+	1945-72, 1976-
03331020	Little Chapman Lake near Warsaw	Kosciusko	7.13	177	827.75	1,990	+	1945-72, 1976-
03331040	Pike Lake at Warsaw	Kosciusko	41.5	203	805.64	2,830	+	1954-
03331060	Fish Lake near Warsaw	Kosciusko	4.93	15	845.52	------	-	1951-66
03331080	Muskellunge Lake near Warsaw	Kosciusko	11.8	32	842.67	300	+	1943-53, 1959-71
03331100	Carr Lake near Claypool	Kosciusko	2.27	79	848.88	1,340	+	1947-53
03331120	Sherburn Lake near Pierceton[3]	Kosciusko	5.51	15	881.00	230	+	1954-
03331140	Winona Lake at Warsaw	Kosciusko	32.1	562	811.06	16,680	+	1943-

Lakes in the Ohio River basin for which records are available--Continued

	Lake	County	Drainage (square miles)	Surface area (acres)	Established level*	Capacity (acre-feet)	Contour map available	Records available
		WABASH RIVER BASIN--Continued						
03331160	Center Lake at Warsaw	Kosciusko	0.73	120	803.86	2,060	+	1945-
03331180	Palestine Lake at Palestine	Kosciusko	32.4	290	--------	1,170	+	1954-
03331200	Crystal Lake near Atwood	Kosciusko	.45	76	789.69	930	+	1945-51
03331220	Hoffman Lake at Atwood	Kosciusko	8.07	180	785.85	3,160	+	1945-53
03331240	Beaver Dam Lake near Silver Lake	Kosciusko	2.83	146	868.95	3,280	+	1947-53
03331260	Loon Lake near Silver Lake	Kosciusko	3.59	40	865.74	670	+	1947-53
03331280	McClures Lake near Silver Lake	Kosciusko	1.29	32	865.85	410	+	1945-52
03331300	Hill Lake near Silver Lake	Kosciusko	.85	67	871.50	1,300	+	1952-
03331320	Diamond Lake near Silver Lake	Kosciusko	3.92	79	--------	1,280	+	1954-
03331340	Yellow Creek Lake near Silver Lake	Kosciusko	11.1	151	860.50	4,730	+	1945-53
03331360	Rock Lake near Akron	Kosciusko	2.74	56	847.29	360	+	1946-66
03331370	Town Lake near Akron	Fulton	2.77	23	--------	220	+	1949-50
03331380	Lake Manitou at Rochester	Fulton	44.2	1,158	778.41	10,165	+	1943-
03331390	Zink Lake near Rochester	Fulton	1.11	19	810.68	------	-	1952-55
03331400	Nyona Lake near Greenoak	Fulton	7.59	104	793.91	1,340	+	1946-
03331420	South Mud Lake near Fulton	Fulton	4.53	94	793.42	1,020	+	1946-66
03331438	King Lake near Delong	Fulton	1.98	18	--------	180	+	1971-
03331440	Maxinkuckee Lake at Culver	Marshall	13.7	1,864	733.12	45,600	+	1943-
03331460	Lost Lake near Culver[4]	Marshall	14.2	40	732.00	------	-	1954-
03331480	Langenbaum Lake near Monterey	Starke	.72	48	717.96	260	+	1954-66
03331700	Bruce Lake at Bruce Lake	Pulaski	6.38	245	723.69	1,790	+	1943-53
03332200	Fletcher Lake at Fletcher	Fulton	.67	45	783.20	880	+	1946-53
03370900	Starve Hollow Lake near Vallonia	Jackson	6.67	145	--------	980	+	1946-61, 1963-71
03371700	Ogle Lake near Nashville	Brown	1.03	20	--------	250	+	1954-

Lakes in the St. Lawrence River basin for which records are available

		STREAMS TRIBUTARY TO LAKE MICHIGAN						
04092500	Wolf Lake at Hammond[9]	Lake	5.72	999	--------	------	-	1946-49
04092990	Lake George at Hobart	Lake	124	282	602.23	------	-	1946-
04097520	Lake Pleasant near Nevada Mills	Steuben	3.18	424	961.50	3,490	+	1954-69, 1971, 1976-
04097550	Lake George at Jamestown	Steuben	[8]14.7	488	985.28	------	-	1946-
04097596	Marsh Lake near Fremont	Steuben	14.9	-----	--------	------	-	1967-69
04097600	Little Otter Lake near Fremont	Steuben	15.7	34	965.18	740	+	1946-53
04097640	Big Otter Lake near Fremont	Steuben	21.3	69	965.18	1,780	+	1946-53
04097650	Snow Lake at Lake James	Steuben	[8]40.2	310	964.96	7,998	+	1943-49
04097660	Lake James at Lake James	Steuben	[8]47.8	1,034	964.96	33,585	+	1943-49
04097680	Jimmerson Lake at Nevada Mills[5]	Steuben	[8]51.6	434	964.66	4,394	+	1946-
04097780	Loon Lake near Angola	Steuben	2.13	138	1,011.98	630	+	1954-66
04097850	Crooked Lake at Crooked Lake	Steuben	10.4	828	988.17	10,555	+	1946-
04097950	Lake Gage at Panama	Steuben	[8]17.3	332	954.25	10,140	+	1946-
04097960	Lime Lake at Panama	Steuben	[8]17.5	57	954.25	427	+	1946-
04098100	Wall Lake near Orland	Lagrange	1.61	141	942.25	1,640	+	1953-54
04098110	Mud Lake near Orland	Steuben	1.85	25	939.01	------	-	1956-67
04098300	Cedar Lake near Ontario	Lagrange	1.60	120	871.90	1,020	+	1948-51
04099050	Pigeon Lake near Angola	Steuben	[8]35.2	61	988.24	930	+	1954-63
04099100	Fox Lake near Angola	Steuben	[8]1.25	142	1,018.83	3,150	+	1946-53
04099190	Pleasant Lake at Pleasant Lake	Steuben	[8]1.12	53	963.52	1,190	+	1946-66
04099200	Long Lake at Moonlight	Steuben	[8]67.9	92	--------	1,540	+	1946-
04099250	Bower Lake near Pleasant Lake	Steuben	[8]84.6	25	948.50	280	+	1946-71, 1976-
04099260	Golden Lake near Pleasant Lake	Steuben	[8]88.8	119	948.50	1,810	+	1946-71, 1976-
04099400	Silver Lake near Angola	Steuben	[8]3.79	238	959.40	2,540	+	1945-53
04099430	Bass Lake near Angola	Steuben	[8].39	61	979.68	450	+	1954-66
04099440	Howard Lake near Angola	Steuben	[8]3.90	27	977.34	130	+	1954-63
04099500	Hogback Lake near Angola	Steuben	[8]103	146	948.50	1,450	+	1946-
04099520	Otter Lake near Flint	Steuben	[8]6.91	118	934.15	1,960	+	1954-66
04099540	Story Lake near Hudson	DeKalb	3.16	77	942.20	1,020	+	1946, 1954-66
04099560	Big Turkey Lake at Stroh	Lagrange	35.8	450	926.61	7,300	+	1945-66
04099575	McClish Lake near Helmer	Lagrange	1.28	35	951.09	1,210	+	1951-74, 1976-
04099580	Lake of the Woods near Helmer	Lagrange	5.25	136	951.09	5,470	+	1951-74, 1976-
04099600	Big Long Lake near Stroh	Lagrange	4.77	388	956.2	------	-	1954-
04099620	Pretty Lake near Stroh	Lagrange	2.89	184	965.50	4,720	+	1949-53, 1963-65
04099640	Little Turkey Lake at Elmira	Lagrange	56.5	135	925.72	1,550	+	1945-66
04099660	Royer Lake near Plato	Lagrange	4.69	69	936.50	1,630	+	1952-
04099670	Fish Lake near Plato	Lagrange	[8]10.6	100	936.50	4,050	+	1945-
04099700	North Twin Lake near Howe	Lagrange	1.54	135	843.56	2,120	+	1953-
04099710	South Twin Lake near Howe	Lagrange	2.22	116	843.56	3,600	+	1953-70
04099740	Shipshewana Lake near Shipshewana	Lagrange	[8]6.74	202	852.04	1,350	+	1951-
04099760	Fish Lake near Scott	Lagrange	[8]6.21	139	814.42	2,560	+	1954-73, 1976-

Lakes in the St. Lawrence River basin for which records are available--Continued

	Lake	County	Drainage (square miles)	Surface area (acres)	Established level*	Capacity (acre-feet)	Contour map available	Records available
	STREAMS TRIBUTARY TO LAKE MICHIGAN--Continued							
04099780	Stone Lake near Scott	Lagrange	1.51	152	818.76	2,060	+	1954-73, 1976-
04099800	Emma Lake near Emma	Lagrange	13.6	42	880.87	700	+	1954-66
04099810	Cass Lake near Shipshewana	Lagrange	.68	89	--------	873	+	1970-
04099820	Hunter Lake near Middlebury	Elkhart	.51	99	856.90	1,120	+	1946-53
04099840	Wolf Lake near Goshen	Elkhart	[8]1.29	100	813.00	------	-	1947-57
04099860	Heaton Lake near Elkhart	Elkhart	9.33	87	767.30	640	+	1946-53, 1969-74, 1976-
04099880	Simonton Lake near Elkhart	Elkhart	7.44	303	772.19	1,560	+	1946-
04099950	Indiana Lake near Bristol	Elkhart	.62	122	759.73	3,400	+	1946-53
04100010	Cree Lake near Kendallville	Noble	4.85	58	945.23	910	+	1949-66
04100020	Blackman Lake near Wolcottville	Lagrange	.98	67	974.20	1,210	+	1953-59
04100030	Adams Lake near Wolcottville	Lagrange	5.62	308	953.59	7,690	+	1946-
04100040	Atwood Lake near Wolcottville	Lagrange	1.23	170	899.99	1,560	+	1948-53
04100050	Witmer Laker near Wolcottville	Lagrange	36.1	204	897.36	7,040	+	1945-
04100060	Westler Lake near Wolcottville	Lagrange	37.8	88	897.36	1,770	+	1945-
04100070	Dallas Lake near Wolcottville	Lagrange	39.8	283	897.36	9,970	+	1945-
04100080	Martin Lake near Valentine	Lagrange	4.93	26	899.45	890	+	1945-
04100090	Olin Lake neaqr Valentine	Lagrange	5.81	103	899.45	9,180	+	1945-
04100100	Oliver Lake near Valentine	Lagrange	11.1	362	899.45	15,358	+	1945-
04100110	Hackenburg Lake near Wolcottville	Lagrange	55.4	42	897.36	510	+	1945-
04100120	Messick Lake near Wolcottville	Lagrange	56.4	68	897.36	1,450	+	1945-
04100130	Jones Lake near Cosperville[6]	Noble	70.3	114	885.55	960	+	1948-
04100140	Bixler Lake at Kendallville	Noble	5.28	120	963.65	2,090	+	1945-
04100150	Round Lake at Kendallville	Noble	3.47	99	954.50	2,140	+	1954-
04100160	Little Long Lake at Kendallville	Noble	4.55	71	954.50	1,750	+	1954-
04100170	Latta Lake near Rome City	Noble	2.52	42	918.71	900	+	1954-66
04100180	Sylvan Lake at Rome City	Noble	33.8	669	916.20	5,986	+	1943-
04100190	Sacarider Lake near Kendallville	Noble	1.43	33	--------	740	+	1954-63
04100200	Tamarack Lake near Cosperville	Noble	15.9	50	885.55	880	+	1948-
04100210	Steinbarger Lake near Cosperville	Noble	24.3	73	885.55	1,590	+	1948-
04100220	Waldron Lake near Cosperville	Noble	134	216	885.55	3,120	+	1948-
04100230	Long Lake near Burr Oak	Noble	12.0	40	895.82	630	+	1954-71
04100240	Sand Lake near Burr Oak	Noble	14.9	47	893.56	1,270	+	1946-51
04100250	Rivir Lake near Burr Oak	Noble	18.6	24	--------	380	+	1954-65
04100258	High Lake near Wolflake	Noble	4.43	123	896.35	1,240	+	1961-
04100260	Bear Lake near Wolflake	Noble	6.98	136	894.60	3,030	+	1943-
04100280	Muncie Lake near Burr Oak	Noble	42.8	47	--------	580	+	1954-
04100290	Silver Lake near Wolflake	Noble	.28	34	--------	220	+	1953-63
04100300	Skinner Lake near Albion	Noble	14.0	125	927.74	1,750	+	1945-72, 1977-
04100310	Pleasant Lake near Wolflake	Noble	.29	20	--------	540	+	1952-53
04100320	Upper Long Lake near Wolflake	Noble	2.08	86	891.19	1,900	+	1956-
04100330	Lower Long Lake near Albion	Noble	4.35	66	889.81	1,560	+	1946-52
04100340	Eagle Lake near Kimmel	Noble	3.22	81	--------	1,050	+	1946-48
04100350	Diamond Lake near Wawaka	Noble	4.80	105	--------	2,580	+	1946-
04100360	Sparta Lake at Kimmel	Noble	.69	31	888.50	170	+	1946-51
04100370	Engle Lake near Ligonier	Noble	[8]4.19	48	878.90	670	+	1956-71, 1977-
04100380	Harper Lake near Washington Center	Noble	2.76	11	878.25	160	+	1946-
04100390	Knapp Lake near Washington Center	Noble	6.02	88	878.25	3,040	+	1946-
04100400	Moss Lake near Washington Center	Noble	6.12	9	878.25	80	+	1946-
04100410	Hindman Lake near Washington Center	Noble	8.66	13	878.25	140	+	1946-
04100420	Gordy Lake near Cromwell	Noble	9.40	31	876.68	680	+	1953-66
04100425	Rider Lake near Cromwell	Noble	10.9	5	876.68	30	+	1953-66
04100430	Duely Lake near Cromwell[7]	Noble	11.2	21	876.68	180	+	1953-66
04100440	Village Lake near Cromwell	Noble	12.0	12	876.68	160	+	1953-66
04100446	Flatbelly Lake near Syracuse	Kosciusko	4.66	326	--------	------	-	1964-69
04100448	Papakeechie Lake near Syracuse	Kosciusko	5.52	300	--------	------	-	1964-69
04100450	Wawasee Lake at Wawasee	Kosciusko	36.9	3,060	858.89	67,210	+	1943-66
04100460	Syracuse Lake at Syracuse	Kosciusko	38.2	414	858.87	5,360	+	1943-
04100470	Dewart Lake near Leesburg	Kosciusko	[8]8.05	551	867.70	9,000	+	1945-
04100480	Wabee Lake near Milford	Kosciusko	[8]14.6	187	829.79	4,750	+	1946-53
	STREAMS TRIBUTARY TO LAKE ERIE							
04177200	Clear Lake at Clear Lake	Steuben	6.86	800	1,037.38	24,990	+	1943-
04177210	Round Lake at Clear Lake	Steuben	7.25	30	1,037.38	340	+	1943-
04177300	Long Lake near Ray	Steuben	2.80	154	--------	1,840	+	1961-63
04177680	Ball Lake near Hamilton	Steuben	11.6	87	894.76	3,520	+	1961-
04177700	Hamilton Lake at Hamilton	Steuben	16.5	802	898.83	16,600	+	1943-
04179200	Indian Lake near Corunna	DeKalb	3.76	56	--------	1,220	+	1957
04179300	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							
05514740	Saugany Lake near Rolling Prairie	LaPorte	[8]2.34	74	781.21	2,190	+	1946-50
05514741	Hudson Lake at Hudson Lake	LaPorte	7.92	432	763.09	5,060	+	1946-

Lakes in the Upper Mississippi River basin for which records are available--Continued

	Lake	County	Drainage (square miles)	Surface area (acres)	Established level*	Capacity (acre-feet)	Contour map available	Records available
		ILLINOIS RIVER BASIN--Continued						
05514750	North Chain Lake at Lydick	St. Joseph	[8]3.89	88	721.17	1,400	+	1946-53
05514760	South Chain Lake at Westfield	St. Joseph	[8]6.32	90	717.04	270	-	1946-53
05514770	Wharton Lake near South Bend	St. Joseph	[8]1.85	-----	--------	------	-	1960-
05514900	Silver Lake near Rolling Prairie	LaPorte	1.72	54	795.20	------	-	1946-66
05515200	Upper Fish Lake near Stillwell	LaPorte	[8]9.65	139	688.22	1,040	+	1946-53
05515210	Lower Fish Lake near Stillwell	LaPorte	[8]10.4	134	688.22	870	+	1946-53
05515220	Pine Lake at LaPorte	LaPorte	[8]10.7	564	796.20	------	-	1946-75 1980-
05515230	Stone Lake at LaPorte	LaPorte	[8]10.7	140	796.20	------	-	1946-75 1980-
05515240	Clear Lake at LaPorte	LaPorte	.65	106	798.20	760	+	1942-49, 1952-75 1980-
05515600	Koontz Lake at Koontz Lake	Starke	[8]6.25	346	714.56	3,170	+	1943-
05515800	Riddles Lake near Lakeville	St. Joseph	[8]11.7	77	817.50	640	+	1946-73, 1976-
05516200	Lake of the Woods near Bremen	Marshall	[8]9.45	416	803.85	6,810	+	1945-
05516600	Pretty Lake near Plymouth	Marshall	.85	97	787.36	2,140	+	1954-66
05516700	Myers Lake near Twin Lakes	Marshall	1.41	96	768.69	2,000	+	1945-53
05516800	Mill Pond and Kreighbaum Lake near Twin Lakes	Marshall	[8]5.34	168	767.75	1,020	+	1945-53
05516900	Eagle Lake near Ober	Starke	[8]25.5	24	713.25	160	+	1946-53
05517100	Skitz Lake near Knox	Starke	------	1,000	--------	------	-	1949-53
05517200	Bass Lake at Bass Lake	Starke	5.18	1,400	713.65	------	-	1943-
05517600	Wauhob Lake near Valparaiso	Porter	.40	21	--------	------	-	1946-
05517650	Long Lake near Valparaiso	Porter	1.31	65	797.66	520	+	1947-52
05517670	Spectacle Lake near Valparaiso	Porter	.53	62	812.82	540	+	1946-53
05517700	Flint Lake near Valparaiso	Porter	2.62	86	797.66	------	-	1946-
05517800	Lake Eliza near Beatrice	Porter	1.70	45	738.70	------	-	1954-74, 1976-
05518700	Cedar Lake at Cedar Lake	Lake	8.14	781	--------	6,750	+	1943-
05518800	Dalecarlia Lake near Creston	Lake	20.1	193	--------	------	-	1947-52
05521300	Ringneck Lake near Medaryville	Jasper	1.94	1,400	--------	------	-	1949-55
05525700	J.C. Murphy Lake near Morocco	Newton	13.0	1,515	--------	------	-	1952-61

+Depth contour maps available for sale by Indiana Department of Natural Resources, State Office Building, Indianapolis, Indiana.
*Elevation, in feet, above mean sea level.
[1]Formerly published as Rider Lake at Wilmot.
[2]Formerly published as Chapman Lake near Warsaw.
[3]Formerly published as Johnson Lake near Pierceton.
[4]Formerly published as Hawks Lake near Culver.
[5]Formerly published as Jimerson Lake at Nevada Mills.
[6]Formerly published as Sanford Lake near Cosperville.
[7]Formerly published as Duley Lake near Cromwell, and Druely Lake near Cromwell, and Druley Lake near Cromwell.
[8]Contains drainage area (5 percent or greater) that does not contribute directly to surface-water runoff.
[9]Same as Wolf Lake at Chicago, Illinois WRD District.

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 area 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	1,920	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	Schlamm Lake	Clark	19	170
Franke Lake	Clark	9	70	Sellers Lake	Kosciusko	32	340
Hartz Lake	Starke	28	370	Shakamak Lake	Sullivan	56	610
Kunkel Lake	Wells	25	150	Twin Lakes	Wabash	18	190
Lake Freeman	Carroll	1,547	26,000	Whitewater Lake	Union	199	3,650
Lake Shafer	White	1,291	13,120	Yellowwood Lake	Brown	133	1,890
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	1,340	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	1,080	Pigeon Lake	Lagrange	61	1,160
Bristol Lake	Noble	27	740	Port Mitchell Lake	Noble	15	180
Buck Lake	Lagrange	18	150	Rainbow Lake	Lagrange	16	250
Center Lake	Steuben	46	390	Schockopee Lake	Noble	21	280
Cline Lake	Lagrange	20	350	Shock Lake	Kosciusko	37	1,210
Deer Lake	Noble	36	420	Smith Hole	Lagrange	2	10
Dock Lake	Noble	16	230	Still Lake	Lagrange	30	620
Eve Lake	Lagrange	31	670	Sweet Lake	Noble	16	210
Fish Lake	Steuben	59	750	Tamarack Lake	Noble	84	1,340
Hog Lake	LaPorte	59	690	Walters Lake	Steuben	53	550
Hog Lake	Steuben	48	570	Weir Lake	Lagrange	6	70
Lime Lake	Steuben	30	330	Wible Lake	Noble	49	650
Little Turkey Lake	Steuben	58	780	Williams Lake	Noble	46	1,070
Marl Lake	Noble	30	510	Wyland Lake	Kosciusko	6	100
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	1,580

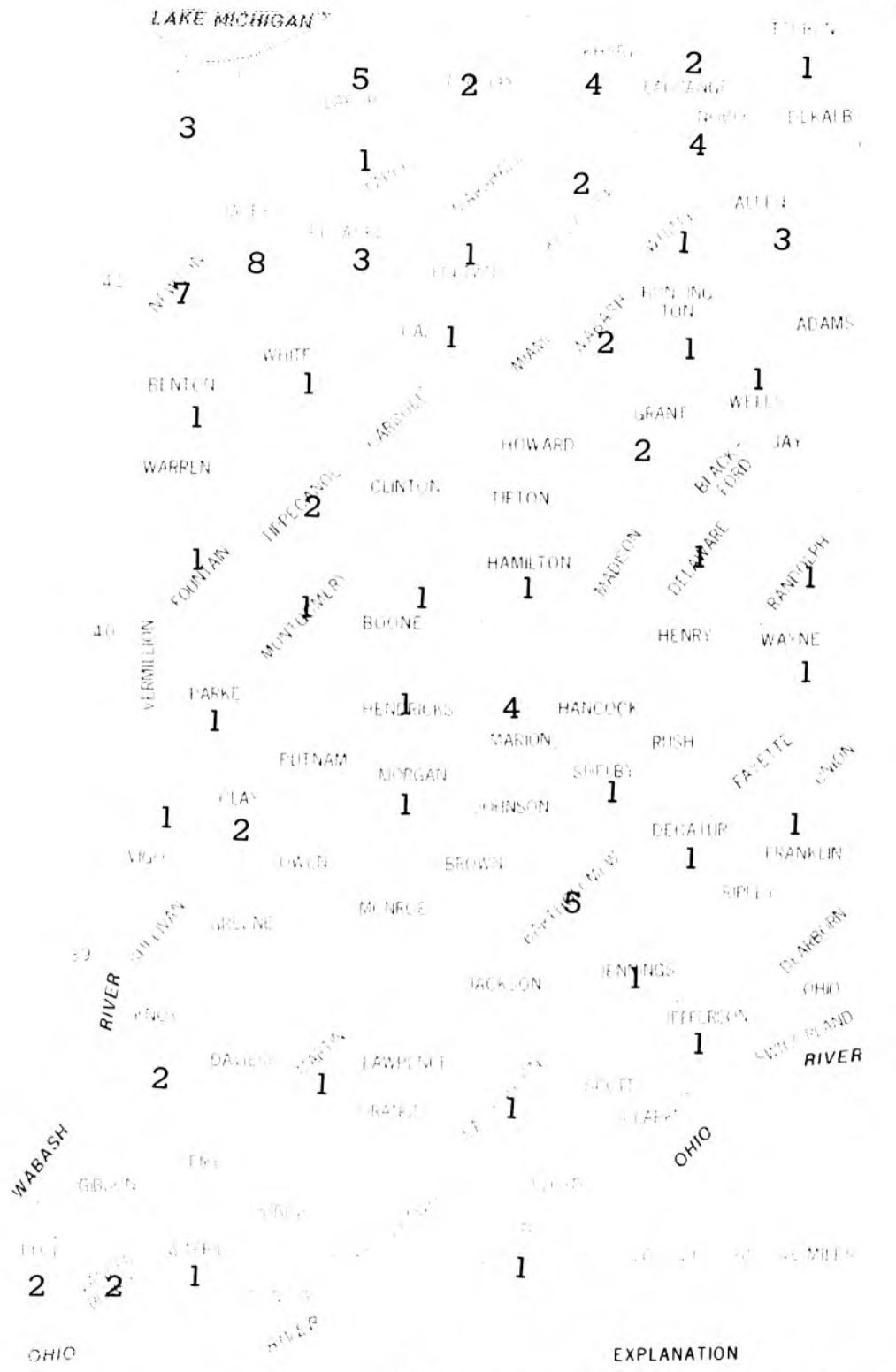


Figure 7.– Number of ground-water wells by county having 1990 water-level records.

ALLEN COUNTY

410426084495201. Local number, AL 5.
LOCATION.--Lat 41°04'26", long 84°49'52", in NW¼NE¼SE¼ sec.9, T.30 N., R.15 E., Allen County, Hydrologic Unit 04100005, 1.3 mi west of Edgerton.
Owner: Noel Gerig.

AQUIFER.--Limestone of Salina Formation of Silurian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 4 in., depth 97 ft, cased to 40 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 760 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of floor of shelter, 0.10 ft above land-surface datum.

REMARKS.--Nearby quarry operations were shut down in 1980, and since that time water levels have been rising.

PERIOD OF RECORD.--July 1962 to December 1971, January 1973 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 10.04 ft below land-surface datum, July 8, 9, 1962; lowest, 38.41 ft below land-surface datum, May 4, 1967.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	16.91	17.08	17.10	17.87	17.77	17.45	16.54	16.14	15.78	15.91	15.46	15.46
10	17.07	17.26	17.29	17.59	17.34	16.84	16.15	15.54	15.71	15.90	15.47	15.29
15	16.78	16.45	17.47	17.80	17.08	16.41	16.36	15.88	15.79	15.52	15.44	15.02
20	17.43	16.93	18.11	17.62	17.91	17.22	16.29	15.63	15.58	15.84	15.43	15.29
25	17.27	17.17	17.79	17.20	17.95	17.00	16.11	15.86	15.67	15.72	15.42	14.98
EOM	17.02	17.48	17.43	17.75	17.74	16.56	15.93	15.90	15.69	15.66	15.40	15.12

WTR YR 1990 HIGH 14.93 SEP 16

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	17.73	18.08	17.51	18.28	18.23	17.97	17.08	16.69	16.41	16.64	16.11	15.97
10	17.51	18.02	17.73	18.10	17.88	17.50	16.89	16.54	16.17	16.44	15.92	15.96
15	17.18	16.84	18.37	18.18	18.06	16.83	17.16	16.46	16.34	15.98	15.87	15.61
20	18.03	17.46	18.57	18.19	18.41	17.77	16.91	15.92	15.80	16.07	15.90	15.99
25	17.83	17.72	18.41	18.17	18.57	17.57	16.64	16.24	16.16	16.48	16.13	15.73
EOM	17.84	17.93	17.99	18.26	18.18	17.03	16.35	16.34	16.22	16.07	15.89	15.68

WTR YR 1990 LOW 19.04 DEC 23

ALLEN COUNTY

410932084561101. Local number, AL 6.
LOCATION.--Lat 41°09'32", long 84°56'11", in SW¼SW¼NE¼ sec.10, T.31 N., R.14 E., Allen County, Hydrologic Unit 04100005, at the intersection of Ehle and Thimler Roads, 10 mi northeast of New Haven.
Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 84 ft, cased to 81.5 ft, screened to 83.5 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 760 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of floor of shelter, 2.50 ft above land-surface datum.

REMARKS.--Water level affected by pumpage.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 7.90 ft below land-surface datum, Feb. 24, 1990; lowest, 14.77 ft below land-surface datum, Oct. 29, 1978.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	12.50	12.67	12.25	12.13	9.54	9.12	---	---	10.19	11.32	10.77	11.73
10	12.59	12.68	12.35	11.69	9.55	9.54	---	9.80	10.12	11.65	11.02	11.87
15	12.76	12.62	12.43	11.53	9.63	9.37	---	9.71	10.39	11.38	11.16	11.80
20	12.66	12.12	12.59	10.52	9.21	9.64	---	9.05	10.77	11.58	11.22	11.83
25	12.64	12.13	12.59	10.08	8.20	9.90	---	9.68	10.88	10.03	11.32	11.91
EOM	12.59	12.19	12.61	10.36	8.65	---	---	9.71	11.07	10.53	11.52	12.11

WTR YR 1990 HIGH 7.90 FEB 24

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	12.70	12.86	12.42	12.46	9.70	9.34	---	---	10.37	11.56	10.85	11.86
10	12.80	12.99	12.53	11.86	9.74	9.73	---	9.99	10.29	11.91	11.27	11.97
15	12.91	12.88	12.54	11.74	9.99	9.58	---	9.92	10.53	11.54	11.36	11.95
20	12.84	12.26	12.78	10.73	9.41	9.84	---	9.28	10.96	11.74	11.37	12.00
25	12.82	12.29	12.72	10.24	8.56	10.04	---	9.90	11.14	10.23	11.46	12.04
EOM	12.85	12.35	12.76	10.55	8.83	---	---	9.91	11.27	10.70	11.73	12.25

WTR YR 1990 LOW 13.00 NOV 12

ALLEN COUNTY

410335085190701. Local number, AL 7.
LOCATION.--Lat 41°03'35", long 85°19'07", in SE¼SW¼SW¼ sec. 8, T.30N., R.11E., Allen County, Hydrologic Unit 05120101, on Covington Road about 5mi. west of Interstate Highway 69 on the northeast corner of the United Telephone Company property.
Owner: U.S. Geological Survey.

AQUIFER.--Limestone.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 193 ft., cased to 173 ft., open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 850.60 ft (revised) above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.50 ft. above land-surface datum.

PERIOD OF RECORD.--July 1988 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 55.70 ft below land-surface datum, April 26, 1989; lowest, 67.17 ft. below land-surface datum, July 18, 1989.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	63.51	62.92	57.84	58.37	59.04	57.97	---	---	---	---	---	60.31
10	63.43	62.81	57.79	57.83	57.27	57.25	---	57.20	---	---	---	60.20
15	64.72	60.34	57.82	58.56	57.39	56.87	---	57.77	---	---	---	58.93
20	63.41	58.91	58.40	57.68	58.06	57.62	---	---	---	---	---	59.43
25	63.28	58.44	58.57	57.36	57.87	57.65	---	---	---	---	59.48	59.63
EOM	62.95	58.35	58.24	57.87	57.77	57.08	---	---	58.71	---	59.65	59.59

WTR YR 1990 HIGH 56.60 MAR 17

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	64.33	63.91	58.33	59.38	60.73	58.55	---	---	---	---	---	62.19
10	64.42	64.48	58.00	58.52	58.51	58.58	---	58.10	---	---	---	61.36
15	66.38	62.54	58.28	59.20	59.75	57.42	---	58.95	---	---	---	60.43
20	64.32	59.62	59.06	58.75	58.84	58.57	---	---	---	---	---	60.51
25	64.36	58.73	59.43	57.89	59.55	59.00	---	---	---	---	61.24	60.53
EOM	63.80	58.49	59.60	58.48	58.34	57.61	---	---	60.67	---	60.81	61.61

WTR YR 1990 LOW 66.38 OCT 15

BARTHOLOMEW COUNTY

391627085534401. Local number, BA 4.
LOCATION.--Lat 39°16'27", long 85°53'44", in NE¼NE¼NE¼ sec.31, T.10 N., R.6 E., Bartholomew County, Hydrologic Unit 05120205, by a cemetery on the north side of Bakalar AFB at the northern city limits of Columbus.
Owner: Bartholomew County.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 6 in., depth 93 ft, cased to 85 ft, screened to 90 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 654.04 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of floor of shelter, 2.60 ft above land-surface datum.

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

REVISED RECORDS.--WDR IN-80-1: 1979.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 14.21 ft below land-surface datum, June 15, 1989; lowest, 21.15 ft below land-surface datum, Feb. 11, 12, 1977.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	15.64	16.41	16.55	17.04	17.36	15.83	16.17	16.58	14.89	15.93	16.91	17.51
10	15.74	16.54	16.65	17.07	17.05	15.82	16.25	16.51	15.02	16.29	17.03	17.65
15	15.87	16.65	16.72	17.13	16.68	15.84	16.35	16.42	15.20	16.44	17.16	17.67
20	15.98	16.65	16.81	17.19	16.44	15.91	16.41	15.70	15.34	16.45	17.19	17.74
25	16.13	16.56	16.89	17.23	16.13	15.98	16.47	15.09	15.53	16.50	17.37	17.81
EOM	16.27	16.56	16.98	17.33	15.97	16.07	16.54	14.88	15.71	16.59	17.45	17.87

WTR YR 1990 HIGH 14.84 JUN 3

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	15.65	16.43	16.56	17.05	17.38	15.84	16.20	16.60	14.91	16.00	16.94	17.52
10	15.78	16.58	16.66	17.08	17.13	15.83	16.29	16.53	15.06	16.36	17.04	17.65
15	15.89	16.66	16.75	17.15	16.75	15.86	16.36	16.46	15.23	16.45	17.16	17.68
20	16.01	16.67	16.83	17.21	16.50	15.92	16.42	15.84	15.40	16.45	17.21	17.76
25	16.15	16.59	16.90	17.28	16.19	16.00	16.48	15.19	15.56	16.51	17.38	17.81
EOM	16.31	16.57	17.00	17.34	16.01	16.10	16.56	14.89	15.73	16.65	17.46	17.89

WTR YR 1990 LOW 17.89 SEP 30

BARTHOLOMEW COUNTY

390950085553501. Local number, BA 8.
LOCATION.--Lat 39°09'50", long 85°55'35", in NE¼NW¼SW¼ sec.1, T.8 N., R.5 E., Bartholomew County, Hydrologic Unit 05120206, on property of Meadows Metal Products Co., 4 mi south of Columbus.
Owner: Meadows Metal Products Co., Inc.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 6 in., depth 49 ft, casing length unknown.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 615.48 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top of floor of shelter, 3.00 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 8.06 ft below land-surface datum, June 3, 1968; lowest, 24.13 ft below land-surface datum, Dec. 27, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	17.53	18.70	18.26	19.06	18.93	16.16	16.44	16.69	13.21	15.05	16.48	17.87
10	17.67	18.83	18.36	19.05	18.45	16.23	16.48	16.54	13.40	15.40	16.72	18.00
15	17.85	18.89	18.48	19.08	17.76	16.30	16.55	16.36	13.66	15.61	16.96	18.16
20	18.05	18.80	18.64	19.09	17.23	16.26	16.59	14.37	13.98	15.87	17.18	18.32
25	18.27	18.52	18.76	19.02	16.54	16.32	16.61	13.11	14.37	16.11	17.40	18.49
EOM	18.50	18.36	18.90	19.07	16.30	16.35	16.70	13.03	14.71	16.30	17.65	18.67

WTR YR 1990 HIGH 12.94 MAY 28

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	17.54	18.72	18.28	19.07	18.97	16.18	16.46	16.74	13.23	15.12	16.52	17.90
10	17.71	18.88	18.39	19.08	18.58	16.25	16.55	16.56	13.47	15.46	16.76	18.03
15	17.89	18.96	18.54	19.11	17.91	16.34	16.57	16.41	13.74	15.68	17.01	18.19
20	18.08	18.84	18.67	19.12	17.39	16.30	16.61	14.78	14.05	15.91	17.23	18.36
25	18.32	18.59	18.78	19.07	16.63	16.33	16.64	13.25	14.44	16.15	17.45	18.51
EOM	18.55	18.39	18.95	19.09	16.37	16.40	16.73	13.07	14.77	16.34	17.70	18.70

WTR YR 1990 LOW 19.16 JAN 18

BARTHOLOMEW COUNTY

391035085560401. Local number, BA 9.
LOCATION.--Lat 39°10'35", long 85°56'04", in SW¼NE¼SW¼ sec.35, T.9 N., R.5 E., Bartholomew County, Hydrologic Unit 05120206, at the Bartholomew County Home on the 4-H Fairgrounds, 3.0 mi south of Columbus.
Owner: City of Columbus.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 6 in., depth 115 ft, cased to 106 ft, screened to 111 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 621.58 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top of floor of shelter, 1.65 ft above land-surface datum.

REMARKS.--Water level affected by pumpage from municipal supply well field.

PERIOD OF RECORD.--April 1970 to current year.

REVISED RECORDS.--WDR IN-80-1: 1979.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 12.75 ft below land-surface datum, Apr. 27-30, 1973; lowest, 38.75 ft below land-surface datum, Sept. 15, 1977.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	28.96	29.69	29.54	30.50	30.26	28.97	29.24	28.91	24.43	26.56	27.79	29.04
10	29.22	29.70	29.84	30.56	30.13	28.51	27.95	28.12	24.82	27.87	28.59	29.76
15	30.42	30.08	30.99	30.73	29.68	28.57	27.98	28.65	26.22	26.98	28.84	29.93
20	29.48	30.01	31.29	30.56	30.47	28.19	28.26	26.58	25.27	26.75	28.60	30.10
25	29.44	29.77	30.42	30.33	29.05	28.21	28.15	24.94	25.57	26.89	29.31	29.33
EOM	29.44	29.59	31.12	30.41	28.51	28.33	28.24	25.42	27.11	27.30	28.57	30.29

WTR YR 1990 HIGH 24.34 JUN 6

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	29.98	30.83	30.74	31.82	31.73	29.44	29.36	28.95	25.74	27.49	28.41	29.66
10	30.18	31.01	30.89	31.85	31.36	29.52	29.27	28.90	25.96	27.95	28.66	29.83
15	30.52	30.70	31.10	31.92	30.86	29.48	29.11	28.84	26.29	28.17	28.91	29.97
20	30.56	30.76	31.34	31.70	30.49	29.39	29.36	26.91	26.50	27.81	29.13	30.14
25	30.67	30.48	31.56	31.73	30.07	29.40	29.40	25.76	26.71	27.86	29.37	30.20
EOM	30.77	30.86	31.76	31.74	29.79	29.43	29.39	25.85	27.19	28.19	29.46	30.41

WTR YR 1990 LOW 31.94 JAN 16

BARTHOLOMEW COUNTY

390317085523701. Local number, BA 10.
LOCATION.--Lat 39°03'17", long 85°52'37", in NE¼NE¼NE¼ sec.16, T.7 N., R.6 E., Bartholomew County, Hydrologic Unit 05120206, 0.8 mi east of State Highway 11 and 1.0 mi southeast of Jonesville.
Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 6 in., depth 85 ft, cased to 80 ft, screened to 85 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 580 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of floor of shelter, 3.50 ft above land-surface datum.

PERIOD OF RECORD.--October 1978 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.67 ft below land-surface datum, Apr. 14, 1979; lowest, 12.65 ft below land-surface datum, Oct. 29, Nov. 2, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.80	9.19	7.77	8.42	5.64	6.68	7.01	5.36	6.44	8.09	8.59	9.25
10	8.15	9.08	8.12	8.44	5.04	7.11	7.06	5.87	6.46	8.41	8.76	9.49
15	8.51	8.73	8.39	8.63	5.44	4.51	6.57	3.41	6.97	7.88	8.97	9.50
20	8.68	5.05	8.77	8.37	4.28	6.17	7.03	2.09	7.32	8.11	9.15	9.60
25	8.86	6.57	8.77	7.91	6.00	6.76	7.16	5.48	7.53	7.97	9.20	9.67
EOM	9.05	7.26	8.83	8.22	6.28	7.05	7.51	6.21	7.82	8.34	9.21	9.85

WTR YR 1990 HIGH 1.66 MAY 17

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.89	9.29	7.84	8.56	6.31	6.86	7.21	6.92	6.57	8.23	8.72	9.38
10	8.35	9.24	8.33	8.55	5.37	7.27	7.42	6.20	6.61	8.53	8.85	9.56
15	8.69	9.20	8.68	8.71	6.25	5.08	6.69	4.31	7.07	7.98	9.09	9.64
20	8.73	5.62	8.81	8.65	4.92	6.31	7.15	3.26	7.45	8.29	9.32	9.74
25	8.96	6.78	8.91	8.27	6.17	6.93	7.34	5.68	7.66	8.04	9.26	9.75
EOM	9.24	7.47	9.05	8.36	6.39	7.13	7.67	6.33	7.87	8.43	9.38	9.98

WTR YR 1990 LOW 9.98 SEP 30

BARTHOLOMEW COUNTY

390658085572201. Local number, BA 13.
LOCATION.--Lat 39°06'58", long 85°57'22", in SW¼NW¼SE¼ sec.22, T.8 N., R.5 E., Bartholomew County, Hydrologic Unit 05120206, at the end of farm access road, 0.3 mi north of County Road 600 South at its intersection with Interstate Highway 65.
Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 6 in., depth 55.6 ft, cased to 50.6 ft, screened to 55.6 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 633.91 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of floor of shelter, 3.40 ft above land-surface datum.

PERIOD OF RECORD.--July 1986 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 20.55 ft below land-surface datum, May 17 and June 22, 1990; lowest, 24.17 ft below land-surface datum, Feb. 16, 1989.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	22.51	22.32	21.96	22.12	21.87	21.55	20.97	20.82	20.81	20.88	20.87	21.11
10	22.50	22.18	22.20	21.81	21.39	21.45	20.83	20.58	20.97	20.96	21.00	21.11
15	22.57	21.89	22.09	22.00	21.10	21.11	21.14	20.83	20.84	20.83	21.08	20.90
20	22.45	22.16	22.46	21.60	22.03	21.65	21.24	20.67	20.63	20.84	20.99	21.17
25	22.91	22.26	21.92	21.18	22.02	21.62	21.14	20.74	20.96	21.07	21.08	20.91
EOM	22.45	22.58	21.74	21.84	21.94	21.10	20.86	21.05	20.84	20.93	21.04	21.22

WTR YR 1990 HIGH 20.55 MAY 17

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	22.80	22.57	22.08	22.27	22.01	21.64	21.17	21.03	21.06	20.97	21.05	21.26
10	22.69	22.59	22.28	22.07	21.54	21.57	21.21	20.98	21.12	21.03	21.04	21.20
15	22.69	22.29	22.49	22.16	21.48	21.28	21.20	21.05	20.90	21.01	21.15	21.03
20	22.54	22.42	22.62	21.91	22.15	21.82	21.43	20.82	20.81	20.97	21.07	21.25
25	23.01	22.44	22.35	21.73	22.28	21.73	21.24	21.01	21.05	21.15	21.17	21.14
EOM	22.78	22.66	21.97	22.04	22.03	21.19	21.16	21.16	20.95	21.04	21.14	21.34

WTR YR 1990 LOW 23.01 OCT 25

BENTON COUNTY

402851087213501. Local number, BE 4.

LOCATION.--Lat 40°28'51", long 87°21'35", in SE¼NE¼SE¼ sec.31, T.24 N., R.8 W., Benton County, Hydrologic Unit 05120108, on north side of county road, 3.6 mi southeast of Boswell.
Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 310 ft, cased to 300 ft, screened to 305 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 710 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of floor of shelter, 2.19 ft above land-surface datum.

PERIOD OF RECORD.--November 1978 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 10.65 ft below land-surface datum, May 7, 1982; lowest, 16.55 ft below land-surface datum, Dec. 4, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	15.90	16.03	16.02	16.32	16.20	15.06	13.45	13.06	12.66	12.72	12.98	13.51
10	15.93	15.96	16.14	16.23	16.00	14.43	13.38	13.00	12.64	12.82	13.10	13.55
15	16.01	15.95	16.18	16.33	15.76	14.26	13.36	13.05	12.63	12.77	13.11	13.63
20	15.95	16.05	16.31	16.25	15.97	14.21	13.35	12.89	12.49	12.88	13.13	13.80
25	16.17	16.08	16.20	16.04	15.59	14.00	13.25	12.79	12.60	12.99	13.22	13.83
EOM	16.08	16.22	16.14	16.29	15.50	13.63	13.10	12.82	12.62	12.98	13.29	14.06

WTR YR 1990 HIGH 12.47 JUN 23

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	16.02	16.11	16.06	16.34	16.22	15.13	13.50	13.10	12.73	12.78	13.05	13.54
10	15.99	16.09	16.17	16.27	16.04	14.85	13.49	13.08	12.70	12.85	13.11	13.60
15	16.05	16.05	16.23	16.36	15.90	14.32	13.39	13.12	12.64	12.82	13.14	13.66
20	16.00	16.11	16.32	16.37	15.98	14.26	13.44	12.94	12.60	12.91	13.19	13.82
25	16.19	16.14	16.36	16.19	15.68	14.06	13.29	12.93	12.66	13.04	13.25	13.88
EOM	16.15	16.24	16.18	16.34	15.54	13.67	13.17	12.85	12.64	13.04	13.34	14.11

WTR YR 1990 LOW 16.52 DEC 23

BOONE COUNTY

400532086183901. Local number, BO 17.

LOCATION.--Lat 40°05'32", long 86°18'39", in SW¼SE¼NW¼ sec.16, T.19 N., R.2 E., Boone County, Hydrologic Unit 05120201, 0.6 mi north along U.S. Highway 421 from the intersection of U.S. Highway 421 and County Road 300 North at Waugh on the west side of the highway at the residence of John Sheets.
Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 171.8 ft, cased to 166.8 ft, screened to 171.8 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 956.50 ft above National Geodetic Vertical Datum of 1929. Measuring point: Mark on top of casing, 3.50 ft above land-surface datum.

PERIOD OF RECORD.--July 1986 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 45.87 ft below land-surface datum, July 11-13, 1986; lowest, 51.98 ft below land-surface datum, Oct. 13, 14, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	48.67	48.31	47.76	47.99	47.91	47.65	47.15	47.00	46.79	47.32	48.08	48.59
10	48.62	48.12	47.80	47.95	47.79	47.50	47.01	46.92	46.75	47.60	48.22	48.74
15	48.65	47.92	47.79	48.01	47.65	47.40	47.14	46.92	46.86	47.63	48.28	48.71
20	48.60	47.91	47.90	47.89	47.89	47.49	47.14	46.85	47.01	47.76	48.26	48.68
25	48.72	47.91	47.82	47.77	47.80	47.41	47.13	46.81	47.15	47.78	48.25	48.57
EOM	48.50	47.95	47.82	47.97	47.77	47.24	47.04	46.83	47.24	47.96	48.30	48.60

WTR YR 1990 HIGH 46.62 JUN 8

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	48.74	48.40	47.79	48.01	47.94	47.71	47.21	47.08	46.79	47.39	48.13	48.60
10	48.66	48.24	47.85	47.98	47.88	47.63	47.21	47.03	46.83	47.63	48.25	48.75
15	48.68	48.10	47.87	48.05	47.77	47.44	47.16	47.00	46.86	47.63	48.29	48.71
20	48.64	47.99	47.92	48.01	47.91	47.52	47.22	46.90	47.01	47.76	48.26	48.68
25	48.75	47.97	47.94	47.93	47.87	47.47	47.18	46.92	47.21	47.83	48.25	48.63
EOM	48.56	47.99	47.88	48.02	47.80	47.27	47.11	46.86	47.25	48.06	48.35	48.64

WTR YR 1990 LOW 48.83 SEP 17

CASS COUNTY

403407086175701. Local number, CS 3.
LOCATION.--Lat 40°34'07", long 86°17'57", in NE¼NE¼SE¼ sec.33, T.25 N., R.2 E., Cass County, Hydrologic Unit 05120105, at intersection of State Highway 18 and County Road 400 East, 2.5 mi east of Young America.
Owner: U.S. Geological Survey.

AQUIFER.--Dolomitic limestone of Devonian-Silurian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 130 ft, cased to 78ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 781.74 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of floor of shelter, 2.65 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.85 ft below land-surface datum, Feb. 2, 1968; lowest, 9.55 ft below land-surface datum, Nov. 11, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.95	6.12	6.25	6.77	6.32	5.52	5.51	5.48	5.43	6.28	6.23	6.26
10	5.98	6.10	6.33	6.49	6.00	5.39	5.53	5.44	5.65	6.31	6.32	6.27
15	6.19	5.94	6.47	6.71	5.67	5.03	5.53	5.48	5.89	5.99	6.36	6.30
20	6.26	6.17	6.89	6.39	5.98	5.38	5.52	5.25	5.90	6.18	6.71	6.43
25	6.24	6.25	6.78	6.18	5.86	5.35	5.54	5.22	5.89	6.25	6.63	6.36
EOM	6.06	6.31	6.52	6.37	5.71	5.30	5.54	5.45	6.14	6.35	6.53	6.49

WTR YR 1990 HIGH 5.00 MAR 17

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.09	6.22	6.32	6.85	6.43	5.65	5.65	5.61	5.57	6.42	6.44	6.38
10	6.15	6.36	6.44	6.60	6.08	5.64	5.73	5.67	5.83	6.43	6.39	6.35
15	6.32	6.21	6.67	6.79	5.88	5.14	5.59	5.57	5.97	6.08	6.43	6.38
20	6.31	6.33	6.95	6.56	6.03	5.43	5.61	5.45	6.04	6.30	6.94	6.52
25	6.32	6.34	7.04	6.48	5.98	5.49	5.78	5.38	5.99	6.34	6.67	6.50
EOM	6.25	6.40	6.66	6.49	5.78	5.38	5.80	5.58	6.24	6.42	6.61	6.64

WTR YR 1990 LOW 7.29 DEC 22

CLAY COUNTY

392653087120501. Local number, CY 6.
LOCATION.--Lat 39°26'53", long 87°12'05", in SE¼SE¼SE¼ sec.29, T.12 N., R.7 W., Clay County, Hydrologic Unit 05120111, 2.8 mi southwest of Staunton and 4.0 mi west of State Highway 59 just north of State Highway 42.
Owner: U.S. Geological Survey.

AQUIFER.--Sandstone of the Mansfield Formation, Pennsylvanian Period.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 400 ft, cased to 347 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 653.16 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.40 ft above land-surface datum.

PERIOD OF RECORD.--September 1987 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 151.36 ft below land-surface datum, Jan. 19, 1988; lowest, 153.68 ft below land-surface datum, Sept. 30, 1990.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	152.54	152.48	152.28	152.66	152.67	152.58	152.32	152.45	152.47	152.76	152.81	153.12
10	152.54	152.42	152.41	152.50	152.40	152.47	152.31	152.41	152.70	152.85	152.93	153.20
15	152.58	152.27	152.48	152.67	152.32	152.32	152.47	152.28	152.66	152.75	152.98	153.14
20	152.57	152.41	152.71	152.41	152.84	152.77	152.48	152.31	152.51	152.83	152.91	153.33
25	152.84	152.41	152.37	152.14	152.91	152.66	152.43	152.36	152.74	152.92	153.06	153.26
EOM	152.64	152.64	152.38	152.62	152.81	152.41	152.54	152.62	152.74	152.86	153.01	153.50

WTR YR 1990 HIGH 152.00 MAY 9

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	152.81	152.69	152.43	152.77	152.82	152.75	152.55	152.61	152.77	152.95	153.03	153.31
10	152.76	152.78	152.64	152.70	152.59	152.71	152.53	152.71	152.89	153.02	153.04	153.30
15	152.84	152.58	152.70	152.74	152.45	152.54	152.57	152.51	152.74	152.88	153.14	153.35
20	152.71	152.61	152.78	152.61	152.95	152.85	152.66	152.51	152.69	153.06	153.11	153.46
25	152.98	152.63	152.74	152.68	153.09	152.87	152.65	152.55	152.92	153.04	153.13	153.41
EOM	152.88	152.84	152.54	152.79	152.94	152.56	152.65	152.73	152.82	153.02	153.22	153.68

WTR YR 1990 LOW 153.68 SEP 30

CLAY COUNTY

391124087134701. Local number, CY 7.
LOCATION.--Lat 39°11'24", long 87°13'47", in SW¼NW¼SE¼ sec. 30, T.9N., R.7W., Clay County, Hydrologic Unit 05120111, 300 ft east of State Highway 159 just south of Coalmont and about 3.6 mi northwest of Jasonville.
Owner: U.S. Geological Survey

AQUIFER.--Sandstone of Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 121 ft, cased to 80 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 616.80 ft (revised) above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.50 ft above land-surface datum.

PERIOD OF RECORD.--September 1988 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 25.59 ft below land-surface datum, Sept. 4, 5, 1988; lowest, 33.05 ft below land-surface datum, Dec. 26, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	31.80	31.88	31.47	31.16	30.67	30.36	30.12	29.97	30.00	30.23	30.40	30.85
10	31.84	31.76	31.46	31.07	30.58	30.30	30.06	29.94	29.98	30.36	30.52	30.80
15	31.91	31.63	31.42	31.05	30.41	30.26	30.07	29.85	30.05	30.27	30.59	30.83
20	31.83	31.62	31.45	30.89	30.52	30.33	30.05	29.85	29.97	30.34	30.65	30.89
25	31.92	31.57	31.38	30.79	30.45	30.26	30.04	29.87	30.04	30.39	30.72	30.93
EOM	31.90	31.57	31.17	30.77	30.41	30.17	30.03	29.96	30.13	30.38	30.74	31.00

WTR YR 1990 HIGH 29.81 MAY 16

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	31.84	31.91	31.49	31.18	30.69	30.38	30.15	30.00	30.03	30.26	30.45	30.88
10	31.88	31.80	31.49	31.10	30.60	30.35	30.16	29.98	30.02	30.39	30.54	30.82
15	31.93	31.74	31.47	31.06	30.51	30.29	30.09	29.92	30.07	30.30	30.62	30.86
20	31.85	31.66	31.46	30.92	30.54	30.33	30.11	29.87	30.04	30.43	30.68	30.91
25	31.93	31.61	31.44	30.86	30.48	30.28	30.09	29.91	30.08	30.42	30.74	30.95
EOM	31.93	31.60	31.20	30.80	30.43	30.20	30.07	29.98	30.15	30.41	30.77	31.03

WTR YR 1990 LOW 31.95 NOV 1

DECATUR COUNTY

392022085371801. Local number, DC 2.
LOCATION.--Lat 39°20'22", long 85°37'18", in SE¼NE¼SW¼ sec.3, T.10 N., R.8 E., Decatur County, Hydrologic Unit 05120206, at the intersection of County Roads 50 North and 750 West and 7.5 mi west of Greensburg.
Owner: U.S. Geological Survey.

AQUIFER.--Limestone of Devonian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 49 ft, cased to 12.5 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 840.8 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of floor of shelter, 3.02 ft above land-surface datum.

PERIOD OF RECORD.--September 1966 to October 1971, September 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.16 ft below land-surface datum, Dec. 10, 1966; lowest, 9.25 ft below land-surface datum, Feb. 9-11, 1977.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.27	7.31	5.26	3.71	.73	3.97	3.77	.63	4.80	6.37	6.92	7.71
10	6.60	6.40	5.72	4.32	1.22	1.23	1.64	2.80	5.02	6.60	7.07	7.45
15	6.86	1.32	6.15	4.71	.48	2.53	3.29	1.70	5.40	5.88	7.22	7.10
20	7.00	2.86	6.44	2.86	2.09	3.84	4.16	2.11	5.62	6.31	7.38	5.69
25	7.11	4.33	6.65	3.74	3.49	4.31	4.36	3.94	5.79	6.51	7.52	6.30
EOM	7.21	4.80	4.38	4.38	3.44	3.86	4.69	4.47	6.11	6.76	7.59	6.76

WTR YR 1990 HIGH .34 MAY 16

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.33	7.32	5.33	3.85	.98	4.08	3.97	1.12	4.84	6.43	6.95	7.74
10	6.66	6.43	5.80	4.37	1.51	4.42	4.34	3.33	5.10	6.64	7.10	7.51
15	6.89	6.52	6.22	4.81	2.92	2.89	3.62	2.34	5.47	5.97	7.25	7.17
20	7.01	3.37	6.47	4.59	2.44	3.96	4.23	2.68	5.79	6.38	7.43	5.81
25	7.13	4.44	6.68	4.00	3.68	4.37	4.42	4.02	5.85	6.56	7.54	6.40
EOM	7.25	4.89	5.76	4.48	3.47	3.93	4.79	4.53	6.16	6.79	7.60	6.83

WTR YR 1990 LOW 7.81 SEP 8

DELAWARE COUNTY

400541085213701. Local number, DW 4.
LOCATION.--Lat 40°05'41", long 85°21'37", in SE¼NW¼SW¼ sec.9, T.19 N., R.10 E., Delaware County, Hydrologic Unit 05120201, on property owned by Monroe Township Conservation Club, and 8.0 mi south of Muncie.
Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 91 ft, cased to 89 ft, screened to 91 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 1,005 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of floor of shelter, 2.88 ft above land-surface datum.

PERIOD OF RECORD.--October 1966 to October 1971, October 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 43.98 ft below land-surface datum, Dec. 11, 1985; lowest, 49.50 ft below land-surface datum, Oct. 13, 14, 1966.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	47.85	48.20	48.02	47.61	47.12	47.08	47.59	47.26	47.37	47.82	47.73	47.56
10	47.99	48.15	48.12	47.76	47.32	47.29	47.24	47.32	46.70	47.95	47.91	47.64
15	48.08	47.79	48.19	47.95	45.90	46.11	47.08	46.26	47.03	47.63	47.85	47.70
20	48.11	47.60	48.26	48.02	46.31	46.83	47.34	45.99	47.34	47.81	47.55	47.80
25	48.14	47.79	48.29	47.99	46.47	47.23	47.41	46.77	47.53	47.08	47.62	47.70
EOM	48.19	47.93	47.68	48.13	46.75	47.50	47.54	47.14	47.68	47.53	47.22	47.86

WTR YR 1990 HIGH 45.40 MAR 11

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	47.87	48.21	48.07	47.63	47.35	47.15	47.62	47.31	47.40	47.84	47.77	47.63
10	48.03	48.18	48.13	47.79	47.36	47.41	47.71	47.40	46.74	47.96	47.93	47.69
15	48.09	48.18	48.20	47.98	47.30	46.30	47.11	46.37	47.11	47.65	47.88	47.72
20	48.11	47.64	48.28	48.05	46.46	46.91	47.36	46.20	47.37	47.84	47.61	47.82
25	48.15	47.83	48.30	48.04	46.60	47.30	47.44	46.81	47.57	47.14	47.67	47.73
EOM	48.20	47.95	48.06	48.14	46.82	47.51	47.58	47.21	47.71	47.59	47.28	47.88

WTR YR 1990 LOW 48.36 DEC 28

ELKHART COUNTY

413121085481301. Local number, EH 4.
LOCATION.--Lat 41°31'21", long 85°48'13", in SW¼SE¼SW¼ sec.35, T.36 N., R.6 E., Elkhart County, Hydrologic Unit 04050001, at the southwest corner of Goshen Municipal Airport.
Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 6 in., depth 62 ft, cased to 58 ft, screened to 60 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 818 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of floor of shelter, 2.60 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 10.60 ft below land-surface datum, Apr. 14, 1985; lowest, 16.18 ft below land-surface datum, Dec. 1-5, 1971.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	14.43	14.66	14.68	14.75	14.42	13.11	12.86	12.99	12.07	12.39	13.18	13.35
10	14.48	14.69	14.72	14.66	14.35	13.04	12.95	12.97	12.11	12.72	13.24	13.38
15	14.53	14.72	14.76	14.64	14.29	12.96	12.98	12.91	12.13	12.81	13.40	13.41
20	14.57	14.68	14.80	14.61	14.25	12.90	13.03	12.24	12.16	12.88	13.40	13.44
25	14.59	14.67	14.83	14.54	13.75	12.83	13.02	11.98	12.23	12.88	13.39	13.45
EOM	14.63	14.67	14.87	14.49	13.35	12.83	13.02	12.01	12.30	13.11	13.37	13.50

WTR YR 1990 HIGH 11.95 MAY 27

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	14.43	14.67	14.69	14.81	14.44	13.13	12.89	13.00	12.09	12.48	13.19	13.35
10	14.49	14.71	14.73	14.67	14.37	13.07	12.96	13.02	12.13	12.82	13.26	13.39
15	14.54	14.73	14.76	14.65	14.30	12.98	12.99	12.95	12.15	12.82	13.40	13.41
20	14.57	14.69	14.80	14.62	14.25	12.93	13.03	12.36	12.17	12.89	13.41	13.45
25	14.59	14.67	14.84	14.56	13.94	12.85	13.03	12.00	12.24	12.89	13.39	13.46
EOM	14.64	14.68	14.87	14.50	13.44	12.83	13.03	12.02	12.31	13.12	13.37	13.51

WTR YR 1990 LOW 14.89 JAN 2

ELKHART COUNTY

414419085544601. Local number, EH 5.
LOCATION.--Lat 41°44'19", long 85°54'46", in NW¼NE¼NE¼ sec.23, T.38 N., R.5 E., Elkhart County, Hydrologic Unit 04050001, on the inlet to Heaton Lake, and 3.5 mi east of Elkhart.
Owner: State of Indiana.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 1.5 in., depth 13 ft, cased to 11 ft, screened to 13 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 770 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of floor of shelter, 2.10 ft above land-surface datum.

PERIOD OF RECORD.--May 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.37 ft below land-surface datum, June 16, 1981; lowest, 5.65 ft below land-surface datum, Sept. 17-19, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	3.83	4.00	3.30	3.45	3.14	2.91	2.90	3.05	3.05	3.58	3.71	4.15
10	3.93	4.00	3.39	3.41	3.20	2.44	2.90	3.08	3.11	3.81	3.91	4.21
15	4.09	3.68	3.48	3.44	3.29	2.55	2.85	2.75	3.25	3.75	3.91	4.21
20	3.94	3.36	3.58	3.25	3.35	2.75	2.90	2.61	3.40	3.59	3.88	4.30
25	3.92	3.38	3.71	3.14	2.71	2.81	2.95	2.80	3.38	3.41	3.84	4.11
EOM	4.00	3.26	3.72	3.24	2.81	2.90	3.05	2.91	3.39	3.65	4.01	4.15

WTR YR 1990 HIGH 2.40 MAR 11

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	3.86	4.00	3.30	3.47	3.15	2.92	2.92	3.05	3.08	3.60	3.76	4.29
10	3.93	4.00	3.46	3.44	3.24	2.69	3.00	3.08	3.16	3.82	3.94	4.32
15	4.10	3.92	3.54	3.45	3.30	2.60	2.85	2.75	3.30	3.79	3.92	4.21
20	4.08	3.39	3.59	3.31	3.39	2.79	2.98	2.71	3.42	3.76	3.96	4.36
25	3.97	3.38	3.71	3.30	2.74	2.86	3.00	2.86	3.40	3.44	3.85	4.12
EOM	4.03	3.27	3.76	3.26	2.85	2.90	3.08	2.96	3.41	3.70	4.05	4.18

WTR YR 1990 LOW 4.42 SEP 13

ELKHART COUNTY

414351085540401. Local number, EH 6.
LOCATION.--Lat 41°43'51", long 85°54'04", in NW¼NE¼SW¼ sec.24, T.38 N., R.5 E., Elkhart County, Hydrologic Unit 04050001, on the southeast shore of Heaton Lake, and 4.0 mi east of Elkhart.
Owner: State of Indiana.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 1.5 in., depth 22 ft, cased to 20 ft, screened to 22 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 770 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of floor of shelter, 2.50 ft above land-surface datum.

PERIOD OF RECORD.--May 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 5.10 ft below land-surface datum, June 16-19, 1981; lowest, 10.68 ft below land-surface datum, Oct. 16, 17, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.42	8.97	8.14	8.67	7.97	7.23	6.98	7.16	7.00	7.87	8.59	8.98
10	8.60	9.01	8.22	8.61	7.92	7.02	7.07	7.23	7.07	8.25	8.73	9.06
15	8.78	8.96	8.32	8.61	7.92	6.66	7.04	7.01	7.20	8.32	8.77	9.17
20	8.86	8.55	8.42	8.42	8.03	6.66	7.06	6.70	7.40	8.35	8.83	9.18
25	8.92	8.28	8.55	8.17	7.42	6.82	7.07	6.73	7.52	8.27	8.70	9.17
EOM	8.94	8.17	8.66	8.07	7.27	6.95	7.10	6.88	7.63	8.37	8.77	9.19

WTR YR 1990 HIGH 6.64 MAR 19

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.44	8.98	8.15	8.71	7.98	7.23	7.00	7.18	7.01	7.91	8.59	9.00
10	8.60	9.03	8.25	8.61	7.92	7.16	7.09	7.23	7.11	8.27	8.76	9.07
15	8.79	9.06	8.34	8.61	7.92	6.67	7.04	7.07	7.26	8.35	8.79	9.17
20	8.86	8.63	8.42	8.51	8.06	6.70	7.06	6.71	7.40	8.43	8.86	9.19
25	8.93	8.31	8.55	8.25	7.47	6.84	7.08	6.73	7.59	8.29	8.72	9.17
EOM	8.94	8.17	8.69	8.09	7.28	6.95	7.11	6.91	7.65	8.48	8.83	9.19

WTR YR 1990 LOW 9.20 SEP 27

ELKHART COUNTY

414514085505001. Local number, EH 7.
LOCATION.--Lat 41°45'14", long 85°50'50", in SW¼SE¼SW¼ sec.9, T.38 N., R.6 E., Elkhart County, Hydrologic Unit 04050001, on north side of County Road 2, 200 ft east of County Road 21, and 2.7 mi northwest of Bristol.
Owner: U.S. Geological Survey.

AQUIFER.--Fine to medium sand of Pleistocene age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 6 in., depth 61 ft, cased to 56 ft, screened to 61 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 781 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of floor of shelter, 3.70 ft above land-surface datum.

PERIOD OF RECORD.--June 1981 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 5.50 ft below land-surface datum, Feb. 24, 1985; lowest, 12.73 ft below land-surface datum, Aug. 5, 6, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.46	10.82	10.58	10.69	10.33	9.66	8.97	9.08	8.72	9.51	10.71	10.86
10	10.52	10.86	10.57	10.75	10.26	9.47	9.06	9.09	8.88	9.99	10.69	10.88
15	10.62	10.89	10.58	10.78	10.21	8.83	9.15	9.07	8.99	10.19	10.74	10.84
20	10.66	10.85	10.59	10.68	10.21	8.72	9.16	8.62	9.09	10.23	10.62	10.85
25	10.75	10.73	10.61	10.53	10.01	8.74	9.13	8.51	9.24	10.11	10.57	10.82
EOM	10.78	10.64	10.69	10.42	9.83	8.86	9.09	8.64	9.35	10.40	10.52	10.84

WTR YR 1990 HIGH 8.51 MAY 25

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.48	10.83	10.59	10.71	10.35	9.68	9.01	9.12	8.77	9.63	10.72	10.88
10	10.57	10.88	10.58	10.78	10.27	9.53	9.11	9.19	8.91	10.10	10.75	10.89
15	10.64	10.91	10.59	10.80	10.22	8.87	9.17	9.15	9.03	10.19	10.78	10.85
20	10.68	10.87	10.60	10.74	10.23	8.74	9.17	8.66	9.14	10.26	10.64	10.85
25	10.76	10.76	10.63	10.55	10.05	8.76	9.15	8.54	9.27	10.13	10.58	10.83
EOM	10.79	10.65	10.71	10.44	9.88	8.89	9.12	8.66	9.37	10.45	10.59	10.84

WTR YR 1990 LOW 10.93 NOV 18

FOUNTAIN COUNTY

401200087121701. Local number, FO 3.
LOCATION.--Lat 40°12'00", long 87°12'17", in NW¼NW¼NW¼ sec.10, T.20 N., R.7 W., Fountain County, Hydrologic Unit 05120108, on the southwest corner of the Union Church property on County Road 520 North, about 6.5 mi southeast of Attica.
Owner: U.S. Geological Survey.

AQUIFER.--Shale and sandstone of the Mississippian Period.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 6 in., depth 102 ft, cased to 22 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 670.99 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.60 ft above land-surface datum.

PERIOD OF RECORD.--July 1986 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.02 ft below land-surface datum, Mar. 11, 1990; lowest, 13.53 ft below land-surface datum, Dec. 21, 22, 25-27, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.67	10.37	10.63	10.81	9.40	6.36	6.68	7.16	7.14	8.35	8.65	9.95
10	9.80	10.45	10.76	10.83	8.54	4.09	6.36	7.47	6.93	8.44	8.96	10.09
15	10.01	10.42	10.88	10.94	6.71	4.00	6.27	6.68	7.41	8.05	9.17	10.22
20	10.04	10.30	10.98	10.87	7.12	5.39	6.34	5.17	7.23	8.42	9.37	10.36
25	10.20	10.46	11.01	10.76	5.57	6.13	6.57	5.88	7.70	8.67	9.55	10.47
EOM	10.28	10.60	11.06	10.75	5.97	6.48	7.03	6.60	8.04	8.46	9.78	10.62

WTR YR 1990 HIGH 3.02 MAR 11

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.72	10.41	10.66	10.88	9.47	6.46	6.83	7.24	7.18	8.43	8.75	9.97
10	9.90	10.53	10.81	10.89	8.57	6.69	7.14	7.64	7.08	8.50	9.01	10.13
15	10.02	10.55	10.93	10.99	8.52	4.32	6.30	6.74	7.50	8.13	9.20	10.23
20	10.06	10.38	11.03	10.91	7.17	5.51	6.76	5.49	7.79	8.48	9.40	10.38
25	10.22	10.50	11.03	10.84	5.76	6.26	6.69	6.20	7.79	8.73	9.59	10.49
EOM	10.35	10.62	11.10	10.78	6.03	6.53	7.18	6.72	8.10	8.54	9.81	10.65

WTR YR 1990 LOW 11.18 DEC 30

FRANKLIN COUNTY

392416085004301. Local number, FR 5.
LOCATION.--Lat 39°24'16", long 85°00'43", in SE¼NE¼NW¼ sec.32, T.9 N., R.2 W., Franklin County, Hydrologic Unit 05080003, adjacent to property of Franklin County Conservation Club, 1.0 mi south of Brookville.
Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 6 in., depth 61 ft, cased to 57 ft, screened to 59 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 621.79 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of floor of shelter, 2.70 ft above land-surface datum.

PERIOD OF RECORD.--March 1968 to October 1971, September 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 11.95 ft below land-surface datum, May 24, 1968; lowest, 27.32 ft below land-surface datum, Feb. 1, 1977.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	25.95	26.42	25.32	25.56	23.50	23.95	24.28	22.22	23.75	25.64	25.48	24.42
10	26.10	26.17	25.76	25.52	23.42	24.53	24.34	22.32	24.25	25.85	25.60	24.81
15	26.22	25.74	26.01	25.34	22.33	23.45	24.25	21.74	24.59	24.67	25.87	25.01
20	26.28	24.98	26.21	25.50	22.53	23.47	24.63	20.17	24.95	24.86	25.86	24.88
25	26.32	24.59	26.33	25.03	22.59	24.10	24.54	20.96	25.01	24.66	24.93	25.28
EOM	26.39	24.43	25.98	25.36	23.26	24.39	24.87	22.82	25.35	25.20	23.84	25.63

WTR YR 1990 HIGH 18.43 MAY 17

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	25.98	26.43	25.43	25.67	23.59	24.09	24.40	22.86	23.84	25.68	25.59	24.58
10	26.13	26.19	25.81	25.59	23.47	24.60	24.76	22.62	24.34	25.87	25.67	24.87
15	26.24	26.04	26.05	25.44	23.66	23.55	24.32	22.11	24.67	24.75	25.90	25.04
20	26.29	25.00	26.23	25.70	22.64	23.56	24.68	20.53	25.03	25.01	25.94	24.97
25	26.33	24.65	26.34	25.16	22.66	24.20	24.60	21.50	25.07	24.75	25.00	25.35
EOM	26.39	24.62	26.31	25.37	23.36	24.55	24.91	23.11	25.41	25.30	23.93	25.68

WTR YR 1990 LOW 26.43 NOV 5

FULTON COUNTY

405829086175801. Local number, FU 7.
LOCATION.--Lat 40°58'29", long 86°17'58", in NW¼NW¼SW¼ sec.10, T.29 N., R.2 E., Fulton County, Hydrologic Unit 05120106, 2.5 mi northwest of Fulton.
Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 102 ft, cased to 96 ft, screened to 102 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 776.45 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of floor of shelter, 2.50 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 6.35 ft below land-surface datum, Apr. 23-27, 1973; lowest, 13.21 ft below land-surface datum, Oct. 13, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.28	10.64	10.22	10.63	9.41	7.80	8.21	8.53	8.54	9.12	8.50	7.97
10	10.38	10.68	10.38	10.43	9.20	7.69	8.35	8.67	8.65	9.41	8.74	8.32
15	10.54	10.58	10.49	10.45	9.10	7.20	8.09	8.71	8.86	8.65	8.31	8.55
20	10.54	10.15	10.63	10.09	8.84	7.68	8.12	7.91	9.04	8.37	6.82	8.84
25	10.65	10.13	10.62	9.75	7.69	8.02	8.16	8.11	9.23	7.93	6.70	9.04
EOM	10.60	10.23	10.70	9.82	7.67	8.20	8.36	8.45	9.01	8.26	7.41	9.29

WTR YR 1990 HIGH 6.56 AUG 23

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.32	10.67	10.24	10.71	9.49	7.89	8.28	8.62	8.57	9.23	8.55	8.05
10	10.44	10.78	10.41	10.46	9.21	7.92	8.43	8.77	8.71	9.52	8.81	8.40
15	10.56	10.78	10.54	10.48	9.22	7.27	8.13	8.77	8.91	8.75	8.37	8.60
20	10.55	10.22	10.66	10.23	8.89	7.74	8.17	7.94	9.08	8.63	7.10	8.89
25	10.66	10.16	10.70	9.87	7.72	8.07	8.21	8.14	9.28	7.98	6.82	9.07
EOM	10.65	10.25	10.74	9.86	7.70	8.22	8.44	8.52	9.03	8.35	7.53	9.34

WTR YR 1990 LOW 10.85 NOV 12

GRANT COUNTY

402322085481901. Local number, GI 8.
LOCATION.--Lat 40°23'22", long 85°48'19", in NW¼SW¼NW¼ sec.1, T.22 N., R.6 E., Grant County, Hydrologic Unit 05120107, located on County Road 700 West right-of-way, and 1.0 mi northwest of Rigdon.
Owner: U.S. Geological Survey.

AQUIFER.--Limestone of Silurian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 35 ft, cased to 20 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 880 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of floor of shelter, 3.10 ft above land-surface datum.

PERIOD OF RECORD.--October 1966 to October 1971, July 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.16 ft below land-surface datum, Mar. 21, 1984; lowest, 10.66 ft below land-surface datum, Oct. 29, 1966.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.56	4.63	3.95	3.89	1.62	2.86	3.17	2.71	3.69	4.21	4.92	4.54
10	4.79	4.45	4.29	3.74	1.63	2.78	2.73	2.91	2.75	4.46	5.27	4.93
15	4.99	3.88	4.49	3.92	1.44	2.10	2.47	2.29	3.36	3.65	5.52	4.96
20	4.90	3.47	4.69	3.02	2.22	2.83	3.11	2.13	3.78	4.11	4.31	5.16
25	4.60	3.88	4.54	2.77	2.03	3.25	3.14	3.09	3.67	4.45	3.72	5.10
EOM	4.48	4.04	4.40	3.46	2.62	3.48	3.53	3.42	3.96	4.74	3.98	5.34

WTR YR 1990 HIGH 1.31 FEB 16

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.72	4.69	4.02	4.04	1.74	2.95	3.31	2.93	3.91	4.57	5.27	4.84
10	4.89	4.81	4.36	3.83	1.81	3.14	3.52	3.16	2.95	4.68	5.44	5.27
15	5.21	4.58	4.57	4.01	2.32	2.32	2.59	2.33	3.66	3.85	5.85	5.11
20	4.94	3.62	4.73	3.38	2.39	2.90	3.16	2.57	4.09	4.49	5.27	5.40
25	4.86	3.88	4.70	3.00	2.37	3.38	3.26	3.31	3.90	4.76	4.02	5.23
EOM	4.63	4.07	4.65	3.62	2.66	3.50	3.68	3.65	4.25	5.19	4.39	5.54

WTR YR 1990 LOW 5.88 AUG 17

GRANT COUNTY

403836085374401. Local number, GT 10.
LOCATION.--Lat 40°38'36", long 85°37'44", in NE¼SE¼SW¼ sec.4, T.25 N., R.8 E., Grant County, Hydrologic Unit 05120103, 0.20 mi north of intersection of State Highway 9 and County Road 600 North on west side of road.
Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 198 ft, cased to 193 ft, screened to 198 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 912.16 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.16 ft above land-surface datum.

PERIOD OF RECORD.--August 1987 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 107.39 ft below land-surface datum, Apr. 6, 1988; lowest, 120.87 ft below land-surface datum, June 29, 1989.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	117.44	119.84	119.26	116.83	116.92	116.77	116.63	115.56	115.75	116.11	115.70	119.47
10	119.92	117.59	117.61	117.32	117.02	119.36	118.32	115.09	115.52	115.04	115.92	119.62
15	117.45	117.00	119.39	116.46	117.01	119.25	116.05	115.80	115.41	115.39	116.08	119.47
20	119.34	119.88	119.00	116.08	116.93	119.88	116.02	118.07	115.20	115.64	116.05	119.84
25	119.07	117.60	116.88	117.57	118.81	117.70	116.28	118.36	115.40	115.86	116.11	119.61
EOM	117.34	119.35	116.52	117.72	119.56	116.30	115.63	116.72	118.27	115.80	117.57	120.01

WTR YR 1990 HIGH 114.94 JUL 11

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	118.85	120.02	119.62	117.93	118.31	118.24	117.62	115.67	116.11	116.88	115.83	119.55
10	120.16	117.82	117.67	118.91	117.09	119.44	118.67	115.41	115.65	115.13	115.98	119.71
15	117.60	118.39	119.68	116.57	118.63	119.39	116.29	116.95	115.47	115.61	116.12	119.60
20	119.58	120.14	120.31	116.46	117.59	120.01	116.20	118.37	115.32	115.71	116.14	119.91
25	120.60	117.83	117.46	118.14	119.46	118.47	116.77	118.46	115.56	116.00	116.20	119.81
EOM	117.56	119.87	116.65	119.09	119.73	116.50	115.80	118.09	118.37	115.97	118.46	120.12

WTR YR 1990 LOW 120.60 OCT 25

HAMILTON COUNTY

400000086023001. Local number, HA 5.
LOCATION.--Lat 40°00'00", long 86°02'30", in NE¼NE¼NW¼ sec.23, T.18 N., R.4 E., Hamilton County, Hydrologic Unit 05120201, on south side of 146th Street, 1.0 mi west of White River, 1.2 mi west of Allisonville Road, and 3.5 mi southwest of Noblesville.
Owner: Earlham College.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 6 in., depth 86 ft, cased to 82 ft, screened to 86 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 755.47 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of floor of shelter, 2.76 ft above land-surface datum.

PERIOD OF RECORD.--July 1965 to September 1971, July 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 8.00 ft below land-surface datum, Feb. 24, 25, 1982; lowest, 11.99 ft below land-surface datum, Oct. 30-Nov. 4, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.81	10.19	9.99	10.05	9.77	9.24	9.52	9.65	9.24	9.89	10.27	10.43
10	9.94	10.13	10.10	10.08	9.60	9.32	9.51	9.71	9.21	10.06	10.40	10.51
15	10.08	9.90	10.21	10.20	9.08	8.76	9.52	9.30	9.47	10.01	10.38	10.57
20	9.98	9.60	10.32	10.18	8.85	9.05	9.66	8.54	9.59	10.16	10.46	10.60
25	10.00	9.72	10.41	10.18	8.94	9.27	9.75	8.93	9.61	10.18	10.45	10.65
EOM	10.12	9.88	10.20	10.30	9.05	9.45	9.87	8.98	9.74	10.30	10.28	10.71

WTR YR 1990 HIGH 8.51 MAY 18

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.83	10.21	10.01	10.08	9.84	9.29	9.56	9.70	9.28	9.92	10.30	10.45
10	9.97	10.17	10.13	10.10	9.62	9.46	9.69	9.75	9.29	10.08	10.42	10.52
15	10.09	10.16	10.24	10.23	9.56	8.81	9.55	9.43	9.50	10.06	10.41	10.59
20	10.03	9.62	10.34	10.24	8.92	9.09	9.70	8.64	9.67	10.17	10.50	10.62
25	10.02	9.75	10.41	10.22	9.00	9.31	9.77	8.96	9.66	10.20	10.47	10.66
EOM	10.14	9.91	10.34	10.31	9.08	9.47	9.89	9.04	9.76	10.33	10.30	10.73

WTR YR 1990 LOW 10.73 SEP 30

HARRISON COUNTY

382323086044501. Local number, HR 8.
LOCATION.--Lat 38°23'23", long 86°04'45", in NW¼NW¼NE¼ sec.33, T.1 S., R.4 E., Harrison County, Hydrologic Unit 05140104, on Harrison County right-of-way, 2.0 mi southeast of Palmyra.
Owner: U.S. Geological Survey.

AQUIFER.--Limestone of Mississippian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 93 ft, cased to 54 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 827 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of floor of shelter, 3.10 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.56 ft below land-surface datum, June 7, 1990; lowest, 19.90 ft below land-surface datum, Nov. 2-4, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	13.51	14.92	14.45	13.59	1.96	5.03	5.24	3.70	2.41	6.91	9.72	12.28
10	13.92	15.18	14.81	13.18	2.12	5.72	4.22	4.49	1.51	7.72	10.37	12.72
15	14.35	15.12	15.16	13.23	1.32	6.29	4.26	4.22	3.61	7.04	10.96	12.87
20	14.38	14.12	15.52	9.77	3.02	6.57	5.62	2.59	4.63	7.87	11.47	12.92
25	14.45	14.04	15.84	6.38	4.35	7.01	4.11	3.02	5.17	7.97	11.71	12.89
EOM	14.63	14.26	14.60	4.31	4.61	6.67	5.52	2.84	6.00	8.91	11.93	13.23

WTR YR 1990 HIGH .56 JUN 7

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	13.57	14.96	14.50	13.74	2.19	5.21	5.47	4.10	2.67	7.07	9.82	12.35
10	14.00	15.27	14.87	13.23	2.28	5.80	6.35	5.01	2.17	7.86	10.47	12.79
15	14.42	15.51	15.25	13.29	3.49	6.50	4.51	5.43	3.88	7.20	11.05	12.96
20	14.44	14.21	15.58	12.67	3.26	6.65	5.70	3.10	4.73	8.01	11.57	12.93
25	14.47	14.06	15.89	6.57	4.55	7.10	4.45	3.22	5.33	8.14	11.79	12.92
EOM	14.72	14.30	15.99	4.50	4.70	6.90	5.94	3.18	6.14	9.06	11.94	13.32

WTR YR 1990 LOW 16.13 DEC 29

HENDRICKS COUNTY

394025086400801. Local number, HD 4.
LOCATION.--Lat 39°40'25", long 86°40'08", in NW¼NW¼NW¼ sec.8, T.14 N., R.2 W., Hendricks County, Hydrologic Unit 05120203, at the intersection of State Highway 75 and County Road 600 South on county right-of-way, and 1.0 mi south of Coatesville.
Owner: U.S. Geological Survey.

AQUIFER.--Sandstone of Mississippian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 85 ft, cased to 70 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 860 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of floor of shelter, 1.92 ft above land-surface datum.

REMARKS.--Water level affected by pumpage.

PERIOD OF RECORD.--October 1966 to September 1971, November 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 18.65 ft below land-surface datum, Jan. 30, 1976; lowest, 29.02 ft below land-surface datum, Nov. 30, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	22.56	22.51	21.98	22.69	20.92	20.89	21.17	21.75	21.86	22.32	22.45	23.22
10	23.00	22.09	22.23	22.17	20.74	21.03	21.41	21.72	22.12	22.60	22.85	23.40
15	23.12	21.89	22.49	22.14	20.50	20.81	21.13	21.06	22.47	22.45	22.82	23.30
20	22.80	21.35	22.81	22.09	21.10	21.62	21.35	20.69	22.74	22.80	22.89	23.18
25	22.36	22.02	22.85	21.36	20.87	21.55	21.25	21.22	22.30	22.61	22.84	23.04
EOM	22.16	21.93	23.03	21.70	20.88	21.78	21.57	21.44	22.38	22.77	22.90	23.14

WTR YR 1990 HIGH 20.50 FEB 15

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	22.66	22.65	22.09	22.84	21.59	21.10	21.24	21.94	22.10	22.38	22.61	23.33
10	23.11	22.73	22.31	22.41	21.04	21.62	21.52	21.82	22.22	22.78	23.10	23.59
15	23.22	22.11	22.61	22.50	21.01	21.07	21.22	21.51	22.56	22.51	22.98	23.80
20	22.95	21.50	23.12	22.45	21.17	21.91	21.48	20.74	22.99	22.95	22.99	23.27
25	22.46	22.51	22.93	21.99	20.99	21.66	21.52	21.39	22.37	22.66	23.00	23.17
EOM	22.30	22.06	23.19	21.84	21.15	22.02	21.76	21.76	22.56	22.91	23.07	23.26

WTR YR 1990 LOW 23.80 SEP 15

HUNTINGTON COUNTY

404858085284301. Local number, HU 2.
LOCATION.--Lat 40°48'58", long 85°28'43", in SW¼SW¼SE¼ sec. 2, T.2N., R.9E., Huntington County, Hydrologic Unit 05120101, on the property of Luther Fusselman, 3.0 mi south of Huntington and 0.5 mi west of State Highway 5.

AQUIFER.--Sand and gravel of the Pleistocene Epoch.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 148 ft, cased to 143 ft, screened to 148 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 819.70 ft (revised) above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.30 ft above land-surface datum.

PERIOD OF RECORD.--August 1988 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 65.46 ft below land-surface datum, Dec. 24, 1988; lowest, 71.50 ft below land-surface datum, Dec. 23, 1989.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	70.08	---	70.23	70.50	70.33	69.97	69.29	69.26	69.42	69.94	70.29	69.76
10	70.08	---	70.39	70.15	69.83	69.48	69.42	69.09	69.87	70.00	70.46	69.77
15	70.06	69.96	70.52	70.26	69.03	69.23	69.87	69.39	70.00	69.75	70.28	69.17
20	70.06	70.13	70.85	69.84	70.04	69.74	69.67	69.66	69.98	70.02	70.30	69.41
25	---	70.29	70.11	69.41	69.89	69.51	69.37	69.40	70.16	70.40	70.06	69.40
EOM	---	70.61	69.86	70.33	69.88	69.35	69.48	69.39	69.96	70.35	70.01	69.74

WTR YR 1990 HIGH 68.90 FEB 24

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	70.40	---	70.32	70.66	70.59	70.16	69.54	69.52	69.71	70.23	70.50	69.87
10	70.41	---	70.51	70.40	70.00	69.70	69.76	69.62	69.95	70.13	70.50	69.92
15	70.18	70.28	70.76	70.55	69.73	69.47	69.93	69.69	70.17	70.03	70.45	69.45
20	70.13	70.51	70.99	70.28	70.27	69.94	70.03	69.86	70.19	70.14	70.45	69.71
25	---	70.53	70.76	70.16	70.27	69.68	69.80	69.83	70.30	70.53	70.27	69.60
EOM	---	70.77	70.14	70.60	70.02	69.48	69.75	69.58	70.15	70.49	70.10	69.91

WTR YR 1990 LOW 71.50 DEC 23

JASPER COUNTY

410249087011201. Local number, JP 4.
LOCATION.--Lat 41°02'49", long 87°01'12", in SW¼NE¼SW¼ sec.17, T.30 N., R.5 W., Jasper County, Hydrologic Unit 07120002, on property of William Gehring, Inc., 0.9 mi east of Newland.
Owner: William Gehring, Inc.

AQUIFER.--Limestone of Devonian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 16 in., depth 300 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 676.93 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of floor of shelter, 0.00 ft above land-surface datum.

REMARKS.--Water level may be affected by irrigation pumpage.

PERIOD OF RECORD.--July 1956 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.96 ft below land-surface datum, Apr. 9, 1962; lowest, 40.17 ft below land-surface datum, July 25, 1980.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	3.40	3.29	3.20	3.47	2.91	2.09	2.10	2.36	2.67	4.03	5.55	3.36
10	3.39	3.35	3.28	3.34	2.66	1.84	2.18	2.28	2.89	6.05	4.57	3.45
15	3.47	3.29	---	3.38	2.52	1.60	2.25	2.42	4.26	4.83	3.97	3.37
20	3.40	3.28	---	3.10	2.90	2.04	2.26	2.33	5.32	4.21	3.53	3.50
25	3.60	3.26	---	2.79	2.47	2.03	2.24	2.44	5.24	3.82	3.44	3.44
EOM	3.41	3.42	3.22	3.04	2.26	2.04	2.30	2.74	4.33	4.15	3.39	3.88

WTR YR 1990 HIGH 1.60 MAR 15

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	3.64	3.46	3.28	3.53	3.08	2.26	2.30	2.53	2.90	4.58	5.78	3.49
10	3.59	3.65	3.48	3.44	2.82	2.09	2.34	2.56	3.04	6.21	4.76	3.52
15	3.64	3.48	---	3.44	2.67	1.81	2.33	2.58	4.66	4.93	4.12	3.51
20	3.45	3.47	---	3.31	2.96	2.11	2.38	2.56	5.51	4.41	3.70	3.60
25	3.71	3.40	---	3.24	2.63	2.19	2.43	2.63	5.54	3.93	3.50	3.56
EOM	3.62	3.53	3.39	3.23	2.39	2.15	2.49	2.82	4.45	5.19	3.52	4.01

WTR YR 1990 LOW 6.58 JUN 21

JASPER COUNTY

410809086580801. Local number, JP 7.
LOCATION.--Lat 41°08'09", lon 86°58'08", in SE¼SE¼NE¼ sec.15, T.31 N., R.5 W., Jasper County, Hydrologic Unit 07120002, in northwest corner of intersection of County Roads 850 North and 400 East, 4.0 mi south of Tefft.
Owner: U.S. Geological Survey.

AQUIFER.--Dolomite of Middle Devonian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 130 ft, cased to 94 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 699.38 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of floor of shelter, 2.75 ft above land-surface datum.

REMARKS.--Water level affected by pumpage.

PERIOD OF RECORD.--May 1967 to current year. (Semi-annual tape-down readings only September 1971 to May 1978.)

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 6.04 ft below land-surface datum, Apr. 5, 1985; lowest, 18.15 ft below land-surface datum, Aug. 30, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.14	7.92	7.75	8.09	7.83	7.70	7.37	7.12	7.22	7.59	7.82	7.55
10	8.12	7.89	7.92	7.89	7.63	7.20	7.39	6.89	7.46	9.52	7.83	7.66
15	8.19	7.78	8.00	8.01	7.55	6.97	7.17	7.02	7.43	9.03	7.77	7.53
20	8.09	7.81	8.22	7.73	8.07	7.18	7.19	6.95	7.33	8.55	7.50	7.70
25	8.37	7.84	7.75	7.37	7.96	7.49	7.15	7.10	7.60	8.31	7.54	7.53
EOM	8.12	8.09	7.79	7.88	8.04	7.15	7.10	7.38	7.55	8.03	7.54	7.84

WTR YR 1990 HIGH 6.84 APR 28

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.46	8.12	7.85	8.17	8.03	7.80	7.51	7.29	7.50	7.89	8.04	7.71
10	8.37	8.27	8.16	8.03	7.78	7.45	7.50	7.26	7.63	9.68	7.95	7.73
15	8.39	8.04	8.20	8.09	7.73	7.19	7.19	7.26	7.50	9.10	7.92	7.71
20	8.18	8.05	8.27	8.00	8.14	7.41	7.30	7.23	7.53	8.77	7.67	7.82
25	8.50	8.00	8.13	7.93	8.06	7.64	7.35	7.31	7.74	8.42	7.61	7.68
EOM	8.34	8.23	7.98	8.08	8.10	7.27	7.31	7.47	7.63	8.18	7.68	7.99

WTR YR 1990 LOW 4.68 JUL 10

JASPER COUNTY

410535087035801. Local number, JP 8.
LOCATION.--Lat 41°05'35", long 87°03'58", in NE¼NE¼SE¼ sec.35, T.31 N., R.6 W., Jasper County, Hydrologic Unit 07120002, 1.7 mi north of Gifford.
Owner: William Gehring, Inc.

AQUIFER.--Limestone of Silurian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 12 in., depth 310 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 686 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Lower lip of 2 in. tapedown pipe, 2.10 ft above land-surface datum.

REMARKS.--Water level may be affected by irrigation pumpage.

PERIOD OF RECORD.--May 1978 to current year. Record prior to October 1, 1978 available in District files.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 8.77 ft below land-surface datum, May 3, 4, 1983; lowest, 25.11 ft below land-surface datum, July 26, 1980.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.65	10.87	10.74	11.02	10.66	9.71	9.65	10.02	10.29	11.28	10.65	10.48
10	10.70	10.86	10.86	10.97	10.53	9.32	9.79	10.05	10.38	11.81	10.74	10.60
15	10.82	10.81	10.92	11.07	10.44	9.00	9.77	10.03	10.49	11.67	10.61	10.59
20	10.78	10.72	11.04	10.90	10.64	9.38	9.85	9.97	10.61	11.40	10.32	10.72
25	10.91	10.74	10.95	10.69	9.88	9.51	9.90	10.07	10.78	10.92	10.29	10.75
EOM	10.86	10.83	10.95	10.85	9.80	9.58	9.95	10.25	10.97	10.76	10.34	10.90

WTR YR 1990 HIGH 9.00 MAR 15

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.72	10.93	10.77	11.04	10.73	9.78	9.73	10.09	10.38	11.44	10.73	10.53
10	10.79	10.98	10.92	11.00	10.58	9.54	9.86	10.17	10.45	11.86	10.77	10.64
15	10.87	10.95	11.00	11.10	10.50	9.08	9.80	10.11	10.53	11.69	10.63	10.64
20	10.82	10.78	11.06	11.00	10.66	9.39	9.91	10.07	10.67	11.59	10.38	10.75
25	10.94	10.78	11.07	10.84	9.93	9.57	10.02	10.16	10.89	10.96	10.32	10.79
EOM	10.94	10.87	10.99	10.91	9.85	9.62	10.04	10.29	11.03	10.79	10.39	10.96

WTR YR 1990 LOW 11.92 JUL 9

JASPER COUNTY

410713087063201. Local number, JP 9.
LOCATION.--Lat 41°07'13", long 87°06'32", in NE¼SW¼SE¼ sec.21, T.31 N., R.6 W., Jasper County, Hydrologic Unit 07120002, 4.4 mi northwest of Gifford.
Owner: William Gehring, Inc.

AQUIFER.--Silurian limestone.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 18 in., depth 260 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 685 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Lower lip of 2 in. tapedown pipe, 2.10 ft above land-surface datum.

REMARKS.--Water level may be affected by irrigation pumpage.

PERIOD OF RECORD.--July 1978 to current year. Record prior to October 1, 1978 available in District files.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.18 ft below land-surface datum, Apr. 3, 1982; lowest, 32.05 ft below land-surface datum, Aug. 5, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.92	6.00	5.85	6.26	5.92	5.12	4.70	5.05	5.29	15.12	5.93	5.62
10	5.98	5.99	6.00	6.09	5.74	4.78	4.84	5.00	5.44	---	5.94	5.71
15	6.08	5.95	6.09	6.19	5.66	4.51	4.82	5.06	5.58	---	5.89	5.80
20	6.01	5.88	6.23	6.04	5.95	4.80	4.95	4.95	5.66	---	5.63	5.99
25	6.16	5.87	6.09	5.79	5.45	4.81	4.95	5.08	5.83	6.81	5.45	5.96
EOM	6.01	6.02	6.12	6.02	5.39	4.70	4.97	5.26	9.54	6.25	5.44	6.18

WTR YR 1990 HIGH 4.51 MAR 15

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.04	6.09	5.87	6.28	5.96	5.17	4.78	5.09	5.30	16.75	5.99	5.65
10	6.04	6.15	6.04	6.14	5.76	4.93	4.93	5.10	5.56	---	5.96	5.81
15	6.11	6.10	6.13	6.23	5.77	4.55	4.84	5.13	5.62	---	5.92	5.84
20	6.09	5.96	6.25	6.21	5.98	4.82	5.02	5.02	5.70	---	5.72	6.02
25	6.18	5.93	6.27	5.96	5.59	4.84	5.00	5.18	5.90	6.92	5.46	6.03
EOM	6.09	6.06	6.16	6.08	5.42	4.71	5.07	5.27	10.63	6.28	5.48	6.22

WTR YR 1990 LOW 18.57 JUL 7

JASPER COUNTY

410322087163101. Local number, JP 11.
LOCATION.--Lat 41°03'22", long 87°16'31", in NW¼NW¼NW¼ sec.18, T.30 N., R.7 W., Jasper County, Hydrologic Unit 07120002, on Prudential Life Insurance Company of America property, 3.2 mi north of State Highway 14, and 1.5 mi southwest of Fair Oaks.
Owner: Prudential Insurance Company of America.

AQUIFER.--Limestone of Devonian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 16 in., depth 630 ft, cased to 63 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 680 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of floor of shelter, 3.50 ft above land-surface datum.

REMARKS.--Water level may be affected by irrigation pumpage.

PERIOD OF RECORD.--March 1981 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.04 ft above land-surface datum, Apr. 3, 1982; lowest, 52.19 ft below land-surface datum, July 9, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.84	5.09	4.03	3.73	3.05	2.20	1.76	1.99	2.51	10.75	16.70	14.36
10	6.56	4.92	4.07	3.52	2.89	1.86	1.88	1.87	3.47	21.08	15.04	9.55
15	6.28	4.66	4.05	3.59	2.80	1.58	1.80	1.90	3.41	11.19	8.48	7.04
20	5.83	4.41	4.09	3.31	3.07	1.94	1.87	1.84	3.00	7.95	6.78	6.23
25	5.77	4.27	3.76	3.01	2.66	1.91	1.96	1.96	3.01	6.20	5.97	5.60
EOM	5.38	4.32	3.70	3.24	2.45	1.79	1.97	2.13	7.36	5.41	12.24	5.43

WTR YR 1990 HIGH 1.58 MAR 15

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.06	5.22	4.07	3.79	3.13	2.29	1.88	2.05	2.81	12.88	19.46	17.77
10	6.62	5.07	4.14	3.61	2.93	2.06	1.96	2.02	3.53	23.41	17.67	10.47
15	6.39	4.83	4.12	3.64	2.92	1.67	1.82	2.00	3.50	12.23	9.00	7.35
20	5.98	4.49	4.12	3.47	3.10	1.96	1.94	1.97	3.08	8.57	7.04	6.37
25	5.81	4.36	3.96	3.25	2.73	1.97	2.04	2.07	3.06	6.41	6.08	5.75
EOM	5.46	4.38	3.76	3.34	2.51	1.82	2.07	2.17	7.65	5.98	15.82	5.48

WTR YR 1990 LOW 23.70 JUL 9

JASPER COUNTY

410145087130401. Local number, JP 12.
LOCATION.--Lat 41°01'45", long 87°13'04", in NW¼SW¼SW¼ sec.22, T.30 N., R.7 W., Jasper County, Hydrologic Unit 07120002, in Old Union Township school yard, 200 ft east of County Road 900 West, 750 ft north of State Highway 14, and in Parr.
Owner: Prudential Insurance Company of America.

AQUIFER.--Limestone/dolomite of Silurian/Devonian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 5 in., depth 150 ft, cased to 103 ft, open end.

INSTRUMENTATION.--Water-level recorder, data-collection platform, and incremental encoder.

DATUM.--Elevation of land-surface datum is 695ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of well casing, 2.6 ft above land-surface datum.

REMARKS.--Water level may be affected by irrigation pumpage.

PERIOD OF RECORD.--May 1982 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 14.08 ft below land-surface datum, May 22, 1983; lowest, 53.41 ft below land-surface datum, Aug. 18, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	21.91	19.71	18.44	18.06	17.33	16.55	15.77	15.85	16.12	18.14	25.72	28.78
10	21.43	19.50	18.41	17.81	17.11	16.17	15.78	15.71	16.39	22.40	24.65	28.49
15	21.13	19.18	18.40	17.83	16.90	15.95	15.84	15.87	16.60	22.35	24.83	25.89
20	20.68	19.03	18.41	17.59	17.20	16.13	15.85	15.80	16.62	21.53	23.59	24.75
25	20.55	18.81	18.05	17.24	17.06	15.99	15.85	15.90	16.81	21.08	23.05	23.78
EOM	20.05	18.78	17.97	17.42	16.88	15.86	15.84	16.16	17.24	20.64	25.62	23.40

WTR YR 1990 HIGH 15.70 APR 28

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	22.10	19.83	18.63	18.13	17.53	16.77	15.92	16.12	16.35	18.70	26.25	30.09
10	21.66	19.72	18.58	17.97	17.30	16.44	15.93	15.97	16.71	22.69	26.02	29.25
15	21.27	19.33	18.51	17.96	17.03	16.20	15.93	16.09	16.86	22.45	25.24	26.25
20	20.79	19.15	18.61	17.72	17.39	16.29	15.98	16.16	16.81	21.77	23.79	25.08
25	20.60	18.94	18.35	17.61	17.25	16.33	16.09	16.17	17.09	21.22	23.43	24.00
EOM	20.18	18.87	18.18	17.66	17.03	15.97	16.14	16.35	17.52	20.97	28.31	23.57

WTR YR 1990 LOW 30.18 SEP 7

JASPER COUNTY

405902087141501. Local number, JP 13.
LOCATION.--Lat 40°59'02", long 87°14'15", in NW¼NW¼NW¼ sec.9, T.29 N., R.7 W., Jasper County, Hydrologic Unit 07120002, at southwest corner of North Newton school, and 4.6 mi northwest of Rensselaer.
Owner: Prudential Insurance Company of America.

AQUIFER.--Dolomite of Silurian/Devonian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 5 in., depth 150 ft, cased to 106 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 700 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of well casing, 3.4 ft above land-surface datum.

REMARKS.--Water level may be affected by irrigation pumpage.

PERIOD OF RECORD.--March 1982 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 20.98 ft below land-surface datum, Apr. 3, 1982; lowest, 55.85 ft below land-surface datum, Aug. 19, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	31.26	28.58	27.07	26.46	25.68	24.95	24.00	23.89	24.01	25.63	29.35	30.10
10	30.78	28.35	27.02	26.24	25.47	24.61	23.99	23.77	24.24	27.43	30.35	31.38
15	30.33	27.98	26.90	26.24	25.25	24.36	23.99	23.83	24.38	29.17	30.53	30.49
20	29.74	27.82	26.89	25.96	25.53	24.57	24.09	23.79	24.40	29.20	29.82	29.82
25	29.61	27.58	26.42	25.57	25.46	24.36	23.97	23.88	24.63	28.86	29.25	29.07
EOM	29.04	27.51	26.36	25.79	25.26	24.13	23.92	24.12	24.85	28.34	28.85	28.73

WTR YR 1990 HIGH 23.77 APR 28

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	31.56	28.75	27.16	26.52	25.84	25.10	24.17	24.02	24.23	25.92	29.90	30.31
10	30.91	28.56	27.14	26.36	25.59	24.82	24.11	23.97	24.39	28.12	30.42	31.45
15	30.51	28.17	27.02	26.30	25.42	24.53	24.07	23.96	24.44	29.35	30.65	30.69
20	29.87	27.93	26.93	26.13	25.60	24.67	24.18	24.00	24.57	29.32	30.00	30.02
25	29.72	27.70	26.70	25.95	25.59	24.52	24.11	24.04	24.74	28.95	29.36	29.25
EOM	29.17	27.62	26.47	25.96	25.36	24.19	24.07	24.18	25.02	28.41	29.08	28.85

WTR YR 1990 LOW 32.07 OCT 1

JASPER COUNTY

410839087130301. Local number, JP 14.
LOCATION.--Lat 41°08'39", long 87°13'03", in NW¼NW¼NW¼ sec.15, T.31 N., R.7 W., Jasper County, Hydrologic Unit 07120001, at the southeast corner of the intersection of State Highway 10 and County Road 900 West, about 3.5 mi southwest of Demotte.
Owner: U.S. Geological Survey

AQUIFER.--Limestone of Silurian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 97.4 ft, cased to 56 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 690 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 3.40 ft above land-surface datum.

PERIOD OF RECORD.--July 1989 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.68 ft below land-surface datum, July 22, 1990; lowest, 8.80 ft below land-surface datum, July 13, 1989.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.93	7.20	7.03	6.96	6.49	5.98	6.20	6.30	6.30	6.88	5.80	6.74
10	7.03	7.25	7.14	6.85	6.66	4.86	6.11	6.30	5.87	7.08	6.28	6.84
15	7.19	5.84	7.19	7.03	6.61	5.62	5.87	5.99	6.09	6.39	6.22	6.86
20	6.96	6.47	7.22	6.66	6.67	6.06	6.22	6.01	6.22	5.47	5.80	6.93
25	7.04	6.78	7.09	6.51	5.45	6.12	6.36	6.20	6.62	5.45	6.34	6.93
EOM	7.15	6.96	7.17	6.84	5.65	6.06	6.45	6.39	6.69	6.03	6.64	7.01

WTR YR 1990 HIGH 4.68 JUL 22

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.01	7.30	7.07	7.01	6.57	6.05	6.28	6.35	6.41	6.98	5.98	6.76
10	7.17	7.37	7.21	6.98	6.72	5.53	6.25	6.48	5.94	7.16	6.36	6.87
15	7.22	7.07	7.27	7.09	6.65	5.74	5.96	6.05	6.14	6.42	6.27	6.90
20	7.11	6.65	7.26	6.74	6.73	6.13	6.25	6.18	6.39	6.31	5.99	6.94
25	7.07	6.84	7.18	6.80	5.63	6.17	6.39	6.32	6.66	5.62	6.41	6.97
EOM	7.24	7.01	7.27	6.94	5.79	6.10	6.53	6.42	6.73	6.09	6.67	7.04

WTR YR 1990 LOW 7.41 NOV 12

WATER-QUALITY RECORDS

410839087130301. Local number, JP 14.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	SPECIFIC CONDUCTANCE (US/CM) (00095)	SPECIFIC CONDUCTANCE LAB (US/CM) (90095)	PH (STANDARD UNITS) (00400)	PH LAB (STANDARD UNITS) (00403)	TEMPERATURE WATER (DEG C) (00010)	OXYGEN, DISSOLVED (MG/L) (00300)	HARDNESS TOTAL (MG/L AS CACO3) (00900)	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)
JUL 13...	1330	9.20	438	495	7.1	7.7	12.5	0.4	260	51

DATE	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)	ALKALINITY WAT WH TOT IT FIELD MG/L AS CACO3 (00419)	ALKALINITY LAB (MG/L AS CACO3) (90410)	BICARBONATE WATER WH IT FIELD MG/L AS HCO3 (00450)	CARBONATE WATER WH IT FIELD MG/L AS CO3 (00447)	SULFATE DISSOLVED (MG/L AS SO4) (00945)
JUL 13...	84	11	4.0	0.5	199	205	188	250	0	52

DATE	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)	IRON, DISSOLVED (UG/L AS FE) (01046)
JUL 13...	12	0.2	16	260	305	<0.010	0.194	<0.01	1800

JEFFERSON COUNTY

384949085251901. Local number, JF 5.
LOCATION.--Lat 38°49'49", long 85°25'19", in SE¼NW¼SW¼ sec.33, T.5 N., R.10 E., Jefferson County, Hydrologic Unit 05120207, on Jefferson Proving Ground, 500 ft north of Airfield Road, 1,000 ft southwest of the water tower, and 2.2 mi west of main gate.
Owner: U.S. Army

AQUIFER.--Limestone, dolomite, and shale of Silurian and Ordovician age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 5 in., depth 200 ft, cased to 33 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 855 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of floor of shelter, 3.00 ft above land-surface datum.

REMARKS.--This well was drilled on a mapped fracture trace.

PERIOD OF RECORD.--March 1980 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.17 ft below land-surface datum, Dec. 28, 1982; lowest, 9.22 below land-surface datum, Sept. 7, 16, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.08	5.31	4.35	4.72	4.24	4.30	4.29	4.59	4.75	5.50	5.67	5.73
10	6.00	5.17	4.44	4.55	3.96	4.36	4.29	4.44	4.70	5.71	5.92	5.77
15	6.08	4.76	4.39	4.57	3.87	4.31	4.45	4.57	4.75	5.78	6.12	---
20	5.92	4.64	4.77	4.24	4.23	4.56	4.54	4.39	4.90	5.67	6.19	---
25	5.83	4.56	4.61	4.00	4.43	4.46	4.50	4.40	5.14	5.65	6.12	---
EOM	5.46	4.62	4.69	4.30	4.32	4.29	4.58	4.69	5.26	5.55	5.91	---

WTR YR 1990 HIGH 3.73 FEB 22

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.22	5.47	4.42	4.79	4.35	4.41	4.48	4.74	4.87	5.70	5.84	5.91
10	6.22	5.45	4.59	4.64	4.04	4.49	4.49	4.68	4.88	5.85	6.03	5.85
15	6.24	5.13	4.72	4.64	4.05	4.45	4.52	4.73	4.84	5.94	6.26	---
20	6.05	4.79	4.82	4.42	4.28	4.63	4.66	4.49	5.02	5.89	6.34	---
25	5.96	4.71	4.83	4.33	4.58	4.61	4.70	4.62	5.29	5.77	6.19	---
EOM	5.71	4.78	4.85	4.40	4.41	4.43	4.75	4.76	5.32	5.68	6.00	---

WTR YR 1990 LOW 6.37 AUG 19

JENNINGS COUNTY

385601085365701. Local number, JN 3.
LOCATION.--Lat 38°56'01", long 85°36'57", in SE¼SW¼NE¼ sec.27, T.6 N., R.8 E., Jennings County, Hydrologic Unit 05120207, 200 ft west of State Highway 3, 1.6 mi south of Crosley Fish and Game Office and 3.0 mi south of Vernon.
Owner: U.S. Geological Survey.

AQUIFER.--Limestones and dolomites of Devonian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 180 ft, cased to 45 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 718 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of floor of shelter, 3.50 ft above land-surface datum.

PERIOD OF RECORD.--October 1978 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 36.64 ft below land-surface datum, Jan. 21, 1979; lowest, 40.87 ft below land-surface datum, July 6, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	39.35	39.03	38.83	38.89	38.71	38.97	38.61	38.68	38.96	39.42	39.45	39.77
10	39.36	38.93	39.02	38.86	38.48	39.01	38.67	38.48	38.71	39.53	39.55	39.80
15	39.37	38.72	38.99	39.07	38.47	38.87	38.65	38.54	38.81	39.18	39.64	39.73
20	38.92	38.69	39.23	38.58	38.88	39.08	38.87	38.33	38.83	39.30	39.66	39.87
25	39.20	38.87	38.98	38.47	39.12	39.06	38.80	38.69	39.02	39.30	39.72	39.65
EOM	39.05	39.10	38.86	38.84	39.08	38.70	38.88	39.08	39.23	39.35	39.72	39.61

WTR YR 1990 HIGH 38.25 MAY 17

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	39.50	39.13	38.89	38.94	38.76	39.04	38.76	38.74	39.07	39.46	39.56	39.85
10	39.43	39.15	39.06	39.00	38.52	39.08	38.90	38.72	38.83	39.59	39.56	39.87
15	39.42	39.02	39.20	39.14	38.65	38.97	38.69	38.67	38.84	39.27	39.68	39.80
20	39.02	38.82	39.29	38.84	38.95	39.14	38.95	38.43	38.88	39.38	39.72	39.91
25	39.25	38.97	39.20	38.75	39.30	39.13	38.88	38.77	39.10	39.36	39.75	39.77
EOM	39.23	39.18	38.97	38.92	39.12	38.73	39.04	39.15	39.25	39.45	39.79	39.64

WTR YR 1990 LOW 40.06 SEP 17

KNOX COUNTY

383247087361001. Local number, KN 7.
LOCATION.--Lat 38°32'47", long 87°36'10", in SE¼SE¼NW¼ sec.2, T.1 N., R.11 W., Knox County, Hydrologic Unit 05120113, in the right-of-way of Sixth Street Road, 9.8 mi south of Vincennes.
Owner: Michael J. Kelley.

AQUIFER.--Sand and gravel Quaternary age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 43 ft, cased to 16 ft, slotted to 19 ft, open end.

INSTRUMENTATION.--Water-level recorder. Prior to April 1968, hand-taped monthly.

DATUM.--Elevation of land-surface datum is 405 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of floor of shelter, 2.42 ft above land-surface datum.

PERIOD OF RECORD.--November 1956 to December 1972, January 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.57 ft below land-surface datum, May 3, 1983; lowest, 11.35 ft below land-surface datum, Feb. 1-13, 1977.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.69	9.56	9.22	9.16	6.70	8.31	8.25	7.15	5.49	8.52	8.84	9.32
10	9.79	8.71	9.40	9.28	7.57	8.61	7.15	7.84	4.81	8.79	9.10	9.61
15	9.85	7.42	9.53	9.43	5.64	8.77	7.44	6.12	6.67	7.61	9.31	9.74
20	9.22	7.97	9.67	7.65	7.03	8.89	7.95	2.97	7.19	7.83	9.27	9.87
25	9.31	8.64	9.69	8.02	7.75	8.67	7.91	3.48	7.69	7.74	9.22	9.94
EOM	9.32	9.04	9.37	8.72	7.84	8.32	8.37	4.23	8.20	8.54	9.32	10.01

WTR YR 1990 HIGH 2.80 MAY 16

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.71	9.58	9.26	9.20	6.79	8.37	8.39	7.29	6.04	8.58	8.92	9.39
10	9.83	8.90	9.43	9.32	7.60	8.65	8.68	8.02	5.39	8.84	9.15	9.64
15	9.85	9.17	9.59	9.46	7.99	8.85	7.54	7.74	6.88	7.87	9.34	9.77
20	9.24	8.17	9.68	9.11	7.24	8.94	8.08	3.20	7.59	8.42	9.33	9.89
25	9.32	8.71	9.72	8.26	7.79	8.78	8.04	3.63	7.82	7.91	9.26	9.95
EOM	9.38	9.07	9.64	8.76	7.96	8.45	8.48	4.76	8.24	8.61	9.35	10.03

WTR YR 1990 LOW 10.03 SEP 30

KNOX COUNTY

384951087262501. Local number, KN 8.
LOCATION.--Lat 38°49'51", long 87°20'25", in M.D. 240, T.5 N., R.8 W., Knox County, Hydrologic Unit 05120111, on the northwest side of road at the southwest boundary of Chambers Cemetery about 2.5 mi southwest of Freelandville.
Owner: U.S. Geological Survey

AQUIFER.--Interbedded sandstone, shale, and coal of Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 137 ft, cased to 41 ft, open hole.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 460 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 3.50 ft above land-surface datum.

PERIOD OF RECORD.--August 1989 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 12.00 ft below land-surface datum, Feb. 22, 1990; lowest, 13.95 ft below land-surface datum, Sept. 30, 1990.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	12.58	12.91	12.88	12.94	12.39	12.22	12.31	12.38	---	---	12.88	13.66
10	12.63	12.93	12.97	12.88	12.34	12.26	12.35	12.32	---	---	13.04	13.66
15	12.74	12.81	13.05	12.93	12.17	12.24	12.31	12.26	---	---	13.18	13.62
20	12.72	12.71	13.18	12.66	12.26	12.49	12.42	12.15	---	---	13.27	13.75
25	12.87	12.80	13.13	12.47	12.25	12.47	12.35	12.28	---	---	13.37	13.76
EOM	12.86	12.98	13.02	12.57	12.26	12.33	12.42	12.43	---	12.80	13.48	13.91

WTR YR 1990 HIGH 12.00 FEB 22

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	12.65	12.95	12.90	12.95	12.42	12.25	12.38	12.41	---	---	12.94	13.69
10	12.68	13.03	13.01	12.91	12.37	12.29	12.47	12.42	---	---	13.07	13.69
15	12.77	12.98	13.10	12.96	12.45	12.29	12.33	12.31	---	---	13.23	13.66
20	12.75	12.75	13.21	12.85	12.29	12.50	12.47	12.21	---	---	13.31	13.77
25	12.89	12.86	13.24	12.59	12.34	12.50	12.41	12.31	---	---	13.41	13.81
EOM	12.93	13.02	13.08	12.63	12.29	12.36	12.51	12.46	---	12.85	13.53	13.95

WTR YR 1990 LOW 13.95 SEP 30

KOSCIUSKO COUNTY

412554085450001. Local number, KO 6.
LOCATION.--Lat 41°25'54", long 85°45'00", in NW¼SW¼NW¼ sec.5, T.34 N., R.7E., Kosciusko County, Hydrologic Unit 04050001, west end of North Shore Drive and Lakeview Park in Syracuse, Indiana.
Owner: U.S. Geological Survey.

AQUIFER.--Sand of Pleistocene age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 2 in., depth 23 ft, cased to 20 ft, screened to 23 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 870 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of floor of shelter, 3.00 ft above land-surface datum.

PERIOD OF RECORD.--November 1978 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 6.94 ft below land-surface datum, Apr. 15, 16, 1985; lowest, 10.64 ft below land-surface datum, Feb. 9, 1979, Oct. 7, 13, 14, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.92	10.19	10.31	10.36	10.05	9.55	9.28	9.07	8.67	8.79	8.94	8.70
10	9.97	10.21	10.37	---	10.00	9.49	9.29	9.08	8.59	8.83	9.02	8.70
15	10.03	10.23	10.40	10.40	10.02	9.33	9.20	8.99	8.62	8.85	8.94	8.73
20	10.05	10.19	10.42	10.21	10.03	9.32	9.10	8.78	8.70	8.91	8.91	8.74
25	10.05	10.24	10.45	10.14	9.63	9.32	9.07	8.76	8.73	8.79	8.83	8.77
EOM	10.13	10.29	10.46	10.12	9.59	9.30	9.07	8.69	8.76	8.82	8.70	8.81

WTR YR 1990 HIGH 8.59 JUN 9

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.93	10.19	10.31	10.37	10.05	9.56	9.28	9.08	8.67	8.80	8.94	8.70
10	9.97	10.22	10.37	---	10.02	9.52	9.33	9.08	8.59	8.84	9.02	8.71
15	10.03	10.25	10.40	10.41	10.02	9.36	9.21	9.01	8.64	8.85	8.94	8.74
20	10.05	10.21	10.42	10.26	10.04	9.33	9.13	8.79	8.70	8.91	8.92	8.75
25	10.07	10.25	10.45	10.19	9.63	9.33	9.07	8.79	8.73	8.79	8.83	8.77
EOM	10.14	10.30	10.46	10.13	9.59	9.31	9.07	8.70	8.76	8.87	8.70	8.86

WTR YR 1990 LOW 10.46 DEC 26

KOSCIUSKO COUNTY

412556085513401. Local number, KO 9.
LOCATION.--Lat 41°25'56", long 85°51'34", in SW¼NW¼ sec.5, T.34 N., R.6 E., Kosciusko County, Hydrologic Unit 04050001, on the north edge of property owned by the Dome Pipeline Corporation, on County Road 50 West, 1.5 mi northwest of Milford.
Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 4 in., depth 102 ft, cased to 99 ft, screened to 102 ft.

INSTRUMENTATION.--Water-stage recorder.

DATUM.--Elevation of land-surface datum is 830.90 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of floor of shelter, 3.2 ft above land-surface datum.

PERIOD OF RECORD.--October 1982 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 7.24 ft below land-surface datum, Apr. 8, 9, 1985; lowest, 14.33 ft below land-surface datum, Aug. 10, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	13.28	13.54	13.43	13.51	12.72	10.91	10.54	10.58	9.62	10.40	11.33	10.95
10	13.31	13.57	13.42	13.45	12.60	10.78	10.66	10.66	9.65	10.79	11.41	10.97
15	13.36	13.60	13.43	13.43	12.47	10.59	10.69	10.67	9.74	10.91	11.50	11.00
20	13.39	13.55	13.48	13.34	12.41	10.41	10.70	9.69	9.91	11.08	11.42	11.04
25	13.47	13.51	13.52	13.09	11.78	10.38	10.60	9.58	10.08	10.89	11.24	11.04
EOM	13.50	13.47	13.57	12.87	11.24	10.47	10.54	9.66	10.24	11.01	11.04	11.13

WTR YR 1990 HIGH 9.57 MAY 26

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	13.28	13.55	13.43	13.55	12.74	10.94	10.58	10.62	9.67	10.45	11.35	10.96
10	13.32	13.58	13.42	13.46	12.62	10.80	10.69	10.74	9.66	10.88	11.46	11.00
15	13.36	13.61	13.44	13.43	12.50	10.63	10.70	10.72	9.78	10.93	11.50	11.04
20	13.40	13.57	13.49	13.37	12.41	10.44	10.73	9.78	9.94	11.12	11.44	11.06
25	13.48	13.52	13.53	13.13	11.99	10.39	10.61	9.59	10.11	10.91	11.27	11.06
EOM	13.51	13.47	13.57	12.90	11.36	10.49	10.56	9.68	10.27	11.12	11.08	11.14

WTR YR 1990 LOW 13.61 NOV 14

LAGRANGE COUNTY

414318085200601. Local number, LG 2.
LOCATION.--Lat 41°43'18", long 85°20'06", in SW¼SE¼NE¼ sec.26, T.38 N., R.10 E., Lagrange County, Hydrologic Unit 04050001, on northeast corner of intersection of State Highway 120 and County Road 475 East, and 1.2 mi west of Brighton.
Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 5 in., depth 86 ft, cased to 80 ft, screened to 86 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 911.02 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of floor of shelter, 3.0 ft above land-surface datum.

PERIOD OF RECORD.--May 1980 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 10.99 ft below land-surface datum, Apr. 3, 1982; lowest, 16.93 ft below land-surface datum, Aug. 14, 15, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	15.20	15.38	15.41	15.25	15.20	14.36	13.39	13.30	12.76	12.98	13.95	14.43
10	15.22	15.41	15.41	15.23	15.15	13.99	13.37	13.26	12.78	13.32	14.19	14.46
15	15.27	15.44	15.38	15.25	15.09	13.74	13.36	13.27	12.78	13.33	14.17	14.48
20	15.28	15.44	15.42	15.25	15.06	13.61	13.36	13.12	12.80	13.50	14.13	14.51
25	15.34	15.46	15.41	15.22	14.74	13.51	13.34	12.91	12.88	13.47	14.13	14.52
EOM	15.36	15.45	15.46	15.24	14.57	13.43	13.32	12.82	12.88	13.83	14.33	14.58

WTR YR 1990 HIGH 12.76 JUN 5

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	15.21	15.39	15.41	15.30	15.21	14.38	13.41	13.31	12.79	13.07	13.96	14.44
10	15.25	15.43	15.42	15.25	15.16	14.10	13.39	13.31	12.79	13.42	14.21	14.48
15	15.28	15.45	15.40	15.26	15.11	13.77	13.37	13.29	12.81	13.37	14.18	14.49
20	15.29	15.47	15.43	15.26	15.07	13.64	13.37	13.16	12.82	13.55	14.15	14.52
25	15.35	15.47	15.43	15.25	14.79	13.53	13.35	12.95	12.90	13.48	14.14	14.53
EOM	15.37	15.46	15.48	15.25	14.61	13.44	13.34	12.83	12.89	13.85	14.39	14.58

WTR YR 1990 LOW 15.49 NOV 23

LAGRANGE COUNTY

414158085253401. Local number, LG 3.
LOCATION.--Lat 41°41'58", long 85°25'34", in SE¼SE¼SE¼ sec.36, T.38 N., R.9 E., Lagrange County, Hydrologic Unit 04050001, at northwest corner of intersection of State Highway 9 and County Road 400 North, at edge of woods, and 1.4 mi south of Howe.
Owner: U.S. Geological Survey.

AQUIFER.--Fine to medium sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 6 in., depth 40 ft, cased to 35 ft, screened to 40 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 870 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of floor of shelter, 3.7 ft above land-surface datum.

PERIOD OF RECORD.--June 1981 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.48 ft below land-surface datum, Mar. 21, 1982; lowest, 8.82 ft below land-surface datum, Sept. 2, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.15	8.31	8.03	8.01	7.36	6.06	5.97	6.20	5.85	6.75	7.41	7.84
10	8.18	8.29	8.06	7.92	7.26	5.70	5.99	6.31	6.00	6.93	7.54	7.90
15	8.22	8.27	8.10	7.90	7.21	5.24	5.89	6.11	6.15	7.03	7.59	7.92
20	8.24	8.11	8.14	7.80	7.25	5.56	5.95	5.05	6.33	7.12	7.62	7.96
25	8.26	8.05	8.17	7.64	6.20	5.75	6.03	5.39	6.46	7.16	7.67	7.86
EOM	8.28	8.03	8.19	7.51	6.09	5.92	6.12	5.68	6.59	7.28	7.74	7.95

WTR YR 1990 HIGH 5.05 MAY 20

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.15	8.31	8.04	8.05	7.39	6.11	6.00	6.25	5.87	6.78	7.44	7.85
10	8.19	8.31	8.07	7.93	7.27	5.91	6.07	6.36	6.04	6.95	7.57	7.92
15	8.23	8.32	8.10	7.90	7.22	5.30	5.90	6.15	6.19	7.07	7.61	7.93
20	8.25	8.13	8.15	7.83	7.26	5.59	5.96	5.12	6.36	7.17	7.66	7.96
25	8.26	8.07	8.18	7.68	6.32	5.78	6.05	5.43	6.50	7.18	7.68	7.88
EOM	8.29	8.04	8.22	7.52	6.10	5.94	6.14	5.72	6.62	7.31	7.76	7.96

WTR YR 1990 LOW 8.39 NOV 2

LAKE COUNTY

411038087284701. Local number, LK 12.
LOCATION.--Lat 41°10'38", long 87°28'47", in SW¼NE¼SW¼ sec.32, T.32 N., R.9 W., Lake County, Hydrologic Unit 07120001, on the northern edge of Kankakee River State Park, 2.0 mi southwest of Schneider.
Owner: U.S. Geological Survey.

AQUIFER.--Dolomite of Silurian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 82 ft, cased to 52 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 630.59 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of floor of shelter, 2.55 ft above land-surface datum.

REMARKS.--Water level may be affected by pumping.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.15 ft below land-surface datum, Jan. 12, 1973; lowest, 17.92 ft below land-surface datum, Aug. 27, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.30	5.09	4.32	4.07	3.34	2.63	2.51	2.78	2.71	3.15	4.33	4.62
10	6.07	4.96	4.34	3.97	3.30	2.45	2.63	2.65	2.71	3.44	4.73	4.60
15	5.87	4.73	4.28	4.00	3.24	2.21	2.53	2.34	2.79	3.29	5.67	4.45
20	5.55	4.47	4.25	3.75	3.33	2.40	2.57	2.13	2.95	3.25	5.68	4.44
25	5.45	4.40	4.17	3.54	2.76	2.47	2.65	2.22	3.05	3.02	4.93	4.35
EOM	5.24	4.41	4.16	3.52	2.69	2.50	2.78	2.52	3.05	3.23	4.57	4.32

WTR YR 1990 HIGH 2.13 MAY 19

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.46	5.37	4.43	4.17	3.46	2.73	2.65	2.86	2.82	3.28	4.47	4.70
10	6.36	5.10	4.53	4.06	3.52	2.69	2.81	2.80	2.99	3.51	5.10	4.66
15	6.01	4.87	4.36	4.15	3.33	2.30	3.15	2.52	2.86	3.36	5.84	4.60
20	5.70	4.61	4.34	3.93	3.40	2.55	2.67	2.27	3.03	3.37	6.01	4.54
25	5.85	4.56	4.40	3.69	2.92	2.57	2.77	2.33	3.25	3.12	5.07	4.45
EOM	5.40	4.61	4.33	3.63	2.84	2.61	2.95	2.63	3.12	3.39	4.63	4.43

WTR YR 1990 LOW 6.62 OCT 1

LAKE COUNTY

413559087270 31. Local number, LK 13.
LOCATION.--Lat 41°35'59", long 87°27'03", in SW¼NW¼SW¼ sec.34, T.36 N., R.9 W., Lake County, Hydrologic Unit 04040001, at the Gibson Woods Nature Preserve on the north side of Hammond.
Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 6.0 in., depth 23 ft, cased to 18 ft, screened to 23 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 591.91 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.50 ft above land-surface datum.

PERIOD OF RECORD.--July 1986 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.16 ft below land-surface datum, May 13, 1990; lowest, 5.15 ft below land-surface datum, Sept. 10, 1986.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	3.84	3.19	2.25	1.91	1.51	.91	.91	.85	1.09	2.70	1.67	2.33
10	3.91	3.12	2.44	2.08	1.69	.42	.80	.36	1.27	2.69	1.45	2.27
15	4.00	1.45	2.62	2.31	1.71	.71	.95	.33	1.41	2.17	1.46	2.50
20	3.09	2.16	2.84	1.69	1.67	.94	.59	.39	2.12	.44	.27	2.87
25	3.23	1.87	2.89	.91	.98	.87	1.13	.29	2.30	1.25	.82	3.05
EOM	3.19	2.22	2.76	1.69	.97	.77	1.35	.79	1.57	2.25	1.47	3.19

WTR YR 1990 HIGH .16 MAY 13

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	3.93	3.23	2.29	2.09	1.57	1.10	.98	1.00	1.19	2.95	2.01	2.50
10	4.00	3.18	2.49	2.18	1.74	.83	1.01	.65	1.43	3.15	2.99	2.51
15	4.04	2.79	2.70	2.36	1.85	.78	1.01	.39	1.66	2.34	1.78	2.79
20	3.25	2.31	2.87	1.89	1.83	.99	1.16	.46	2.32	1.03	.92	3.04
25	3.23	2.15	2.96	1.96	1.04	.91	1.17	.68	2.61	1.50	1.00	3.22
EOM	3.23	2.28	2.79	1.80	1.09	.89	1.43	.88	1.97	2.47	1.78	3.33

WTR YR 1990 LOW 4.07 OCT 14

LAKE COUNTY

411146087204101. Local number, LK 14.
LOCATION.--Lat 41°11'46", long 87°20'41", in SE¼SE¼NW¼ sec.28, T.32 N., R.8 W., Lake County, Hydrologic Unit 07120001, in Shelby on northwest corner of the intersection of Tyler Road and State Highway 55.
Owner: U.S. Geological Survey.

AQUIFER.--Limestone of Silurian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 96.2 ft, cased to 50 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 641 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 3.50 ft above land-surface datum.

PERIOD OF RECORD.--July 1989 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 6.82 ft below land-surface datum, Mar. 17, 1990; lowest, 19.87 ft below land-surface datum, Aug. 11, 1989.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.81	9.28	9.25	9.68	8.89	7.48	7.27	7.79	7.72	8.63	10.41	9.12
10	8.91	9.35	9.35	9.59	8.68	7.23	7.43	7.72	7.82	9.39	9.08	9.28
15	9.07	9.36	9.45	9.63	8.55	6.85	7.45	7.58	7.93	8.83	8.93	9.34
20	9.06	9.27	9.56	9.44	8.78	7.04	7.51	7.32	8.03	8.67	9.21	9.50
25	9.26	9.24	9.44	9.17	8.06	7.12	7.65	7.40	8.29	8.50	8.90	9.54
EOM	9.26	9.33	9.53	9.13	7.71	7.20	7.78	7.66	8.40	8.54	8.96	9.74

WTR YR 1990 HIGH 6.82 MAR 17

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.92	9.34	9.28	9.71	8.99	7.56	7.39	7.85	7.83	8.71	11.33	9.20
10	9.03	9.50	9.46	9.65	8.75	7.39	7.50	7.82	7.88	9.53	9.18	9.32
15	9.11	9.47	9.52	9.67	8.63	6.91	7.49	7.67	7.98	8.86	8.98	9.41
20	9.08	9.37	9.58	9.56	8.80	7.05	7.55	7.42	8.12	8.79	9.44	9.55
25	9.31	9.31	9.58	9.38	8.20	7.18	7.74	7.49	8.38	8.54	8.99	9.58
EOM	9.36	9.38	9.61	9.23	7.80	7.25	7.90	7.72	8.42	8.72	9.03	9.80

WTR YR 1990 LOW 14.09 AUG 4

WATER-QUALITY RECORDS

411146087204101. Local number, LK 14.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	SPECIFIC CONDUCTANCE (US/CM) (00095)	SPECIFIC CONDUCTANCE LAB (US/CM) (90095)	PH (STANDARD UNITS) (00400)	PH LAB (STANDARD UNITS) (00403)	TEMPERATURE WATER (DEG C) (00010)	OXYGEN, DISSOLVED (MG/L) (00300)	HARDNESS TOTAL (MG/L AS CACO3) (00900)	HARDNESS NONCARB DISSOLV FLD, AS CACO3 (MG/L) (00904)
JUL 12...	1200	14.73	493	504	7.4	7.9	12.0	0.1	170	0

DATE	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)	ALKALINITY WAT WH TOT IT FIELD MG/L AS CACO3 (00419)	ALKALINITY LAB (MG/L AS CACO3) (90410)	BICARBONATE WATER WH IT FIELD MG/L AS HCO3 (00450)	CARBONATE WATER WH IT FIELD MG/L AS CO3 (00447)	SULFATE DISSOLVED (MG/L AS SO4) (00945)
JUL 12...	39	17	43	4.4	228	235	195	287	0	5.0

DATE	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)	IRON, DISSOLVED (UG/L AS FE) (01046)
JUL 12...	21	0.7	8.9	250	281	<0.010	0.535	0.62	7

LA PORTE COUNTY

413700086445401. Local number, LP 8.
LOCATION.--Lat 41°37'00", long 86°44'54", in NE¼SE¼NW¼ sec.34, T.37 N., R.3 W., La Porte County, Hydrologic Unit 07120001, at the west end of Soldiers Memorial Park in La Porte.
Owner: State of Indiana.

AQUIFER.--Sand and gravel of Quaternary age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 3.0 in., depth 22 ft, cased to 20 ft, screened to 22 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 802.79 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of floor of shelter, 3.70 ft above land-surface datum.

PERIOD OF RECORD.--May 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.84 ft below land-surface datum, May 24, 25, 1983; lowest, 7.04 ft below land-surface datum, Mar. 8-11, 1978.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.40	6.39	6.22	5.96	---	---	5.69	5.38	5.41	5.54	5.75	5.37
10	6.43	6.29	6.32	6.24	---	---	5.19	5.22	5.47	5.55	5.95	5.44
15	6.52	5.33	6.37	6.24	---	---	5.55	5.22	5.59	5.56	5.88	5.27
20	5.79	6.08	6.43	6.19	---	5.80	5.18	5.21	5.59	5.19	4.26	5.46
25	6.27	6.16	6.41	6.16	---	5.70	5.68	5.22	5.60	5.58	5.11	5.25
EOM	6.33	6.18	6.46	6.14	---	5.71	5.77	5.30	5.43	5.82	5.25	5.40

WTR YR 1990 HIGH 4.18 AUG 18

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.42	6.39	6.23	6.26	---	---	5.74	5.60	5.42	5.54	5.88	5.39
10	6.46	6.35	6.32	6.25	---	---	5.48	5.24	5.50	5.55	5.96	5.48
15	6.52	6.04	6.43	6.24	---	---	5.62	5.22	5.60	5.56	5.91	5.36
20	6.17	6.13	6.45	6.19	---	5.84	5.70	5.22	5.71	5.55	5.24	5.48
25	6.29	6.17	6.45	6.17	---	5.72	5.70	5.29	5.63	5.75	5.11	5.32
EOM	6.35	6.20	6.46	6.14	---	5.75	5.79	5.31	5.50	5.82	5.29	5.40

WTR YR 1990 LOW 6.56 OCT 16

LA PORTE COUNTY

412350086512801. Local number, LP 9.
LOCATION.--Lat 41°23'50", long 86°51'28", in SE¼SW¼NE¼ sec.15, T.34 N., R.4 W., La Porte County, Hydrologic Unit 07120001, at the intersection of County Roads 1450 South and 825 West, 3.0 mi southeast of Wanatah.
Owner: U.S. Geological Survey.

AQUIFER.--Sand of Pleistocene age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 32 ft, cased to 27 ft, screened to 32 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 706.81 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of floor of shelter, 1.60 ft above land-surface datum.

PERIOD OF RECORD.--June 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.56 ft below land-surface datum, Apr. 5, 1985; lowest, 8.28 ft below land-surface datum, Oct. 16, 17, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.84	7.27	6.86	---	6.29	4.45	4.57	4.66	4.04	5.20	5.03	4.62
10	6.89	7.33	6.93	---	6.17	3.52	4.49	4.69	4.24	5.34	5.29	4.87
15	6.99	7.30	---	---	6.13	3.61	4.29	3.52	4.49	5.37	5.44	5.10
20	7.04	6.95	---	---	6.24	4.14	4.36	2.81	4.65	5.21	3.18	5.39
25	7.15	6.86	---	---	4.65	4.34	4.46	3.35	4.95	4.54	3.75	5.58
EOM	7.21	6.86	---	---	4.36	4.43	4.65	3.80	5.04	4.80	4.27	5.78

WTR YR 1990 HIGH 2.15 MAY 17

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.85	7.28	6.87	---	6.33	4.57	4.69	4.82	4.14	5.25	5.14	4.68
10	6.93	7.35	6.95	---	6.19	4.05	4.70	4.94	4.34	5.37	5.35	4.95
15	7.01	7.38	---	---	6.15	3.79	4.35	3.61	4.54	5.43	5.47	5.17
20	7.07	6.97	---	---	6.25	4.20	4.47	3.06	4.78	5.43	3.27	5.43
25	7.16	6.87	---	---	4.74	4.39	4.50	3.46	4.97	4.57	3.85	5.60
EOM	7.23	6.86	---	---	4.42	4.51	4.76	3.87	5.07	4.91	4.34	5.81

WTR YR 1990 LOW 7.38 NOV 13

LA PORTE COUNTY

413139086341401. Local number, LP 10.
LOCATION.--Lat 41°31'40", long 86°34'10", in SE¼SW¼NE¼ sec.31, T.36 N., R.1 W., La Porte County, Hydrologic Unit 07120001, 200 ft north of the manager's residence at the Mixsawbah Fish Hatchery and 2.6 mi southeast of Stillwell.
Owner: State of Indiana.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 6 in., depth 104 ft, cased to 102 ft, screened to 104 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 695 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of floor of shelter, 3.60 ft above land-surface datum.

PERIOD OF RECORD.--August 1980 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.88 ft below land-surface datum, Feb. 24, 1985; lowest, 9.61 ft below land-surface datum, Sept. 17, 18, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.69	8.74	8.02	7.99	6.58	5.60	6.04	7.03	6.64	6.89	6.82	6.52
10	8.72	8.71	8.06	7.81	6.74	4.29	5.98	6.90	6.75	7.20	7.12	6.85
15	8.79	8.52	8.09	7.77	6.88	4.89	5.77	5.02	7.10	6.56	7.28	6.93
20	8.76	8.20	8.15	7.34	7.08	5.86	6.40	4.39	7.31	6.72	3.24	7.13
25	8.72	8.12	8.16	7.02	4.57	5.99	6.64	5.59	7.34	5.99	4.58	7.01
EOM	8.72	8.07	8.22	6.96	5.11	6.32	6.96	6.28	6.47	6.74	5.95	7.21

WTR YR 1990 HIGH 3.24 AUG 20

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.70	8.75	8.03	8.09	6.66	5.82	6.21	7.12	6.76	6.99	6.94	6.60
10	8.76	8.74	8.08	7.86	6.80	4.60	6.53	7.06	6.84	7.23	7.18	6.92
15	8.79	8.69	8.11	7.78	6.92	5.23	5.90	5.18	7.17	6.71	7.32	6.98
20	8.78	8.23	8.16	7.41	7.16	5.96	6.43	4.83	7.38	6.92	4.82	7.15
25	8.72	8.13	8.18	7.28	4.75	6.06	6.71	5.79	7.38	6.20	4.87	7.08
EOM	8.75	8.08	8.25	7.07	5.19	6.39	7.07	6.38	6.52	6.82	6.10	7.25

WTR YR 1990 LOW 8.81 OCT 17

LA PORTE COUNTY

412839086533101. Local number, LP 11.
LOCATION.--Lat 41°28'39", long 86°53'31", in SW¼SW¼SW¼ sec.16, T.35 N., R.4 W., La Porte County, Hydrologic Unit 07120001, in the northeast corner of intersection of U.S. Highway 421 and County Road 900 South.
Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 100 ft, cased to 95 ft, screened to 100 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 760 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of floor of shelter, 4.1 ft above land-surface datum.

REMARKS.--Water level may be affected by pumpage.

PERIOD OF RECORD.--June 1981 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.52 ft below land-surface datum, July 2, 1983; lowest, 10.18 ft below land-surface datum, Oct. 17, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.74	9.25	9.02	9.39	8.62	6.50	6.08	5.98	4.86	5.65	5.99	5.12
10	8.81	9.32	9.05	9.37	8.30	6.23	6.14	5.84	5.10	5.77	6.12	5.32
15	8.99	9.36	9.14	9.45	8.13	5.82	6.06	4.98	5.21	5.85	6.30	5.44
20	9.00	9.23	9.25	9.30	8.23	5.87	5.92	4.52	5.31	5.90	4.66	5.64
25	9.16	9.10	9.24	9.11	6.83	5.96	5.89	4.64	5.50	5.68	4.61	5.72
EOM	9.21	9.07	9.37	8.89	6.60	6.04	5.91	4.81	5.55	5.82	4.88	5.91

WTR YR 1990 HIGH 4.51 MAY 19

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.80	9.30	9.03	9.43	8.69	6.56	6.18	6.02	4.96	5.69	6.04	5.16
10	8.93	9.37	9.08	9.43	8.34	6.37	6.20	5.89	5.14	5.81	6.18	5.37
15	9.00	9.38	9.18	9.49	8.17	5.86	6.09	5.05	5.24	5.90	6.34	5.46
20	9.05	9.27	9.27	9.36	8.28	5.92	5.94	4.61	5.38	5.96	5.35	5.66
25	9.17	9.11	9.28	9.18	7.01	6.00	5.91	4.69	5.52	5.69	4.64	5.78
EOM	9.25	9.07	9.41	8.95	6.66	6.06	5.99	4.83	5.56	5.86	4.92	5.94

WTR YR 1990 LOW 9.49 JAN 15

LA PORTE COUNTY

413434086434701. Local number, LP 12.
LOCATION.--Lat 41°34'34", long 86°43'47", in NE¼NE¼NW¼ sec.14, T.36 N., R.3 W., La Porte County, Hydrologic Unit 07120001, on County Road 150 West, at La Porte Municipal Airport, 1.6 mi south of La Porte.
Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 6 in., depth 77 ft, cased to 71 ft, screened to 77 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 805 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of floor of shelter, 3.70 ft above land-surface datum.

REMARKS.--Water level may be affected by pumpage.

PERIOD OF RECORD.--July 1981 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 15.59 ft below land-surface datum, May 29-31, 1983; lowest, 22.82 ft below land-surface datum, Jan. 27, 28, 31, 1990..

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	21.78	22.07	22.38	22.66	22.77	22.34	21.22	20.91	19.61	19.48	19.67	18.45
10	21.81	22.12	22.43	22.69	22.69	22.16	21.13	20.84	19.53	19.53	19.73	18.39
15	21.87	22.18	22.48	22.74	22.61	21.97	21.08	20.78	19.48	19.62	19.77	18.34
20	21.90	22.24	22.52	22.76	22.57	21.78	21.04	20.60	19.44	19.65	19.57	18.38
25	21.97	22.29	22.55	22.76	22.51	21.55	21.00	20.17	19.46	19.67	19.13	18.38
EOM	22.02	22.35	22.60	22.80	22.44	21.33	20.96	19.80	19.45	19.66	18.65	18.50

WTR YR 1990 HIGH 18.33 SEP 14

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	21.79	22.09	22.39	22.66	22.78	22.36	21.23	20.91	19.65	19.50	19.71	18.48
10	21.83	22.14	22.45	22.70	22.70	22.20	21.14	20.87	19.54	19.56	19.73	18.39
15	21.88	22.20	22.49	22.75	22.63	22.00	21.09	20.81	19.50	19.62	19.77	18.35
20	21.91	22.26	22.53	22.78	22.58	21.82	21.05	20.65	19.46	19.66	19.64	18.40
25	21.98	22.30	22.57	22.80	22.51	21.59	21.00	20.27	19.48	19.68	19.23	18.40
EOM	22.03	22.36	22.61	22.82	22.46	21.36	20.96	19.84	19.47	19.68	18.70	18.51

WTR YR 1990 LOW 22.82 JAN 27

MARION COUNTY

393855086120701. Local number, MA 34.
LOCATION.--Lat 39°38'55", long 86°12'07", in NE¼NW¼NE¼ sec.21, T.14 N., R.3 E., Marion County, Hydrologic Unit 05120201, about 0.5 mi northwest of Glenns Valley.
Owner: U.S. Geological Survey.

AQUIFER.--Coarse sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 6 in., depth 66 ft, cased to 61 ft, screened to 66 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 670.73 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.70 ft above land-surface datum.

PERIOD OF RECORD.--July 1986 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.25 ft below land-surface datum, May 26, 1989; lowest, 8.84 ft below land-surface datum, Nov. 23-25, 1987.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.43	5.96	5.71	5.70	5.08	5.01	5.06	5.02	4.70	5.58	5.28	6.14
10	5.54	5.86	5.82	5.83	5.28	4.29	4.63	5.32	4.95	5.78	5.80	6.11
15	5.68	4.43	5.91	5.96	3.86	4.80	5.09	4.11	5.13	5.60	5.71	6.30
20	5.57	5.38	6.03	5.69	4.88	4.97	5.12	4.31	4.55	4.81	5.82	6.15
25	5.70	5.52	6.08	5.70	4.85	5.10	5.25	4.52	5.24	5.48	5.84	6.31
EOM	5.86	5.63	5.59	5.81	4.86	5.04	5.36	4.61	5.41	5.71	5.97	6.46

WTR YR 1990 HIGH 3.57 MAY 16

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.45	5.99	5.73	5.75	5.20	5.05	5.12	5.21	4.79	5.62	5.58	6.18
10	5.60	5.93	5.85	5.87	5.30	5.14	5.23	5.38	5.01	5.84	5.85	6.17
15	5.70	5.86	5.96	5.99	5.20	4.87	5.12	4.90	5.18	5.67	5.77	6.32
20	5.61	5.44	6.04	5.92	4.91	4.99	5.25	4.40	5.31	5.85	5.95	6.20
25	5.79	5.55	6.11	5.83	4.88	5.12	5.28	4.60	5.29	5.54	5.89	6.36
EOM	5.91	5.66	5.83	5.87	4.90	5.11	5.40	4.66	5.45	5.75	6.02	6.49

WTR YR 1990 LOW 6.49 SEP 30

MARION COUNTY

394632086092701. Local number, MA 35.
LOCATION.--Lat 39°46'32", long 86°09'27", in NW¼SW¼NW¼ sec.1, T.15 N., R.3 E., Marion County, Hydrologic Unit 05120201, in the northeast corner of the intersection of Meridian and North Streets in Indianapolis.
Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 83 ft, cased to 77.5 ft, screened to 83 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 716.40 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.50 ft above land-surface datum.

PERIOD OF RECORD.--September 1987 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 30.93 ft below land-surface datum, May 29, 1990; lowest, 36.95 ft below land-surface datum, Sept. 25, 1987.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	32.80	32.52	32.28	31.95	31.56	31.12	31.22	30.95	31.86	32.06	32.53
10	---	32.73	32.40	32.16	31.86	31.55	31.14	31.25	31.17	32.01	32.09	32.50
15	---	32.74	32.68	32.17	31.80	31.64	30.99	31.14	31.46	31.78	32.21	32.77
20	32.99	32.64	32.78	32.09	31.76	31.48	31.01	31.06	31.51	32.02	32.09	32.64
25	32.92	32.58	32.73	32.04	31.83	31.33	31.30	31.00	31.48	31.97	32.37	32.34
EOM	32.86	32.58	32.44	32.03	31.70	31.21	31.34	30.95	31.80	32.15	32.59	32.50

WTR YR 1990 HIGH 30.93 MAY 29

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	32.87	32.59	32.34	32.06	31.61	31.20	31.27	31.08	32.26	32.11	32.93
10	---	32.84	32.58	32.25	31.90	31.61	31.26	31.33	31.23	32.36	32.43	32.95
15	---	32.85	32.74	32.25	31.83	31.82	31.04	31.53	31.78	31.87	32.48	32.89
20	33.04	32.83	32.91	32.14	31.91	31.71	31.04	31.11	31.84	32.43	32.52	32.79
25	33.22	32.63	32.76	32.16	31.88	31.36	31.62	31.29	31.84	32.31	32.60	32.47
EOM	33.01	32.65	32.49	32.10	31.75	31.28	31.74	31.10	32.04	32.44	32.87	32.59

WTR YR 1990 LOW 33.22 OCT 24

MARION COUNTY

394626086100201. Local number, MA 36.
LOCATION.--Lat 39°46'26", long 86°10'02", in SW¼SW¼NE¼ sec.2, T.15 N., R.3 E., Marion County, Hydrologic Unit 05120201, in the southwest corner of the intersection of West and Michigan Streets in Indianapolis.
Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 70.6 ft, cased to 65.1 ft, screened to 70.6 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 710.06 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.00 ft above land-surface datum.

PERIOD OF RECORD.--September 1987 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 26.99 ft below land-surface datum, Mar. 14, 22, 1990; lowest, 33.12 ft below land-surface datum, Sept. 24, 25, 1987.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	29.91	29.33	28.98	29.03	28.69	27.21	27.28	27.83	27.41	28.00	28.56	29.02
10	29.79	29.28	28.98	28.93	28.57	27.23	27.49	27.82	27.51	28.15	28.66	29.10
15	29.68	29.21	28.98	28.89	28.57	27.00	27.60	27.78	27.61	28.29	28.72	29.18
20	29.54	29.14	29.07	28.83	28.66	27.13	27.58	27.60	27.72	---	28.77	---
25	29.45	29.07	29.13	28.78	27.67	27.08	27.62	27.45	27.81	28.45	28.84	---
EOM	29.39	29.03	29.11	28.76	27.45	27.13	27.74	27.39	27.88	28.48	28.93	---

WTR YR 1990 HIGH 26.99 MAR 14

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	29.94	29.35	28.98	29.05	28.72	27.41	27.34	27.84	27.42	28.03	28.59	29.03
10	29.81	29.29	28.99	28.95	28.59	27.25	27.55	27.86	27.54	28.18	28.67	29.11
15	29.70	29.23	29.00	28.89	28.59	27.03	27.60	27.83	27.64	28.31	28.73	29.20
20	29.56	29.15	29.08	28.84	28.67	27.18	27.60	27.62	27.74	---	28.79	---
25	29.47	29.09	29.14	28.82	27.71	27.09	27.64	27.48	27.82	28.45	28.86	---
EOM	29.39	29.04	29.13	28.78	27.47	27.16	27.78	27.39	27.90	28.49	28.95	---

WTR YR 1990 LOW 30.05 OCT 1

MARION COUNTY

394732086115501. Local number, MA 37.
LOCATION.--Lat 39°47'32", long 86°11'55", in SE¼NE¼NE¼ sec. 33, T.16N., R.3W., Marion County, Hydrologic Unit 05120201, on the South Grove Municipal Golf Course property, west of the 11th fairway and east of White River Parkway in Indianapolis.
Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene epoch.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 6 in., depth 74 ft, cased to 69 ft, screened to 74 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 690 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 3.35 ft above land-surface datum.

PERIOD OF RECORD.--July 1988 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.98 ft below land-surface datum, Mar. 12, 1990; lowest, 10.54 ft below land-surface datum, Aug. 18, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.54	5.71	5.84	7.15	6.32	4.67	4.48	4.67	4.33	5.37	5.40	6.00
10	5.63	5.64	5.82	5.93	5.24	4.57	4.68	4.86	4.77	5.55	5.57	5.84
15	6.21	5.55	5.89	5.83	4.64	5.77	4.34	5.64	5.20	4.84	5.42	5.72
20	5.57	6.80	6.22	5.64	4.99	4.36	4.64	5.46	4.86	5.30	5.60	5.67
25	5.75	7.22	7.22	5.68	4.42	4.43	5.00	4.30	4.78	4.94	6.79	5.47
EOM	5.70	6.01	5.87	5.66	4.58	4.61	4.97	4.15	5.14	5.34	5.28	5.84

WTR YR 1990 HIGH 3.98 MAR 12

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.76	5.84	5.87	7.23	6.42	4.89	4.63	4.93	4.40	5.51	5.49	6.14
10	5.83	5.71	5.86	6.01	5.41	4.99	5.99	5.09	4.95	5.62	5.71	5.95
15	6.51	5.93	7.11	5.96	5.68	5.92	4.46	5.88	6.39	4.94	5.53	5.84
20	5.64	7.04	6.42	5.77	6.05	4.39	4.76	5.72	5.11	5.46	5.66	5.73
25	6.24	7.32	7.30	5.75	4.49	4.48	5.15	4.37	4.92	5.04	6.97	5.72
EOM	6.14	6.21	6.02	5.72	4.61	4.65	5.16	4.46	5.20	5.41	6.49	6.04

WTR YR 1990 LOW 7.75 DEC 26

MARTIN COUNTY

383659086545901. Local number, MI 5.
LOCATION.--Lat 38°36'59", long 86°54'59", in SE¼NE¼SW¼ sec.12, T.2 N., R.5 W., Martin County, Hydrologic Unit 05120208, on private property 0.25 mi southwest of Whitfield.
Owner: Marjorie A. Arvin.

AQUIFER.--Sandstone of Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 143 ft, cased to 53 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 565 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of floor of shelter, 2.80 ft above land-surface datum.

PERIOD OF RECORD.--May 1958 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 23.91 ft below land-surface datum, Apr. 14, 1980; lowest, 34.10 ft below land-surface datum, Jan. 1, 5, 22, 23, 1960, and Dec. 18, 19, 1964.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	27.03	26.98	26.83	27.30	27.11	26.62	25.88	25.53	25.37	25.18	25.24	25.71
10	27.04	26.86	27.08	27.02	26.62	26.46	25.73	25.26	25.39	25.21	25.36	25.68
15	27.09	26.69	27.06	27.16	26.33	26.06	25.99	25.52	25.24	25.09	25.47	---
20	27.07	27.06	27.46	26.84	27.19	26.66	26.04	25.30	25.05	25.16	25.40	---
25	---	27.09	27.00	26.41	27.17	26.62	25.87	25.34	25.29	25.38	25.53	---
EOM	27.09	27.47	26.88	27.01	27.09	26.03	25.52	25.56	25.21	25.26	25.50	---

WTR YR 1990 HIGH 24.97 JUN 22

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	27.31	27.20	26.95	27.39	27.24	26.70	26.06	25.71	25.50	25.25	25.40	25.83
10	27.19	27.26	27.16	27.24	26.73	26.61	26.08	25.61	25.51	25.29	25.40	25.78
15	27.19	27.03	27.47	27.30	26.61	26.26	26.05	25.66	25.27	25.24	25.52	---
20	27.16	27.27	27.59	27.12	27.30	26.81	26.20	25.42	25.14	25.28	25.48	---
25	---	27.27	27.40	26.92	27.42	26.70	25.99	25.56	25.40	25.46	25.61	---
EOM	27.38	27.59	27.10	27.21	27.16	26.12	25.81	25.66	25.26	25.38	25.63	---

WTR YR 1990 LOW 28.04 DEC 22

MONTGOMERY COUNTY

400247086462101. Local number, MY 7.
LOCATION.--Lat 40°02'47", long 86°48'21", in NE¼NW¼SW¼ sec.31, T.19 N., R.3 W., Montgomery County, Hydrologic Unit 05120110, on the county right-of-way at the intersection of State Highway 32 and County Road 525 East, and 4.5-mi east of Crawfordsville.
Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 111 ft, cased to 107 ft, screened to 109 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 801 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of floor of shelter, 2.38 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 26.10 ft below land-surface datum, Apr. 13, 1974; lowest, 32.55 ft below land-surface datum, Oct. 30, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	29.16	30.24	30.98	31.79	31.18	29.63	29.01	29.03	---	29.22	29.85	31.38
10	29.31	30.26	31.23	31.69	30.66	29.49	29.15	---	28.90	29.44	30.05	31.57
15	29.54	30.29	31.47	31.90	30.21	28.83	29.20	---	28.93	29.28	30.16	31.70
20	29.69	30.58	31.82	31.70	30.23	28.97	29.25	---	28.97	29.43	30.29	31.75
25	30.03	30.77	31.64	31.48	29.87	29.12	29.21	---	28.92	29.56	30.58	31.74
EOM	30.03	30.93	31.66	31.55	29.96	29.08	29.07	---	28.98	29.79	31.05	31.99

WTR YR 1990 HIGH 28.74 MAR 17

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	29.22	30.28	30.99	31.82	31.24	29.66	29.09	29.08	---	29.33	29.93	31.40
10	29.38	30.42	31.27	31.74	30.74	29.64	29.28	---	28.96	29.50	30.07	31.65
15	29.57	30.43	31.59	31.92	30.43	28.88	29.23	---	28.98	29.29	30.19	31.74
20	29.72	30.63	31.87	31.79	30.29	29.01	29.34	---	29.09	29.48	30.34	31.79
25	30.05	30.80	31.90	31.60	30.03	29.16	29.25	---	28.96	29.62	30.65	31.80
EOM	30.13	30.97	31.72	31.61	29.99	29.09	29.13	---	29.02	29.86	31.14	32.03

WTR YR 1990 LOW 32.18 DEC 23

MORGAN COUNTY

393423086161001. Local number, MG 4.
LOCATION.--Lat 39°34'23", long 86°16'10", in NW¼NW¼NW¼ sec.13, T.13 N., R.2 E., Morgan County, Hydrologic Unit 05120201, on east side of County Road 850 East, 0.4 mi north of County Road 950 North, and 1.1 mi north of Waverly.
Owner: U.S. Geological Survey.

AQUIFER. Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 6 in., depth 60 ft, cased to 56 ft, screened to 60 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 645 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of floor of shelter, 2.90 ft above land-surface datum.

PERIOD OF RECORD.--May 1978 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 8.27 ft below land-surface datum, Apr. 7, 1985; lowest, 16.09 ft below land-surface datum, Nov. 2-4, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	11.01	12.36	12.10	12.61	11.84	9.79	10.14	10.73	9.57	10.53	10.60	11.24
10	11.33	12.46	12.23	12.59	11.21	10.04	10.35	10.72	9.56	10.85	10.80	11.41
15	11.62	12.41	12.38	12.60	10.72	9.36	10.31	10.19	9.56	10.65	10.89	11.60
20	11.81	12.05	12.53	12.57	9.72	9.48	10.46	8.69	9.81	10.66	11.05	11.80
25	11.99	11.99	12.67	12.46	9.61	9.73	10.54	8.94	9.99	10.26	11.02	11.96
EOM	12.19	12.03	12.60	12.44	9.65	10.00	10.68	9.27	10.24	10.45	11.07	12.16

WTR YR 1990 HIGH 8.69 MAY 19

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	11.05	12.39	12.14	12.65	12.01	9.85	10.20	10.74	9.63	10.60	10.64	11.28
10	11.39	12.50	12.26	12.62	11.27	10.07	10.37	10.79	9.67	10.91	10.84	11.46
15	11.67	12.54	12.41	12.61	11.08	9.38	10.33	10.33	9.62	10.67	10.93	11.64
20	11.84	12.07	12.55	12.61	9.76	9.51	10.49	8.72	9.87	10.90	11.08	11.84
25	12.03	12.00	12.69	12.49	9.64	9.78	10.58	8.98	10.04	10.28	11.06	12.00
EOM	12.24	12.07	12.76	12.48	9.67	10.05	10.73	9.34	10.29	10.50	11.10	12.20

WTR YR 1990 LOW 12.82 DEC 29

NEWTON COUNTY

405105087173301. Local number, NE 6.
LOCATION.--Lat 40°51'05", long 87°17'33", in SE¼SW¼SE¼ sec.23, T.28 N., R.8 W., Newton County, Hydrologic Unit 07120002, on the right-of-way of County Road 1000 South, 1.0 mi south of Foresman.
Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 80 ft, cased to 76 ft, screened to 78 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 654.10 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of floor of shelter, 2.15 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 7.94 ft below land-surface datum, Mar. 20, 21, 1982; lowest, 18.82 ft below land-surface datum, Oct. 29, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	12.70	13.31	12.83	13.43	11.95	9.91	10.96	11.49	11.84	13.14	11.82	13.06
10	12.94	13.26	12.96	13.25	11.74	9.83	11.19	11.52	12.18	13.45	12.22	13.21
15	13.26	13.23	13.10	13.25	11.71	8.91	10.95	11.20	12.36	12.86	12.27	13.34
20	13.25	12.82	13.29	13.02	11.60	10.01	11.00	10.98	12.72	12.39	12.35	13.52
25	13.33	12.75	13.27	12.65	9.45	10.59	11.07	11.39	12.90	11.13	12.32	13.67
EOM	13.21	12.88	13.39	12.64	9.40	10.94	11.27	11.72	12.98	11.43	12.68	13.88

WTR YR 1990 HIGH 8.91 MAR 15

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	12.78	13.37	12.86	13.52	12.09	10.12	11.13	11.57	11.92	13.20	11.91	13.14
10	13.20	13.40	13.05	13.31	11.78	10.28	11.29	11.73	12.23	13.54	12.30	13.27
15	13.30	13.31	13.19	13.31	11.79	9.18	11.00	11.35	12.43	12.89	12.32	13.36
20	13.27	12.92	13.30	13.13	11.67	10.10	11.03	11.14	12.91	12.67	12.39	13.59
25	13.35	12.79	13.35	12.89	9.57	10.68	11.13	11.47	12.98	11.17	12.38	13.74
EOM	13.31	12.92	13.46	12.72	9.49	11.00	11.44	11.76	13.02	11.54	12.74	13.94

WTR YR 1990 LOW 13.94 SEP 30

NEWTON COUNTY

405959087282901. Local number, NE 7.
LOCATION.--Lat 40°59'59", long 87°28'29", in SE¼SW¼SE¼ sec.32, T.30 N., R.9 W., Newton County, Hydrologic Unit 07120002, in the Willow Slough Game Preserve, 2.0 mi southwest of Enos.
Owner: State of Indiana.

AQUIFER.--Limestone of Silurian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 150 ft, cased to 136 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 680.83 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of floor of shelter, 2.03 ft above land-surface datum.

PERIOD OF RECORD.--February 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 34.65 ft below land-surface datum, Apr 14, 1980; lowest, 97.33 ft below land-surface datum, Aug. 29, 30, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	65.05	59.58	55.33	52.14	49.48	47.55	45.75	44.33	43.15	43.83	49.95	53.00
10	64.22	58.88	54.87	51.59	49.02	47.03	45.53	44.01	43.25	45.16	52.10	54.04
15	63.26	57.93	54.32	51.25	48.56	46.65	45.30	43.86	43.42	47.53	53.19	54.16
20	62.23	57.32	53.84	50.65	48.53	46.63	45.08	43.63	43.47	48.68	53.34	53.81
25	61.59	56.66	53.12	50.05	48.14	46.37	44.84	43.45	43.72	49.16	52.95	53.06
EOM	60.50	56.14	52.53	49.85	47.90	46.00	44.57	43.39	43.70	49.12	52.49	52.58

WTR YR 1990 HIGH 43.13 JUN 8

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	65.36	59.80	55.46	52.24	49.59	47.60	45.81	44.39	43.28	43.95	50.57	53.12
10	64.30	58.96	54.98	51.71	49.13	47.22	45.62	44.11	43.38	45.59	52.29	54.18
15	63.49	58.17	54.45	51.29	48.74	46.74	45.33	43.95	43.47	47.88	53.33	54.28
20	62.45	57.43	53.94	50.85	48.59	46.73	45.19	43.71	43.58	48.83	53.43	53.95
25	61.74	56.82	53.38	50.31	48.22	46.47	44.92	43.61	43.81	49.24	53.05	53.24
EOM	60.61	56.29	52.63	49.98	47.98	46.04	44.64	43.44	43.72	49.18	52.55	52.67

WTR YR 1990 LOW 66.06 OCT 1

NEWTON COUNTY

410428087231501. Local number, NE 8.
LOCATION.--Lat 41°04'28", long 87°25'44", in NW¼SW¼SW¼ sec.2, T.30 N., R.9 W., Newton County, Hydrologic Unit 07120001, in the Beaver Lake Prairie Chicken Refuge, 3.0 mi north of Enos.
Owner: State of Indiana.

AQUIFER.--Limestone of Silurian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 150 ft, cased to 97 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 663.34 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of floor of shelter, 2.83 ft above land-surface datum.

REMARKS.--Water level may be affected by irrigation pumpage.

PERIOD OF RECORD.--February 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.04 ft below land-surface datum, May 31, 1976; lowest, 98.40 ft below land-surface datum, July 29, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	33.97	27.00	22.88	19.97	17.50	15.59	13.71	12.43	11.30	12.92	37.98	27.63
10	32.64	26.31	22.45	19.45	17.08	15.09	13.47	12.10	12.79	41.58	29.12	29.49
15	31.35	25.34	21.97	19.19	16.62	14.72	13.25	11.95	11.66	24.12	33.93	24.74
20	30.07	24.74	21.52	18.61	16.61	14.72	13.06	11.74	11.24	21.06	28.61	22.63
25	29.28	24.11	20.77	18.00	16.24	14.42	12.86	11.61	12.70	19.01	25.16	21.02
EOM	28.05	23.67	20.28	17.86	15.98	13.98	12.69	11.55	12.68	29.11	22.86	20.10

WTR YR 1990 HIGH 11.04 JUN 22

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	34.41	27.24	22.99	20.08	17.62	15.67	13.79	12.50	11.44	14.34	43.81	35.69
10	32.77	26.42	22.55	19.59	17.18	15.29	13.56	12.24	13.24	44.18	38.51	31.19
15	31.63	25.61	22.10	19.21	16.83	14.82	13.29	12.06	11.79	25.15	36.25	25.39
20	30.33	24.86	21.62	18.83	16.69	14.84	13.16	11.85	11.33	21.60	29.69	22.99
25	29.46	24.26	21.04	18.28	16.32	14.54	12.93	11.79	13.02	19.28	25.66	21.33
EOM	28.15	23.80	20.37	18.01	16.06	14.03	12.82	11.61	12.73	34.72	24.90	20.27

WTR YR 1990 LOW 53.00 AUG 4

NEWTON COUNTY

405959087282902. Local number, NE 9.
LOCATION.--Lat 40°59'59", long 87°28'29", in SE¼SW¼SE¼ sec.32, T.30 N., R.9 W., Newton County, Hydrologic Unit 07120002, in the Willow Slough Game Preserve, 2.0 mi southwest of Enos.
Owner: U.S. Geological Survey.

AQUIFER.--Sand of Pleistocene age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 2 in., depth 45 ft, cased to 42 ft, screened to 45 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 681 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of "Y" in well casing, 3.10 ft above land-surface datum.

PERIOD OF RECORD.--May 1978 to current year. Fragmentary record prior to March 1981.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.07 ft below land-surface datum, May 3, 1978; lowest, 15.44 ft below land-surface datum, Oct. 19-21, 26-31, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	12.45	12.89	12.31	12.84	11.91	10.29	9.28	9.38	9.95	11.23	10.51	11.12
10	12.61	12.92	12.39	12.69	11.77	9.53	9.34	9.48	10.02	11.56	10.74	11.36
15	12.75	12.87	12.45	12.69	11.68	8.98	9.20	9.16	10.32	11.41	10.81	11.55
20	12.79	12.40	12.57	12.51	11.67	9.15	9.29	9.14	10.68	11.17	10.51	11.75
25	12.81	12.32	12.61	12.30	10.74	9.18	9.41	9.33	10.89	10.19	10.36	11.93
EOM	12.85	12.29	12.81	12.21	10.44	9.24	9.55	9.69	11.01	10.37	10.83	12.08

WTR YR 1990 HIGH 8.98 MAR 15

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	12.47	12.90	12.31	12.86	11.98	10.30	9.33	9.38	9.98	11.27	10.54	11.13
10	12.63	12.94	12.40	12.71	11.77	9.95	9.53	9.49	10.10	11.57	10.79	11.40
15	12.76	12.95	12.46	12.69	11.69	9.10	9.21	9.20	10.39	11.41	10.83	11.58
20	12.79	12.45	12.58	12.59	11.67	9.18	9.35	9.17	10.70	11.56	10.73	11.78
25	12.81	12.33	12.72	12.35	10.84	9.26	9.46	9.42	10.96	10.21	10.40	11.97
EOM	12.85	12.30	12.81	12.24	10.47	9.24	9.57	9.76	11.02	10.46	10.89	12.10

WTR YR 1990 LOW 12.97 NOV 12

NEWTON COUNTY

410428087231502. Local number, NE 10.
LOCATION.--Lat 41°04'28", long 87°25'44", in NW¼SW¼SW¼ sec.2, T.30 N., R.9 W., Newton County, Hydrologic Unit 07120001, in the Beaver Lake Prairie Chicken Refuge, 3.0 mi north of Enos.
Owner: U.S. Geological Survey.

AQUIFER.--Sand of Pleistocene age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 2 in., depth 45 ft, cased to 41 ft, screened to 44 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 663 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of "Y" in well casing, 2.65 ft above land-surface datum.

PERIOD OF RECORD.--May 1978 to current year. Fragmentary record prior to March 1981.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.03 ft below land-surface datum, Mar. 16, 1982; lowest, 6.48 ft below land-surface datum, Sept. 30, Oct. 1, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.37	4.92	4.43	---	4.29	3.02	3.12	3.84	4.16	4.48	---	3.46
10	4.44	4.93	4.49	---	4.25	2.83	3.51	---	4.25	---	4.04	3.47
15	4.60	4.94	4.54	---	4.42	2.04	3.48	---	4.23	---	4.11	---
20	4.63	4.04	4.55	---	---	2.53	3.52	3.43	4.32	---	---	---
25	4.65	4.04	---	4.75	3.02	2.76	3.58	3.58	4.44	---	---	---
EOM	4.77	4.28	---	---	3.02	3.08	3.70	3.61	4.50	---	3.19	---

WTR YR 1990 HIGH 2.02 MAR 12

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.37	4.93	4.43	---	4.31	3.02	3.26	3.84	4.19	4.48	---	3.53
10	4.48	4.93	4.49	---	4.25	2.85	3.51	---	4.25	---	4.09	3.52
15	4.61	4.94	4.54	---	4.42	2.17	3.48	---	4.24	---	4.11	---
20	4.65	4.04	4.55	---	---	2.58	3.52	3.43	4.36	---	---	---
25	4.66	4.05	---	4.81	3.02	2.86	3.59	3.58	4.45	---	---	---
EOM	4.77	4.31	---	---	3.02	3.08	3.70	3.62	4.50	---	3.23	---

WTR YR 1990 LOW 5.06 JAN 23

NEWTON COUNTY

410235087305901. Local number, NE 11.
LOCATION.--Lat 41°02'35", long 87°30'59", in SW¼SW¼SE¼ sec.13, T.30 N., R.10 W., Newton County, Hydrologic Unit 07120001, on right-of-way of County Road 300 North, 0.5 mi west of County Road 600 West, and 4.0 mi northwest of Enos.
Owner: U.S. Geological Survey.

AQUIFER.--Limestone of Silurian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 5 in., depth of 150 ft, cased to 90 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 670 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 3.30 ft above land-surface datum.

PERIOD OF RECORD.--October 1981 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 22.78 ft below land-surface datum, May 6, 1982; lowest recorded, 98.83 ft below land-surface datum, Aug. 5, 6, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	52.87	47.10	42.78	39.61	36.35	34.13	32.05	30.79	37.62	30.72	43.97	45.85
10	52.00	46.43	42.44	38.75	35.76	33.59	31.84	30.29	35.63	42.62	42.06	49.19
15	51.02	45.52	41.94	38.75	35.23	33.02	31.70	30.27	33.32	39.15	41.24	45.96
20	49.94	44.92	41.54	37.66	35.40	33.24	31.52	30.02	31.98	37.65	40.55	44.15
25	49.50	44.31	41.24	36.71	35.17	32.89	31.29	29.94	31.48	37.02	40.04	42.37
EOM	48.26	43.98	40.07	36.72	34.73	32.38	30.98	29.98	30.91	36.28	47.84	41.50

WTR YR 1990 HIGH 29.55 JUN 2

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	53.35	47.43	43.35	39.80	36.59	34.32	32.25	30.93	40.60	31.77	44.39	46.39
10	52.14	46.69	42.88	39.12	35.93	33.80	32.03	30.64	36.15	44.06	42.33	49.85
15	51.30	45.91	42.06	38.93	35.51	33.28	31.75	30.48	33.65	39.43	41.36	46.57
20	50.18	45.27	41.73	38.18	35.56	33.46	31.67	30.28	32.15	37.90	40.73	44.54
25	49.68	44.72	41.48	37.33	35.31	33.08	31.42	30.15	31.61	37.12	40.14	42.72
EOM	48.32	44.31	40.26	37.06	34.86	32.44	31.19	30.08	31.02	36.38	49.51	41.66

WTR YR 1990 LOW 54.09 OCT 1

NEWTON COUNTY

410917087285801. Local number, NE 14.
LOCATION.--Lat 41°09'17", long 87°28'58", in NE¼SW¼NW¼ sec.8, T.31 N., R.9 W., Newton County, Hydrologic Unit 07120001, 100 ft south of wildlife area parking lot in La Salle State Fish and Wildlife Area.
Owner: U.S. Geological Survey.

AQUIFER.--Dolomitic limestone of Silurian/Devonian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 150 ft, cased to 82 ft, open end.

INSTRUMENTATION.--Water-level recorder, data-collection platform, and incremental encoder.

DATUM.--Elevation of land-surface datum is 636.62 ft (revised) above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.30 ft above land-surface datum.

REMARKS.--Water level may be affected by pumpage.

PERIOD OF RECORD.--August 1985 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 7.29 ft below land-surface datum, Apr. 17, 1988 and May 20 and 26, 1990; lowest, 31.19 ft below land-surface datum, Aug. 26, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	14.54	12.43	11.00	10.16	9.28	8.38	7.66	7.68	7.51	7.85	12.28	11.45
10	14.17	12.19	10.88	9.97	9.05	8.15	7.73	7.54	7.53	8.62	12.64	11.14
15	13.83	11.82	10.73	9.96	8.91	7.92	7.68	7.45	7.57	8.67	14.37	10.70
20	13.53	11.64	10.65	9.71	9.08	8.04	7.67	7.29	7.55	9.14	14.29	10.55
25	13.20	11.43	10.34	9.39	8.75	7.94	7.63	7.32	7.68	9.10	12.86	10.23
EOM	12.74	11.25	10.24	9.42	8.62	7.71	7.61	7.48	7.78	9.86	11.83	10.16

WTR YR 1990 HIGH 7.29 MAY 20

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	14.75	12.58	11.08	10.25	9.38	8.47	7.73	7.87	7.61	7.96	12.34	11.55
10	14.38	12.25	10.98	10.05	9.08	8.23	7.79	7.66	7.65	8.90	13.20	11.23
15	13.93	11.98	10.75	9.97	9.14	7.96	7.70	7.56	7.84	8.74	14.68	10.79
20	13.45	11.72	10.83	9.83	9.11	8.07	7.77	7.42	7.69	9.35	14.67	10.75
25	13.26	11.50	10.52	9.56	8.81	8.03	7.77	7.42	7.99	9.22	13.07	10.33
EOM	12.84	11.32	10.52	9.52	8.69	7.74	7.61	7.63	7.87	10.43	11.94	10.21

WTR YR 1990 LOW 15.25 AUG 18

NOBLE COUNTY

411922085221801. Local number, NO 8.
LOCATION.--Lat 41°19'22", long 85°22'18", in SE¼SW¼SE¼ sec.9, T.33 N., R.10 E., Noble County, Hydrologic Unit 04050001, near the east edge of Chain O'Lakes Stae Park, and 5.0 mi south of Albion.
Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled artesian (revised) well, diameter 6 in., depth 149 ft, cased to 146 ft, screened to 148 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 928 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of floor of shelter, 2.65 ft above land-surface datum.

PERIOD OF RECORD.--December 1966 to September 1971, August 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 28.55 ft below land-surface datum, May 31, 1982; lowest, 32.49 ft below land-surface datum, Jan. 18, 1967.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	30.05	30.16	30.30	30.73	30.69	30.35	29.81	29.52	29.45	29.48	29.52	29.51
10	30.09	30.15	30.47	30.51	30.47	30.15	29.72	29.33	29.53	29.56	29.61	29.50
15	30.25	30.13	30.53	30.71	30.40	29.99	29.83	29.63	29.43	29.44	29.66	29.31
20	30.10	30.28	30.71	30.48	30.85	30.31	29.83	29.45	29.33	29.49	29.62	29.47
25	30.51	30.39	30.22	30.23	30.73	30.18	29.75	29.48	29.56	29.65	29.65	29.24
EOM	30.19	30.58	30.38	30.70	30.64	29.89	29.68	29.66	29.46	29.56	29.58	29.50

WTR YR 1990 HIGH 29.15 JUN 23

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	30.28	30.33	30.36	30.81	30.77	30.47	29.97	29.69	29.59	29.56	29.67	29.59
10	30.26	30.51	30.55	30.70	30.54	30.24	29.94	29.61	29.63	29.60	29.64	29.55
15	30.30	30.36	30.67	30.82	30.65	30.08	29.87	29.74	29.49	29.55	29.69	29.37
20	30.12	30.45	30.76	30.75	30.94	30.43	29.98	29.59	29.37	29.57	29.69	29.51
25	30.56	30.48	30.55	30.56	30.97	30.28	29.82	29.67	29.62	29.72	29.69	29.37
EOM	30.37	30.64	30.52	30.87	30.70	29.92	29.79	29.72	29.49	29.65	29.64	29.56

WTR YR 1990 LOW 30.99 DEC 22

NOBLE COUNTY

413106085232701. Local number, NO 9.
LOCATION.--Lat 41°31'06", long 85°23'27", in NW¼NE¼SE¼ sec.5, T.35 N., R.10 E., Noble County, Hydrologic Unit 04050001, at the intersection of County Roads 175 East and 1150 North, and 2.0 mi west of Wolcottville.
Owner: U.S. Geological Survey.

AQUIFER.--Sand of Pleistocene age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 6 in., depth 44 ft, cased to 39 ft, screened to 42 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 930 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of floor of shelter, 2.60 ft above land-surface datum.

PERIOD OF RECORD.--June 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 8.45 ft below land-surface datum, Mar. 31, Apr. 1, 1985; lowest, 17.55 ft below land-surface datum, Dec. 27, 28, 1978.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	14.85	15.41	15.14	14.77	12.68	10.44	10.91	11.56	11.31	12.70	13.83	13.96
10	15.00	15.51	15.33	14.64	12.64	9.97	11.17	11.82	10.63	13.08	14.08	14.22
15	15.22	15.41	15.56	14.62	12.81	9.80	10.67	11.26	11.19	13.05	13.41	14.19
20	15.17	14.85	15.69	13.32	13.17	10.57	10.92	9.92	11.81	13.39	13.74	14.17
25	15.38	14.98	15.53	13.16	10.22	10.84	10.68	10.77	12.27	---	13.89	13.84
EOM	15.35	15.21	15.55	13.43	10.29	11.02	11.33	10.95	12.38	---	13.63	14.17

WTR YR 1990 HIGH 9.59 MAR 12

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	14.97	15.51	15.21	15.24	12.75	10.57	11.07	11.70	11.35	12.83	13.93	13.99
10	15.11	15.69	15.39	14.72	12.70	10.36	11.35	12.03	10.70	13.17	14.11	14.29
15	15.24	15.56	15.62	14.73	12.99	9.99	10.70	11.41	11.34	13.17	13.42	14.23
20	15.21	14.96	15.74	13.57	13.25	10.62	10.98	10.13	11.87	13.41	13.81	14.21
25	15.39	15.04	15.68	13.42	10.36	10.88	10.83	10.83	12.34	---	13.94	13.92
EOM	15.47	15.25	15.62	13.59	10.38	11.04	11.45	11.05	12.41	---	13.69	14.22

WTR YR 1990 LOW 15.88 DEC 22

NOBLE COUNTY

412405085154501. Local number, NO 11.
LOCATION.--Lat 41°24'05", long 85°15'45", in NW¼NE¼SW¼ sec.16, T.34 N., R.11 E., Noble County, Hydrologic Unit 04100003, on the property of Ron Karst on the south side of County Road 350 North, 0.6 mi west of State Highway 3 and about 2.2 mi north of Fort Wayne.
Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled artsian well, diameter 6 in., depth 216 ft, cased to 211 ft, screened to 216 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 1,036.94 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.45 ft above land-surface datum.

PERIOD OF RECORD.--November 1987 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 113.24 ft below land-surface datum, Nov. 6, 1988; lowest, 115.00 ft below land-surface datum, Feb. 17, 1989.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	114.07	113.92	113.84	114.23	114.35	114.43	113.97	114.02	114.16	114.16	114.14	114.34
10	114.04	113.69	114.10	113.91	114.01	114.35	114.05	113.71	114.22	114.25	114.31	114.24
15	114.11	113.65	114.12	114.22	113.98	114.08	114.21	114.12	114.19	114.12	114.33	113.99
20	113.89	113.87	114.42	114.06	114.62	114.54	114.38	113.94	114.04	114.20	114.28	114.23
25	114.50	114.06	113.96	113.62	114.33	114.54	114.25	114.11	114.18	114.36	114.33	113.95
EOM	114.08	114.26	113.91	114.20	114.71	114.20	114.05	114.33	114.17	114.24	114.23	114.28

WTR YR 1990 HIGH 113.62 JAN 25

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	114.35	114.16	113.88	114.36	114.42	114.56	114.12	114.13	114.28	114.26	114.28	114.45
10	114.18	114.03	114.16	114.12	114.08	114.44	114.34	113.87	114.38	114.32	114.38	114.34
15	114.17	113.99	114.24	114.36	114.30	114.12	114.23	114.24	114.25	114.19	114.35	114.06
20	114.07	114.11	114.46	114.44	114.78	114.60	114.55	114.03	114.16	114.33	114.33	114.32
25	114.53	114.19	114.44	114.00	114.89	114.63	114.33	114.32	114.32	114.48	114.37	114.14
EOM	114.20	114.32	114.05	114.42	114.80	114.25	114.16	114.40	114.20	114.35	114.31	114.34

WTR YR 1990 LOW 114.94 FEB 26

NOBLE COUNTY

412405085154504 Local number, NO 14.
LOCATION.--Lat 41°24'05", long 85°15'45", in NW¼NE¼SW¼ sec.16, T.34 N., R.11 E., Noble County, Hydrologic Unit 04100003, on the property of Ron Karst on the south side of County Road 350 North, 0.6 mi west of State Highway 3 and about 22 mi north of Fort Wayne.
Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 145 ft, cased to 140 ft, screened to 145 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 1,037.24 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.50 ft above land-surface datum.

PERIOD OF RECORD.--November 1987 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 112.21 ft below land-surface datum, Dec. 15, 1987; lowest, 114.29 ft below land-surface datum, Feb. 17, 1989.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	113.04	112.89	112.89	113.39	113.43	113.57	113.05	113.02	113.18	113.24	113.24	113.38
10	113.02	112.98	113.25	112.75	113.10	113.41	113.05	112.63	113.39	113.38	113.38	113.36
15	113.20	112.67	113.21	113.50	113.01	113.14	113.31	113.19	113.30	113.17	113.43	113.03
20	112.89	112.87	113.54	113.01	113.89	113.68	113.44	112.95	113.08	113.27	113.39	113.37
25	113.67	113.10	112.86	112.54	113.82	113.63	113.37	113.18	113.37	113.52	113.44	112.96
EOM	113.12	113.36	113.15	113.40	113.93	113.31	113.15	113.48	113.24	113.36	113.38	113.39

WTR YR 1990 HIGH 112.54 JAN 25

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	113.41	113.19	113.00	113.55	113.60	113.80	113.31	113.26	113.45	113.39	113.48	113.48
10	113.32	113.28	113.40	113.12	113.23	113.56	113.35	113.10	113.56	113.47	113.43	113.48
15	113.28	112.88	113.56	113.59	113.35	113.29	113.37	113.35	113.39	113.36	113.48	113.18
20	113.00	113.22	113.88	113.24	114.04	113.85	113.62	113.23	113.19	113.35	113.48	113.45
25	113.75	113.23	113.43	113.07	114.21	113.75	113.45	113.43	113.48	113.63	113.53	113.18
EOM	113.44	113.49	113.67	113.66	114.02	113.35	113.36	113.60	113.32	113.49	113.48	113.49

WTR YR 1990 LOW 114.21 FEB 25

PARKE COUNTY

393619087043001. Local number, PA 6.
LOCATION.--Lat 39°36'19", long 87°04'30", in SE¼SW¼SE¼ sec.33, T.14 N., R.6 W., Parke County, Hydrologic Unit 05120111, on county right-of-way on north side of road at the Parke-Clay county line, 1.7 mi east of Carbon, 2.6 mi east of State Highway 59, and 6.2 mi north of Brazil.
Owner: U.S. Geological Survey.

AQUIFER.--Sandstone of Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 155 ft, cased to 46 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 703 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 2.40 ft above land-surface datum.

PERIOD OF RECORD.--July 1967 to August 1971, October 1981 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 11.53 ft below land-surface datum, Apr. 19, 1970; lowest, 16.87 ft below land-surface datum, Oct. 30, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	15.27	15.13	14.76	14.64	14.19	13.68	13.40	13.55	13.53	14.04	14.35	15.91
10	15.57	15.10	14.78	14.54	13.98	13.56	13.38	13.55	13.65	14.15	14.56	16.27
15	15.56	15.02	14.74	14.55	13.81	13.47	13.51	13.51	13.73	14.11	14.69	15.99
20	15.39	15.01	14.78	14.34	14.02	13.64	13.62	13.46	13.71	14.24	14.86	15.81
25	15.46	14.97	14.58	14.19	13.96	13.57	13.69	13.43	13.87	14.26	15.10	15.54
EOM	15.26	15.04	14.55	14.28	13.82	13.44	13.61	13.54	13.95	14.30	15.41	15.56

WTR YR 1990 HIGH 13.36 APR 4

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	15.39	15.23	14.83	14.67	14.26	13.75	13.49	13.63	13.63	14.11	14.46	15.95
10	15.78	15.24	14.85	14.61	14.05	13.66	13.48	13.68	13.78	14.21	14.60	16.34
15	15.66	15.18	14.84	14.59	13.90	13.55	13.55	13.62	13.76	14.15	14.75	16.08
20	15.45	15.09	14.81	14.42	14.06	13.69	13.71	13.52	13.78	14.31	14.93	15.88
25	15.52	15.05	14.71	14.43	14.03	13.64	13.78	13.51	13.95	14.31	15.15	15.63
EOM	15.36	15.11	14.63	14.37	13.87	13.49	13.72	13.59	13.98	14.37	15.50	15.61

WTR YR 1990 LOW 16.37 SEP 11

POSEY COUNTY

380758087551001. Local number, PY 3.
LOCATION.--Lat 38°07'58", long 87°55'10", in NW¼NW¼SW¼ sec.31, T.4 S., R.13 W., Posey County, Hydrologic Unit 05120113, on property of the New Harmony Park Board, at the east edge of New Harmony.
Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 58 ft, cased to 54ft, screened to 56 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 380 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of floor of shelter, 3.00 ft above land-surface datum.

REMARKS.--Water level affected by Wabash River floods.

PERIOD OF RECORD.--April 1967 to September 1971, September 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.95 ft below land-surface datum, May 14, 1983; lowest, 21.40 ft below land-surface datum, Nov. 4, 8-15, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	15.87	17.20	17.52	18.35	16.07	11.56	12.03	12.43	8.48	11.85	14.15	15.79
10	16.23	17.38	17.72	18.18	15.03	11.65	12.01	12.48	8.73	12.48	14.55	16.03
15	16.57	17.52	17.88	18.19	13.64	11.98	11.69	12.00	9.18	12.99	14.97	16.27
20	16.58	17.40	18.10	17.15	12.72	11.70	11.80	8.16	9.85	13.25	15.27	16.55
25	16.80	17.19	18.29	16.69	11.96	11.58	11.93	5.78	10.38	13.58	15.50	16.79
EOM	17.00	17.38	18.40	16.68	11.67	11.96	12.33	6.74	11.12	13.85	15.58	17.06

WTR YR 1990 HIGH 5.06 MAY 26

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	15.92	17.23	17.55	18.39	16.26	11.62	12.14	12.51	8.64	11.98	14.25	15.81
10	16.32	17.44	17.75	18.24	15.29	11.73	12.38	12.62	8.82	12.60	14.63	16.08
15	16.63	17.54	17.95	18.23	14.39	12.15	11.73	12.21	9.31	13.08	15.04	16.31
20	16.61	17.45	18.13	18.06	12.89	11.93	11.83	8.50	10.06	13.32	15.32	16.61
25	16.83	17.22	18.31	16.77	12.17	11.63	12.02	5.89	10.50	13.62	15.53	16.83
EOM	17.06	17.42	18.42	16.73	11.72	12.03	12.59	7.14	11.25	13.93	15.62	17.11

WTR YR 1990 LOW 18.46 JAN 1

POSEY COUNTY

380546087474301. Local number, PY 5.
LOCATION.--Lat 38°05'46", long 87°47'43", in NE¼NW¼NE¼ sec. 18, T.5S., R.12W., Posey County, Hydrologic Unit 05120113, about 0.5 mi southwest of Wadesville along the west edge of Laurel Hill Cemetary.
Owner: U.S. Geological Survey

AQUIFER.--Sandstone of Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 221 ft, cased to 160 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 460.60 ft (revised) above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.60 ft above land-surface datum.

PERIOD OF RECORD.--September 1988 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 133.23 ft below land-surface datum, Apr. 10, 1990; lowest, 141.98 ft below land-surface datum, Sept. 1, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	137.20	136.54	135.73	136.17	134.99	134.01	133.32	133.45	133.49	134.75	136.22	137.25
10	137.09	136.38	135.72	135.95	134.60	133.75	133.23	133.41	133.66	135.30	136.28	137.64
15	137.17	136.16	135.85	135.97	134.29	133.76	133.38	133.39	133.70	135.76	136.58	137.40
20	136.86	136.25	136.05	135.44	134.63	134.01	133.41	133.26	133.85	135.98	136.92	137.42
25	137.09	136.22	136.05	135.13	134.44	133.77	133.47	133.59	134.13	136.14	137.03	137.42
EOM	136.89	136.21	136.25	135.19	134.25	133.37	133.51	133.58	134.49	136.08	137.28	137.43

WTR YR 1990 HIGH 133.23 APR 10

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	137.42	136.69	135.83	136.27	135.11	134.09	133.42	133.60	133.66	134.88	136.37	137.38
10	137.20	136.53	135.87	136.10	134.68	133.90	133.42	133.54	133.84	135.45	136.33	137.79
15	137.35	136.46	136.11	136.01	134.53	133.83	133.45	133.51	133.74	135.87	136.71	137.53
20	136.98	136.50	136.10	135.54	134.73	134.11	133.50	133.38	133.98	136.15	137.05	137.52
25	137.16	136.34	136.22	135.44	134.57	133.84	133.58	133.74	134.23	136.19	137.08	137.60
EOM	137.01	136.37	136.35	135.30	134.34	133.41	133.68	133.67	134.59	136.19	137.40	137.58

WTR YR 1990 LOW 137.95 SEP 9

PULASKI COUNTY

405916086530701. Local number, PU 6.
LOCATION.--Lat 40°59'16", long 86°53'07", in NW¼SE¼SW¼ sec.4, T.29 N., R.4 W., Pulaski County, Hydrologic Unit 05120106, on private property at the north edge of Francesville.
Owner: Earl Overmeyer.

AQUIFER.--Limestone of Devonian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 8 in., depth 663 ft, cased to 11 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 678.60 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of floor of shelter, 3.00 ft above land-surface datum.

REMARKS.--Water level affected by pumpage and earthquakes.

PERIOD OF RECORD.--July 1956 to February 1971, January 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.03 ft below land-surface datum, June 15, 1958; lowest, 25.33 ft below land-surface datum, Nov. 22, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	15.61	17.66	17.85	20.06	17.39	13.99	14.91	15.43	16.60	18.13	17.33	15.46
10	15.98	18.00	18.26	19.65	16.73	13.67	15.24	15.48	17.13	18.64	17.58	16.04
15	16.67	18.19	18.73	19.70	16.76	12.68	14.89	15.75	17.23	18.44	15.14	16.43
20	16.76	17.35	19.29	19.44	16.67	14.17	14.73	15.47	17.43	18.60	13.94	17.05
25	17.46	17.32	19.34	18.80	14.53	14.48	14.73	15.89	17.82	17.85	13.92	17.33
EOM	17.37	17.79	19.61	18.55	14.14	14.76	15.15	16.51	17.94	17.65	14.82	18.07

WTR YR 1990 HIGH 12.68 MAR 15

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	16.08	17.92	18.05	20.34	17.77	14.50	15.36	15.84	16.89	18.50	17.78	15.75
10	16.53	18.65	18.69	19.98	16.98	14.01	15.60	16.00	17.37	18.87	17.88	16.37
15	16.89	18.48	19.17	20.06	17.00	13.15	15.13	15.99	17.51	18.75	15.49	16.67
20	17.14	17.81	19.56	19.80	17.01	14.32	14.93	15.94	19.28	18.93	14.20	17.38
25	17.78	17.69	19.85	19.48	14.85	14.73	15.04	16.20	18.19	18.08	14.16	17.58
EOM	17.89	18.15	20.11	18.76	14.38	14.98	15.65	16.76	18.15	17.85	15.10	18.41

WTR YR 1990 LOW 20.57 DEC 23

PULASKI COUNTY

410739086365201. Local number, PU 7.
LOCATION.--Lat 41°07'39", long 86°36'52", in NE¼NE¼NW¼ sec.23, T.31 N., R.2 W., Pulaski County, Hydrologic Unit 05120106, in the Winamac State Fish and Game Area, 0.8 mi southwest of Beardstown.
Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 105 ft, cased to 98 ft, screened to 100 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 715.26 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of floor of shelter, 2.50 ft above land-surface datum.

PERIOD OF RECORD.--August 1967 to September 1971, September 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.69 ft below land-surface datum, June 15, 1981; lowest, 11.86 ft below land-surface datum, Nov. 6-9, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.84	10.27	10.02	10.42	9.53	7.83	7.42	7.39	7.90	9.02	9.25	8.43
10	9.93	10.33	10.12	10.34	9.38	7.41	7.51	7.48	8.01	9.27	9.40	8.65
15	10.09	10.31	10.23	10.33	9.30	6.95	7.12	7.14	8.28	9.22	9.14	8.79
20	10.08	10.00	10.35	10.16	9.28	7.29	7.14	7.09	8.56	9.26	7.72	8.97
25	10.19	9.94	10.34	9.94	7.89	7.39	7.10	7.45	8.67	8.89	7.68	9.09
EOM	10.22	9.99	10.44	9.77	7.77	7.41	7.36	7.77	8.76	9.04	8.10	9.28

WTR YR 1990 HIGH 6.92 MAR 13

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.88	10.31	10.04	10.49	9.59	7.90	7.51	7.42	7.95	9.09	9.28	8.48
10	10.02	10.41	10.18	10.40	9.41	7.66	7.60	7.64	8.07	9.29	9.44	8.70
15	10.12	10.37	10.29	10.35	9.33	7.04	7.16	7.17	8.33	9.27	9.16	8.82
20	10.13	10.05	10.37	10.21	9.32	7.31	7.27	7.22	8.60	9.42	7.95	9.00
25	10.21	9.97	10.38	10.07	8.00	7.43	7.15	7.52	8.70	8.90	7.76	9.13
EOM	10.29	10.02	10.49	9.84	7.81	7.43	7.45	7.81	8.78	9.08	8.17	9.33

WTR YR 1990 LOW 10.53 JAN 1

PULASKI COUNTY

405605086551701. Local number, PU 8.
LOCATION.--Lat 40°56'05", long 86°55'17", in SE¼SE¼NW¼ sec.30, T.29 N., R.4 W., Pulaski County, Hydrologic Unit 05120106, at the Arrowhead Country Resource Conservation and Development Office property, 11 mi east of Rensselaer on State Highway 114.
Owner: U.S. Geological Survey.

AQUIFER.--Limestone of Middle Silurian Period, Wabash Formation.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 6 in., depth 102 ft, cased to 12 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 683.76 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.50 ft above land-surface datum.

PERIOD OF RECORD.--August 1986 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.79 ft below land-surface datum, Feb. 22, 1990; lowest, 11.74 ft below land-surface datum, Aug. 25, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	3.85	4.22	4.07	3.32	2.46	2.57	2.72	2.79	2.98	3.67	2.64	3.77
10	4.00	4.31	4.23	3.38	2.79	.99	2.06	3.05	3.19	4.09	3.53	3.64
15	4.29	3.65	4.38	3.68	2.45	2.08	1.81	2.34	3.55	3.40	2.64	3.83
20	3.99	3.55	4.52	3.17	2.22	2.73	2.28	2.62	3.69	2.16	1.70	4.06
25	4.15	3.81	4.28	2.60	1.87	2.79	2.75	2.80	3.67	3.01	2.81	---
EOM	4.16	4.03	4.20	3.15	2.20	2.60	3.03	3.26	2.78	2.42	3.38	---

WTR YR 1990 HIGH .79 FEB 22

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	3.96	4.39	4.14	3.37	2.57	2.69	2.86	2.90	3.13	3.82	2.97	3.85
10	4.25	4.56	4.35	3.63	2.88	1.76	2.90	3.19	3.31	4.21	3.66	3.73
15	4.34	4.20	4.51	3.78	3.07	2.30	2.03	2.44	3.63	3.54	2.88	3.88
20	4.23	3.79	4.59	3.33	2.37	2.83	2.65	2.89	3.84	3.44	2.58	4.09
25	4.20	3.90	4.39	3.22	2.11	2.86	2.81	3.14	3.73	3.21	2.99	---
EOM	4.33	4.10	4.32	3.32	2.32	2.65	3.18	3.31	3.04	2.82	3.47	---

WTR YR 1990 LOW 4.69 DEC 21

RANDOLPH COUNTY

401532085085301. Local number, RA 3.
LOCATION.--Lat 40°15'32", long 85°08'53", in NE¼NE¼SE¼ sec.23, T.21 N., R.12 E., Randolph County, Hydrologic Unit 05120103, at the east edge of Purdue University Agriculture Experiment Station, about 5.5 mi north of Farmland.
Owner: U.S. Geological Survey.

AQUIFER.--Limestone of Silurian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 54 ft, cased to 33 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 970 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of floor of shelter, 3.85 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 7.84 ft below land-surface datum, June 6, 1981; lowest, 15.18 ft below land-surface datum, Oct. 12, 13, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	11.03	10.85	10.39	10.14	9.08	9.49	9.59	9.34	10.52	11.50	11.38	10.90
10	11.22	10.23	10.72	10.09	9.08	9.68	9.08	9.40	9.23	11.75	11.71	11.04
15	11.52	9.59	10.90	10.29	8.13	9.09	9.21	8.87	9.91	10.68	11.65	10.83
20	11.15	9.47	11.20	9.94	9.26	9.63	9.60	8.91	10.42	10.92	11.49	11.01
25	10.87	9.91	11.03	9.61	9.32	9.98	9.54	9.71	10.91	10.79	10.85	10.92
EOM	10.69	10.35	10.28	10.24	9.34	9.79	9.81	10.30	11.17	11.13	10.37	11.20

WTR YR 1990 HIGH 8.13 FEB 15

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	11.16	11.00	10.46	10.22	9.14	9.65	9.74	9.40	10.68	11.60	11.52	10.98
10	11.41	10.49	10.82	10.21	9.19	9.85	9.91	9.72	9.46	11.82	11.80	11.09
15	11.55	10.35	11.07	10.43	9.16	9.24	9.30	9.01	10.09	10.74	11.68	10.90
20	11.32	9.66	11.25	10.33	9.36	9.68	9.74	9.17	10.54	10.98	11.57	11.09
25	10.93	9.96	11.21	9.93	9.47	10.04	9.66	9.85	11.03	10.88	10.92	11.00
EOM	10.90	10.44	10.94	10.36	9.38	10.00	10.02	10.36	11.21	11.25	10.50	11.29

WTR YR 1990 LOW 11.89 AUG 12

ST. JOSEPH COUNTY

414138086265101. Local number, SJ 30.
LOCATION.--Lat 41°41'38", long 86°26'51", in SW¼SW¼SW¼ sec.32, T.38 N., R.1 E., St. Joseph County, Hydrologic Unit 07120001, 4.1 mi southeast of New Carlisle.
Owner: U.S. Geological Survey.

AQUIFER.--Sand of Pleistocene age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 5 in., depth 87.5 ft, cased to 83.3 ft, screened to 87.5 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 737 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of floor of shelter, 3.20 ft above land-surface datum.

PERIOD OF RECORD.--May 1980 to June 1990 (discontinued).

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.50 ft below land-surface datum, Mar. 20, 1982; lowest, 10.03 ft below land-surface datum, Oct. 15-17, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.69	9.10	8.45	8.81	7.61	6.59	6.66	6.82	5.86	---	---	---
10	8.76	9.14	8.54	8.75	7.53	6.28	6.72	6.79	6.24	---	---	---
15	8.86	9.15	8.62	8.69	7.61	5.97	6.65	5.78	6.49	---	---	---
20	8.92	8.72	8.69	8.43	7.88	6.24	6.60	5.25	6.87	---	---	---
25	9.00	8.50	8.69	8.22	6.78	6.39	6.59	5.43	7.05	---	---	---
EOM	9.05	8.45	8.75	7.73	6.61	6.56	6.71	5.65	---	---	---	---

WTR YR 1990 HIGH 5.24 MAY 19

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.71	9.11	8.46	8.82	7.66	6.66	6.74	6.88	5.94	---	---	---
10	8.80	9.16	8.57	8.79	7.56	6.45	6.82	6.91	6.30	---	---	---
15	8.87	9.18	8.64	8.69	7.64	6.04	6.68	5.87	6.55	---	---	---
20	8.94	8.79	8.70	8.50	7.90	6.29	6.62	5.31	6.97	---	---	---
25	9.01	8.53	8.72	8.28	6.98	6.43	6.62	5.47	7.07	---	---	---
EOM	9.06	8.46	8.78	7.79	6.64	6.60	6.80	5.68	---	---	---	---

WTR YR 1990 LOW 9.18 NOV 12

ST. JOSEPH COUNTY

413120086055601. Local number, SJ 31.
LOCATION.--Lat 41°31'20", long 86°05'56", in SW¼SW¼SW¼ sec.31, T.36 N., R.4 E., St. Joseph County, Hydrologic Unit 07120001, 4 mi west of Wakarusa.
Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 6 in., depth 109 ft, cased to 104 ft, screened to 109 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 830.50 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.40 ft above land-surface datum.

PERIOD OF RECORD.--August 1986 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 8.37 ft below land-surface datum, Mar. 1, 1987; lowest, 12.64 ft below land surface datum, Oct. 6,7, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.90	11.03	10.43	10.84	9.62	8.98	8.66	8.72	8.68	---	---	9.46
10	10.94	10.92	10.57	10.57	9.45	8.78	8.68	8.68	8.76	---	9.60	9.50
15	11.10	10.89	10.81	10.48	9.32	8.65	8.62	8.64	8.98	---	9.62	9.49
20	11.01	10.77	11.01	10.14	9.53	8.77	8.63	8.47	---	---	9.53	9.51
25	11.14	10.68	11.01	9.78	9.21	8.84	8.62	8.53	---	---	9.47	9.29
EOM	11.06	10.62	10.86	9.82	9.19	8.78	8.65	8.60	---	---	9.37	9.35

WTR YR 1990 HIGH 8.47 MAY 20

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.97	11.09	10.47	10.87	9.66	9.01	8.72	8.78	8.74	---	---	9.51
10	11.02	11.03	10.63	10.59	9.48	8.88	8.76	8.76	8.81	---	9.66	9.58
15	11.13	10.99	10.85	10.51	9.41	8.67	8.65	8.70	9.09	---	9.65	9.53
20	11.08	10.82	11.05	10.27	9.57	8.82	8.69	8.52	---	---	9.63	9.55
25	11.18	10.73	11.15	9.96	9.28	8.87	8.67	8.65	---	---	9.50	9.35
EOM	11.12	10.65	10.93	9.85	9.22	8.82	8.72	8.65	---	---	9.40	9.38

WTR YR 1990 LOW 11.26 OCT 18

SHELBY COUNTY

393943085490901. Local number, SH 2.
LOCATION.--Lat 39°39'43", long 85°49'09", in SW¼SW¼NW¼ sec.13, T.14 N., R.6 E., Shelby County, Hydrologic Unit 05120204, on the county right-of-way at the intersection of County Roads 950 North and 200 West, 3.0 mi south of Carrollton.
Owner: U.S. Geological Survey.

AQUIFER.--Limestone of Devonian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 150 ft, cased to 128 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 816.10 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of floor of shelter, 3.00 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 15.90 ft below land-surface datum, May 27, 1968; lowest, 22.65 ft below land-surface datum, Feb. 7, 1977.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	18.95	19.92	19.07	---	17.55	17.93	17.89	18.47	18.20	---	19.12	20.00
10	19.19	19.61	19.48	---	17.55	18.32	18.13	18.39	18.60	---	19.29	20.13
15	19.48	18.96	19.68	---	17.27	17.11	17.72	17.27	18.87	---	19.48	20.18
20	19.63	18.18	19.82	19.46	17.23	17.76	18.21	16.67	18.99	19.13	19.71	20.22
25	19.75	18.62	19.93	18.39	17.55	18.19	17.97	17.78	18.97	18.38	19.55	20.29
EOM	19.77	19.02	19.72	18.88	17.71	18.42	18.35	17.68	19.24	19.00	19.79	20.42

WTR YR 1990 HIGH 16.50 MAY 17

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	19.00	19.98	19.11	---	1 .67	18.07	18.03	18.52	18.25	---	19.20	20.04
10	19.25	19.68	19.48	---	17.61	18.32	18.36	18.39	18.74	---	19.38	20.16
15	19.48	19.53	19.75	---	18.00	17.22	17.78	17.50	18.98	---	19.49	20.18
20	19.63	18.24	19.89	19.46	17.37	17.82	18.22	16.96	19.15	19.28	19.82	20.22
25	19.77	18.62	19.97	19.47	17.73	18.26	18.09	17.78	19.07	18.49	19.55	20.30
EOM	19.91	19.05	19.96	18.96	17.75	18.42	18.52	17.82	19.29	19.10	19.83	20.46

WTR YR 1990 LOW 20.46 SEP 30

STARKE COUNTY

411342086365001. Local number, SK 2.
LOCATION.--Lat 41°13'42", long 86°36'56", in NW¼NE¼NW¼ sec.14, T.32 N., R.2 W., Starke County, Hydrologic Unit 07120001, on private property in the southeast angle of intersection of U.S. Highway 35 and County Road 500 South, and 5.0 mi south of Knox.
Owner: Samuel A. Craigmile.

AQUIFER.--Gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 85 ft, cased to 77 ft, screened to 85 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 712.97 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of floor of shelter, 3.00 ft above land-surface datum.

PERIOD OF RECORD.--October 1935 to December 1952 (random instantaneous measurements only), August 1963 to October 1966, June 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.83 ft below land-surface datum, June 17, 1949; lowest, 6.99 ft below land-surface datum, Aug. 2, 1939, Sept. 17, 18, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.70	5.94	5.77	5.72	5.04	4.27	4.50	4.59	4.83	5.24	5.07	5.04
10	5.78	5.91	5.84	5.74	5.11	3.64	4.36	4.76	4.58	5.37	5.31	5.15
15	5.84	5.50	5.91	5.79	5.16	3.92	4.15	4.25	4.87	5.23	5.22	5.17
20	5.79	5.53	5.96	5.48	5.14	4.31	4.23	4.21	5.00	4.73	3.95	5.30
25	5.82	5.64	5.94	5.23	3.90	4.42	4.40	4.47	5.06	4.59	4.33	5.37
EOM	5.85	5.73	5.98	5.31	4.03	4.44	4.64	4.74	5.03	4.97	4.78	5.50

WTR YR 1990 HIGH 3.58 MAR 11

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.73	5.95	5.79	5.73	5.06	4.33	4.57	4.65	4.86	5.28	5.15	5.08
10	5.84	5.97	5.88	5.78	5.13	3.96	4.65	4.85	4.67	5.41	5.35	5.20
15	5.85	5.93	5.94	5.81	5.17	4.00	4.19	4.28	4.91	5.28	5.27	5.20
20	5.82	5.57	5.97	5.51	5.15	4.34	4.44	4.32	5.05	5.38	4.10	5.33
25	5.83	5.66	5.97	5.49	4.00	4.47	4.46	4.55	5.10	4.68	4.43	5.41
EOM	5.91	5.75	6.01	5.34	4.11	4.47	4.69	4.77	5.06	5.03	4.84	5.52

WTR YR 1990 LOW 6.04 JAN 1

STEUBEN COUNTY

414204085054002. Local number, SB 6.
LOCATION.--Lat 41°42'04", long 85°05'40", in SE¼SE¼SW¼ sec.36, T.38 N., R.12 W., Steuben County, Hydrologic Unit 04050001, 0.5 east of Panama on the north side of the Lake Gage Congregational Church.
Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 6 in., depth 76 ft, cased to 71 ft, screened to 76 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 987.89 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.60 ft above land-surface datum.

PERIOD OF RECORD.--August 1986 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 14.88 ft below land-surface datum, June 22, 1990; lowest, 19.12 ft below land-surface datum, Oct. 17, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	17.04	17.33	17.51	17.74	17.61	16.90	16.06	15.75	14.97	15.03	15.38	15.69
10	17.07	17.36	17.55	17.72	17.57	16.69	15.98	15.68	14.99	15.09	15.48	15.78
15	17.18	17.36	17.60	17.74	17.48	16.47	15.94	15.65	14.95	15.10	15.48	15.80
20	17.17	17.38	17.69	17.65	17.55	16.34	15.87	15.31	14.93	15.16	15.51	15.87
25	17.29	17.43	17.64	17.59	17.23	16.21	15.83	15.12	14.99	15.25	15.57	15.88
EOM	17.29	17.48	17.72	17.65	17.05	16.11	15.82	15.08	14.98	15.34	15.64	15.97

WTR YR 1990 HIGH 14.88 JUN 22

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	17.10	17.37	17.54	17.80	17.66	16.92	16.11	15.80	15.05	15.06	15.44	15.72
10	17.18	17.46	17.62	17.77	17.61	16.77	16.04	15.80	15.02	15.13	15.50	15.80
15	17.22	17.44	17.66	17.77	17.51	16.50	15.96	15.72	14.98	15.15	15.50	15.84
20	17.20	17.47	17.71	17.69	17.59	16.39	15.92	15.36	14.96	15.20	15.56	15.90
25	17.31	17.48	17.69	17.74	17.32	16.26	15.87	15.21	15.03	15.27	15.59	15.91
EOM	17.36	17.53	17.81	17.72	17.11	16.14	15.85	15.13	14.99	15.37	15.67	16.02

WTR YR 1990 LOW 17.86 JAN 1

TIPPECANOE COUNTY

402734087033401. Local number, TC 17.
LOCATION.--Lat 40°27'34", long 87°03'34", NW¼NE¼NE¼ sec.11, T.23 N., R.6 W., Tippecanoe County, Hydrologic Unit 05120108, on the property of Purdue University and at the southeast corner of the intersection of County Roads 300 North and 825 West, about 3.0 mi southeast of Otterbein.
Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age (Teays Valley aquifer).

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 212.5 ft, cased to 207.5 ft, screened to 212.5 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 681 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 3.60 ft above land-surface datum.

PERIOD OF RECORD.--August 1989 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 110.98 ft below land-surface datum, October 2, 1989; lowest, 121.28 ft below land-surface datum, August 18, 1989.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	111.33	---	115.08	116.96	118.14	118.34	118.22	118.57	118.98	119.11	119.11	119.32
10	---	112.61	115.71	116.86	117.90	118.23	118.32	118.37	119.10	119.19	119.27	119.22
15	---	113.39	116.03	117.29	117.66	117.94	118.61	118.75	119.05	119.04	119.35	119.01
20	---	114.15	116.51	117.32	118.59	118.68	118.78	118.67	118.86	119.14	119.19	119.20
25	---	114.61	116.19	117.02	118.55	118.73	118.65	118.85	119.12	119.35	119.34	118.92
EOM	---	115.38	116.39	117.82	118.71	118.34	118.52	119.16	119.12	119.20	119.26	119.25

WTR YR 1990 HIGH 110.98 OCT 2

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	111.46	---	115.11	117.07	118.19	118.49	118.41	118.74	119.13	119.20	119.30	119.46
10	---	113.09	115.76	117.10	117.98	118.41	118.54	118.67	119.28	119.25	119.32	119.30
15	---	113.58	116.18	117.45	117.93	118.17	118.64	118.92	119.08	119.14	119.38	119.09
20	---	114.29	116.60	117.67	118.71	118.78	118.94	118.81	118.97	119.22	119.28	119.26
25	---	114.71	116.64	117.40	118.93	118.81	118.76	119.06	119.24	119.44	119.39	119.14
EOM	---	115.42	116.53	118.03	118.82	118.37	118.75	119.23	119.13	119.32	119.33	119.31

WTR YR 1990 LOW 119.52 SEP 4

WATER-QUALITY RECORDS

402734087033401. Local number, TC 17.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	SPECIFIC CONDUCTANCE (US/CM) (00095)	SPECIFIC CONDUCTANCE LAB (US/CM) (90095)	PH (STANDARD UNITS) (00400)	PH LAB (STANDARD UNITS) (00403)	TEMPERATURE WATER (DEG C) (00010)	OXYGEN, DISSOLVED (MG/L) (00300)	HARDNESS TOTAL (MG/L AS CACO3) (00900)	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)
AUG 17...	1725	120.0	597	621	7.1	7.4	12.0	0.2	330	1

DATE	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)	ALKALINITY WAT WH TOT IT FIELD MG/L AS CACO3 (00419)	ALKALINITY LAB (MG/L AS CACO3) (90410)	BICARBONATE WATER WH IT FIELD MG/L AS HCO3 (00450)	CARBONATE WATER WH IT FIELD MG/L AS CO3 (00447)	SULFATE DISSOLVED (MG/L AS SO4) (00945)
AUG 17...	81	30	6.6	1.4	320	325	267	397	0	47

DATE	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)	IRON, DISSOLVED (UG/L AS FE) (01046)
AUG 17...	4.0	0.2	18	--	385	0.288	0.038	0.11	7

TIPPECANOE COUNTY

402734087033402. Local number, TC 18.
LOCATION.--Lat 40°27'34", long 87°03'34", NW¼NE¼NE¼ sec.11, T.23 N., R.6 W., Tippecanoe County, Hydrologic Unit 05120108, on the property of Purdue University and at the southeast corner of the intersection of County Roads 300 North and 825 West, about 3.0 mi southeast of Otterbein.
Owner: U.S. Geological Survey

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 6 in., depth 64 ft, cased to 59 ft, screened to 64 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 681 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 3.50 ft above land-surface datum.

PERIOD OF RECORD.--August 1989 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 17.60 ft below land-surface datum, March 12, 1990; lowest, 21.24 ft below land-surface datum, Jan. 16, 1990.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	20.69	20.90	20.78	21.11	20.70	19.19	18.72	19.05	19.27	19.96	20.29	20.62
10	20.73	20.95	20.86	21.13	20.57	18.72	18.89	19.17	19.22	20.09	20.43	20.68
15	20.82	20.80	20.94	21.20	20.29	17.64	18.75	19.33	19.40	20.12	20.39	20.73
20	20.79	20.67	21.06	21.11	20.03	18.04	18.81	18.74	19.49	20.22	20.42	20.82
25	20.86	20.71	21.08	21.01	19.25	18.34	18.73	18.92	19.70	20.35	20.39	20.85
EOM	20.88	20.78	21.13	21.05	19.22	18.55	18.89	19.18	19.82	20.20	20.53	20.96

WTR YR 1990 HIGH 17.60 MAR 12

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	20.74	20.92	20.79	21.14	20.76	19.24	18.80	19.13	19.30	20.00	20.36	20.63
10	20.78	21.00	20.89	21.16	20.59	19.21	18.94	19.29	19.24	20.11	20.45	20.70
15	20.83	21.00	20.98	21.23	20.51	17.73	18.76	19.37	19.44	20.16	20.41	20.75
20	20.80	20.71	21.09	21.15	20.07	18.07	18.85	18.82	19.57	20.25	20.50	20.83
25	20.87	20.73	21.11	21.10	19.30	18.39	18.77	19.00	19.74	20.37	20.42	20.87
EOM	20.91	20.80	21.15	21.08	19.25	18.61	18.98	19.22	19.85	20.22	20.55	20.98

WTR YR 1990 LOW 21.24 JAN 16

WATER-QUALITY RECORDS

402734087033402. Local number, TC 18.

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	SPECIFIC CONDUCTANCE (US/CM) (00095)	SPECIFIC CONDUCTANCE LAB (US/CM) (90095)	PH (STANDARD UNITS) (00400)	PH LAB (STANDARD UNITS) (00403)	TEMPERATURE WATER (DEG C) (00010)	OXYGEN, DISSOLVED (MG/L) (00300)	HARDNESS TOTAL (MG/L AS CACO3) (00900)	HARDNESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)
AUG 18...	1020	21.40	704	714	7.2	7.4	11.0	0.2	370	81

DATE	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)	ALKALINITY WAT WH TOT IT FIELD MG/L AS CACO3 (00419)	ALKALINITY LAB (MG/L AS CACO3) (90410)	BICARBONATE WATER WH IT FIELD MG/L AS HCO3 (00450)	CARBONATE WATER WH IT FIELD MG/L AS CO3 (00447)	SULFATE DISSOLVED (MG/L AS SO4) (00945)
AUG 18...	95	33	6.5	1.4	290	292	286	356	0	87

DATE	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)	IRON, DISSOLVED (UG/L AS FE) (01046)
AUG 18...	12	0.2	17	306	430	0.014	0.230	0.02	2200

VANDERBURGH COUNTY

380608087395901. Local number, VA 6.
LOCATION.--Lat 38°06'08", long 87°39'59", in SE¼SW¼NW¼ sec.8, T.5 S., R.11 W., Vanderburgh County, Hydrologic Unit 05120113, on county right-of-way at the intersection of Buente and New Harmony Roads, 1.0 mi southwest of Armstrong.
Owner: U.S. Geological Survey.

AQUIFER.--Sandstone of Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 125 ft, cased to 80 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 446.57 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of floor of shelter, 3.40 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 24.88 ft below land-surface datum, Apr. 3, 4, 1968; lowest, 35.43 ft below land-surface datum, Sept. 2, 3, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	34.28	34.35	33.91	34.12	33.53	33.05	32.93	32.65	32.73	33.23	33.42	34.04
10	34.40	34.31	33.98	34.01	33.17	33.04	32.94	32.59	32.78	33.39	33.52	34.05
15	34.57	33.98	34.16	34.00	32.89	32.86	33.01	32.60	32.77	33.25	33.60	33.88
20	34.36	34.04	34.20	33.59	33.30	33.12	32.98	32.44	32.76	33.38	33.61	34.22
25	34.67	34.06	34.07	33.40	33.25	33.08	32.99	32.46	32.89	33.46	33.71	34.30
EOM	34.52	34.17	33.96	33.65	33.19	32.91	32.78	32.65	33.14	33.62	33.88	34.39

WTR YR 1990 HIGH 32.34 MAY 28

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	34.45	34.49	34.01	34.23	33.62	33.18	33.09	32.77	32.86	33.35	33.53	34.16
10	34.56	34.49	34.10	34.08	33.27	33.14	33.22	32.75	32.87	33.49	33.63	34.12
15	34.73	34.36	34.39	34.11	33.16	32.96	33.08	32.76	32.84	33.33	33.67	33.99
20	34.45	34.14	34.29	33.66	33.37	33.20	33.09	32.53	32.87	33.57	33.76	34.43
25	34.76	34.19	34.27	33.76	33.36	33.16	33.15	32.59	33.01	33.56	33.77	34.47
EOM	34.67	34.29	34.14	33.72	33.25	33.05	32.95	32.69	33.19	33.69	33.95	34.47

WTR YR 1990 LOW 33.05 DEC 12

VANDERBURGH COUNTY

380626087344401. Local number, VA 7.
LOCATION.--Lat 38°06'26", long 87°34'44", in NE¼NW¼NW¼ sec.7, T.5 S., R.10 W., Vanderburgh County, Hydrologic Unit 05120113, on north side of Salem United Church of Christ 0.5 mi north of Darmstadt.
Owner: U.S. Geological Survey.

AQUIFER.--Inglefield Sandstone Member, Patoka formation of Pennsylvanian Period.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 6 in., depth 70 ft, cased to 39.3 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 475.35 ft above National Geodetic Vertical Datum of 1929. Measuring point: top of floor of shelter, 4.04 ft above land-surface datum.

PERIOD OF RECORD.--June 1986 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 20.00 ft below land-surface datum, May 28, 1990; lowest, 25.06 ft below land-surface datum, Oct. 29, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	22.83	22.73	22.53	22.99	22.21	21.46	20.97	20.75	20.20	21.16	21.90	22.64
10	22.89	22.75	22.84	22.73	21.58	21.54	20.85	20.50	20.33	21.39	22.07	22.73
15	23.02	22.58	22.89	22.90	21.19	21.28	20.93	20.64	20.37	21.41	22.22	22.62
20	22.92	22.72	23.26	22.45	21.89	21.94	21.01	20.25	20.47	21.58	22.22	22.87
25	23.19	22.71	22.84	21.95	21.97	21.86	20.75	20.20	20.90	21.88	22.39	22.71
EOM	22.79	23.08	22.81	22.38	21.83	21.20	20.68	20.27	21.02	21.86	22.47	23.03

WTR YR 1990 HIGH 20.00 MAY 28

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	23.06	22.91	22.65	23.10	22.37	21.61	21.15	20.93	20.37	21.29	22.08	22.76
10	23.06	23.14	22.93	23.00	21.70	21.67	21.17	20.82	20.47	21.48	22.11	22.83
15	23.14	22.88	23.31	23.02	21.51	21.56	21.02	20.79	20.45	21.62	22.28	22.74
20	23.05	22.90	23.40	22.67	22.01	22.15	21.19	20.37	20.63	21.69	22.30	22.93
25	23.27	22.86	23.10	22.48	22.19	21.98	20.91	20.38	21.03	22.08	22.47	22.92
EOM	23.10	23.22	23.02	22.58	21.92	21.33	20.99	20.43	21.11	22.00	22.61	23.12

WTR YR 1990 LOW 23.91 DEC 22

VIGO COUNTY

392820087242601. Local number, VI 7.
LOCATION.--Lat 39°28'20", long 87°24'26", in SE¼SE¼NE¼ sec.21, T.12 N., R.9 W., Vigo County, Hydrologic Unit 05120111, on the campus of Indiana State University, in Terre Haute.
Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 6 in., depth 70 ft, cased to 67 ft, screened to 70 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 502 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of floor of shelter, 3.00 ft above land-surface datum.

PERIOD OF RECORD.--January 1970 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 41.80 ft below land-surface datum, June 7, 1974; lowest, 51.90 ft below land-surface datum, Sept. 29 to Oct. 1, 1972.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	45.55	46.36	46.49	47.18	46.96	45.16	44.43	45.10	43.91	44.22	44.39	44.37
10	45.64	46.48	46.57	47.18	46.78	44.86	44.56	45.26	44.01	44.40	44.45	44.50
15	45.83	46.59	46.66	47.17	46.52	44.77	44.66	45.37	44.00	44.65	44.54	44.68
20	45.99	46.63	46.80	47.07	46.25	44.43	44.79	45.00	44.02	44.65	44.68	44.82
25	46.15	46.57	46.93	47.04	45.93	44.11	44.88	44.38	44.03	44.52	44.64	44.94
EOM	46.26	46.52	47.08	46.99	45.68	44.18	44.96	44.01	44.08	44.39	44.42	45.12

WTR YR 1990 HIGH 43.90 JUN 6

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	45.57	46.38	46.50	47.19	46.97	45.25	44.49	45.15	43.93	44.25	44.42	44.38
10	45.69	46.51	46.58	47.19	46.82	44.88	44.60	45.30	44.02	44.45	44.46	44.52
15	45.85	46.62	46.70	47.20	46.58	44.80	44.67	45.38	44.01	44.68	44.57	44.70
20	46.01	46.66	46.83	47.08	46.31	44.42	44.80	45.08	44.04	44.67	44.70	44.84
25	46.18	46.59	46.95	47.08	46.00	44.12	44.90	44.50	44.05	44.54	44.67	44.97
EOM	46.29	46.53	47.11	47.00	45.77	44.23	44.99	44.04	44.10	44.41	44.44	45.16

WTR YR 1990 LOW 47.22 JAN 12

WABASH COUNTY

404424085422801. Local number, WB 3.
LOCATION. -Lat 40°44'24", long 85°42'28", in SE¼SE¼SW¼ sec.35, T.27 N., R.7 E., Wabash County, Hydrologic Unit 05120101, on State Highway 124, 3.5 mi west of the county line and in the southwest corner of United Telephone Company property.
Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 105 ft, cased to 100 ft, screened to 105 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 850.45 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.50 ft above land-surface datum.

PERIOD OF RECORD.--August 1986 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 44.35 ft below land-surface datum, May 20, 1990; lowest, 48.20 ft below land-surface datum, Oct. 30, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	46.44	46.32	46.16	46.55	45.90	45.26	44.87	44.80	44.86	45.43	45.66	45.64
10	46.46	46.19	46.34	46.22	45.52	45.25	44.93	44.59	44.93	45.55	45.85	45.63
15	46.58	46.15	46.38	46.35	45.38	44.87	44.93	44.69	44.99	45.45	45.89	45.50
20	46.44	46.22	46.65	46.13	45.61	45.18	45.02	44.35	45.04	45.54	45.63	45.66
25	46.76	46.30	46.45	45.74	45.26	45.26	44.93	44.53	45.18	45.67	45.45	45.55
EOM	46.42	46.42	46.36	46.06	45.43	45.12	44.80	44.92	45.28	45.64	45.42	45.83

WTR YR 1990 HIGH 44.35 MAY 20

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	46.59	46.47	46.20	46.62	45.94	45.36	44.98	44.89	44.94	45.48	45.76	45.71
10	46.56	46.43	46.42	46.30	45.56	45.36	45.11	44.68	45.05	45.60	45.88	45.68
15	46.64	46.39	46.50	46.42	45.58	44.91	44.96	44.83	45.04	45.48	45.91	45.55
20	46.51	46.35	46.70	46.38	45.69	45.22	45.17	44.40	45.11	45.64	45.73	45.72
25	46.82	46.37	46.75	45.94	45.53	45.30	45.01	44.64	45.30	45.73	45.47	45.67
EOM	46.53	46.48	46.47	46.15	45.48	45.23	44.92	45.10	45.31	45.73	45.48	45.88

WTR YR 1990 LOW 46.99 DEC 23

WABASH COUNTY

403948085414601. Local number, WB 4.
LOCATION.--Lat 40°39'48", long 85°41'46", in NE¼SE¼NE¼ sec. 35, T.26N., R.7E., Wabash County, Hydrologic Unit 05120103, on America Road, 1.3 mi southeast of La Fountaine.
Owner: U.S. Geological Survey

AQUIFER.--Sand and gravel of the Pleistocene age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 118 ft, cased to 113 ft, screened to 118 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 837.40 ft (revised) above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.30 ft above land-surface datum.

PERIOD OF RECORD.--August 1988 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 38.19 ft below land-surface datum, Nov. 5, 1988; lowest, 44.58 ft below land-surface datum, Dec. 23, 1989.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	43.81	43.77	43.71	44.06	43.60	42.94	42.59	42.48	42.49	42.74	42.89	43.03
10	43.80	43.67	43.95	43.65	43.15	42.81	42.60	42.31	42.54	42.81	43.06	42.97
15	43.90	43.64	44.00	43.84	42.93	42.56	42.76	42.58	42.51	42.72	43.11	42.80
20	43.82	43.81	44.21	43.59	43.46	43.06	42.84	42.29	42.41	42.82	43.01	42.97
25	44.16	43.94	43.79	43.25	43.23	43.03	42.70	42.41	42.61	42.99	43.03	42.80
EOM	43.85	44.20	43.78	43.71	43.26	42.73	42.52	42.64	42.66	42.91	42.97	43.07

WTR YR 1990 HIGH 42.27 JUN 23

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	44.04	43.98	43.78	44.13	43.70	43.05	42.76	42.64	42.63	42.81	43.03	43.12
10	43.90	43.99	44.01	43.80	43.21	42.93	42.83	42.55	42.66	42.87	43.09	43.03
15	43.94	43.88	44.11	43.93	43.17	42.65	42.79	42.71	42.56	42.83	43.16	42.86
20	43.88	43.99	44.26	43.88	43.55	43.15	42.98	42.37	42.49	42.93	43.08	43.03
25	44.22	44.05	44.16	43.51	43.55	43.10	42.78	42.57	42.70	43.06	43.07	42.96
EOM	44.02	44.26	43.88	43.85	43.32	42.76	42.65	42.70	42.68	43.01	43.05	43.15

WTR YR 1990 LOW 44.58 DEC 23

WARRICK COUNTY

380624087164801. Local number, WK 4.
LOCATION.--Lat 38°06'24", long 87°16'48", in S½SW¼SW¼ sec.2, T.5 S., R.8 W., Warrick County, Hydrologic Unit 05140201, on State Highway 61, 4.2 mi north of Boonville.
Owner: U.S. Geological Survey.

AQUIFER.--Sandstone from lower Dugger formation of Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 6 in., depth 105 ft, cased to 30 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 446.18 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of floor of shelter, 4.09 ft above land-surface datum.

PERIOD OF RECORD.--June 1986 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 8.31 ft below land-surface datum, May 28, 1990; lowest, 18.20 ft below land-surface datum, Oct. 30, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	12.70	12.28	11.95	11.77	9.74	9.67	9.16	9.04	8.76	10.13	10.69	10.85
10	12.84	12.16	12.07	11.58	9.45	9.84	9.31	9.03	8.81	10.41	10.75	10.96
15	12.97	12.05	12.18	11.65	9.32	9.82	9.17	8.92	9.15	10.58	10.87	10.61
20	12.73	11.95	12.41	11.13	9.41	9.78	9.24	8.68	9.48	10.87	10.66	10.51
25	12.58	11.93	12.49	10.52	9.51	9.69	9.21	8.62	9.70	10.87	10.63	10.26
EOM	12.34	12.04	12.15	10.26	9.64	9.35	9.31	8.53	10.00	11.06	10.67	10.37

WTR YR 1990 HIGH 8.31 MAY 28

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	12.73	12.33	11.99	11.83	9.78	9.73	9.22	9.08	8.81	10.16	10.87	10.88
10	12.89	12.22	12.10	11.62	9.53	9.86	9.46	9.10	8.90	10.46	10.76	11.01
15	12.99	12.16	12.28	11.67	9.50	9.85	9.18	9.03	9.22	10.64	10.91	10.67
20	12.82	12.00	12.44	11.38	9.48	9.81	9.27	8.70	9.51	10.93	10.70	10.54
25	12.63	11.96	12.56	10.59	9.60	9.75	9.26	8.65	9.77	10.91	10.65	10.30
EOM	12.38	12.05	12.28	10.33	9.66	9.42	9.37	8.60	10.07	11.13	10.70	10.41

WTR YR 1990 LOW 12.99 OCT 15

WASHINGTON COUNTY

383012086124501. Local number, WA 2.
LOCATION.--Lat 38°30'12", long 86°12'45", in NE¼SW¼SW¼ sec.20, T.1 N., R.3 E., Washington County, Hydrologic Unit 05140104, on West Washington School Road, 5.1 mi north of Fredericksburg.
Owner: U.S. Geological Survey.

AQUIFER.--Limestone of Mississippian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depty 142.5 ft, cased to 101 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 780 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 3.50 ft above land-surface datum.

PERIOD OF RECORD.--August 1989 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 65.57 ft below land-surface datum, June 8, 1990; lowest, 73.28 ft below land-surface datum, Sept. 30, 1990.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	71.44	71.85	71.81	72.11	70.40	70.13	71.34	71.79	70.23	71.12	71.93	73.01
10	71.45	71.87	72.00	72.15	70.05	70.32	71.34	71.96	67.71	71.41	72.06	73.11
15	71.87	71.83	72.02	72.21	67.38	70.69	71.45	71.83	69.44	---	72.31	73.05
20	71.76	71.83	72.35	70.19	69.54	70.95	71.64	68.37	70.34	---	72.64	73.11
25	71.93	71.84	72.33	71.14	69.99	71.22	71.69	70.06	70.53	---	72.68	73.17
EOM	71.97	71.95	72.07	71.13	70.00	71.17	71.77	70.32	70.71	---	72.81	73.26

WTR YR 1990 HIGH 65.57 JUN 8

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	71.44	71.88	71.84	72.17	70.45	70.21	71.43	71.84	70.25	71.21	71.95	73.04
10	71.45	71.98	72.08	72.18	70.23	70.42	71.55	72.06	68.42	71.43	72.09	73.12
15	71.87	71.94	72.22	72.25	70.27	70.80	71.50	71.95	69.64	---	72.34	73.09
20	71.76	71.89	72.39	71.93	69.84	70.95	71.67	69.19	70.38	---	72.65	73.14
25	71.93	71.94	72.47	71.42	70.08	71.32	71.78	70.16	70.53	---	72.70	73.23
EOM	71.98	72.02	72.22	71.21	70.07	71.25	71.86	70.34	70.71	---	72.86	73.28

WTR YR 1990 LOW 73.28 SEP 30

WATER-QUALITY RECORDS

WATER QUALITY DATA, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	SPECIFIC CONDUCTANCE (US/CM) (00095)	SPECIFIC CONDUCTANCE LAB (US/CM) (90095)	PH (STANDARD UNITS) (00400)	PH LAB (STANDARD UNITS) (00403)	TEMPERATURE WATER (DEG C) (00010)	OXYGEN, DISSOLVED (MG/L) (00300)	HARDNESS TOTAL (MG/L AS CACO3) (00900)	HARDNESS NONCARB DISSOLV FLD, AS CACO3 (MG/L) (00904)
JUL 31...	1540	76.00	1260	1230	7.0	7.5	12.5	0.2	720	500

DATE	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)	ALKALINITY WAT WH TOT IT FIELD MG/L AS CACO3 (00419)	ALKALINITY LAB (MG/L AS CACO3) (90410)	BICARBONATE WATER WH IT FIELD MG/L AS HCO3 (00450)	CARBONATE WATER WH IT FIELD MG/L AS CO3 (00447)	SULFATE DISSOLVED (MG/L AS SO4) (00945)
JUL 31...	130	97	4.1	1.0	222	227	219	276	0	540

DATE	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L) (70301)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N) (00631)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	PHOSPHORUS DISSOLVED (MG/L AS P) (00666)	IRON, DISSOLVED (UG/L AS FE) (01046)
JUL 31...	0.7	1.8	8.2	884	919	0.011	0.103	0.03	20

WAYNE COUNTY

394426085080601. Local number, WE 6.
LOCATION.--Lat 39°44'26", long 85°08'06", in SE¼NW¼NE¼ sec.24, T.15 N., R.12 E., Wayne County, Hydrologic Unit 05080003, on county right-of-way, 750 ft east of State Highway 1, and 4.0 mi south of East Germantown. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 6 in., depth 49 ft, cased to 47 ft, screened to 49 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 888 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of collar in shelter, 3.60 ft above land-surface datum.

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

REVISED RECORDS.--WDR IN-81-1: 1980.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 10.07 ft below land-surface datum, Aug. 3, 1979; lowest, 21.68 ft below land-surface datum, Feb. 1, 1977.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	16.12	17.12	16.74	17.29	16.13	13.56	13.10	12.95	11.84	13.42	13.35	14.04
10	16.25	17.24	16.86	17.17	15.23	13.84	13.19	12.87	12.19	13.69	13.56	14.15
15	16.41	17.26	16.97	17.13	14.65	13.11	13.14	12.50	12.50	13.31	13.80	13.96
20	16.57	16.91	17.10	17.12	13.16	12.95	13.28	10.39	12.77	13.21	14.04	13.66
25	16.75	16.72	17.25	16.91	13.21	13.04	12.87	10.92	12.97	13.11	14.21	13.56
EOM	16.95	16.70	17.33	16.75	13.32	13.24	12.89	11.40	13.18	13.19	14.13	13.66

WTR YR 1990 HIGH 10.39 MAY 20

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	16.14	17.14	16.76	17.31	16.45	13.62	13.12	12.97	11.90	13.47	13.39	14.06
10	16.28	17.27	16.88	17.19	15.35	13.88	13.22	12.91	12.26	13.74	13.60	14.18
15	16.44	17.31	16.99	17.13	14.93	13.14	13.16	12.64	12.56	13.37	13.84	14.04
20	16.60	16.96	17.13	17.14	13.24	12.96	13.29	10.41	12.80	13.22	14.07	13.69
25	16.79	16.75	17.27	16.94	13.25	13.07	12.90	11.02	13.01	13.13	14.24	13.57
EOM	16.98	16.71	17.43	16.77	13.36	13.24	12.93	11.50	13.22	13.23	14.17	13.69

WTR YR 1990 LOW 17.43 DEC 30

WELLS COUNTY

404331085064701. Local number, WL 4.
LOCATION.--Lat 40°43'31", long85°06'47", in SE¼NW¼NE¼ sec.12, T.26 N., R.12 E., Wells County, Hydrologic Unit 05120101, 1000 ft south of north entrance to Ouabache State Recreation Area, and 3.5 mi southeast of Bluffton. Owner: U.S. Geological Survey.

AQUIFER.--Silty dolomite of Silurian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 79 ft, cased to 46 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 826.04 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of floor of shelter, 2.35 ft above land-surface datum.

PERIOD OF RECORD.--January 1967 to current year. (Semi-annual tape-down readings only September 1971 to December 1981.)

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 17.70 ft below land-surface datum, Apr. 4, 1973; lowest, 25.21 ft below land-surface datum, Sept. 24, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	23.33	23.44	23.15	22.86	21.73	21.44	21.16	21.10	20.84	22.19	22.30	22.17
10	23.37	23.39	23.25	22.88	21.69	21.41	21.17	20.81	20.70	22.49	22.47	22.25
15	23.62	23.04	23.35	23.06	21.48	20.86	20.93	20.45	20.81	22.04	22.48	22.24
20	23.51	22.85	23.55	22.61	21.21	21.29	21.18	19.86	21.26	22.14	21.70	22.37
25	23.65	23.09	23.27	22.30	21.27	21.41	21.17	20.71	21.62	21.82	21.73	22.21
EOM	23.45	23.23	23.28	22.84	21.40	21.33	21.36	20.98	21.84	22.20	21.78	22.46

WTR YR 1990 HIGH 19.86 MAY 20

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	23.52	23.58	23.21	23.03	21.89	21.62	21.38	21.19	21.03	22.36	22.45	22.26
10	23.61	23.72	23.38	23.09	21.79	21.54	21.39	21.22	20.83	22.58	22.57	22.34
15	23.68	23.51	23.54	23.20	22.01	21.04	21.02	20.67	21.00	22.08	22.54	22.34
20	23.56	23.10	23.62	22.81	21.36	21.40	21.30	20.19	21.39	22.25	21.81	22.44
25	23.73	23.16	23.45	22.81	21.47	21.51	21.26	21.03	21.72	21.89	21.91	22.34
EOM	23.69	23.33	23.39	23.05	21.47	21.39	21.53	21.20	21.94	22.30	21.92	22.56

WTR YR 1990 LOW 23.84 OCT 18

WHITE COUNTY

404914086403001. Local number, WI 4.
LOCATION.--Lat 40°49'14", long 86°40'30", in NW¼SW¼NW¼ sec.5, T.27 N., R.2 E., White County, Hydrologic Unit 05120106, in the southwest corner of the Pious Chapel property, 4.25 mi north of Idaville.
Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 6 in., depth 134 ft, cased to 129 ft, screened to 134 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 683.06 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.20 ft above land-surface datum.

PERIOD OF RECORD.--July 1986 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.04 ft below land-surface datum, Mar. 13, 14, 1990; lowest, 12.45 ft below land-surface datum, Aug. 5, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.60	4.84	4.78	5.06	3.90	2.74	3.33	3.46	3.46	9.27	5.53	---
10	4.69	4.90	4.90	4.92	3.79	2.62	3.44	3.50	3.67	10.56	5.36	4.39
15	4.85	4.85	4.99	4.95	3.75	2.09	3.04	3.37	3.81	6.34	4.42	4.48
20	4.81	4.61	5.11	4.94	3.39	2.79	3.15	2.56	5.48	5.60	3.91	4.66
25	4.87	4.67	4.97	4.53	2.32	3.10	3.08	2.98	4.22	4.82	---	4.73
EOM	4.81	4.81	5.08	4.47	2.47	3.26	3.36	3.33	7.34	8.26	---	4.92

WTR YR 1990 HIGH 2.04 MAR 13

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.68	4.89	4.81	5.15	4.01	2.86	3.43	3.53	3.53	9.85	6.36	---
10	4.79	5.05	4.97	4.97	3.82	2.83	3.52	3.62	3.72	11.43	5.65	4.42
15	4.89	4.99	5.06	5.00	3.89	2.24	3.10	3.46	4.30	6.98	4.46	4.53
20	4.82	4.69	5.12	5.30	3.44	2.84	3.19	2.69	5.83	5.95	4.01	4.70
25	4.89	4.71	5.07	4.71	2.38	3.15	3.15	3.03	4.81	4.91	---	4.77
EOM	4.90	4.84	5.15	4.53	2.52	3.30	3.47	3.37	8.39	9.12	---	4.95

WTR YR 1990 LOW 11.71 JUL 9

WHITLEY COUNTY

410337085264201. Local number, WY 3.
LOCATION.--Lat 41°03'37", long 85°26'42", in NW¼SE¼NW¼ sec.18, T.30 N., R.10 E., Whitley County, Hydrologic Unit 05120104, on the county right-of-way of Evergreen Road, and 0.75 mi north of Laud.
Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 191 ft, cased to 187 ft, screened to 191 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 870 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of floor of shelter, 2.68 ft above land-surface datum.

PERIOD OF RECORD.--December 1966 to September 1971, August 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 49.30 ft below land-surface datum, Mar. 27, 1976; lowest, 52.96 ft below land-surface datum, Dec. 7, 1989.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	52.35	52.45	52.50	---	---	52.09	51.62	51.55	51.48	51.81	51.82	51.62
10	52.31	52.43	52.63	---	52.37	51.95	51.63	51.33	51.64	51.92	51.94	51.58
15	52.41	52.31	52.64	---	52.23	51.78	51.69	51.53	51.65	51.74	51.89	51.45
20	52.31	52.49	---	---	52.62	51.97	51.73	51.41	51.61	51.82	51.77	51.60
25	52.67	52.59	---	---	52.40	51.90	51.64	51.48	51.70	51.92	51.79	51.46
EOM	52.47	52.71	---	---	52.36	51.74	51.53	51.66	51.73	51.92	51.66	51.69

WTR YR 1990 HIGH 51.33 MAY 10

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	52.56	52.62	52.56	---	---	52.23	51.79	51.68	51.69	51.93	51.94	51.73
10	52.48	52.74	52.76	---	52.44	52.11	51.80	51.57	51.72	52.02	51.99	51.64
15	52.54	52.60	52.79	---	52.40	51.88	51.73	51.64	51.73	51.81	51.97	51.55
20	52.37	52.67	---	---	52.70	52.03	51.82	51.55	51.73	51.95	51.90	51.67
25	52.75	52.68	---	---	52.56	52.02	51.77	51.66	51.82	52.02	51.84	51.57
EOM	52.66	52.79	---	---	52.43	51.81	51.67	51.72	51.78	52.00	51.75	51.79

WTR YR 1990 LOW 52.96 DEC 7

CALENDAR FOR WATER YEAR 1990

1989

OCTOBER

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

NOVEMBER

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

DECEMBER

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

1990

JANUARY

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

FEBRUARY

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

MARCH

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

APRIL

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

MAY

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

JUNE

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

JULY

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

AUGUST

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

SEPTEMBER

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