CALENDAR FOR WATER YEAR 1987

1986

OCTOBER

S	M	T	W	T	F	S
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NOVEMBER

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DECEMBER

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1987

JANUARY

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FEBRUARY

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MARCH

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APRIL

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31						

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AUGUST

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30	31					

SEPTEMBER

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Water Resources Data Indiana

Water Year 1987

by Dale R. Glatfelter, Ronald E. Thompson, Jr., and Graham E. Ne

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT IN-87-1
Prepared in cooperation with the State of Indiana
and with other agencies

DEPARTMENT OF THE INTERIOR

DONALD PAUL HODEL, Secretary

U.S. GEOLOGICAL SURVEY

Dallas L. Peck, Director

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Indianapolis, Indiana 46278

1988

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 quality of water 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:

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16. Abstract (Limit: 200 words)

Water resources data for the 1987 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 187 stream-gaging stations, stage for 1 stream station, stage and contents for 1 reservoir, water quality for 3 streams and 3 observation wells, and water levels for 79 lakes and 87 observation wells. Also included are records of peak flows for 23 crest-stage, partial-record stations. 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.

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

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ILLUSTRATIONS

TABLES

STREAMFLOW STATIONS, IN DOWNSTREAM ORDER, FOR WHICH RECORDS ARE PUBLISHED

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

LAKE-LEVEL STATIONS FOR WHICH RECORDS ARE PUBLISHED

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 1987 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 187 gaging stations, stage at 1 gaging station, stage and contents at 1 reservoir, water quality at 3 stream sites and 3 observation wells, water levels at 79 lakes, peak flows at 23 crest-stage partial-record sites, and water levels at 87 observation wells. Locations of the streamflow and water-quality sites, crest-stage partial-record sites, and ground-water observation wells are shown on figures 6, 7, and 9. The number of lakes by county having 1987 water-level records are shown on figure 8. Additional water data were collected at various sites not involved in the systematic data-collection program and are published as miscellaneous measurements. 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). 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 quantities and quality of surface water, and ground-water levels.

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-87-1." 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 coalesced 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, James M. Ridenour, Director, through the Bureau of Water and Mineral Resources, Thomas M. Bruns, Deputy Director

State of Indiana, Department of Environmental Management, Nancy A. Maloley, Commissioner, and David M. Wagner, Deputy Commissioner

State of Indiana, Department of Highways, John P. Isenbarger, 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, and Indianapolis; 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.; and Hoosier Energy.

SUMMARY OF HYDROLOGIC CONDITIONS

Precipitation patterns in Indiana vary both seasonally and geographically. Although some precipitation falls each month, the greatest amounts usually fall during late winter and spring. Average annual amounts (fig. 1) range from about 34 inches in northeastern Indiana to about 46 inches in south-central Indiana. Consumption due to evapotranspiration is relatively uniform throughout the State 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 Indiana to about 18 inches in the extreme south.

Precipitation amounts during water year 1987 departed significantly from normal over much of Indiana. The departures ranged from about -12 inches in the south to about +2 inches in the north (fig. 3). Runoff also departed significantly from normal over much of the State. Departures ranged from about -8 inches in west-central Indiana to about normal in northwestern Indiana (fig. 4).

New record precipitation totals for September and October fell during 1986 over many areas in Indiana. For example, Indianapolis received 13.5 inches during these months, the most since records began in 1871 and 13 percent more than the previous record set in 1926. October 1986 monthly mean discharges at the three Indiana index stations (fig. 5)--Mississinewa River at Marion (03326500); East Fork White River at Shoals (03373500); and Wabash River at Mount Carmel, IL (03377500)--all were much greater than their 1951-80 medians. Mean flows at these sites ranged from slightly more than three times the median at Mount Carmel to almost six and one-half times the median at Marion.

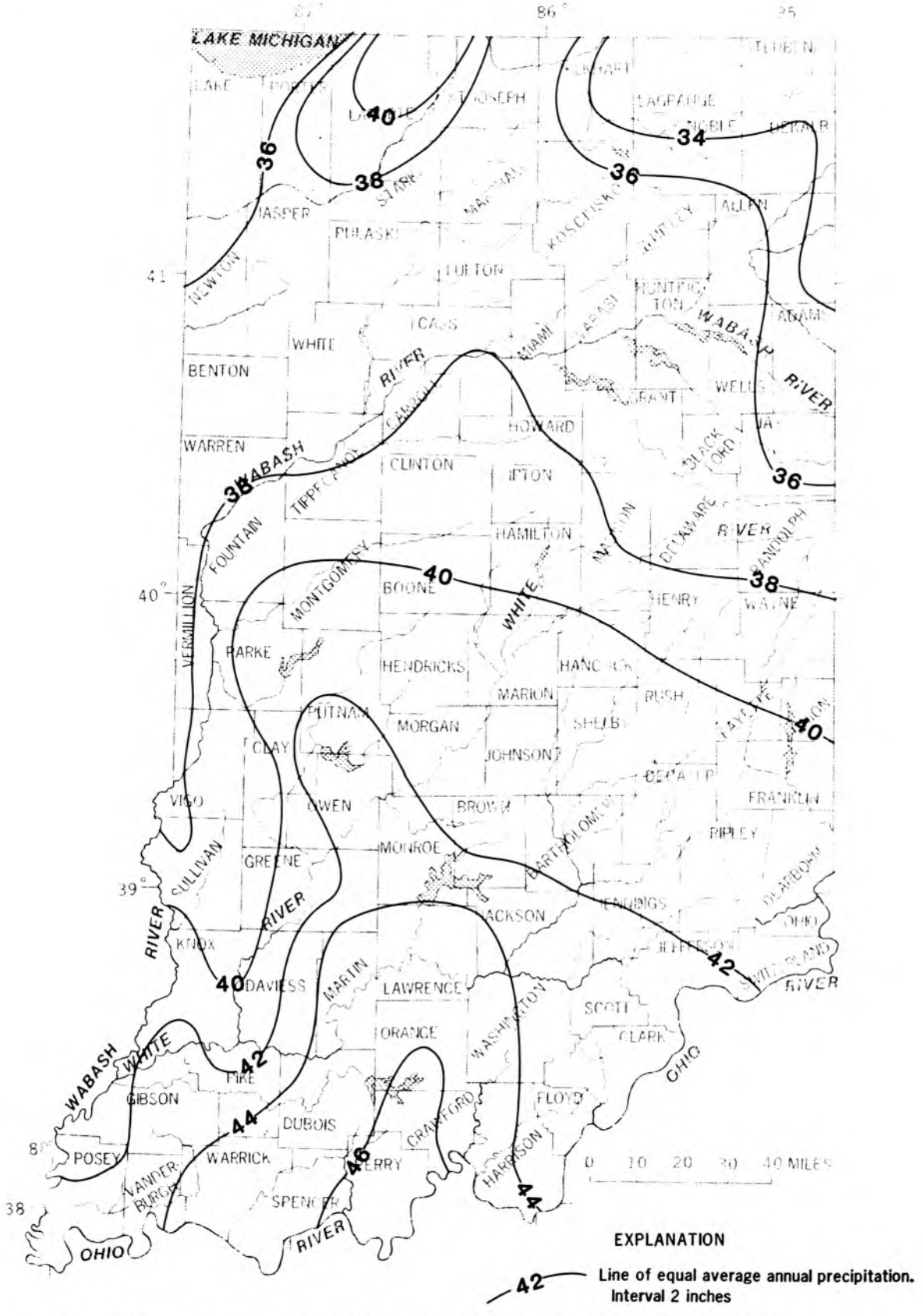

Figure 1.-- Average annual precipitation in Indiana, 1951-80.

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

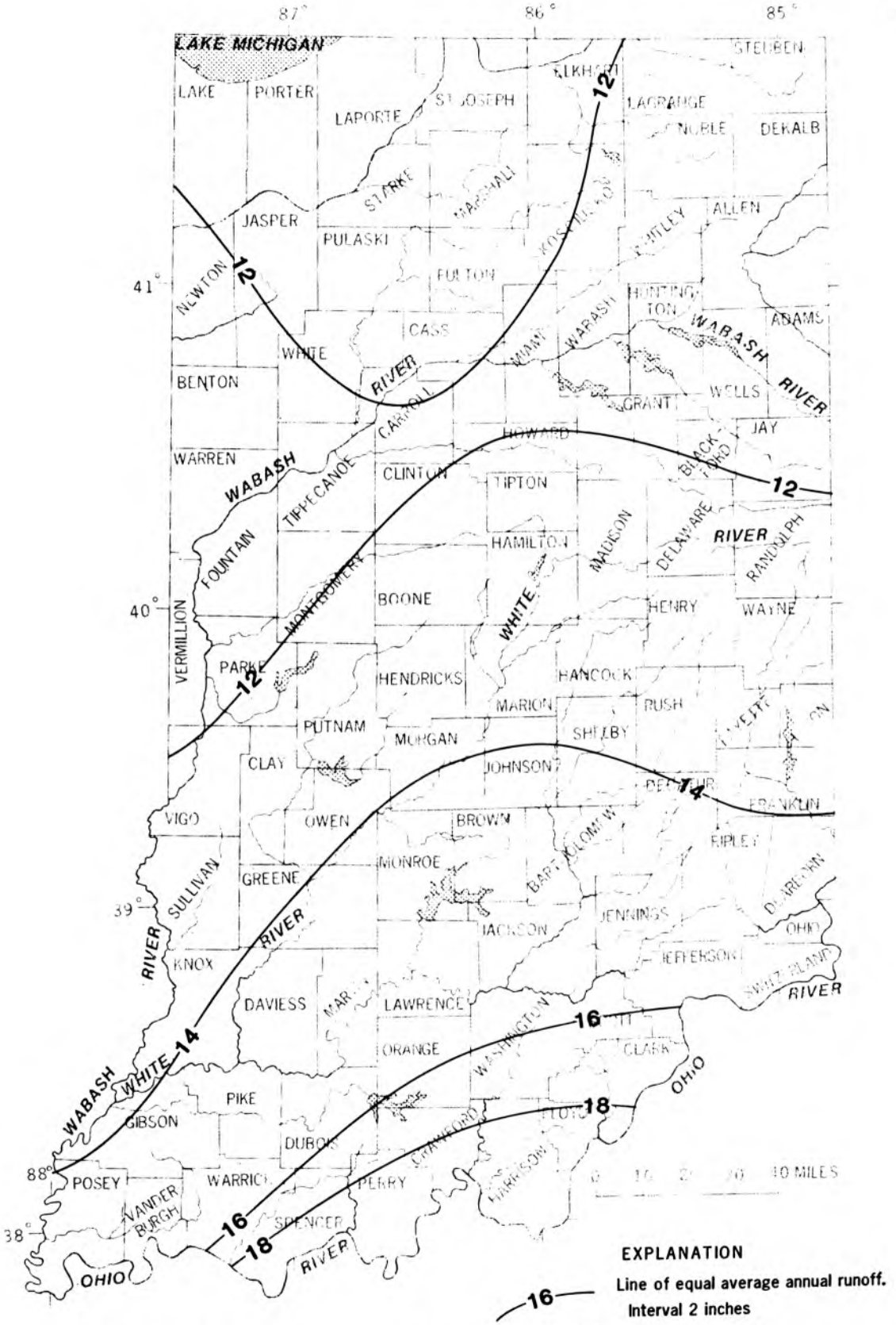

Figure 2.– Average annual runoff in Indiana, 1951-80.

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

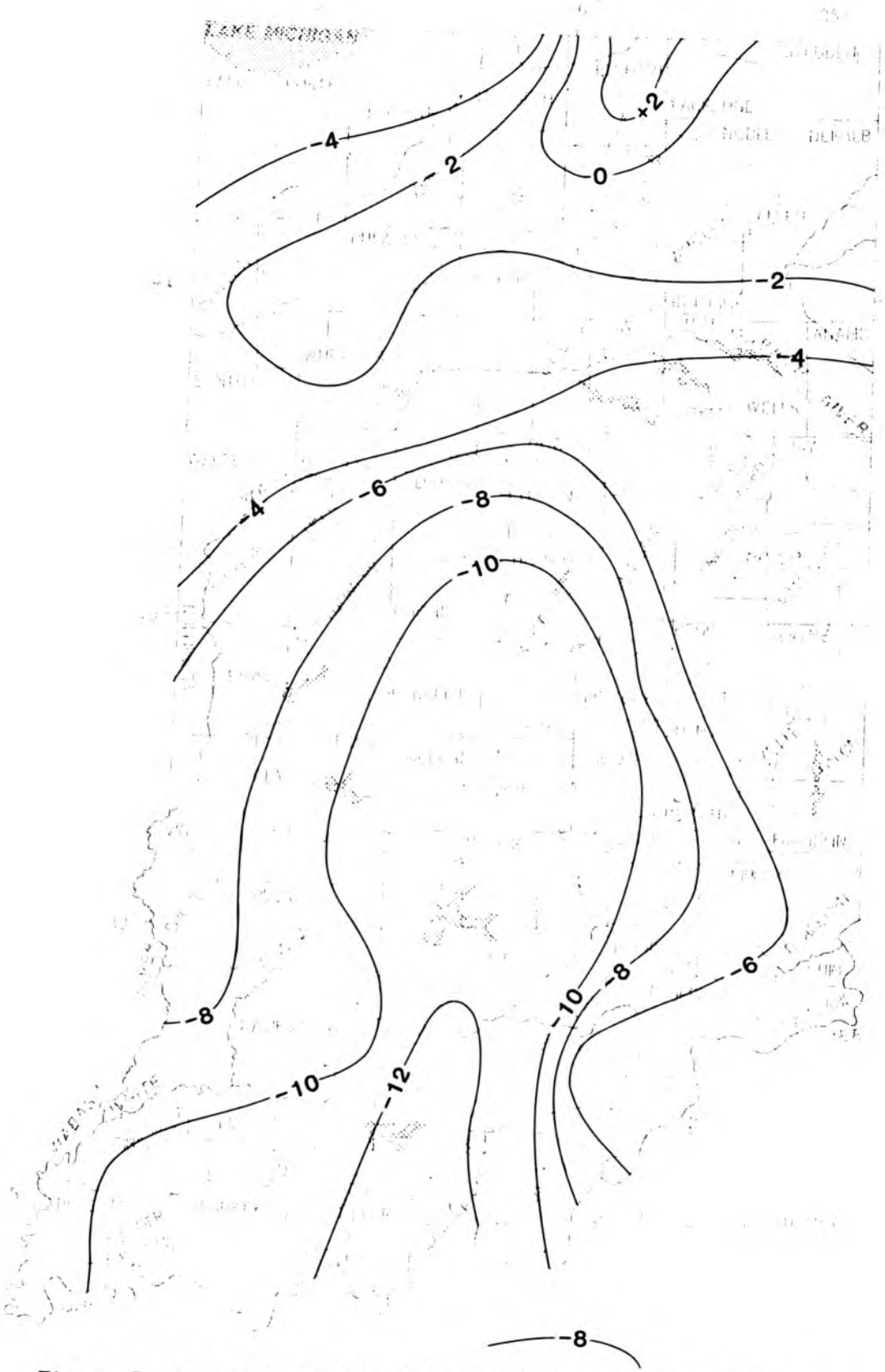

Figure 3.-- Departure of precipitation from normal in Indiana, October 1986 to September 1987.
(Data from National Atmospheric Administration, 1986-87)

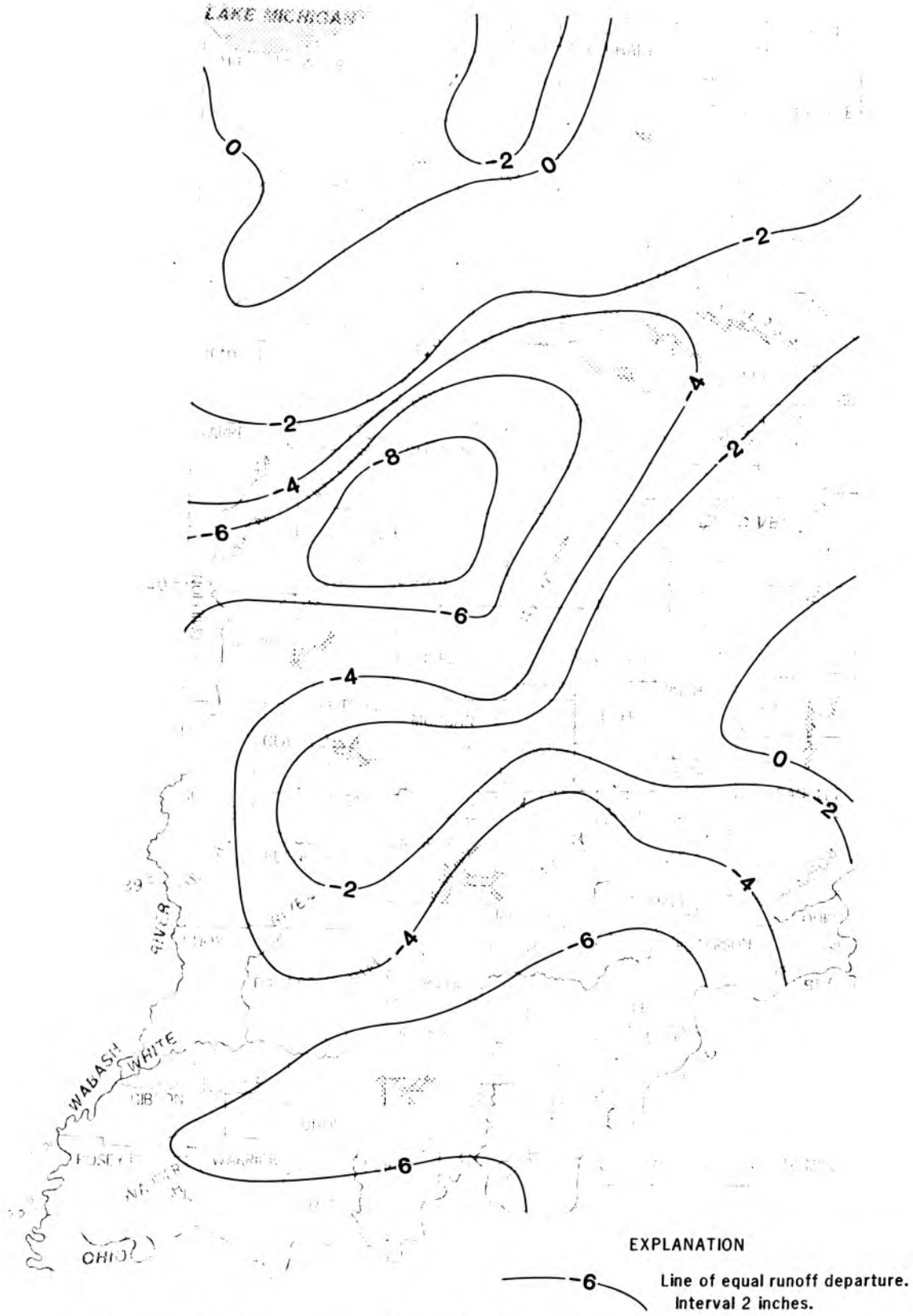

Figure 4.– Departure of runoff from normal in Indiana, October 1986 to September 1987.

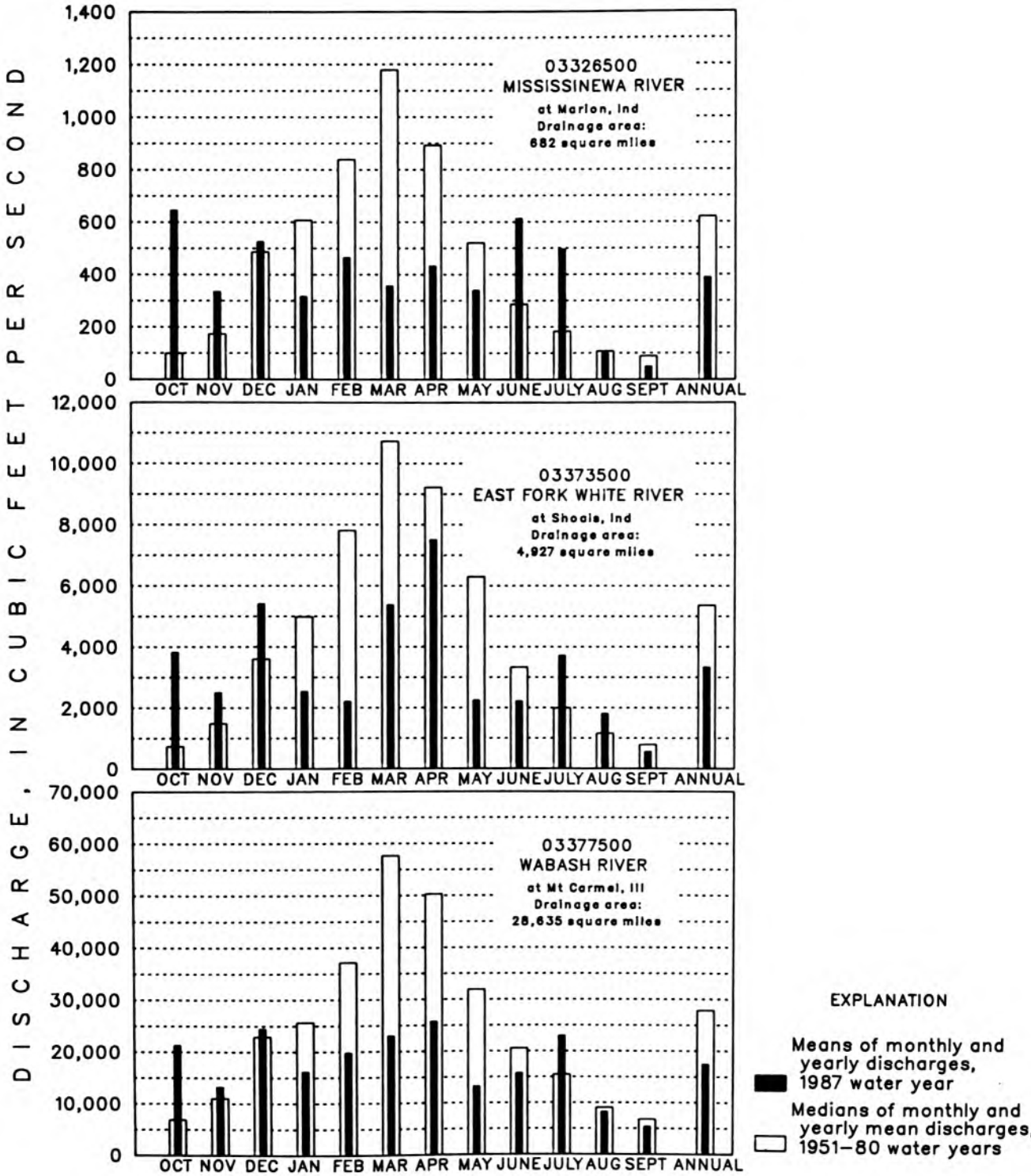

Figure 5. —— Mean discharges at Indiana index stations during 1987 water year and median discharges for period 1951–80.

November was much drier than October and had precipitation amounts closer to normal statewide. Precipitation departures from normal ranged from about -1.3 inches in west-central Indiana to about +0.5 inch in southeastern Indiana. Monthly mean discharges at all three index stations were greater than their medians, ranging from slightly more than the median at Mount Carmel to slightly less than two times the median at Marion.

December was drier than November and had precipitation amounts below normal throughout the State. Departures from normal ranged from about -1.3 inches in south-central Indiana to about -0.4 inch in southeastern Indiana. Mean flows at Marion and Mount Carmel were very close to their medians, while the mean at Shoals was one and one-half times its median.

Precipitation during January 1987 varied from much below normal to near normal in a south-to-north trend. Departures ranged from about -2.3 inches in south-central Indiana to about +0.9 inch in north-central Indiana. Monthly mean flows at the index stations were all approximately one-half of their medians.

February precipitation departures from normal were similar to those of January; however, the variability had no distinct geographical trend. Departures ranged from about -1.7 inches in east-central to about normal in southwestern Indiana. Mean flows at the index stations ranged from about one-quarter of the median at Shoals to about one-half of the median at both Marion and Mount Carmel.

Precipitation amounts during March were all below normal except for one area of the State. Departures ranged from about -1.9 inches in southwestern Indiana to about +0.1 inch in southeastern Indiana. The index station monthly mean flows ranged from about one-third of the median at Marion to one-half of the median at Shoals.

April precipitation amounts were all below normal statewide. Departures from normal ranged from about -1.5 inches in several areas to about -0.7 inch in west-central Indiana. Index station mean flows ranged from about one-half of the median at both Marion and Mount Carmel to about three-quarters of the median at Shoals.

Precipitation departures from normal during May varied once again in a south-to-north trend. The departures ranged from about -2.2 inches in southeastern Indiana to about +2.3 inches in northwestern Indiana. Monthly mean flows at the index stations ranged from about one-third of the median at Shoals to almost two-thirds of the median at Marion.

During June the monthly precipitation departures from normal were dependent on whether each area had been the recipient of thunderstorm downpours. For example, Winchester, in east-central Indiana, received about 6 inches in a 2-hour period. Area precipitation departures from normal ranged from about -0.6 inch in southeastern Indiana to about +1.3 inches in west-central Indiana. Index station mean flows ranged from about two-thirds of the median at Shoals to more than twice the median at Marion.

July precipitation was also of the thunderstorm type over most of the State. Departures from normal ranged from about -0.7 inch in northeastern Indiana to about +2.4 inches in east-central Indiana. Mean flows at all three index stations were greater than their medians, ranging from about one and one-half times the median at Mount Carmel to more than two and one-half times the median at Marion.

Area precipitation departures from normal during August returned to the south-to-north trend. Departures ranged from about -2.9 inches in south-central Indiana to about +2.7 inches in northwestern Indiana. All of the central and southern areas received below normal amounts of precipitation, while all of the northern areas received above normal amounts. Index station mean flows ranged from slightly less than the median at Marion and Mount Carmel to about one and one-half times the median at Shoals.

September precipitation amounts were all below normal. Departures ranged from about -2.1 inches in east-central Indiana to about -0.2 inch in northwestern Indiana. Mean flows at the index stations also were below normal, ranging from about one-half of the median at Marion to about three-quarters of the median at Mount Carmel. The annual mean flows at the index stations reflected the generally dry year and all were about 60 percent of their respective medians.

SPECIAL NETWORKS AND PROGRAMS

Hydrologic Bench-Mark Network is a network of 57 sites in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped watersheds nationwide, 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 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. The 500 or so sites in NASQAN are generally 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: (1) To 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 such that the data may be used for; (2) describing the areal variability of water quality in the Nation's rivers through analysis of data from this and other programs; (3) detecting changes or trends with time in the pattern of occurrence of water-quality characteristics; and (4) providing a nationally consistent data base useful for water-quality assessment and hydrologic research.

Radiochemical Program is a network of regularly sampled water-quality stations where samples are collected to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

EXPLANATION OF THE RECORDS

The surface-water and ground-water records published in this report are for the 1987 water year that began October 1, 1986, and ended September 30, 1987. 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, 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 5 (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.

Records of Stage and Water Discharge

Records of stage and water discharge may be complete or partial. Complete records of discharge are those obtained using a continuous stage-recording device through which either instantaneous or mean daily discharges may be computed for any time, or any period of time, during the period of record.

By contrast, partial records are obtained through discrete measurements without using a continuous stage-recording device and pertain only to a few flow characteristics, or perhaps only one. The nature of the partial record is indicated by table titles such as "Crest-stage partial records" or "Low-flow partial records." Records of miscellaneous discharge measurements or of measurements from special studies, such as low-flow seepage studies, may be considered as partial records, but they are presented separately in this report.

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 or with digital recorders that punch stage values on paper tapes at selected time intervals. 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, Book 3, Chapter 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.

Data collected at partial-record stations follow the information for continuous-record sites. Data for partial-record discharge stations are presented in two tables. The first is a table of annual maximum stage and discharge at crest-stage stations, and the second is a table of discharge measurements at miscellaneous sites. The measurements at miscellaneous sites are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

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. Records of surface-water quality in this report may involve a variety of types of data and measurement frequencies.

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 is usually 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 costs, most data are obtained only monthly or less frequently. Locations of stations for which records on the quality of surface water appear in this report are shown on figure 6.

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. Where a surface-water daily record station is not available or where the water quality differs significantly from that at the nearby surface-water station, the continuing water-quality record is published with its own station number and name in the regular downstream-order sequence. Water-quality data for partial-record stations and for miscellaneous sampling sites appear in separate tables following the table of discharge measurements at miscellaneous sites.

Onsite Measurements and Sample Collection

In obtaining water-quality data, a major concern needs to be assuring that the data obtained represent the in situ quality of the water. To assure this, certain measurements, such as water temperature, pH, and dissolved oxygen, need to be 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. Also, detailed information on collecting, treating, and shipping samples may be obtained from the U.S. Geological Survey, Indiana District Office.

One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled through several vertical sections to obtain a representative sample needed for an accurate mean concentration and for use in calculating load. All samples obtained for the National Stream Quality Accounting Network (see definitions) are obtained from at least several verticals. Whether samples are obtained from the centroid of flow or from several verticals depends on flow conditions and other factors which must be evaluated by the collector.

Chemical-quality data published in this report are considered to be the most representative values available for the stations listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. In the rare case where an apparent inconsistency exists between a reported pH value and the relative abundance of carbon dioxide species (carbonate and bicarbonate), the inconsistency is the result of a slight uptake of carbon dioxide from the air by the sample between measurement of pH in the field and determination of carbonate and bicarbonate in the laboratory.

For chemical-quality stations equipped with digital monitors, the records consist of daily maximum, minimum, and mean values for each constituent measured and are based upon hourly punches beginning at 0100 hours and ending at 2400 hours for the day of record. More detailed records (hourly values) may be obtained from the U.S. Geological Survey, Indiana District Office, whose address is given on the back of the title page of this report.

Water Temperature

Water temperatures are measured at most of the water-quality stations. Large streams have a small diurnal temperature change; shallow streams may have a daily range of several degrees and may follow closely the changes in

air temperature. Some streams may be affected by waste-heat discharges. At stations where recording instruments are used, mean, maximum, and minimum temperatures for each day are published.

Table 1.--Degrees Celsius (°C) to degrees Fahrenheit (°F)*
(Temperature reported to nearest 0.5 °C)

°C	°F	°C	°F	°C	°F	°C	°F	°C	°F
0.0	32	10.0	50	20.0	68	30.0	86	40.0	104
.5	33	10.5	51	20.5	69	30.5	87	40.5	105
1.0	34	11.0	52	21.0	70	31.0	88	41.0	106
1.5	35	11.5	53	21.5	71	31.5	89	41.5	107
2.0	36	12.0	54	22.0	72	32.0	90	42.0	108
2.5	36	12.5	54	22.5	72	32.5	90	42.5	108
3.0	37	13.0	55	23.0	73	33.0	91	43.0	109
3.5	38	13.5	56	23.5	74	33.5	92	43.5	110
4.0	39	14.0	57	24.0	75	34.0	93	44.0	111
4.5	40	14.5	58	24.5	76	34.5	94	44.5	112
5.0	41	15.0	59	25.0	77	35.0	95	45.0	113
5.5	42	15.5	60	25.5	78	35.5	96	45.5	114
6.0	43	16.0	61	26.0	79	36.0	97	46.0	115
6.5	44	16.5	62	26.5	80	36.5	98	46.5	116
7.0	45	17.0	63	27.0	81	37.0	99	47.0	117
7.5	45	17.5	63	27.5	81	37.5	99	47.5	117
8.0	46	18.0	64	28.0	82	38.0	100	48.0	118
8.5	47	18.5	65	28.5	83	38.5	101	48.5	119
9.0	48	19.0	66	29.0	84	39.0	102	49.0	120
9.5	49	19.5	67	29.5	85	39.5	103	49.5	121

*°C = 5/9 (°F -32) or °F = 9/5 °C + 32.

Sediment

Suspended-sediment concentrations are determined from samples collected by using depth-integrating samplers. Samples usually are obtained at several verticals in the cross section, or a single sample may be obtained at a fixed point and a coefficient applied to determine the mean concentration in the cross sections.

During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily or, in some instances, hourly). The published sediment discharges for days of rapidly changing flow or concentration were computed by the subdivided-day method

(time-discharge weighted average). Therefore, for those days when the published sediment discharge value differs from the value computed as the product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided-day method. For periods when no samples were collected, daily discharges of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge.

At other stations, suspended-sediment samples were collected periodically at many verticals in the stream cross section. Although data collected periodically may represent conditions only at the time of observations, such data are useful in establishing seasonal relations between quality and streamflow and in predicting long-term sediment-discharge characteristics of the stream.

In addition to the records of suspended-sediment discharge, records of the periodic measurements of the particle-size distribution of the suspended sediment and bed material are included for some stations.

Laboratory Measurements

Sediment samples, samples for biochemical-oxygen demand (BOD), samples for indicator bacteria, and daily samples for specific conductance are analyzed locally. All other samples are analyzed in the U.S. Geological Survey laboratory in Arvada, Colorado. Methods used in analyzing sediment samples and computing sediment records are given in TWRI, Book 5, Chap. C1. Methods used by the U.S. Geological Survey laboratory are given in TWRI, Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4.

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, type of data available, instrumentation, general remarks, cooperation, and extremes for parameters currently measured daily. Tables of chemical, physical, biological, radiochemical data, and so forth, obtained at a frequency less than daily are presented first. Tables of "daily values" of specific conductance, pH, water temperature, dissolved oxygen, and suspended sediment then follow in sequence.

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. The periods are shown separately for records of parameters measured daily or continuously and those measured less than daily. For those measured daily or continuously, periods of record are given for the parameters individually.

INSTRUMENTATION.--Information on instrumentation is given only if a water-quality monitor temperature record, sediment pumping sampler, or other sampling device is in operation at a station.

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

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

EXTREMES.--Maximums and minimums are given only for parameters measured daily or more frequently. None are given for parameters measured weekly or less frequently, because the true maximums or minimums may not have been sampled. Extremes, when given, are provided for both the period of record and for the current water year.

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.

The surface-water-quality records for partial-record stations and miscellaneous sampling sites are published in separate tables following the table of discharge measurements at miscellaneous sites. No descriptive statements are given for these records. Each station is published with its own station number and name in the regular downstream-order sequence.

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

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 8.

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 a hundredth of a foot.

Data Presentation

Each lake record consists of three parts, the station description, the data table of water levels observed during the year, and a yearly hydrograph. 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.

A hydrograph of the water levels follows the table. The continuous solid line is a plot of the 2400 level for each day in the water year. Breaks in the plot indicate missing or invalid data.

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 9.

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 a hundredth or a few hundredths of a foot. For lesser depths to water, the accuracy is greater. Accordingly, most measurements are reported to a hundredth of a foot, but some are given to a 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 on), 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.

A hydrograph of the water levels follows the tables. The continuous solid line is a plot of the highest water level for each day in the water year; the dashed line is a plot of the lowest water level for each day. Breaks in either line indicate missing or invalid data.

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. See also 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.

Adenosine triphosphate (ATP) is an organic, phosphate-rich, compound important in the transfer of energy in organisms. Its central role in living cells makes it an excellent indicator of the presence of living material in water. A measure of ATP therefore provides a sensitive and rapid estimate of biomass. ATP is reported in micrograms per liter of the original water sample.

Algae are mostly aquatic single-celled, colonial, or multi-celled plants, containing chlorophyll and lacking roots, stems, and leaves.

Algal growth potential (AGP) is the maximum algal dry weight biomass that can be produced in a natural water sample under standardized laboratory conditions. The growth potential is the algal biomass present at stationary phase and is expressed as milligrams dry weight of algae produced per liter of sample.

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.

Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria which ferment lactose with gas formation within 48 hours at 35 °C. In the laboratory these bacteria are defined as all the organisms that produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35 °C plus or minus 1.0 °C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

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.

Biochemical oxygen demand (BOD) is a measure of the quantity of dissolved oxygen, in milligrams per liter, necessary for the decomposition of organic matter by micro-organisms, such as bacteria.

Biomass is the amount of living matter present at any given time, expressed as the mass per unit area or volume of habitat.

Ash mass is the mass or amount of residue present after the residue from the dry mass determination has been ashed in a muffle furnace at a temperature of 500 °C for 1 hour. The ash mass values of zooplankton and phytoplankton are expressed in grams per cubic meter (g/m^3), and periphyton and benthic organisms in grams per square mile (g/m^2).

Dry mass refers to the mass of residue present after drying in an oven at 105 °C for zooplankton and periphyton, until the mass remains unchanged. This mass represents the total organic matter, ash and sediment, in the sample. Dry-mass values are expressed in the same units as ash mass.

Organic mass or volatile mass of the living substance is the difference between the dry mass and ash mass and represents the actual mass of the living matter. The organic mass is expressed in the same units as for ash mass and dry mass.

Wet mass is the mass of living matter plus contained water.

Bottom material: See Bed material.

Cells/volume refers to the number of cells of any organism which is counted by using a microscope and grid or counting cell. Many planktonic organisms are multicelled and are counted according to the number of contained cells per sample, usually milliliters (mL) or liters (L).

Chemical oxygen demand (COD) is a measure of the chemically oxidizable material in the water and furnishes an approximation of the amount of organic and reducing material present. The determined value may correlate with natural water color or with carbonaceous organic pollution from sewage or industrial wastes.

Chlorophyll refers to the green pigments of plants. Chlorophyll a and b are the two most common green pigments in plants.

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 or canal that is used to regulate the flow or stage of the stream 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 is commonly 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.

Metamorphic stage refers to the stage of development that an organism exhibits during its transformation from an immature form to an adult form. This developmental process exists for most insects, and the degree of difference from the immature stage to the adult form varies from relatively slight to pronounced, with many intermediates. Examples of metamorphic stages of insects are egg-larva-adult or egg-nymph-adult.

Methylene blue active substances (MBAS) are apparent detergents. The determination depends on the formation of a blue color when methylene blue dye reacts with synthetic anionic detergent compounds.

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.

The National Trends Network (NTN) is a 150-station network for sampling atmospheric deposition in the United States. The purpose of the network is to determine the variability, both in location and in time, of the composition of atmospheric deposition, which includes snow, rain, dust particles, aerosols, and gases. The core from which the NTN was built was the already-existing deposition-monitoring network of the National Atmospheric Deposition Program (NADP).

Organism is any living entity.

Organism count/area refers to the number of organisms collected and enumerated in a sample and adjusted to the number per area habitat, usually square meter (m^2), acre, or hectare. Periphyton, benthic organisms, and macrophytes are expressed in these terms.

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.

Percent composition is a unit for expressing the ratio of a particular part of a sample or population to the total sample or population, in terms of types, numbers, mass, or volume.

Periphyton is the assemblage of micro-organisms attached to and living upon submerged solid surfaces. While primarily consisting of algae, they also include bacteria, fungi, protozoa, rotifers, and other small organisms.

Pesticides are chemical compounds used to control undesirable organisms. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides.

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.

Plankton is the community of suspended, floating, or weakly swimming organisms that live in the open water of lakes and rivers.

Phytoplankton is the plant part of the plankton. They are usually microscopic and their movement is subject to the water currents. Phytoplankton growth is dependent upon solar radiation and nutrient substances. Because they are able to incorporate as well as release materials to the surrounding water, the phytoplankton have a profound effect upon the quality of the water. They are the primary food producers in the aquatic environment and are commonly known as algae.

Blue-green algae are a group of phytoplankton organisms having a blue pigment, in addition to the green pigment called chlorophyll. Blue-green algae often cause nuisance conditions in water.

Diatoms are the unicellular or colonial algae having a siliceous shell. Their concentrations are expressed as number of cells per milliliter (cells/mL) of sample.

Green algae have chlorophyll pigments similar in color to those of higher green plants. Some forms produce algae mats or floating "moss" in lakes. Their concentrations are expressed as number of cells per milliliter (cells/mL) of sample.

Zooplankton is the animal part of the plankton. Zooplankton are capable of extensive movements within the water column and are often large enough to be seen with the unaided eye. Zooplankton are secondary consumers feeding upon bacteria, phytoplankton, and detritus. Because they are the grazers in the aquatic environment, the zooplankton are a vital part of the aquatic food web. The zooplankton community is dominated by small crustaceans and rotifers.

Primary productivity is a measure of the rate at which new organic matter is formed and accumulated through photosynthetic and chemosynthetic activity of producer organisms (chiefly, green plants). The rate of primary production is estimated by measuring the amount of oxygen released (oxygen method) or the amount of carbon assimilated by the plants (carbon method).

Milligrams of carbon per area or volume per unit time [mg C/(m^2.time)] for periphyton and macrophytes and [mg C/(m^3.time)] for phytoplankton are units for expressing primary productivity. They define the amount of carbon dioxide consumed as measured by radioactive carbon (carbon 14). The carbon 14 method is of greater sensitivity than the oxygen light and dark bottle method and is preferred for use in unenriched waters. Unit time may be either the hour or day, depending on the incubation period.

Milligrams of oxygen per area or volume per unit time [mg O/(m^2.time)] for periphyton and macrophytes and [mg O/(m^3.time)] for phytoplankton are the units for expressing primary productivity. They define production and respiration rates as estimated from changes in the measured dissolved-oxygen concentration. The oxygen light and dark bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made within 24 hours. Unit time may be either the hour or day, depending on the incubation period.

Recoverable from bottom material is the amount of a given constituent that is in solution after a representative sample of bottom material has been digested by a method (usually using an acid or mixture of acids) that results in dissolution of readily soluble substances. Complete dissolution of all bottom material is not achieved by the digestion treatment and thus the determination represents less than the total amount (that is, less than 95 percent) of the constituent in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

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.

Substrate is the physical surface upon which an organism lives.

Natural substrate refers to any naturally occurring emersed or submersed solid surface, such as a rock or tree, upon which an organism lives.

Artificial substrate is a device which is purposely placed in a stream or lake for colonization of organisms. The artificial substrate simplifies the community structure by standardizing the substrate from which each sample is taken. Examples of artificial substrates are basket samplers (made of wire cages filled with clean streamside rocks), multiplate samplers (made of hardboard) for benthic organism collection, and plexiglass strips for periphyton collection.

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.

Taxonomy is the division of biology concerned with the classification and naming of organisms. The classification of organisms is based upon a hierarchial scheme beginning with Kingdom and ending with Species at the base. The higher the classification level, the fewer features the organisms have in common. For example, the taxonomy of a particular mayfly, Hexagenia limbata, is the following:

Kingdom	Animal
Phylum	Arthropoda
Class	Insecta
Order	Ephemeroptera
Family	Ephemeridae
Genus	Hexagenia
Species	Hexagenia limbata

Thermograph is an instrument that continuously records variations of temperature on a chart. The more general term "temperature recorder" is used in the table headings and refers to any instrument that records temperature whether on a chart, a tape, or any other medium.

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 2.--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 3.--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 g/mL 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-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.

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.

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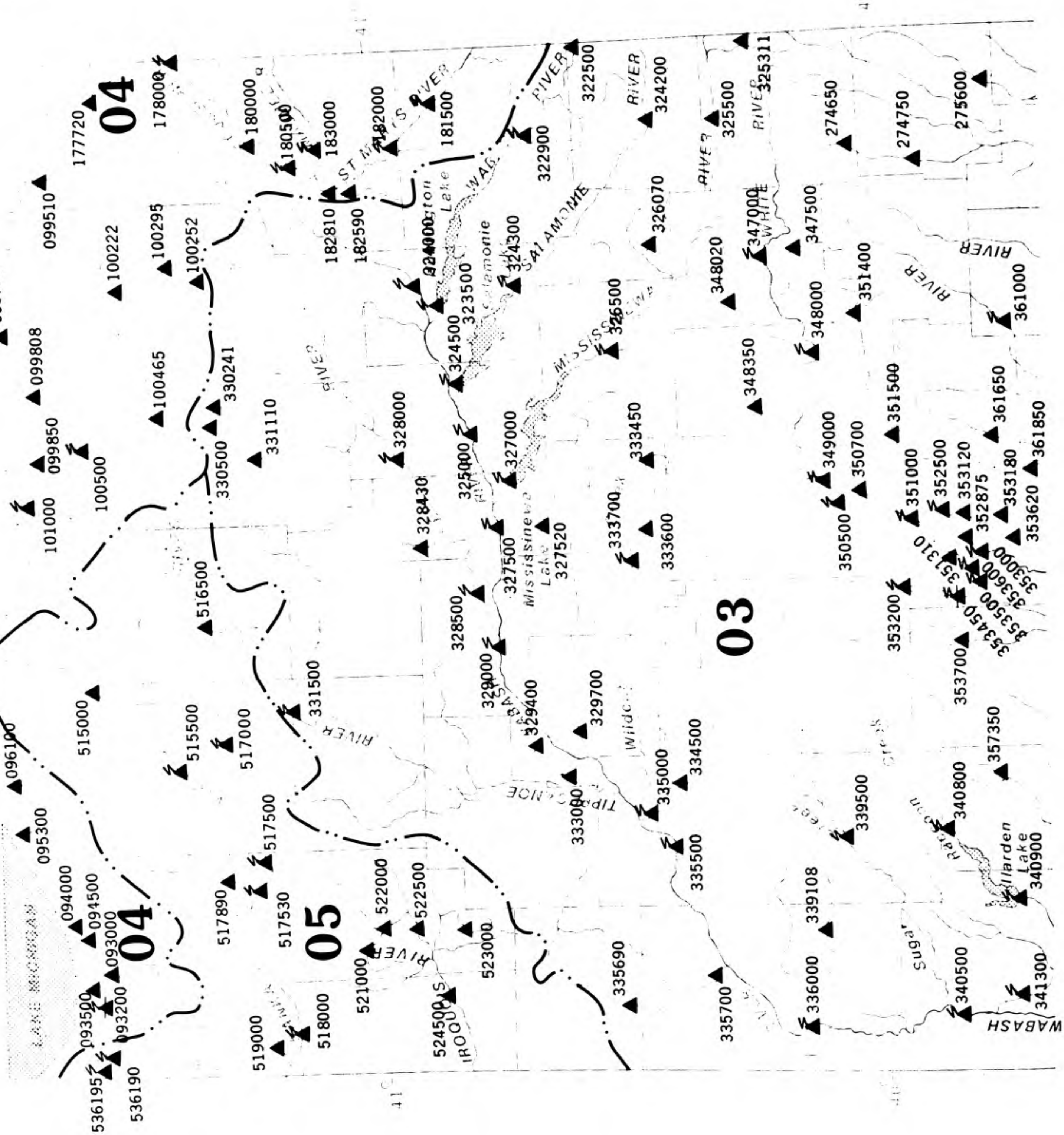
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04
05
03
LAKE MICHIGAN
ST MARYS RIVER
WABASH
SALAMONIE
MISSISSINEWA
TIPPECANOE
IROQUOIS
WHITE RIVER
Salamonie Lake
Mississinewa Lake
Cagles Mill Lake
Sugar
WABASH
177720
178000
180000
180500
183000
182000
181500
322500
324200
325500
325311
274650
274750
275600
099510
100222
100295
100252
182810
182590
322900
326070
347000
347500
348020
351400
361000
099750
099808
100465
330241
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324500
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348000
348350
351500
361650
361850
099850
100500
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331110
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352500
353120
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353180
353620
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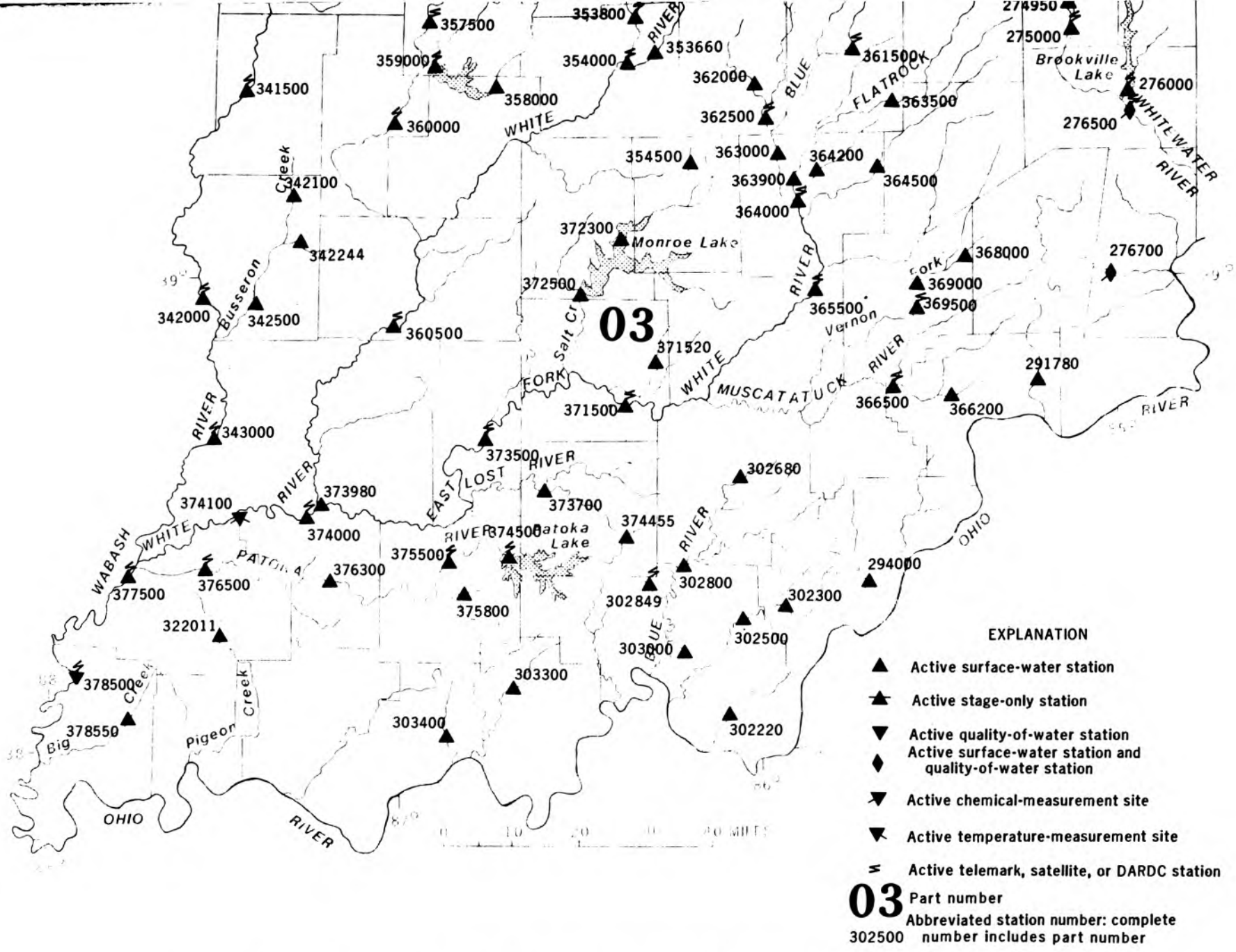


Figure 6.-- Locations of stream flow and water-quality gaging stations in Indiana.

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: Jan. 22-27 and Feb. 16. Records good except for estimated daily discharges, which are fair.

AVERAGE DISCHARGE.--17 years, 11.2 ft^3/s, 14.62 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,100 ft^3/s Aug. 20, 1979, gage height, 8.85 ft; minimum daily, 0.28 ft^3/s Jan. 17, 1977.

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)
Oct. 1	1200	949	8.37	July 1	2000	330	5.89
Oct. 4	0300	*1,060	*8.73	July 13	2200	221	5.24
May 21	1500	415	6.33				

Minimum daily discharge, 0.58 ft^3/s Sept. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	214	5.6	11	4.7	7.8	28	8.1	4.3	7.2	100	2.2	.88
2	81	5.1	50	4.7	12	15	7.3	4.6	7.5	75	2.1	.88
3	73	4.9	25	4.0	13	9.6	5.3	4.2	43	33	2.6	.84
4	430	5.7	14	3.9	9.6	7.6	4.8	3.8	18	21	1.9	.82
5	114	6.1	10	3.8	8.2	7.6	4.7	3.7	10	12	1.7	.81
6	49	6.4	8.7	4.2	7.5	6.8	4.3	3.8	7.2	10	1.5	.83
7	33	5.8	8.1	4.3	7.6	6.3	4.1	3.9	5.8	8.3	1.4	.78
8	26	5.8	8.1	3.8	7.6	6.1	3.8	3.6	4.6	6.0	1.4	.77
9	22	5.3	13	3.7	6.1	5.5	3.4	3.5	3.9	4.8	1.5	.75
10	17	4.5	13	4.4	5.2	4.1	3.2	3.5	3.3	4.2	1.5	.73
11	14	4.7	9.1	3.6	5.0	3.8	3.6	3.5	3.0	38	1.4	.75
12	11	4.5	7.6	3.2	5.3	3.6	3.4	3.9	3.6	43	1.4	1.1
13	11	3.6	5.6	3.1	4.5	3.5	2.8	3.3	3.0	52	1.4	.86
14	17	3.1	5.4	5.3	4.7	3.7	6.1	3.3	2.6	104	1.3	.92
15	11	3.7	5.1	9.8	3.7	3.5	48	3.2	2.2	38	1.2	.84
16	9.1	3.8	5.1	7.3	3.0	3.1	33	2.9	2.1	26	1.2	.82
17	7.9	3.5	5.3	5.7	3.2	2.8	18	2.9	1.9	20	1.1	.79
18	6.9	3.1	5.9	5.8	3.1	3.0	12	3.2	1.8	14	1.1	.79
19	6.2	3.0	5.1	6.3	2.9	4.5	9.6	3.3	1.6	8.6	1.1	.75
20	5.8	3.6	4.7	4.9	2.8	3.6	8.1	2.8	1.8	5.8	.99	.74
21	5.5	5.3	4.2	4.4	3.1	3.4	7.3	93	1.9	4.5	.99	.73
22	5.1	4.2	3.9	3.9	3.2	3.1	7.1	54	1.9	3.6	1.0	.73
23	4.9	3.6	4.0	3.4	3.2	3.1	9.1	24	1.6	3.0	1.0	.72
24	4.8	2.8	5.8	3.0	2.8	3.1	7.0	15	1.4	2.6	.94	.70
25	6.6	3.2	8.7	2.7	2.8	3.2	5.9	32	1.3	2.3	1.1	.71
26	10	40	7.4	2.5	2.7	2.8	5.4	53	1.2	2.7	1.2	.63
27	10	21	6.1	2.5	2.9	2.5	5.2	22	1.1	3.0	1.1	.59
28	8.7	13	5.4	2.6	8.3	2.5	4.8	12	1.1	2.3	1.1	.58
29	7.7	9.9	5.1	3.0	---	2.5	4.8	8.4	1.3	2.0	1.0	.65
30	6.5	8.3	5.0	5.7	---	7.5	4.6	7.2	7.9	2.0	.99	.65
31	6.1	---	4.5	5.3	---	7.5	---	7.3	---	2.5	.94	---
TOTAL	1234.8	203.1	279.9	135.5	151.8	172.9	254.8	399.1	154.8	654.2	41.35	23.14
MEAN	39.8	6.77	9.03	4.37	5.42	5.58	8.49	12.9	5.16	21.1	1.33	.77
MAX	430	40	50	9.8	13	28	48	93	43	104	2.6	1.1
MIN	4.8	2.8	3.9	2.5	2.7	2.5	2.8	2.8	1.1	2.0	.94	.58
CFSM	3.83	.65	.87	.42	.52	.54	.82	1.24	.50	2.03	.13	.07
IN.	4.42	.73	1.00	.48	.54	.62	.91	1.43	.55	2.34	.15	.08

CAL YR 1986	TOTAL	5457.63	MEAN	15.0	MAX	430	MIN	.69	CFSM	1.44	IN.	19.52
WTR YR 1987	TOTAL	3705.39	MEAN	10.2	MAX	430	MIN	.58	CFSM	.98	IN.	13.25

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.--No estimated daily discharges. Records good.

AVERAGE DISCHARGE.--17 years, 68.3 ft^3/s, 15.80 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, 11.31 ft Oct. 4, 1986; 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)
Oct. 1	2100	1,700	9.82	May. 21	2200	1,720	9.87
Oct. 4	1100	*2,230	*11.31	July 1	2400	1,520	9.33

Minimum daily discharge, 13 ft^3/s Sept. 25-28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	926	41	63	39	41	168	48	33	69	744	31	16
2	385	39	287	39	59	89	50	33	79	633	30	16
3	373	39	140	37	67	62	41	32	267	146	29	16
4	1720	42	93	36	52	52	37	30	95	97	27	15
5	502	42	73	36	46	50	37	29	69	75	27	15
6	234	40	65	37	44	47	36	29	57	80	25	14
7	167	39	61	36	42	42	36	29	50	68	24	14
8	132	38	59	36	42	41	33	28	45	59	23	15
9	109	37	83	35	36	40	32	27	42	55	23	15
10	93	34	87	37	36	36	31	26	38	52	23	15
11	81	36	65	35	35	36	32	26	36	55	23	14
12	75	34	58	34	35	35	41	29	41	87	22	17
13	73	32	49	33	33	34	34	26	37	90	21	16
14	91	31	47	36	32	33	51	25	33	276	21	15
15	72	32	47	53	30	33	270	25	32	88	20	15
16	64	31	46	46	29	33	136	23	30	70	19	15
17	59	31	45	40	30	31	94	23	29	59	19	15
18	54	31	46	41	31	32	71	24	27	53	18	15
19	50	29	44	44	30	42	60	26	28	45	17	15
20	48	31	42	40	29	36	53	36	28	42	17	14
21	45	33	41	37	29	33	49	603	37	39	17	14
22	44	31	39	37	30	32	49	371	38	37	18	14
23	42	31	39	33	30	32	57	118	29	35	16	14
24	42	30	44	28	29	31	47	87	27	34	16	14
25	48	30	51	25	29	33	42	166	25	32	19	13
26	59	227	46	24	29	31	40	251	24	36	21	13
27	61	121	43	23	29	31	39	109	23	49	19	13
28	53	81	41	23	50	29	37	81	22	35	19	13
29	48	68	40	25	---	29	36	67	23	32	18	14
30	45	59	41	36	---	49	35	128	33	32	17	14
31	42	---	39	34	---	46	---	98	---	30	17	---
TOTAL	5837	1420	1964	1095	1034	1348	1654	2638	1413	3265	656	438
MEAN	188	47.3	63.4	35.3	36.9	43.5	55.1	85.1	47.1	105	21.2	14.6
MAX	1720	227	287	53	67	168	270	603	267	744	31	17
MIN	42	29	39	23	29	29	31	23	22	30	16	13
CFSM	3.20	.81	1.08	.60	.63	.74	.94	1.45	.80	1.79	.36	.25
IN.	3.70	.90	1.24	.69	.66	.85	1.05	1.67	.90	2.07	.42	.28

CAL YR 1986	TOTAL	29173	MEAN	79.9	MAX	1720	MIN	14	CFSM	1.36	IN.	18.49
WTR YR 1987	TOTAL	22762	MEAN	62.4	MAX	1720	MIN	13	CFSM	1.06	IN.	14.42

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. 2-15, Jan. 22 to Feb. 5, and June 4-9. Records fair except for estimated daily discharges, which are poor. Peak flows affected by ponding at abandoned railroad culvert 0.5 mi upstream.

AVERAGE DISCHARGE.--19 years, 10.1 ft^3/s, 14.97 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,560 ft^3/s June 22, 1974, gage height, 10.13 ft; minimum daily, 0.24 ft^3/s Sept. 26, 28, 1987.

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)
Oct. 1	1100	*811	*6.11

Minimum daily discharge, 0.24 ft^3/s Sept. 26, 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	194	3.9	9.5	4.9	5.5	21	10	4.0	2.0	52	1.4	.55
2	20	3.8	36	4.9	6.0	9.8	13	3.8	2.8	6.9	1.4	.51
3	10	3.8	13	4.7	7.0	7.0	9.7	4.1	16	3.7	1.4	.50
4	40	4.4	9.3	4.6	5.5	6.4	8.8	3.9	4.5	3.2	1.3	.47
5	15	4.7	7.5	4.5	5.0	6.2	8.4	3.7	3.8	2.8	1.2	.46
6	10	4.4	6.8	4.6	4.7	6.0	8.1	3.6	3.3	4.3	1.1	.48
7	7.5	3.8	6.6	4.6	4.7	5.8	7.6	3.6	2.9	3.4	1.1	.45
8	6.0	3.7	6.2	4.6	4.7	5.5	7.2	3.5	2.7	2.9	1.1	.72
9	5.0	3.6	8.1	4.7	4.4	5.6	6.5	3.4	2.5	2.7	1.1	.49
10	4.5	3.3	7.7	5.0	4.4	5.4	5.9	3.2	2.4	2.7	1.1	.39
11	4.0	4.1	6.6	4.7	4.4	5.2	6.9	3.1	2.2	2.7	1.0	.41
12	3.9	4.0	6.2	4.6	4.6	4.9	16	3.3	2.4	2.6	1.0	.52
13	4.2	3.5	5.4	4.6	4.2	5.1	10	2.8	2.3	2.6	.98	.49
14	4.5	3.1	5.4	5.1	4.3	5.2	31	2.8	2.0	2.8	.89	.38
15	4.0	3.3	5.4	5.2	4.1	5.3	58	2.8	2.0	2.4	.87	.33
16	3.7	3.3	5.4	4.9	3.9	5.0	23	2.6	1.9	2.3	.87	.41
17	3.6	3.1	5.5	4.9	4.1	4.8	14	2.6	1.8	2.1	.87	.50
18	3.3	3.1	5.3	5.1	4.1	6.1	9.7	2.5	1.6	2.0	.79	.44
19	3.3	3.0	5.0	5.2	3.9	7.5	7.9	3.0	1.7	2.0	.73	.41
20	3.3	3.4	4.9	4.8	4.0	6.1	6.7	2.8	1.9	1.9	.73	.38
21	3.3	3.3	4.7	4.5	4.1	5.7	6.1	3.2	1.8	1.9	.81	.37
22	3.3	2.8	4.6	3.9	4.3	5.5	5.8	3.3	2.0	1.8	.81	.32
23	3.3	3.0	4.5	3.5	4.3	5.3	5.6	2.5	1.7	1.7	.82	.29
24	3.3	2.8	5.6	3.1	4.0	5.4	5.1	2.4	1.6	1.7	.69	.26
25	4.5	2.8	5.5	2.8	4.0	5.7	4.9	3.1	1.5	1.7	.77	.25
26	5.4	52	5.1	2.6	3.9	5.1	4.8	5.0	1.5	2.5	.91	.24
27	5.2	11	4.9	2.6	4.1	4.9	4.8	2.5	1.4	18	.75	.25
28	4.7	8.1	4.9	2.8	5.0	4.7	4.5	2.2	1.4	2.2	.81	.24
29	4.6	7.1	4.7	3.3	---	4.6	4.3	2.0	1.7	1.4	.76	.37
30	4.3	6.6	4.9	6.0	---	9.2	4.1	2.7	3.6	1.5	.71	.40
31	4.0	---	4.7	5.0	---	9.1	---	2.8	---	1.4	.61	---
TOTAL	395.7	172.8	219.9	136.3	127.2	199.1	318.4	96.8	80.9	143.8	29.38	12.28
MEAN	12.8	5.76	7.09	4.40	4.54	6.42	10.6	3.12	2.70	4.64	.95	.41
MAX	194	52	36	6.0	7.0	21	58	5.0	16	52	1.4	.72
MIN	3.3	2.8	4.5	2.6	3.9	4.6	4.1	2.0	1.4	1.4	.61	.24
CFSM	1.40	.63	.77	.48	.50	.70	1.16	.34	.29	.51	.10	.04
IN.	1.61	.70	.89	.55	.52	.81	1.29	.39	.33	.58	.12	.05

CAL YR 1986	TOTAL	3230.77	MEAN	8.85	MAX	194	MIN	.42	CFSM	.97	IN.	13.12
WTR YR 1987	TOTAL	1932.56	MEAN	5.29	MAX	194	MIN	.24	CFSM	.58	IN.	7.85

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: Jan. 22-29 and Feb. 9, 10. Records good except for estimated daily discharges, which are fair.

AVERAGE DISCHARGE.--59 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 17.50 ft, Oct. 5, 1986; minimum daily discharge, 6.0 ft^3/s Sept. 8, 9, 1964.

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)
Oct. 2	1200	10,900	16.02	July 2	1800	10,200	15.71
Oct. 5	1100	*15,000	*17.50				

Minimum daily discharge, 100 ft^3/s Sept. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3840	328	599	354	345	1330	478	345	910	1570	245	126
2	8510	316	2670	354	419	1270	685	335	700	8200	232	125
3	1900	307	2130	348	524	800	583	331	2160	2880	615	121
4	8130	312	1300	339	468	597	476	317	1380	1320	350	118
5	12000	316	899	337	405	515	428	302	870	855	262	117
6	3180	314	722	338	388	475	407	293	600	795	225	117
7	1760	309	641	341	378	432	386	289	490	765	206	117
8	1300	302	589	330	377	407	366	283	390	561	193	123
9	1000	296	644	322	320	388	348	270	350	459	186	119
10	840	285	1010	339	320	351	333	262	340	409	182	117
11	700	284	762	330	322	332	329	255	313	383	177	115
12	630	288	627	314	316	324	711	261	302	1130	170	119
13	620	280	520	308	306	313	627	256	303	728	163	118
14	630	271	469	313	295	306	697	246	278	1370	159	117
15	680	274	454	356	286	303	3150	242	264	865	154	112
16	593	275	435	410	260	301	2170	233	247	592	150	112
17	533	273	421	371	272	285	1740	227	234	469	144	115
18	475	267	420	360	274	281	1180	227	223	387	142	115
19	427	260	403	372	266	368	900	246	228	340	140	111
20	397	261	383	367	263	347	747	247	223	300	137	107
21	374	266	370	330	260	315	648	252	216	275	132	108
22	348	265	359	305	262	296	578	2650	254	256	133	108
23	333	267	350	280	267	289	575	877	236	240	132	107
24	324	263	373	250	260	285	507	548	215	228	131	107
25	331	258	415	225	255	320	472	451	201	218	130	104
26	386	2490	433	215	252	294	430	1780	194	224	142	102
27	448	2130	407	210	253	282	421	961	189	413	136	100
28	438	1170	384	210	336	271	397	607	182	302	134	102
29	392	828	369	240	---	263	377	464	188	238	130	107
30	361	659	378	325	---	338	362	360	245	255	128	104
31	340	---	366	344	---	454	---	1880	---	241	126	---
TOTAL	52220	14414	20302	9837	8949	13132	21508	16297	12925	27268	5686	3390
MEAN	1685	480	655	317	320	424	717	526	431	880	183	113
MAX	12000	2490	2670	410	524	1330	3150	2650	2160	8200	615	126
MIN	324	258	350	210	252	263	329	227	182	218	126	100
CFSM	3.19	.91	1.24	.60	.60	.80	1.36	.99	.81	1.66	.35	.21
IN.	3.67	1.01	1.43	.69	.63	.92	1.51	1.15	.91	1.92	.40	.24

CAL YR 1986	TOTAL	249579	MEAN	684	MAX	12000	MIN	100	CFSM	1.29	IN.	17.55
WTR YR 1987	TOTAL	205928	MEAN	564	MAX	12000	MIN	100	CFSM	1.07	IN.	14.48

03275000 WHITEWATER RIVER NEAR ALPINE, IN--Continued
(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 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE AIR (DEG C)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	BARO-METRIC PRES-SURE (MM OF HG)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT											
29...	1100	408	659	7.90	22.0	12.5	0.70	8.9	739	310	K130
DEC											
04...	1315	1290	547	8.20	5.5	5.0	13	11.1	243	2700	7100
FEB											
18...	1230	276	637	8.50	10.0	303.0	0.60	13.2	740	600	<1
APR											
30...	0930	356	638	8.05	16.5	14.5	2.2	9.1	748	25	K63
JUN											
30...	1300	266	588	8.10	--	22.5	--	8.7	753	K11000	20000
AUG											
18...	1000	154	662	8.00	--	21.0	1.1	8.5	759	440	89

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY, CARBON-ATE IT-FLD (MG/L - CACO3)	BICAR-BONATE IT-FLD (MG/L AS HCO3)	CAR-BONATE IT-FLD (MG/L AS CO3)
OCT										
29...	360	90	32	9.5	5	0.2	2.4	302	369	0
DEC										
04...	300	77	27	6.6	4	0.2	2.6	243	297	0
FEB										
18...	350	85	33	13	7	0.3	1.7	281	343	0
APR										
30...	340	82	32	9.2	6	0.2	1.7	0	0	0
JUN										
30...	--	--	--	--	--	--	--	257	314	0
AUG										
18...	330	82	31	13	8	0.3	2.3	268	327	0

DATE	ALKA-LINITY WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)
OCT										
29...	302	43	20	0.20	8.1	312	390	0.42	344	3.60
DEC										
04...	243	37	19	0.20	8.7	334	320	0.45	1160	--
FEB										
18...	281	49	27	0.20	4.4	392	380	0.53	292	3.80
APR										
30...	277	44	20	0.20	3.5	372	360	0.51	358	3.20
JUN										
30...	257	--	--	--	--	--	--	--	--	2.60
AUG										
18...	267	44	22	0.20	5.9	373	360	0.51	155	2.90

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)
OCT 29...	0.040	0.05	<0.20	0.070	0.060	0.040	0.12	<10	2	87
DEC 04...	--	--	--	--	--	--	--	--	--	--
FEB 18...	0.020	0.03	1.0	0.060	0.040	0.040	0.12	<10	1	83
APR 30...	0.030	0.04	1.0	0.060	0.040	0.030	0.09	--	--	--
JUN 30...	0.060	0.08	1.1	0.140	0.050	0.030	0.09	--	--	--
AUG 18...	0.100	0.13	1.0	0.130	0.110	0.080	0.25	<10	<1	81

DATE	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)
OCT 29...	<0.5	<1	7	<3	2	17	7	10	6	<0.1
DEC 04...	--	--	--	--	--	--	--	--	--	--
FEB 18...	<0.5	<1	<1	<3	2	12	<5	11	14	<0.1
APR 30...	--	--	--	--	--	--	--	--	--	--
JUN 30...	--	--	--	--	--	--	--	--	--	--
AUG 18...	<0.5	<1	<1	<3	3	10	<5	<4	18	1.6

DATE	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 29...	<10	7	<1	<1	410	<6	9	47	52	16
DEC 04...	--	--	--	--	--	--	--	74	258	78
FEB 18...	<10	8	1	<1	390	<6	8	18	13	6
APR 30...	--	--	--	--	--	--	--	20	19	90
JUN 30...	--	--	--	--	--	--	--	70	50	77
AUG 18...	<10	16	<1	<1	360	<6	14	59	25	85

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: Jan. 22-28. Records good.

AVERAGE DISCHARGE.--22 years, 231 ft^3/s, 15.68 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,400 ft^3/s July 20, 1969, gage height, 16.18 ft; minimum daily, 14 ft^3/s Sept. 11, 15, 1983.

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)
Oct. 1	1600	*8,240	*14.74	Nov. 26	1200	4,230	10.78
Oct. 4	1300	6,460	13.09				

Minimum daily discharge, 21 ft^3/s Sept. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4340	125	285	139	139	605	201	124	195	929	119	32
2	1950	116	1470	139	169	410	431	120	309	1530	78	30
3	759	111	1010	133	187	255	265	119	1800	355	68	29
4	4900	134	486	130	158	202	209	112	427	296	62	28
5	1800	137	333	126	142	184	192	98	245	210	57	26
6	697	138	279	126	137	169	186	96	193	236	53	24
7	441	132	256	126	136	157	179	95	162	205	48	24
8	324	132	244	118	136	152	166	91	139	160	47	25
9	266	128	387	117	116	149	153	88	122	139	45	27
10	227	111	469	132	113	129	143	85	107	124	45	26
11	204	123	297	123	109	117	144	82	93	225	45	25
12	193	127	251	112	112	116	471	90	109	1400	43	29
13	211	117	213	109	104	110	286	80	102	332	41	31
14	221	105	198	115	98	110	244	78	88	595	40	26
15	197	108	191	132	93	113	1070	78	84	279	37	26
16	179	109	182	133	83	106	877	72	79	265	35	26
17	167	105	179	122	89	93	563	69	74	193	37	27
18	153	101	178	127	93	94	355	71	68	157	36	26
19	141	97	168	145	88	144	277	80	65	131	34	27
20	135	105	161	139	84	114	238	73	69	109	33	23
21	130	118	153	121	85	105	212	319	70	92	33	23
22	120	111	149	110	87	99	196	753	76	84	37	24
23	116	114	145	100	88	94	204	230	70	78	40	24
24	115	112	164	92	84	92	182	160	64	72	32	24
25	137	102	170	84	83	140	163	271	60	67	36	23
26	163	2860	163	78	82	114	154	627	56	86	50	22
27	181	1100	154	78	84	103	151	241	52	123	38	22
28	168	531	148	85	166	97	143	169	49	81	37	21
29	152	362	144	94	---	92	136	135	49	69	35	31
30	142	295	148	148	---	172	132	173	86	68	32	29
31	132	---	142	134	---	190	---	339	---	130	35	---
TOTAL	19061	8066	8917	3667	3145	4827	8323	5218	5162	8820	1408	780
MEAN	615	269	288	118	112	156	277	168	172	285	45.4	26.0
MAX	4900	2860	1470	148	187	605	1070	753	1800	1530	119	32
MIN	115	97	142	78	82	92	132	69	49	67	32	21
CFSM	3.07	1.34	1.44	.59	.56	.78	1.38	.84	.86	1.42	.23	.13
IN.	3.55	1.50	1.66	.68	.58	.90	1.55	.97	.96	1.64	.26	.15

CAL YR 1986	TOTAL	97916	MEAN	268	MAX	4900	MIN	26	CFSM	1.34	IN.	18.21
WTR YR 1987	TOTAL	77394	MEAN	212	MAX	4900	MIN	21	CFSM	1.06	IN.	14.40

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.--33 years, 403 ft^3/s, 14.40 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, 2,610 ft^3/s Oct. 9; minimum daily, 13 ft^3/s July 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	101	776	996	143	114	745	62	210	444	88	73	28
2	791	776	1320	143	100	1070	62	235	725	1200	72	28
3	1140	776	1520	143	100	1060	58	239	639	2250	773	28
4	1140	776	1520	143	134	1050	57	230	2140	761	1150	28
5	1140	580	1520	143	159	785	56	236	998	77	1040	28
6	1500	811	1520	190	159	243	56	236	227	460	391	28
7	1930	811	1510	227	159	52	56	238	229	650	45	28
8	2330	810	1500	227	159	53	56	236	230	635	45	28
9	2610	808	1500	227	164	53	56	235	231	353	45	28
10	1600	805	1500	231	458	53	56	155	231	125	38	28
11	1220	805	1500	231	648	53	56	111	114	35	32	28
12	2040	804	1500	231	644	53	61	112	79	35	32	29
13	2030	804	1490	231	355	53	57	112	79	650	33	28
14	1440	804	961	232	157	54	75	112	80	1130	33	28
15	500	804	302	444	155	53	68	112	80	1120	33	41
16	190	803	143	630	162	54	62	113	80	1120	26	41
17	187	800	143	456	157	54	59	96	79	402	31	46
18	187	797	143	187	155	54	57	89	77	40	29	46
19	129	797	143	192	156	64	55	90	78	41	29	43
20	41	711	143	192	127	57	55	90	78	41	29	45
21	92	661	143	191	106	57	54	85	80	41	29	53
22	179	659	143	192	107	57	105	106	79	41	29	61
23	171	658	143	197	107	57	139	114	77	26	29	61
24	365	654	143	196	107	58	138	115	78	14	29	55
25	623	655	143	198	107	61	183	152	79	14	29	46
26	623	855	143	198	108	57	190	674	79	13	29	46
27	871	994	142	198	108	57	190	1290	79	26	29	46
28	1060	993	141	197	113	57	190	764	79	50	29	46
29	1050	993	141	165	---	56	190	102	81	72	29	47
30	956	994	142	146	---	58	189	104	71	72	29	47
31	777	---	142	146	---	59	---	103	---	72	29	---
TOTAL	29013	23774	22440	6867	5285	6347	2748	6896	7700	11654	4298	1163
MEAN	936	792	724	222	189	205	91.6	222	257	376	139	38.8
MAX	2610	994	1520	630	648	1070	190	1290	2140	2250	1150	61
MIN	41	580	141	143	100	52	54	85	71	13	26	28

CAL YR 1986	TOTAL	182232	MEAN	499	MAX	2610	MIN	41
WTR YR 1987	TOTAL	128185	MEAN	351	MAX	2610	MIN	13

03276500 WHITEWATER RIVER AT BROOKVILLE, IN

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.--No estimated daily discharges. Records good. Flow regulated by Brookville Lake since January 1974.

AVERAGE DISCHARGE.--66 years (water years 1916-17, 1924 to current year), 1,276 ft^3/s, 14.16 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, 12,900 ft^3/s Oct. 5, gage height, 9.77 ft; minimum daily, 152 ft^3/s Sept. 8, 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1160	1100	1750	612	548	3420	1300	784	1720	766	412	171
2	6790	1080	4590	614	592	2990	2180	810	1580	6110	404	169
3	3660	1070	4380	606	710	2260	1380	822	3240	6030	2750	167
4	4780	1070	3170	588	755	1930	1060	800	4040	2270	1870	164
5	10800	894	2670	572	702	1560	909	770	2110	1280	1460	160
6	5390	1150	2440	611	684	1010	841	749	1090	1500	773	156
7	3440	1150	2320	655	658	723	783	736	923	1640	378	154
8	3270	1140	2250	646	651	670	712	726	817	1370	339	152
9	3230	1130	2340	635	635	640	656	719	723	1010	317	164
10	2310	1120	2720	664	759	585	612	665	673	704	296	157
11	1820	1120	2490	676	962	539	594	553	534	556	279	157
12	2460	1130	2310	635	962	516	1370	534	481	948	266	153
13	2420	1120	2160	626	835	497	1290	529	486	1480	256	155
14	1940	1100	1610	636	559	485	1440	525	455	2040	250	156
15	1210	1090	985	798	538	483	7300	519	433	2170	242	159
16	840	1090	815	1030	518	555	3640	515	413	1750	228	160
17	772	1090	789	908	498	520	2810	497	396	1040	224	168
18	720	1090	776	652	498	484	1980	449	377	569	213	169
19	619	1080	740	699	498	1900	1550	439	366	498	207	165
20	480	1000	708	779	495	1080	1310	439	466	448	202	161
21	507	952	678	662	478	782	1130	439	428	413	195	171
22	590	953	650	668	468	650	1060	1750	623	386	195	179
23	562	954	624	618	464	586	1060	1340	447	356	194	176
24	700	960	655	538	464	550	1000	834	382	324	187	168
25	947	957	730	510	459	1080	966	693	352	308	182	157
26	983	5960	733	497	455	796	909	1900	333	314	188	154
27	1280	3550	702	492	455	638	879	2300	316	631	191	153
28	1490	2440	668	516	672	575	855	1540	304	704	187	152
29	1440	2060	631	501	---	530	816	694	300	447	182	158
30	1320	1850	649	542	---	769	795	631	339	415	178	159
31	1130	---	631	590	---	1100	---	1760	---	506	176	---
TOTAL	69060	42450	49364	19776	16972	30903	43187	26461	25147	38983	13421	4844
MEAN	2228	1415	1592	638	606	997	1440	854	838	1258	433	161
MAX	10800	5960	4590	1030	962	3420	7300	2300	4040	6110	2750	179
MIN	480	894	624	492	455	483	594	439	300	308	176	152
CFSM	1.82	1.16	1.30	.52	.50	.81	1.18	.70	.68	1.03	.35	.13
IN.	2.10	1.29	1.50	.60	.52	.94	1.31	.80	.76	1.18	.41	.15

CAL YR 1986	TOTAL	508461	MEAN	1393	MAX	11400	MIN	152	CFSM	1.14	IN.	15.45
WTR YR 1987	TOTAL	380568	MEAN	1043	MAX	10800	MIN	152	CFSM	.85	IN.	11.57

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: Dec. 13-15 and Jan. 21-30. Records fair except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--26 years, 42.6 ft^3/s, 15.18 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)
Nov. 26	0230	*3,620	*7.55	Aug. 4	1930	3,180	7.13
Apr. 14	2400	3,000	6.94				

Minimum daily discharge, no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	71	6.9	145	14	19	305	231	7.5	6.4	89	1.0	.00
2	70	6.0	635	16	29	91	305	6.9	10	43	14	.00
3	22	5.6	189	13	26	44	74	6.6	68	11	65	.00
4	188	5.0	76	13	16	31	46	6.3	21	3.4	466	.00
5	125	18	40	9.2	11	27	36	5.3	6.4	1.4	139	.00
6	31	57	29	11	14	22	31	4.8	2.9	1.5	33	.00
7	15	24	24	12	12	19	27	4.6	1.7	1.4	9.2	.00
8	7.2	17	21	9.5	8.7	18	24	4.3	1.2	1.0	3.7	.03
9	4.3	16	149	9.2	7.8	16	23	3.8	.72	.78	2.8	.07
10	2.9	12	101	10	9.7	12	21	3.5	.50	.96	2.2	.02
11	2.1	9.0	48	13	7.8	11	18	3.2	.44	1.6	1.6	.01
12	2.2	14	32	12	11	12	36	3.1	.56	1.9	1.3	.02
13	3.0	18	25	11	9.7	10	29	2.9	.62	.96	.96	.04
14	3.3	15	22	12	8.7	10	265	2.7	.72	.86	.83	.03
15	2.6	9.8	19	11	9.2	26	728	18	.76	1.3	.69	.01
16	2.2	9.8	18	10	7.4	74	111	12	.52	.96	.60	.02
17	1.8	9.6	17	10	6.1	29	80	5.2	.37	.70	.56	.01
18	1.6	7.7	16	10	5.4	23	51	3.7	.28	.63	.41	.00
19	1.2	6.0	13	31	6.5	286	37	3.9	.22	.44	.20	.00
20	.97	5.4	12	31	7.4	67	29	3.7	.20	.19	.12	.00
21	.81	6.1	12	13	7.8	46	24	4.0	.26	.09	.08	.00
22	.76	8.3	12	9.5	8.7	31	21	6.0	23	.06	.06	.00
23	.68	9.8	12	8.6	8.7	27	22	6.7	10	.02	.04	.00
24	.68	9.8	16	8.3	6.9	22	19	3.4	2.8	.00	.03	.00
25	9.9	36	25	8.0	5.4	154	15	2.6	1.6	.00	.02	.00
26	44	958	21	7.8	6.5	53	13	2.2	1.1	.00	.01	.00
27	24	85	16	7.8	8.7	35	13	2.9	.56	53	.00	.00
28	13	44	14	7.8	266	26	11	3.2	.32	21	.00	.00
29	10	31	14	8.5	---	22	10	1.9	.33	3.2	.00	.00
30	7.7	26	13	10	---	53	8.8	1.9	.43	2.4	.00	.00
31	6.9	---	14	14	---	91	---	9.2	---	1.5	.00	---
TOTAL	675.80	1485.8	1800	371.2	551.1	1693	2358.8	156.0	163.91	244.25	743.41	.26
MEAN	21.8	49.5	58.1	12.0	19.7	54.6	78.6	5.03	5.46	7.88	24.0	.01
MAX	188	958	635	31	266	305	728	18	68	89	466	.07
MIN	.68	5.0	12	7.8	5.4	10	8.8	1.9	.20	.00	.00	.00
CFSM	.57	1.30	1.52	.31	.52	1.43	2.06	.13	.14	.21	.63	.00
IN.	.66	1.45	1.76	.36	.54	1.65	2.30	.15	.16	.24	.73	.00

CAL YR 1986	TOTAL	13234.53	MEAN	36.3	MAX	958	MIN	.00	CFSM	.95	IN.	12.92
WTR YR 1987	TOTAL	10243.53	MEAN	28.1	MAX	958	MIN	.00	CFSM	.74	IN.	10.00

03276700 SOUTH HOGAN CREEK NEAR DILLSBORO, IN--Continued
(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 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE AIR (DEG C)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	BARO-METRIC PRES-SURE (MM OF HG)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	CALCIUM DIS-SOLVED (MG/L AS CA)
DEC												
03...	1430	130	298	8.30	4.0	6.5	37	10.7	742	K1800	K17000	46
MAR												
19...	1200	496	246	7.90	10.5	7.5	110	--	744	--	K13000	30
JUN												
30...	0830	0.35	399	7.90	--	24.0	4.6	6.7	757	K1200	4200	55
AUG												
19...	1020	0.89	427	7.96	28.0	25.0	3.5	6.6	760	72	380	59

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY, CARBON-ATE IT-FLD (MG/L - CACO3)	BICAR-BONATE IT-FLD (MG/L AS HCO3)	CAR-BONATE IT-FLD (MG/L AS CO3)	ALKA-LINITY WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)
DEC												
03...	7.5	4.9	5.3	118	144	0	118	35	10	0.20	7.2	189
MAR												
19...	4.9	3.3	3.7	74	90	0	74	30	8.5	0.20	5.0	151
JUN												
30...	11	12	4.8	152	185	0	152	36	15	0.20	6.3	233
AUG												
19...	12	12	5.0	148	181	0	<148	47	16	0.20	4.4	248

DATE	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS, TOTAL (MG/L AS P)	PHOS-PHATE, ORTHO, DIS-SOLVED (MG/L AS PO4)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC DIS-SOLVED (UG/L AS AS)	BARIUM, DIS-SOLVED (UG/L AS BA)	BERYL-LIUM, DIS-SOLVED (UG/L AS BE)	CADMIUM DIS-SOLVED (UG/L AS CD)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR)
DEC												
03...	--	--	--	--	--	--	280	2	37	<0.5	<1	1
MAR												
19...	--	--	1.3	0.370	--	--	210	1	26	<0.5	<1	1
JUN												
30...	0.110	0.030	1.0	0.090	0.03	0.010	10	1	44	<0.5	<1	<1
AUG												
19...	<0.100	<0.010	0.70	0.070	0.03	0.010	<10	<1	42	<0.5	<1	<1

DATE	COBALT, DIS-SOLVED (UG/L AS CO)	COPPER, DIS-SOLVED (UG/L AS CU)	IRON, DIS-SOLVED (UG/L AS FE)	LEAD, DIS-SOLVED (UG/L AS PB)	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)
DEC												
03...	<3	3	130	<5	5	12	0.1	<10	1	<1	<1	110
MAR												
19...	<3	3	170	<5	<4	12	0.5	<10	1	<1	<1	68
JUN												
30...	<3	2	6	<5	5	24	0.2	<10	<1	<1	<1	180
AUG												
19...	<3	2	14	<5	<4	23	0.1	<10	3	<1	<1	200

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)	GROSS ALPHA, DISSOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DISSOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DISSOLVED (PCI/L AS SR/YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/YT-90)	RADIUM 226, DISSOLVED, RADON METHOD (PCI/L)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
DEC												
03...	<6	9	--	--	--	--	--	--	--	43	15	99
MAR												
19...	<6	6	<0.4	1.3	3.4	0.6	2.8	0.6	0.05	244	327	99
JUN												
30...	<6	8	--	--	--	--	--	--	--	14	0.01	95
AUG												
19...	<6	23	--	--	--	--	--	--	--	8	0.02	100

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. 13-15 and Jan. 20-31. Records good except for Jan. 20-31 and days when daily discharge was below 0.5 ft^3/s, which are poor.

AVERAGE DISCHARGE.--18 years, 34.2 ft^3/s, 16.89 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,240 ft^3/s June 10, 1981, maximum gage height, 11.27 ft Aug. 1, 1979; 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. 26	0215	*3,960	*9.01	Apr. 14	2245	1,870	7.15

Minimum daily discharge, no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.7	2.8	104	7.1	11	217	147	6.9	4.1	49	1.8	.00
2	8.9	2.5	333	8.0	17	89	268	6.6	13	11	7.9	.00
3	4.0	2.3	125	6.8	16	46	73	5.9	66	3.9	99	.00
4	149	2.3	57	6.6	13	29	46	5.2	11	2.3	119	.00
5	19	6.8	31	6.5	13	23	34	4.6	5.2	10	56	.00
6	7.6	15	22	7.0	10	19	27	4.3	3.3	3.2	13	.00
7	4.4	7.4	19	6.8	9.3	16	23	4.2	2.4	5.8	7.3	.00
8	3.1	7.4	17	6.0	8.8	15	20	3.9	1.8	2.8	4.4	.00
9	2.3	7.5	124	5.6	6.8	13	18	3.5	1.3	1.4	3.1	.00
10	1.8	5.7	89	8.2	8.3	11	16	3.0	.72	1.0	2.3	.00
11	1.4	7.4	42	8.2	8.1	9.2	16	2.7	.47	1.0	1.8	.00
12	1.5	8.2	27	6.3	7.1	8.6	20	2.4	.81	1.5	1.3	.00
13	2.2	6.2	18	6.6	5.8	7.5	17	2.2	1.2	11	.98	.00
14	2.2	5.2	15	6.4	5.6	7.5	256	1.8	.78	20	.65	.00
15	1.6	5.0	14	6.2	5.3	8.1	394	3.5	.41	4.9	.42	.00
16	1.2	4.7	13	5.5	4.3	19	102	3.3	.27	2.6	.25	.00
17	1.1	4.2	12	5.0	4.4	12	64	1.9	.21	1.6	.41	.00
18	.88	3.7	11	8.5	4.8	19	41	1.4	.16	1.0	.31	.00
19	.82	3.3	9.0	28	4.8	270	31	1.3	.12	.61	.53	.00
20	.74	3.5	8.0	15	4.8	70	24	1.3	.15	.32	.23	.00
21	.73	4.1	7.7	8.0	5.0	40	20	105	.11	.21	.16	.00
22	.77	3.5	7.2	5.6	5.1	31	18	20	.45	.16	.11	.00
23	.89	3.3	7.6	5.2	4.8	24	19	7.4	1.3	.10	.03	.00
24	1.1	3.3	10	4.9	4.1	21	15	4.3	.58	.04	.00	.00
25	5.2	8.1	13	4.8	3.9	167	13	3.2	.23	.00	.00	.00
26	9.9	797	10	4.6	3.8	48	12	3.0	.15	28	.00	.00
27	7.2	107	8.3	4.6	5.3	33	12	3.1	.06	55	.00	.00
28	5.0	60	7.5	4.7	242	25	9.7	2.2	.01	5.7	.00	.00
29	3.9	36	7.6	5.2	---	21	8.9	1.5	.00	2.4	.00	.00
30	3.5	26	8.4	7.0	---	72	8.1	.90	.02	1.5	.00	.00
31	3.1	---	7.1	9.0	---	93	---	.77	---	1.4	.00	---
TOTAL	262.73	1159.4	1184.4	227.9	442.2	1483.9	1772.7	221.27	116.31	229.44	320.98	.00
MEAN	8.48	38.6	38.2	7.35	15.8	47.9	59.1	7.14	3.88	7.40	10.4	.00
MAX	149	797	333	28	242	270	394	105	66	55	119	.00
MIN	.73	2.3	7.1	4.6	3.8	7.5	8.1	.77	.00	.00	.00	.00
CFSM	.31	1.40	1.39	.27	.57	1.74	2.15	.26	.14	.27	.38	.00
IN.	.36	1.57	1.60	.31	.60	2.01	2.40	.30	.16	.31	.43	.00

CAL YR 1986	TOTAL	8407.24	MEAN	23.0	MAX	797	MIN	.00	CFSM	.84	IN.	11.37
WTR YR 1987	TOTAL	7421.23	MEAN	20.3	MAX	797	MIN	.00	CFSM	.74	IN.	10.04

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 05150101, 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: Oct. 21-24, Jan. 19-30, and Aug. 9 to Sept. 7. Records good except for Aug. 9 to Sept. 7, which are poor. Some regulation by Deam Lake.

AVERAGE DISCHARGE.--33 years, 220 ft^3/s, 15.81 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)
Mar. 1	1100	*3,450	*17.34

Minimum daily discharge, 0.53 ft^3/s Sept. 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	13	362	70	57	3090	697	69	26	128	17	1.3
2	26	13	1370	69	126	976	1690	64	25	420	11	1.0
3	31	12	578	65	151	516	741	68	45	132	9.4	.90
4	203	11	337	58	114	369	466	505	34	74	8.6	.80
5	88	25	230	55	95	319	351	172	23	73	210	.70
6	32	106	179	54	89	266	289	101	16	62	54	.64
7	17	68	153	54	84	219	242	79	13	78	25	.58
8	12	111	142	52	83	189	203	65	12	69	15	.53
9	9.7	112	404	49	77	167	168	57	10	45	9.4	.61
10	8.3	69	479	55	65	140	140	48	10	57	6.8	.67
11	8.5	60	282	64	65	126	130	39	10	83	5.5	.70
12	13	72	219	59	68	117	139	36	33	235	4.8	.70
13	15	58	157	53	68	108	143	31	205	281	5.1	.76
14	12	47	124	51	64	105	948	28	87	663	5.0	.93
15	9.8	44	115	50	67	101	1750	25	52	179	4.4	.92
16	8.5	47	108	49	65	142	667	21	32	105	3.7	.90
17	7.8	38	108	43	62	137	485	21	21	77	3.3	1.1
18	9.7	33	105	53	65	105	363	20	17	59	2.9	1.6
19	10	31	90	110	72	280	289	17	16	47	2.8	1.3
20	9.3	30	80	130	74	279	232	16	83	33	3.7	1.0
21	6.4	30	73	100	102	181	190	15	84	25	3.6	.84
22	5.7	32	67	80	178	142	162	67	400	20	3.3	.82
23	5.4	34	64	64	176	119	251	40	195	17	2.9	.76
24	5.2	28	74	56	135	106	191	24	82	14	2.5	.79
25	14	30	137	50	113	604	157	109	54	13	2.2	.90
26	48	1780	120	45	100	401	125	307	39	13	1.9	.92
27	53	562	94	41	296	264	110	86	29	9.7	1.7	.95
28	40	280	85	40	1240	205	99	68	21	9.7	2.1	.98
29	25	194	77	43	---	163	88	43	18	12	2.7	1.4
30	18	144	75	50	---	547	79	39	20	12	2.2	1.6
31	17	---	75	55	---	730	---	35	---	18	1.8	---
TOTAL	802.3	4114	6563	1867	3951	11213	11585	2315	1712	3063.4	434.3	27.60
MEAN	25.9	137	212	60.2	141	362	386	74.7	57.1	98.8	14.0	.92
MAX	203	1780	1370	130	1240	3090	1750	505	400	663	210	1.6
MIN	5.2	11	64	40	57	101	79	15	10	9.7	1.7	.53
CFSM	.14	.72	1.12	.32	.75	1.92	2.04	.40	.30	.52	.07	.00
IN.	.16	.81	1.29	.37	.78	2.21	2.28	.46	.34	.60	.09	.01

CAL YR 1986 TOTAL 54134.3 MEAN 148 MAX 2960 MIN 1.8 CFSM .78 IN. 10.66
WTR YR 1987 TOTAL 47647.60 MEAN 131 MAX 3090 MIN .53 CFSM .69 IN. 9.38

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, at downstream end of pier of bridge on State Highway 337, 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. 16-25, Dec. 13-16, Jan. 6 to Feb. 1., Feb. 7, 8, 11-20, and Aug. 5 to Sept. 30. Records fair except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--18 years, 77.7 ft^3/s, 16.18 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,700 ft^3/s Apr. 2, 1970, gage height, 14.40 ft; minimum daily, 0.62 ft^3/s Sept. 25-28, 1987.

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)
Feb. 28	1715	*2,750	*7.86

Minimum daily discharge, 0.62 ft^3/s Sept. 25-28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	3.2	151	14	12	654	187	29	7.8	6.1	3.1	.84
2	4.6	3.2	302	14	39	347	480	26	8.4	6.5	4.4	.81
3	3.9	3.0	157	14	34	223	232	24	9.8	5.3	5.1	.79
4	9.2	3.4	102	13	27	171	158	47	8.4	4.6	9.1	.78
5	33	14	75	12	23	148	122	32	6.6	4.3	4.5	.77
6	6.1	24	58	11	21	128	96	30	5.8	6.4	3.0	.76
7	3.2	10	46	11	19	106	76	32	5.4	11	2.3	.75
8	2.5	33	42	11	18	74	60	24	5.0	7.5	2.0	.74
9	2.2	24	338	12	17	66	52	21	5.1	5.6	2.2	.80
10	1.9	12	215	13	16	52	45	19	17	5.4	2.6	.87
11	2.2	12	160	14	15	47	44	17	7.7	6.5	2.1	.76
12	2.7	13	117	12	15	44	40	17	16	12	1.8	.70
13	3.6	9.7	70	11	14	45	36	15	18	28	1.6	.69
14	3.2	7.9	54	11	14	45	504	14	16	75	1.5	.68
15	2.6	7.5	46	10	15	47	452	14	11	24	1.5	.67
16	2.2	6.8	38	10	14	96	241	12	9.0	17	1.4	.66
17	2.3	6.1	34	10	14	82	163	12	19	12	1.3	.65
18	2.0	5.2	30	17	14	76	108	11	9.5	9.2	1.3	.90
19	1.8	4.2	27	30	14	73	93	11	21	6.9	1.7	.72
20	1.7	4.8	25	40	16	65	78	11	21	5.5	1.3	.67
21	1.6	5.1	20	32	57	64	66	11	14	4.6	1.2	.64
22	1.5	4.4	18	29	152	64	61	11	21	3.9	1.1	.64
23	1.5	4.5	17	17	146	62	65	9.6	15	3.4	1.1	.63
24	1.5	4.2	19	14	102	61	57	9.1	11	3.1	1.0	.63
25	5.0	5.0	20	13	81	59	49	14	8.1	2.6	1.0	.62
26	11	340	18	11	65	53	43	27	6.5	2.5	.98	.62
27	8.1	115	16	10	163	42	42	12	5.4	3.0	.96	.62
28	5.4	70	16	10	936	37	37	11	4.6	4.0	1.5	.62
29	3.9	45	15	11	---	32	34	9.0	4.3	2.8	1.0	.70
30	3.4	35	16	11	---	99	33	8.5	3.9	2.4	.92	1.0
31	3.4	---	15	11	---	129	---	8.2	---	2.6	.87	---
TOTAL	141.2	835.2	2277	459	2073	3291	3754	548.4	321.3	293.7	65.43	21.73
MEAN	4.55	27.8	73.5	14.8	74.0	106	125	17.7	10.7	9.47	2.11	.72
MAX	33	340	338	40	936	654	504	47	21	75	9.1	1.0
MIN	1.5	3.0	15	10	12	32	33	8.2	3.9	2.4	.87	.62
CFSM	.07	.43	1.13	.23	1.13	1.63	1.92	.27	.16	.15	.03	.01
IN.	.08	.48	1.30	.26	1.18	1.88	2.14	.31	.18	.17	.04	.01

CAL YR 1986	TOTAL	16403.9	MEAN	44.9	MAX	614	MIN	1.3	CFSM	.69	IN.	9.36
WTR YR 1987	TOTAL	14080.96	MEAN	38.6	MAX	936	MIN	.62	CFSM	.59	IN.	8.03

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: Jan. 22 to Feb. 1, May 27 to June 9, and Aug. 21-27. Records fair except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--19 years, 23.2 ft^3/s, 19.57 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, and 1987.

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)
Nov. 26	0330	1,930	6.37	May 25	1900	2,160	6.59
Feb. 28	1530	*3,570	*7.71				

Minimum daily discharge, no flow for many days in August and September.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.7	3.5	114	7.9	12	191	82	6.2	2.7	12	.30	.00
2	3.7	2.9	151	7.6	28	78	242	5.6	4.0	5.0	.21	.00
3	2.0	2.8	56	7.1	20	49	72	62	6.5	3.4	.24	.00
4	4.3	2.7	31	6.7	16	30	47	40	3.5	18	.20	.00
5	8.2	14	21	6.2	13	24	31	15	2.5	14	.08	.00
6	3.1	13	17	6.0	12	19	24	11	1.7	20	.01	.00
7	2.1	7.1	14	6.0	11	17	21	8.4	1.4	16	.00	.00
8	1.7	25	14	5.7	9.3	15	18	6.8	1.3	8.3	.00	.00
9	1.5	14	83	5.6	8.2	13	16	5.6	1.2	41	.01	.00
10	1.1	9.0	50	7.8	8.0	11	14	4.9	1.1	21	.16	.00
11	1.0	11	29	6.9	7.3	10	14	4.1	.82	12	.01	.00
12	1.2	9.3	21	6.3	7.2	9.0	15	3.8	5.2	9.5	.00	.00
13	2.4	7.2	16	6.2	6.4	8.2	13	3.4	7.4	48	.00	.00
14	1.8	6.2	15	6.1	7.6	7.8	204	2.9	4.3	25	.00	.00
15	1.3	6.0	12	6.3	7.4	8.7	124	2.7	2.4	15	.00	.00
16	1.1	6.0	11	5.7	7.7	21	64	2.4	1.9	11	.00	.00
17	1.0	5.5	10	5.6	7.5	14	49	2.3	1.5	7.7	1.4	.00
18	.86	5.1	9.2	11	7.8	14	35	2.2	33	5.7	1.5	.00
19	.76	4.5	8.3	16	7.8	16	25	2.1	19	4.2	.10	.00
20	.70	4.7	7.5	14	8.1	13	21	2.6	7.6	3.3	.00	.00
21	.64	5.1	7.0	13	20	12	19	7.7	5.9	2.4	.00	.00
22	.68	4.6	6.5	11	35	11	19	10	8.4	2.0	.00	.00
23	.76	4.5	6.3	9.2	35	9.9	19	4.3	9.1	1.6	.00	.00
24	.93	4.2	9.7	8.0	24	10	17	2.6	6.9	1.2	.00	.00
25	15	4.5	12	7.0	20	15	14	172	5.7	1.0	.00	.00
26	11	327	10	6.5	17	12	12	37	4.8	.85	.00	.00
27	8.5	43	9.6	6.0	117	12	12	10	3.8	.76	.00	.00
28	5.6	23	9.2	5.8	766	10	9.5	6.5	3.2	.87	.44	.00
29	4.5	17	8.4	6.0	---	9.5	8.2	4.5	3.8	.50	.02	.00
30	4.0	13	8.7	6.5	---	57	7.2	3.5	2.9	.42	.00	.00
31	3.7	---	8.2	8.0	---	61	---	3.0	---	.42	.00	---
TOTAL	104.83	605.4	785.6	237.7	1246.3	788.1	1267.9	455.1	163.52	312.12	4.68	.00
MEAN	3.38	20.2	25.3	7.67	44.5	25.4	42.3	14.7	5.45	10.1	.15	.00
MAX	15	327	151	16	766	191	242	172	33	48	1.5	.00
MIN	.64	2.7	6.3	5.6	6.4	7.8	7.2	2.1	.82	.42	.00	.00
CFSM	.21	1.25	1.57	.48	2.76	1.58	2.63	.91	.34	.63	.01	.00
IN.	.24	1.40	1.82	.55	2.88	1.82	2.93	1.05	.38	.72	.01	.00

CAL YR 1986 TOTAL 5378.43 MEAN 14.7 MAX 327 MIN .03 CFSM .91 IN. 12.43
WTR YR 1987 TOTAL 5971.25 MEAN 16.4 MAX 766 MIN .00 CFSM 1.02 IN. 13.80

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: Nov. 23 to Dec. 10, Jan. 23-31, and July 31 to Sept. 6. Records fair except for Nov. 23 to Dec. 10 and July 21 to Sept. 6, which are poor.

AVERAGE DISCHARGE.--44 years, 169 ft^3/s, 17.79 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, and 1987.

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)
Mar. 1	0100	*4,750	*13.84

Minimum daily discharge, no flow Sept. 16, 19-28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	30	700	54	47	2190	466	59	29	117	6.2	.70
2	103	27	1000	54	174	762	1210	56	32	160	5.0	.62
3	41	25	500	51	149	467	594	55	46	68	3.8	.56
4	116	24	300	47	113	340	373	203	52	44	4.0	.50
5	222	32	200	45	94	280	277	97	34	51	4.2	.47
6	95	134	150	44	85	237	217	71	27	52	3.1	.45
7	52	89	120	44	80	197	178	61	24	101	2.4	.43
8	36	127	110	42	76	176	148	53	22	70	2.1	.44
9	28	175	450	40	65	159	122	48	23	50	1.8	.70
10	22	111	375	43	58	134	105	44	35	181	1.7	.58
11	18	95	252	49	58	117	102	40	29	89	1.6	.43
12	18	102	189	44	57	107	96	39	33	59	1.6	.41
13	28	80	137	42	54	97	92	37	111	312	1.6	.35
14	36	64	106	41	53	92	655	34	243	313	1.4	.29
15	26	60	98	41	59	90	1030	32	85	147	1.3	.08
16	21	59	86	40	54	158	446	30	51	105	1.2	.00
17	17	52	81	38	54	142	334	28	40	65	2.3	.12
18	15	46	74	44	55	123	264	27	33	47	3.0	.02
19	13	41	66	84	54	126	215	27	139	37	2.1	.00
20	12	37	61	106	53	117	181	25	209	30	1.8	.00
21	11	40	56	92	68	106	156	25	82	24	1.9	.00
22	9.8	38	52	88	211	98	137	75	61	21	1.4	.00
23	9.5	36	50	66	225	92	138	79	66	18	1.1	.00
24	9.4	35	57	58	175	90	124	39	45	15	1.0	.00
25	17	34	76	50	142	340	105	33	36	12	.96	.00
26	100	1700	69	45	119	241	92	264	31	10	.91	.00
27	102	800	64	42	320	188	85	88	27	9.0	.88	.00
28	76	250	61	40	1560	158	78	55	24	9.4	1.5	.00
29	53	150	59	42	---	136	71	42	23	8.9	1.3	.19
30	42	110	60	43	---	285	66	35	25	8.9	1.1	.51
31	35	---	57	45	---	435	---	32	---	7.7	.85	---
TOTAL	1403.7	4603	5716	1604	4312	8280	8157	1833	1717	2241.9	65.10	7.85
MEAN	45.3	153	184	51.7	154	267	272	59.1	57.2	72.3	2.10	.26
MAX	222	1700	1000	106	1560	2190	1210	264	243	313	6.2	.70
MIN	9.4	24	50	38	47	90	66	25	22	7.7	.85	.00
CFSM	.35	1.19	1.43	.40	1.19	2.07	2.11	.46	.44	.56	.02	.00
IN.	.40	1.33	1.65	.46	1.24	2.39	2.35	.53	.50	.65	.02	.00

CAL YR 1986	TOTAL	40083.41	MEAN	110	MAX	1790	MIN	.08	CFSM	.85	IN.	11.56
WTR YR 1987	TOTAL	39940.55	MEAN	109	MAX	2190	MIN	.00	CFSM	.84	IN.	11.52

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: Oct. 21-24, Oct. 31 to Nov. 4, Jan. 23-30, Aug. 10-26, and Sept. 1-7, 13-16, 19-28. Records fair.

AVERAGE DISCHARGE.--17 years, 24.1 ft^3/s, 17.23 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,400 ft^3/s May 1, 1983, gage height, 13.14 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.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 26	0400	*1,010	*6.70

Minimum daily discharge, 0.04 ft^3/s Aug. 25, 26, Sept. 4-7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.9	3.1	71	10	9.5	246	26	7.4	3.7	68	.62	.05
2	4.4	2.9	147	9.9	9.2	114	65	7.1	2.8	13	.45	.05
3	3.2	2.8	74	8.6	7.2	65	38	8.0	7.5	7.8	.34	.05
4	154	2.7	43	8.1	5.9	44	27	8.5	3.9	5.8	.24	.04
5	41	8.3	29	7.6	5.5	34	21	5.9	2.7	5.0	.22	.04
6	16	9.2	24	7.7	5.2	27	17	5.2	2.0	130	.19	.04
7	9.7	6.9	20	7.5	5.3	22	15	4.7	1.7	38	.16	.04
8	6.8	7.8	18	6.9	5.5	19	14	4.3	1.3	16	.13	15
9	5.0	7.6	44	7.0	5.1	17	12	3.8	1.1	11	.12	3.2
10	3.9	6.7	43	8.8	5.2	13	11	3.2	1.0	8.8	.11	.65
11	3.4	8.3	32	7.5	5.2	11	11	2.7	.82	7.0	.09	.21
12	3.6	7.6	26	6.8	5.2	10	10	2.9	5.3	5.5	.09	.23
13	4.1	6.7	19	6.5	4.9	9.1	8.6	2.5	8.4	6.1	.08	.12
14	3.4	5.8	16	6.7	4.7	8.7	45	2.7	3.6	6.0	.08	.10
15	2.7	6.1	14	6.7	4.8	9.0	60	3.0	2.0	4.1	.08	.09
16	2.3	5.8	13	5.9	4.3	10	42	2.0	1.6	3.7	.07	.08
17	2.1	5.3	11	5.6	4.8	8.1	34	1.6	1.5	2.9	.07	.29
18	1.8	4.7	10	8.5	5.2	8.0	28	1.5	1.1	2.3	.06	.11
19	1.8	4.1	9.0	12	4.9	8.1	24	1.5	1.2	1.8	.06	.09
20	1.6	4.4	8.0	13	4.9	7.1	20	3.7	1.6	1.6	.06	.11
21	1.5	4.2	7.1	12	5.9	6.8	18	4.7	1.9	1.3	.05	.09
22	1.5	3.5	6.6	12	8.1	6.6	17	4.1	86	1.2	.05	.08
23	1.5	3.5	6.3	8.6	8.3	6.3	16	2.4	11	1.0	.05	.07
24	1.6	3.4	11	7.2	7.7	7.1	14	1.7	6.6	.85	.05	.07
25	9.5	13	15	6.4	7.5	10	12	15	4.6	.68	.04	.07
26	9.9	361	13	5.8	7.2	7.6	11	8.7	3.6	.54	.04	.06
27	7.7	83	12	5.5	13	7.3	10	4.4	2.5	.79	.13	.06
28	6.1	47	12	5.5	177	7.1	9.4	8.8	2.0	1.4	.12	.06
29	4.7	31	12	5.6	---	6.9	8.7	4.8	2.0	.80	.08	.45
30	3.9	23	12	7.0	---	18	8.1	3.6	1.6	1.5	.07	.15
31	3.4	---	10	8.5	---	20	---	3.1	---	.82	.07	---
TOTAL	326.0	689.4	788.0	245.4	347.2	793.8	652.8	143.5	176.62	355.28	4.07	21.75
MEAN	10.5	23.0	25.4	7.92	12.4	25.6	21.8	4.63	5.89	11.5	.13	.72
MAX	154	361	147	13	177	246	65	15	86	130	.62	15
MIN	1.5	2.7	6.3	5.5	4.3	6.3	8.1	1.5	.82	.54	.04	.04
CFSM	.55	1.21	1.34	.42	.65	1.35	1.15	.24	.31	.61	.01	.04
IN.	.64	1.35	1.54	.48	.68	1.55	1.28	.28	.35	.70	.01	.04

CAL YR 1986 TOTAL 5840.46 MEAN 16.0 MAX 361 MIN .04 CFSM .84 IN. 11.44
WTR YR 1987 TOTAL 4543.82 MEAN 12.4 MAX 361 MIN .04 CFSM .65 IN. 8.90

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: Jan. 22-31. Records good.

AVERAGE DISCHARGE.--19 years, 327 ft^3/s, 15.69 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,500 ft^3/s May 2, 1983, gage height, 24.37 ft; minimum daily, 3.2 ft^3/s Sept. 28, 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)
Mar. 1	0400	*5,180	*14.14

Minimum daily discharge, 3.2 ft^3/s Sept. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	41	242	108	75	3960	500	92	35	264	26	6.9
2	28	39	1140	105	108	1610	1180	87	37	320	173	6.0
3	38	36	788	100	126	895	786	83	39	163	55	6.0
4	189	35	499	91	107	615	512	179	47	96	35	5.6
5	415	44	357	86	92	488	394	123	38	89	27	5.6
6	141	114	274	83	87	402	318	92	31	107	23	5.4
7	84	126	231	83	86	330	272	84	27	724	20	5.6
8	58	92	206	79	85	292	236	73	24	261	17	6.0
9	47	102	243	74	80	260	206	67	23	153	15	51
10	40	89	481	81	68	210	183	62	31	196	14	28
11	36	81	353	88	67	180	176	58	24	124	12	12
12	32	83	289	80	70	162	171	55	24	97	11	10
13	34	80	223	74	69	145	163	54	77	187	11	11
14	41	69	180	72	66	136	573	51	98	457	11	10
15	38	62	169	73	65	131	1360	57	54	232	9.5	7.1
16	32	62	152	69	66	143	718	51	39	156	8.9	6.3
17	28	62	144	65	64	137	533	45	35	113	8.6	6.5
18	27	58	135	70	64	121	409	41	48	85	8.2	6.0
19	26	52	121	106	64	120	330	37	38	69	8.4	6.3
20	25	50	109	165	61	118	279	36	70	57	7.3	5.6
21	24	49	100	146	69	110	242	197	61	49	6.5	4.7
22	23	48	93	120	149	103	215	95	554	43	6.5	4.3
23	24	46	89	98	174	98	199	73	260	39	5.8	4.9
24	24	44	96	86	143	97	179	51	128	35	5.8	4.7
25	32	45	146	78	125	435	158	43	82	31	5.3	4.4
26	73	2060	151	73	120	351	140	56	62	29	5.3	3.8
27	83	877	133	69	158	233	128	66	49	27	6.4	3.5
28	70	477	126	67	1110	188	119	48	41	29	12	3.2
29	56	339	121	69	---	156	109	42	41	31	10	4.6
30	46	259	121	73	---	221	101	40	38	29	12	6.2
31	43	---	117	75	---	436	---	38	---	30	8.8	---
TOTAL	1878	5621	7629	2706	3618	12883	10889	2176	2155	4322	585.3	251.2
MEAN	60.6	187	246	87.3	129	416	363	70.2	71.8	139	18.9	8.37
MAX	415	2060	1140	165	1110	3960	1360	197	554	724	173	51
MIN	21	35	89	65	61	97	101	36	23	27	5.3	3.2
CFSM	.21	.66	.87	.31	.46	1.47	1.28	.25	.25	.49	.07	.03
IN.	.25	.74	1.00	.36	.48	1.69	1.43	.29	.28	.57	.08	.03

CAL YR 1986	TOTAL	71332.8	MEAN	195	MAX	3040	MIN	9.0	CFSM	.69	IN.	9.38
WTR YR 1987	TOTAL	54713.5	MEAN	150	MAX	3960	MIN	3.2	CFSM	.53	IN.	7.19

03302849 WHISKEY RUN AT MORENGO, IN

LOCATION.--Lat 38°22'32", long 86°20'41", in SW¼SW¼ 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.--Estimated daily discharges: Aug. 8-30. Records good except for estimated daily discharges, which are fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 494 ft^3/s Feb. 28, 1987, gage height, 4.51 ft; no flow at times.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of August 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.--Maximum discharge, 494 ft^3/s Feb. 28, gage height, 4.51 ft; minimum daily, no flow many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.02	.07	12	.85	.53	43	13	.77	.06	.03	.02	.00
2	.05	.06	21	.86	5.8	18	29	.65	.06	.04	.02	.00
3	.04	.06	8.9	.66	3.9	10	13	.62	.28	.04	.02	.00
4	3.4	.06	4.9	.55	2.5	6.8	8.1	.62	.08	.03	.02	.00
5	1.8	.51	3.2	.54	1.9	5.3	6.0	.42	.07	.03	.02	.00
6	.23	.62	2.3	.55	1.7	4.2	4.6	.36	.06	.07	.01	.00
7	.07	.59	1.9	.55	1.5	3.5	3.8	.29	.06	.14	.01	.00
8	.06	.63	1.7	.43	1.4	3.1	3.2	.18	.05	.06	.01	.00
9	.05	.59	6.1	.40	.88	2.7	2.6	.14	.05	.06	.00	.00
10	.05	.44	6.1	.69	.65	2.1	2.3	.14	.05	.05	.00	.00
11	.05	.50	4.0	.76	.50	1.9	2.4	.11	.04	.05	.00	.00
12	.06	.39	2.9	.62	.47	1.7	2.4	.10	.06	.05	.00	.00
13	.10	.23	2.0	.57	.19	1.5	2.2	.10	.08	17	.00	.00
14	.09	.15	1.6	.55	.36	1.4	32	.09	.06	2.6	.00	.00
15	.05	.17	1.3	.54	.45	1.5	24	.09	.05	.77	.00	.00
16	.05	.13	1.3	.34	.53	4.1	13	.08	.05	.22	.00	.00
17	.04	.10	1.2	.20	.43	3.4	8.9	.08	.04	.09	.00	.00
18	.04	.09	1.1	.70	.30	3.0	6.3	.07	.04	.07	.00	.00
19	.04	.08	.85	2.1	.13	2.7	4.9	.07	.03	.06	.00	.00
20	.04	.09	.69	2.2	.15	2.4	3.9	.08	.03	.06	.00	.00
21	.03	.09	.54	1.8	1.3	2.1	3.3	.12	.03	.05	.00	.00
22	.03	.08	.45	1.6	5.3	1.9	2.8	.91	.03	.04	.00	.00
23	.03	.08	.39	1.2	5.6	1.8	2.6	.10	.03	.04	.00	.00
24	.03	.08	.92	.76	4.9	2.1	2.4	.09	.03	.03	.00	.00
25	.83	2.9	2.2	.64	3.8	6.4	2.1	.25	.02	.03	.00	.00
26	1.1	59	1.7	.42	3.1	4.4	1.8	.09	.02	.03	.00	.00
27	.62	7.6	1.4	.21	14	3.7	1.6	.08	.02	.03	.00	.00
28	.21	4.0	1.3	.15	111	3.1	1.3	.07	.02	.02	.00	.00
29	.09	2.6	1.2	.10	---	2.7	1.2	.06	.02	.02	.00	.00
30	.08	1.8	1.1	.12	---	9.7	1.0	.06	.02	.02	.00	.00
31	.07	---	.93	.13	---	11	---	.06	---	.02	.00	---
TOTAL	9.45	83.79	97.17	21.79	173.27	171.2	205.7	6.95	1.54	21.85	.13	.00
MEAN	.30	2.79	3.13	.70	6.19	5.52	6.86	.22	.05	.70	.00	.00
MAX	3.4	59	21	2.2	111	43	32	.91	.28	17	.02	.00
MIN	.02	.06	.39	.10	.13	1.4	1.0	.06	.02	.02	.00	.00
CFSM	.04	.40	.45	.10	.88	.79	.98	.03	.01	.10	.00	.00
IN.	.05	.44	.51	.12	.92	.91	1.09	.04	.01	.12	.00	.00

WTR YR 1987 TOTAL 792.84 MEAN 2.17 MAX 111 MIN .00 CFSM .31 IN. 4.20

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.--Estimated daily discharges: Jan. 23-29. Records good.

AVERAGE DISCHARGE.--57 years, 632 ft^3/s, 18.03 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)
Mar. 1	1300	*7,930	*11.07

Minimum daily discharge, 18 ft^3/s Sept. 27, 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	79	85	766	277	218	6820	1210	339	140	184	150	27
2	103	74	1930	267	374	4160	2130	318	135	450	208	26
3	125	66	1990	258	392	2290	2270	306	187	473	267	25
4	190	63	1320	245	365	1580	1390	656	170	310	148	23
5	681	82	947	228	319	1230	1020	469	153	213	95	22
6	569	189	729	217	292	1040	813	377	126	237	74	21
7	260	227	595	209	279	873	682	315	104	589	64	20
8	171	302	520	204	276	756	598	287	90	806	56	20
9	117	267	682	195	259	686	527	258	161	457	53	24
10	88	239	969	199	246	593	470	231	183	358	48	25
11	71	228	963	206	230	500	436	208	134	391	44	72
12	63	208	766	214	224	443	413	200	146	299	41	57
13	80	191	618	203	222	407	394	182	187	383	38	40
14	75	183	497	191	226	380	805	170	228	755	36	32
15	74	174	429	187	226	368	2600	160	265	696	35	27
16	68	163	400	182	225	427	1980	150	213	435	33	26
17	57	154	370	174	224	417	1380	152	169	349	33	30
18	47	146	350	185	219	389	1120	136	137	278	33	29
19	40	130	326	230	212	368	918	126	138	226	35	26
20	36	119	301	298	212	350	790	122	181	182	30	24
21	32	112	277	362	261	337	704	148	183	151	27	22
22	29	106	259	343	515	320	639	301	210	130	27	21
23	26	101	246	280	706	304	592	234	727	115	25	20
24	26	95	251	240	606	304	552	213	411	101	23	20
25	52	93	276	220	498	704	504	173	259	91	22	19
26	114	2730	335	210	432	1010	462	178	189	83	24	19
27	169	2830	333	205	678	715	432	169	141	80	24	18
28	186	1250	307	200	2710	565	409	194	115	92	32	18
29	164	869	294	210	---	475	384	170	108	111	31	20
30	133	658	290	215	---	555	362	133	122	82	27	25
31	102	---	283	215	---	901	---	125	---	72	27	---
TOTAL	4027	12134	18619	7069	11646	30267	26986	7200	5712	9179	1810	798
MEAN	130	404	601	228	416	976	900	232	190	296	58.4	26.6
MAX	681	2830	1990	362	2710	6820	2600	656	727	806	267	72
MIN	26	63	246	174	212	304	362	122	90	72	22	18
CFSM	.27	.85	1.26	.48	.87	2.05	1.89	.49	.40	.62	.12	.06
IN.	.31	.95	1.46	.55	.91	2.37	2.11	.56	.45	.72	.14	.06

CAL YR 1986	TOTAL	174124	MEAN	477	MAX	4980	MIN	26	CFSM	1.00	IN.	13.61
WTR YR 1987	TOTAL	135447	MEAN	371	MAX	6820	MIN	18	CFSM	.78	IN.	10.59

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: Jan. 22-30 and Sept. 2-10. Records good except for estimated daily discharges, which are poor. Flow regulated by Forest Service and Middle Fork Anderson River Conservancy District control structures beginning June 1967.

AVERAGE DISCHARGE.--26 years, 58.2 ft^3/s, 19.86 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, 831 ft^3/s Feb. 28, gage height, 14.01 ft; minimum daily, no flow Sept. 24-28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.7	9.9	96	16	20	497	143	14	2.6	8.8	5.6	1.8
2	4.0	10	210	17	75	405	273	13	9.8	8.0	4.9	1.7
3	4.2	9.6	147	14	69	367	213	13	24	7.7	4.5	1.6
4	9.5	9.2	90	13	50	271	131	13	16	7.1	4.2	1.6
5	28	17	60	13	38	119	89	11	11	6.9	3.8	1.5
6	22	30	44	13	31	69	69	10	8.8	8.1	3.6	1.4
7	15	26	36	12	27	52	57	9.3	8.5	11	3.3	1.4
8	11	33	34	12	24	44	47	8.6	8.3	9.9	3.1	1.4
9	9.0	33	165	12	21	38	40	8.0	7.8	9.9	3.1	2.0
10	7.8	26	153	14	19	34	35	7.8	7.7	9.7	3.0	1.5
11	7.0	24	95	15	18	31	36	7.7	8.2	9.0	3.4	1.3
12	8.6	23	66	14	17	28	34	7.9	13	9.5	3.1	1.9
13	16	20	48	14	16	25	31	7.7	46	144	2.9	1.6
14	15	17	37	13	20	24	175	7.5	85	219	2.7	1.5
15	13	17	32	14	26	25	270	7.2	60	77	2.7	5.1
16	11	16	29	13	28	137	207	6.8	30	38	2.6	3.2
17	9.3	15	27	12	27	118	136	6.4	18	23	4.1	2.1
18	8.2	14	25	16	28	85	94	6.3	12	16	2.8	1.2
19	7.5	13	22	26	29	65	71	6.1	9.7	13	2.0	.80
20	6.7	14	20	30	32	51	56	6.7	8.9	11	1.9	.47
21	6.2	17	18	27	47	42	46	6.2	8.9	9.4	1.9	.30
22	5.9	17	17	21	79	35	38	6.0	27	8.9	2.6	.20
23	6.4	16	16	17	77	31	34	5.8	67	8.9	1.9	.04
24	7.0	15	19	14	63	29	32	5.7	37	8.7	2.1	.00
25	19	22	21	12	50	38	28	5.7	20	8.6	3.4	.00
26	25	340	20	11	41	35	24	5.6	13	8.4	3.2	.00
27	22	248	19	10	104	32	22	2.8	10	8.4	3.0	.00
28	18	128	18	10	427	28	19	2.1	8.7	8.6	3.0	.00
29	15	68	16	11	---	26	17	2.0	8.5	7.8	2.5	.05
30	13	46	16	12	---	83	16	2.2	8.2	7.3	2.1	.03
31	11	---	15	14	---	131	---	2.7	---	6.4	2.0	---
TOTAL	365.0	1293.7	1631	462	1503	2995	2483	224.8	603.6	738.0	95.0	35.69
MEAN	11.8	43.1	52.6	14.9	53.7	96.6	82.8	7.25	20.1	23.8	3.06	1.19
MAX	28	340	210	30	427	497	273	14	85	219	5.6	5.1
MIN	3.7	9.2	15	10	16	24	16	2.0	2.6	6.4	1.9	.00
CFSM	.30	1.08	1.32	.37	1.35	2.43	2.08	.18	.51	.60	.08	.03
IN.	.34	1.21	1.52	.43	1.40	2.80	2.32	.21	.56	.69	.09	.03

CAL YR 1986	TOTAL	15080.94	MEAN	41.3	MAX	502	MIN	.23	CFSM	1.04	IN.	14.10
WTR YR 1987	TOTAL	12429.79	MEAN	34.1	MAX	497	MIN	.00	CFSM	.86	IN.	11.62

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: Jan. 22-29, May 7 to June 10, June 25 to July 5, July 8-12, 16-27, 29-31, Aug. 2-17, 27, and Sept. 15, 29, 30. Records fair except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--18 years, 11.3 ft^3/s, 19.52 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; 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)
Feb. 28	1515	*792	*8.96	June 12	2130	786	8.95
May 3	1830	575	8.50				

Minimum daily discharge, no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	1.8	83	2.1	15	108	22	1.4	1.3	1.3	.49	.00
2	7.1	1.4	48	1.9	25	32	62	1.3	8.0	.70	.07	.00
3	7.9	1.3	16	1.5	11	23	18	61	4.0	.25	.00	.00
4	62	3.0	8.3	1.5	5.8	15	11	24	2.6	.13	.00	.00
5	29	18	5.1	1.3	4.1	14	8.3	9.9	1.8	.70	.00	.00
6	8.7	10	3.6	1.6	3.4	13	6.3	4.7	1.4	2.5	.00	.00
7	5.6	5.4	3.0	1.3	3.4	11	5.3	1.5	1.0	2.6	.00	.00
8	3.1	17	4.9	1.1	3.1	11	4.0	1.0	.84	.25	.00	.00
9	1.5	10	56	1.4	2.1	9.7	3.1	.95	.70	.06	.00	.00
10	1.0	5.2	20	2.8	2.1	4.4	2.7	.93	.55	.04	.00	.00
11	.79	7.3	12	1.8	2.2	2.8	5.9	.92	.42	.02	.00	.00
12	6.1	5.4	8.0	1.6	2.0	2.4	3.3	4.0	105	.35	.00	.00
13	9.2	3.0	4.9	1.4	1.4	2.2	2.4	10	55	11	.00	.00
14	5.3	2.5	4.3	1.6	4.4	2.0	76	23	26	2.9	.00	.00
15	2.8	3.1	3.9	1.5	3.6	5.4	40	8.0	4.7	11	.00	.10
16	1.7	2.9	3.8	1.1	4.2	41	26	2.5	2.5	2.0	.00	.00
17	1.2	2.4	3.8	1.1	4.1	15	18	1.0	1.6	.50	.00	.00
18	.76	2.1	2.9	7.9	6.7	11	12	.85	1.8	.11	.00	.00
19	.66	1.6	2.4	21	9.2	8.4	8.9	10	1.2	.05	.00	.00
20	.59	3.5	2.1	9.3	13	6.6	7.3	2.5	1.2	.02	.00	.00
21	.51	2.6	1.6	6.0	28	6.0	6.6	1.0	1.0	.00	.00	.00
22	.47	2.4	1.6	3.0	21	5.0	5.9	.84	2.0	.00	.00	.00
23	.41	2.6	1.7	1.5	11	4.3	6.0	.77	41	.00	.00	.00
24	.80	1.9	6.0	.90	7.5	4.1	5.4	.72	5.1	.00	.00	.00
25	31	28	5.5	.65	5.7	4.1	3.9	15	2.6	.00	.00	.00
26	11	107	3.6	.54	4.1	3.6	2.9	9.0	2.5	.00	.00	.00
27	5.9	21	3.0	.50	55	3.3	2.3	5.0	1.0	.10	.05	.00
28	3.6	11	2.6	.70	264	2.9	2.1	2.5	.60	.28	.00	.00
29	2.6	7.7	2.5	1.2	---	2.6	1.8	1.4	.40	.05	.00	.20
30	2.1	6.0	2.4	2.3	---	12	1.6	7.4	.27	.01	.00	.05
31	1.9	---	2.0	1.7	---	22	---	2.0	---	.00	.00	---
TOTAL	226.29	297.1	328.5	83.79	522.1	407.8	381.0	215.08	278.08	36.92	.61	.35
MEAN	7.30	9.90	10.6	2.70	18.6	13.2	12.7	6.94	9.27	1.19	.02	.01
MAX	62	107	83	21	264	108	76	61	105	11	.49	.20
MIN	.41	1.3	1.6	.50	1.4	2.0	1.6	.72	.27	.00	.00	.00
CFSM	.93	1.26	1.35	.34	2.37	1.68	1.62	.88	1.18	.15	.00	.00
IN.	1.07	1.41	1.55	.40	2.47	1.93	1.80	1.02	1.32	.17	.00	.00

CAL YR 1986	TOTAL	4069.94	MEAN	11.2	MAX	399	MIN	.01	CFSM	1.42	IN.	19.26
WTR YR 1987	TOTAL	2777.62	MEAN	7.61	MAX	264	MIN	.00	CFSM	.97	IN.	13.15

03322011 PIGEON CREEK NEAR FORT BRANCH, IN

LOCATION.--Lat 30°15'07", 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 1.6 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: Oct. 4-8 and Jan. 21-30. Records fair except for estimated daily discharges and discharges above 200 ft^3/s, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,350 ft^3/s Feb. 28, 1987, gage height, 13.77 ft; minimum daily, 0.79 ft^3/s Sept. 21, 1987.

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)
Oct. 4	----	860	11.1	June 13	0030	831	10.94
Feb. 28	1830	*1,350	*13.77				

Minimum daily discharge, 0.79 ft^3/s Sept. 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.8	2.5	176	8.1	11	340	9.8	4.9	3.7	51	16	.84
2	10	2.5	149	7.7	36	61	16	5.0	3.6	5.4	1.4	.85
3	20	2.5	32	6.3	17	34	9.4	87	16	2.4	1.6	.85
4	250	3.0	21	6.2	11	25	7.7	61	3.1	2.0	1.7	.85
5	70	6.0	16	5.8	9.3	22	7.2	9.7	2.5	112	1.2	.87
6	10	4.4	13	6.2	9.3	19	7.0	7.3	2.4	22	1.2	.85
7	5.0	3.7	11	5.5	8.7	16	6.8	6.3	2.3	80	1.1	.85
8	2.4	3.7	13	4.8	8.1	15	6.3	5.5	2.2	5.8	1.1	.92
9	2.0	3.5	70	5.3	8.5	12	6.0	5.1	2.4	3.4	1.2	.91
10	1.9	3.2	26	8.0	5.2	9.4	5.9	4.8	2.4	2.6	1.1	.92
11	1.9	11	18	6.0	5.3	8.7	13	4.7	2.3	2.2	1.1	.91
12	27	5.9	14	5.8	5.4	7.9	7.5	12	59	2.0	1.1	1.1
13	9.5	3.7	9.0	5.5	4.6	7.7	6.9	4.8	236	2.7	1.1	1.0
14	5.9	3.3	8.2	5.7	13	7.7	87	4.4	96	2.2	1.1	.95
15	3.6	3.9	8.0	5.6	11	8.7	39	4.9	7.3	1.7	1.0	1.0
16	3.0	3.3	8.1	4.7	8.5	50	45	4.0	43	1.6	1.0	1.1
17	2.6	3.1	8.5	4.6	7.2	16	39	5.3	11	1.5	8.2	4.5
18	2.5	3.0	7.9	8.5	7.7	13	21	5.6	3.7	1.5	1.3	1.1
19	2.4	2.6	6.8	31	12	12	16	5.8	3.3	1.5	1.1	.86
20	2.3	3.2	6.3	16	15	9.6	12	9.2	3.4	1.4	1.0	.82
21	2.3	2.7	5.5	9.5	31	8.8	10	3.6	3.1	1.4	.97	.79
22	2.3	2.6	5.4	7.6	29	7.8	9.3	3.3	12	1.5	.91	.80
23	2.4	3.2	5.7	6.0	20	7.3	9.1	3.1	287	1.5	.89	.83
24	2.7	2.8	28	4.8	14	7.8	8.3	3.1	12	1.4	.88	.84
25	30	10	21	4.2	12	7.7	7.1	4.7	8.0	2.6	.92	.83
26	8.3	114	15	3.6	10	6.5	6.5	3.6	5.0	1.4	.93	.83
27	4.5	24	11	3.3	105	6.5	6.3	3.2	2.2	1.4	1.1	.82
28	3.5	15	9.9	4.1	558	6.2	5.7	3.1	1.9	1.4	1.3	.84
29	3.1	11	9.3	4.8	---	6.1	5.5	3.0	1.8	1.4	.94	1.9
30	2.7	8.7	9.0	5.0	---	22	5.3	14	1.7	2.7	.87	1.2
31	2.6	---	7.7	5.7	---	12	---	4.2	---	2.2	.85	---
TOTAL	506.2	272.0	749.3	215.9	992.8	793.4	441.6	306.2	840.3	323.8	56.16	31.73
MEAN	16.3	9.07	24.2	6.96	35.5	25.6	14.7	9.88	28.0	10.4	1.81	1.06
MAX	250	114	176	31	558	340	87	87	287	112	16	4.5
MIN	1.9	2.5	5.4	3.3	4.6	6.1	5.3	3.0	1.7	1.4	.85	.79
CFSM	.46	.26	.68	.20	1.00	.72	.42	.28	.79	.29	.05	.03
IN.	.53	.29	.79	.23	1.04	.83	.46	.32	.88	.34	.06	.03

WTR YR 1987 TOTAL 5529.39 MEAN 15.1 MAX 558 MIN .79 CFSM .43 IN. 5.81

03322500 WABASH RIVER NEAR NEW CORYDON, IN

LOCATION.--Lat 40°33'50", long 84°48'10", in NE¼SE¼ sec.3, T.24 N., R.15 E., Jay County, Hydrologic Unit 05120101, on left bank 10 ft downstream from county bridge on Indiana-Ohio State line road, 2 mi east of New Corydon, 2.8 mi downstream from Beaver Creek, and at mile 466.0.

DRAINAGE AREA.--262 mi^2.

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

REVISED RECORDS.--WSP 1555: 1957(P). WSP 1909: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 830.10 ft above National Geodetic Vertical Datum of 1929. Prior to June 24, 1953, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Jan. 19 to Feb. 3, Feb. 16-21, Aug. 25, and Sept. 5-30. Records good except for Jan. 19 to Feb. 3, and days when discharges were below 15 ft^3/s, which are poor. Occasional regulation by Grand Lake, diversion from or into St. Marys River basin, and into Miami and Erie Canals.

AVERAGE DISCHARGE.--36 years, 203 ft^3/s, 10.52 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,720 ft^3/s Jan. 22, 1959; gage height, 20.47 ft, from floodmarks; minimum daily, 0.8 ft^3/s Dec. 22, 23, 1963.

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)
June 3	2000	*2,710	*16.75

Minimum daily discharge, 6.0 ft^3/s Sept. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	594	57	363	277	100	319	133	28	161	464	48	11
2	1170	53	1220	279	450	370	134	28	202	1520	53	9.6
3	1190	51	1160	274	1000	182	102	29	2190	883	89	9.6
4	1370	55	640	269	512	105	70	24	1840	916	62	10
5	709	66	430	268	309	88	74	19	730	240	51	10
6	301	65	372	270	225	103	127	19	273	115	46	9.8
7	356	61	351	272	215	89	112	21	141	81	40	9.6
8	312	55	363	266	217	80	89	19	95	67	36	9.4
9	292	54	632	264	148	72	68	19	68	55	36	9.1
10	281	51	912	269	118	55	57	16	51	49	32	8.8
11	273	51	474	267	87	47	55	16	40	207	33	9.0
12	270	52	375	152	82	47	54	27	119	313	33	9.2
13	237	51	334	297	76	42	46	26	173	512	30	9.7
14	359	56	318	275	70	41	40	23	70	759	27	11
15	188	262	311	530	59	42	581	19	49	318	25	10
16	103	267	300	411	52	38	798	15	55	456	21	9.6
17	76	264	297	138	48	33	487	16	38	205	19	9.0
18	59	271	311	95	45	31	234	17	26	129	18	9.0
19	51	302	311	64	41	34	144	60	25	104	17	8.5
20	45	343	298	50	40	34	104	121	29	89	16	8.0
21	43	612	292	42	40	30	87	152	40	80	15	7.5
22	44	429	290	38	41	28	77	168	103	75	15	7.2
23	42	362	289	35	41	27	108	100	43	69	14	7.3
24	43	331	292	33	38	27	79	49	27	64	13	7.5
25	105	317	323	31	33	28	58	32	20	60	13	7.1
26	431	1140	334	29	32	25	46	384	18	61	77	6.6
27	386	1460	311	27	32	29	40	307	16	64	158	6.2
28	298	708	296	27	40	27	39	103	15	57	82	6.0
29	113	458	289	31	---	21	36	48	15	55	35	7.0
30	73	386	287	35	---	91	34	37	370	52	20	10
31	61	---	279	47	---	176	---	377	---	49	13	---
TOTAL	9875	8690	13054	5362	4191	2361	4113	2319	7042	8168	1187	262.3
MEAN	319	290	421	173	150	76.2	137	74.8	235	263	38.3	8.74
MAX	1370	1460	1220	530	1000	370	798	384	2190	1520	158	11
MIN	42	51	279	27	32	21	34	15	15	49	13	6.0
CFSM	1.22	1.11	1.61	.66	.57	.29	.52	.29	.90	1.00	.15	.03
IN.	1.40	1.23	1.85	.76	.60	.34	.58	.33	1.00	1.16	.17	.04

CAL YR 1986 TOTAL 102478.5 MEAN 281 MAX 2260 MIN 9.0 CFSM 1.07 IN. 14.55
WTR YR 1987 TOTAL 66624.3 MEAN 183 MAX 2190 MIN 6.0 CFSM .70 IN. 9.46

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. 13-15, Jan. 19 to Feb. 5, and Feb. 9-11, 16-21. Records good. Occasional regulation of Grand Lake, diversion from or into St. Marys River basin, and into Miami and Erie Canals.

AVERAGE DISCHARGE.--23 years, 376 ft^3/s, 11.27 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 9,560 ft^3/s Mar. 17, 1978, gage height, 13.87 ft; minimum daily, 5.1 ft^3/s Oct. 8, 1964.

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)
June 5	1600	*1,860	*8.28

Minimum daily discharge, 12 ft^3/s Sept. 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	165	58	506	264	180	493	360	59	499	569	46	27
2	1070	52	996	266	800	811	291	54	181	1580	44	23
3	1390	47	1570	263	1100	541	244	51	777	1800	66	21
4	1580	45	1620	254	1400	282	162	50	1460	1800	87	20
5	1780	46	1100	251	1150	207	123	44	1730	1540	57	20
6	1250	52	622	251	720	350	135	39	1440	571	48	20
7	556	52	460	253	554	264	194	39	472	204	43	18
8	414	48	443	248	506	199	164	40	181	120	38	18
9	329	43	651	240	270	169	129	37	114	87	34	17
10	294	40	1240	245	200	133	101	34	85	70	33	17
11	276	38	1120	251	180	98	91	31	63	70	32	17
12	267	35	631	261	161	90	90	36	78	566	32	18
13	285	36	400	162	153	82	82	47	232	519	31	18
14	404	35	325	257	136	76	75	43	164	1100	28	20
15	421	66	315	728	115	75	1080	36	88	967	26	21
16	182	230	307	793	93	72	1610	32	65	519	24	22
17	108	239	296	417	85	64	1550	27	63	548	23	21
18	78	240	318	162	77	58	911	31	49	214	22	20
19	59	275	346	100	71	59	465	112	36	138	21	19
20	49	317	318	84	67	62	282	210	40	110	20	18
21	44	666	298	72	68	60	199	181	131	92	20	17
22	41	691	291	64	68	56	169	307	393	83	19	16
23	39	467	288	60	65	51	181	244	186	75	18	15
24	38	381	288	55	63	51	183	131	80	69	18	14
25	43	333	348	52	57	53	131	78	49	63	17	14
26	382	713	384	50	52	54	98	196	39	60	33	14
27	577	1520	349	46	50	54	80	658	32	71	247	14
28	428	1760	308	46	56	50	72	343	27	65	337	13
29	268	1350	287	48	---	49	67	140	26	57	115	13
30	113	712	282	60	---	82	63	79	246	53	54	12
31	73	---	271	80	---	393	---	162	---	50	35	---
TOTAL	13003	10587	16978	6383	8497	5138	9382	3571	9026	13830	1668	537
MEAN	419	353	548	206	303	166	313	115	301	446	53.8	17.9
MAX	1780	1760	1620	793	1400	811	1610	658	1730	1800	337	27
MIN	38	35	271	46	50	49	63	27	26	50	17	12
CFSM	.92	.78	1.21	.45	.67	.37	.69	.25	.66	.98	.12	.04
IN.	1.07	.87	1.39	.52	.70	.42	.77	.29	.74	1.14	.14	.04

CAL YR 1986	TOTAL	171889	MEAN	471	MAX	3650	MIN	15	CFSM	1.04	IN.	14.12
WTR YR 1987	TOTAL	98600	MEAN	270	MAX	1800	MIN	12	CFSM	.60	IN.	8.10

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. 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.--36 years, 599 ft^3/s, 11.28 in/yr.

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, 2.4 ft^3/s Oct. 28, 29, 1964.

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, 2,700 ft^3/s Feb. 5; minimum daily discharge, 25 ft^3/s Apr. 27-29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	460	196	824	266	102	92	195	26	187	331	95	37
2	909	177	649	283	110	1250	300	26	319	1210	89	50
3	1080	129	1260	296	1020	1250	340	26	578	1620	84	53
4	919	127	1820	320	1910	534	244	26	932	1700	58	47
5	1790	119	1190	300	2700	265	161	26	1530	1490	44	44
6	2110	102	491	261	1900	215	160	27	1730	1190	44	44
7	1400	80	606	276	494	274	142	27	1200	542	44	44
8	658	71	423	282	123	330	140	27	499	234	270	44
9	528	88	505	267	138	319	179	27	376	181	55	44
10	320	105	1140	174	989	188	187	27	193	148	70	32
11	221	116	1520	111	1170	141	106	27	125	126	76	27
12	311	119	1220	111	603	106	118	38	140	126	76	27
13	370	104	702	250	319	82	179	56	241	224	76	27
14	342	80	344	379	177	87	145	62	398	668	75	27
15	453	89	384	409	115	92	813	71	377	1010	68	136
16	454	95	382	907	79	92	1900	76	257	739	61	178
17	376	188	337	443	191	141	2170	82	111	581	61	176
18	232	277	312	106	196	161	1490	109	43	363	61	180
19	106	262	307	106	103	104	580	173	83	191	52	180
20	40	251	329	687	110	66	175	677	95	153	32	178
21	60	417	305	904	99	68	99	996	116	188	27	175
22	142	688	281	552	94	88	102	1990	353	175	27	173
23	186	688	272	226	94	112	99	1980	435	122	27	170
24	184	476	307	110	95	117	83	554	223	81	27	177
25	152	330	352	98	95	116	60	325	126	70	27	89
26	125	342	382	101	74	85	35	428	93	61	27	131
27	207	1000	382	138	86	70	25	656	61	61	65	174
28	426	1810	340	161	87	70	25	605	69	77	353	174
29	542	1940	300	91	---	59	25	334	75	84	457	170
30	526	1470	300	87	---	95	26	204	88	92	164	171
31	378	---	293	99	---	216	---	177	---	95	27	---
TOTAL	16007	11936	18259	8801	13273	6885	10303	9885	11053	13933	2719	3179
MEAN	516	398	589	284	474	222	343	319	368	449	87.7	106
MAX	2110	1940	1820	907	2700	1250	2170	1990	1730	1700	457	180
MIN	40	71	272	87	74	59	25	26	43	61	27	27

CAL YR 1986 TOTAL 232479 MEAN 637 MAX 4650 MIN 21
WTR YR 1987 TOTAL 126233 MEAN 346 MAX 2700 MIN 25

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. 14, 15, Jan. 19 to Feb. 4, and Feb. 14-19. Records good. During periods of extreme high water in 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.--44 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)
Oct. 3	2400	*1,990	*10.76

Minimum daily discharge, 15 ft^3/s Aug. 21, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	796	79	151	100	150	992	91	59	120	158	26	95
2	1040	68	568	109	230	854	79	66	92	229	26	59
3	1270	69	639	104	450	390	67	76	497	145	24	44
4	1500	72	330	100	580	247	59	71	205	89	23	34
5	607	67	208	107	638	271	58	57	106	62	22	31
6	312	64	159	107	457	524	58	52	80	76	21	29
7	208	58	149	111	607	310	53	51	74	51	18	26
8	156	57	288	101	940	238	55	49	56	313	19	24
9	122	54	655	91	465	188	52	45	69	144	50	25
10	100	49	812	100	278	135	53	45	84	74	42	24
11	89	47	315	102	230	115	57	41	53	55	26	24
12	83	48	212	87	300	104	176	78	95	68	21	24
13	96	45	143	103	341	94	153	61	143	52	20	26
14	252	44	120	81	260	98	113	47	73	46	20	22
15	188	44	105	650	180	94	1430	43	54	37	18	18
16	128	45	101	711	140	82	1170	40	41	40	18	22
17	103	46	99	287	120	75	576	39	38	37	17	53
18	85	49	116	205	105	71	335	111	36	33	16	41
19	82	55	110	140	95	76	233	719	29	31	16	26
20	84	94	98	100	91	72	176	771	28	27	16	26
21	84	641	90	84	91	67	144	322	326	21	15	24
22	80	464	87	78	88	64	123	339	193	22	17	20
23	79	278	86	75	96	63	124	225	91	22	17	20
24	78	202	94	74	94	61	106	139	64	22	17	20
25	78	152	134	72	90	64	89	106	50	22	15	20
26	238	679	134	71	84	64	82	108	43	25	76	20
27	364	792	117	70	80	59	77	98	39	25	579	20
28	234	363	107	69	99	56	69	77	38	21	408	20
29	153	247	99	69	---	56	67	70	34	22	144	20
30	114	185	98	90	---	86	64	75	104	22	80	25
31	91	---	96	130	---	124	---	192	---	25	89	---
TOTAL	8894	5157	6520	4378	7379	5794	5989	4272	2955	2016	1916	882
MEAN	287	172	210	141	264	187	200	138	98.5	65.0	61.8	29.4
MAX	1500	792	812	711	940	992	1430	771	497	313	579	95
MIN	78	44	86	69	80	56	52	39	28	21	15	18
CFSM	1.09	.65	.80	.54	1.00	.71	.76	.52	.37	.25	.23	.11
IN.	1.26	.73	.92	.62	1.04	.82	.85	.60	.42	.29	.27	.12

CAL YR 1986	TOTAL	109553	MEAN	300	MAX	2800	MIN	23	CFSM	1.14	IN.	15.50
WTR YR 1987	TOTAL	56152	MEAN	154	MAX	1500	MIN	15	CFSM	.59	IN.	7.94

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. 13-15, Jan. 17-29, and Feb. 15-18. Records good except for estimated daily discharges, which are poor. Natural flow partially affected by sewage effluent.

AVERAGE DISCHARGE.--28 years, 73.3 ft^3/s, 11.63 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)
June 3	1500	*1,970	*12.31

Minimum daily discharge, 2.6 ft^3/s Sept. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	638	9.2	33	19	112	253	85	10	39	267	5.5	2.8
2	201	8.2	485	20	295	166	67	10	70	866	5.1	2.7
3	400	9.7	245	17	399	69	43	9.3	1750	179	6.3	2.7
4	343	11	102	15	185	39	30	8.3	328	305	5.6	2.6
5	81	19	48	14	120	38	29	7.5	67	77	4.9	2.9
6	36	19	33	14	92	64	37	7.3	37	38	4.3	3.2
7	21	17	28	15	88	45	34	7.5	26	27	4.3	3.8
8	15	13	35	13	86	36	30	7.3	19	20	4.2	3.6
9	10	11	196	12	45	31	24	6.6	16	15	4.8	4.2
10	8.5	9.7	250	14	34	23	21	6.2	12	14	4.3	3.0
11	7.6	9.9	63	13	26	18	21	6.4	10	13	3.9	2.8
12	10	10	37	13	27	16	19	18	26	12	3.4	3.8
13	65	11	25	12	25	15	16	9.8	37	395	3.6	5.1
14	140	9.3	20	24	23	14	22	7.9	17	211	3.6	5.7
15	43	8.0	17	214	19	15	662	6.7	11	56	3.5	6.5
16	23	8.4	15	91	18	13	287	6.3	9.5	39	3.2	6.3
17	15	8.5	16	36	16	11	181	5.8	8.3	29	5.5	6.4
18	11	9.6	26	28	15	11	90	12	7.6	20	3.3	6.4
19	8.7	22	30	22	13	13	55	71	7.2	15	3.1	6.3
20	8.0	44	22	19	11	12	39	75	16	12	3.1	5.9
21	7.2	176	19	16	11	10	32	128	49	10	3.0	6.1
22	7.1	67	19	14	11	9.7	27	78	87	17	3.5	6.5
23	6.8	40	19	13	12	9.4	34	36	21	11	3.6	6.7
24	9.0	32	26	12	11	9.5	29	15	11	8.7	2.9	6.4
25	33	24	100	12	9.6	10	21	15	8.3	7.6	3.1	5.8
26	93	561	69	12	9.3	11	17	230	7.3	22	9.8	5.0
27	45	266	36	12	9.4	10	15	92	6.3	35	17	4.3
28	27	94	26	15	21	9.6	14	29	5.4	13	7.2	4.7
29	18	56	22	19	---	9.1	13	16	11	8.0	4.4	5.6
30	13	38	21	54	---	56	12	14	121	7.4	3.4	5.6
31	10	---	18	74	---	115	---	170	---	5.8	3.0	---
TOTAL	2353.9	1621.5	2101	878	1743.3	1161.3	2006	1121.9	2840.9	2755.5	146.4	143.4
MEAN	75.9	54.0	67.8	28.3	62.3	37.5	66.9	36.2	94.7	88.9	4.72	4.78
MAX	638	561	485	214	399	253	662	230	1750	866	17	6.7
MIN	6.8	8.0	15	12	9.3	9.1	12	5.8	5.4	5.8	2.9	2.6
CFSM	.89	.63	.79	.33	.73	.44	.78	.42	1.11	1.04	.06	.06
IN.	1.02	.70	.91	.38	.76	.50	.87	.49	1.23	1.20	.06	.06

CAL YR 1986	TOTAL	32608.2	MEAN	89.3	MAX	1860	MIN	1.6	CFSM	1.04	IN.	14.17
WTR YR 1987	TOTAL	18873.1	MEAN	51.7	MAX	1750	MIN	2.6	CFSM	.60	IN.	8.20

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: Jan. 20-29, Feb. 16-20, June 27-29, July 8-13, 17-29, and Sept. 3-15. Records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--30 years, 386 ft^3/s, 12.33 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)
Feb. 3	1500	4,820	11.10	May 21	2400	*8,190	*13.68

Minimum daily discharge, 13 ft^3/s Sept. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	90	75	163	101	221	914	307	72	240	343	36	28
2	1170	66	500	110	652	1080	240	69	197	1140	58	18
3	810	60	1320	115	2200	550	193	67	595	1390	99	13
4	973	60	670	105	1330	299	145	61	1500	836	54	14
5	978	60	335	99	805	226	113	54	695	798	32	16
6	364	63	196	99	557	270	99	50	212	260	24	16
7	167	68	152	100	534	265	97	49	137	127	21	17
8	104	71	154	94	559	212	97	50	105	90	19	14
9	79	66	340	89	368	184	88	48	102	78	29	14
10	61	61	1190	91	239	144	78	57	84	64	22	15
11	49	56	632	93	194	115	75	69	65	58	19	16
12	46	52	282	74	184	102	99	105	106	70	17	17
13	51	50	153	70	179	92	91	132	233	90	17	17
14	84	49	122	83	165	89	99	116	172	599	20	18
15	326	49	127	751	146	87	1130	96	101	450	25	19
16	168	50	108	913	96	81	1750	90	70	126	25	23
17	100	50	98	400	90	72	1030	97	52	80	25	25
18	71	57	105	240	86	68	608	119	45	64	30	28
19	54	61	142	179	83	72	359	325	38	52	26	28
20	46	74	142	142	82	74	252	465	53	46	24	28
21	44	186	118	130	83	70	197	2030	140	66	33	26
22	50	394	106	106	78	65	165	4740	519	48	29	24
23	61	212	109	95	79	61	155	1120	502	41	30	24
24	66	140	115	87	77	59	150	561	165	50	28	23
25	77	116	159	82	72	62	131	345	94	72	31	20
26	127	334	330	78	68	60	107	345	59	112	55	18
27	359	1570	231	76	67	58	100	536	36	90	172	19
28	254	742	153	81	91	55	92	302	31	76	213	17
29	150	351	124	83	---	52	85	187	33	66	122	19
30	108	226	117	98	---	102	79	144	84	57	64	16
31	86	---	108	133	---	276	---	161	---	41	43	---
TOTAL	7173	5469	8601	4997	9385	5916	8211	12662	6465	7480	1442	590
MEAN	231	182	277	161	335	191	274	408	216	241	46.5	19.7
MAX	1170	1570	1320	913	2200	1080	1750	4740	1500	1390	213	28
MIN	44	49	98	70	67	52	75	48	31	41	17	13
CFSM	.54	.43	.65	.38	.79	.45	.64	.96	.51	.57	.11	.05
IN.	.63	.48	.75	.44	.82	.52	.72	1.11	.57	.65	.13	.05

CAL YR 1986	TOTAL	153673.1	MEAN	421	MAX	4560	MIN	9.1	CFSM	.99	IN.	13.45
WTR YR 1987	TOTAL	78391	MEAN	215	MAX	4740	MIN	13	CFSM	.51	IN.	6.86

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. Datum of gage was 673.96 ft above National Geodetic Vertical Datum of 1929 (levels by State of Indiana, Department of Natural Resources). Oct. 9, 1961, to Sept. 30, 1974, water-stage recorder at site described in "LOCATION" paragraph. Prior to Oct. 1, 1951, nonrecording 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). Data-Collection Platform installed on May 1, 1986.

REMARKS.--Flow regulated by Salamonie Lake. 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.--63 years (1924 to current year), 510 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, 1,950 ft^3/s Feb. 5; minimum daily, 11 ft^3/s Oct. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	466	470	678	104	53	53	52	43	117	244	70	55
2	485	421	314	124	53	624	52	43	173	794	70	48
3	656	418	582	158	420	1030	53	43	475	1510	70	48
4	491	394	1070	196	1540	1000	53	43	1150	1530	70	48
5	722	373	863	213	1950	968	54	43	1210	1360	70	48
6	1120	371	313	195	1440	1190	54	43	811	771	70	48
7	1360	369	242	186	451	1030	54	43	356	281	70	48
8	1350	366	182	176	55	627	54	43	151	161	55	38
9	1330	364	244	160	56	179	55	43	151	96	48	26
10	1310	361	321	172	475	43	55	43	151	70	48	26
11	1300	358	472	187	983	44	55	43	132	70	34	26
12	914	355	618	130	951	44	55	43	151	70	26	26
13	460	352	606	142	916	45	56	43	430	60	26	26
14	253	349	529	104	396	45	56	43	488	48	26	26
15	11	346	321	154	52	46	57	43	135	255	26	224
16	262	342	222	452	52	46	60	43	48	486	26	309
17	459	339	208	263	164	47	62	43	48	327	26	309
18	458	336	144	56	314	47	62	43	81	151	42	308
19	456	334	140	57	322	47	62	44	108	124	23	307
20	454	364	169	360	202	48	63	44	120	95	21	306
21	451	407	193	787	104	48	63	44	162	82	21	320
22	449	504	208	764	51	48	63	46	183	70	21	326
23	447	666	140	521	51	49	63	47	627	40	138	326
24	445	654	104	177	52	49	63	47	747	26	21	325
25	443	509	124	53	52	49	63	47	325	26	21	162
26	441	442	240	53	70	49	63	47	96	26	21	242
27	511	723	333	181	100	50	50	48	60	26	21	322
28	660	1050	320	307	93	50	43	48	48	26	225	321
29	755	1150	205	185	---	50	43	48	48	26	201	321
30	690	1050	155	157	---	50	43	48	62	55	95	320
31	564	---	104	91	---	51	---	48	---	70	70	---
TOTAL	20173	14537	10364	6865	11418	7746	1681	1380	8844	8976	1772	5285
MEAN	651	485	334	221	408	250	56.0	44.5	295	290	57.2	176
MAX	1360	1150	1070	787	1950	1190	63	48	1210	1530	225	326
MIN	11	334	104	53	51	43	43	43	48	26	21	26

CAL YR 1986 TOTAL 191363 MEAN 524 MAX 3510 MIN 11
WTR YR 1987 TOTAL 99041 MEAN 271 MAX 1950 MIN 11

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: Jan. 21 to Feb. 2 and Sept. 15, 16. Records good except for estimated daily discharges, which are poor. Flow regulated by Huntington Lake and Salamonie Lake.

AVERAGE DISCHARGE.--64 years, 1,493 ft^3/s, 11.47 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, 5,700 ft^3/s Feb. 5, gage height, 10.21 ft; minimum daily, 69 ft^3/s Aug. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1710	915	2050	731	450	1810	526	193	782	524	261	323
2	3030	826	1970	699	500	2770	504	190	673	1710	241	245
3	3560	755	2890	754	1550	3400	663	196	1600	3010	220	202
4	3780	713	3480	781	3960	2350	641	202	2160	3100	221	180
5	3320	681	3180	854	5340	1900	436	189	2500	2850	200	161
6	3770	664	2050	805	4750	2220	418	174	2640	2180	159	146
7	3260	644	1350	737	2580	2100	421	171	1960	1290	152	145
8	2290	594	1280	747	1860	1680	368	170	1010	676	205	138
9	2040	577	1750	691	1240	1110	365	162	737	662	346	116
10	1820	610	2680	676	1330	713	434	154	659	416	202	113
11	1560	621	2550	544	2680	496	446	152	392	348	181	128
12	1300	628	2320	443	2430	475	558	195	427	327	150	99
13	1020	622	1800	453	2090	372	643	236	1140	327	141	93
14	969	578	1380	791	1560	353	657	198	1110	503	134	91
15	809	549	992	1400	699	362	2890	178	830	1310	128	320
16	1030	583	1040	2470	513	349	3480	171	528	1440	123	540
17	1020	591	896	1840	532	334	3170	170	412	1150	113	504
18	992	798	827	617	978	415	2320	211	234	775	131	526
19	726	833	775	498	770	427	1410	1050	212	512	110	518
20	700	857	833	706	588	295	789	1640	340	298	95	503
21	592	1490	832	2000	490	262	492	1650	456	319	77	505
22	665	2010	818	1200	397	257	441	2070	704	311	69	515
23	732	2040	744	700	401	300	445	2930	1100	277	162	511
24	763	1710	694	430	402	324	401	1240	1260	194	81	510
25	747	1310	833	320	390	327	332	576	659	151	71	516
26	888	1710	1000	320	391	328	285	627	335	137	159	512
27	1220	2890	1090	400	343	296	249	792	244	137	2450	510
28	1430	3390	1090	520	436	286	221	970	174	133	1600	516
29	1640	3490	858	480	---	279	208	695	184	193	1220	552
30	1510	3070	822	420	---	251	202	527	245	380	736	527
31	1340	---	746	400	---	410	---	1440	---	241	380	---
TOTAL	50233	36749	45620	24427	39650	27251	24415	19519	25707	25881	10518	10265
MEAN	1620	1225	1472	788	1416	879	814	630	857	835	339	342
MAX	3780	3490	3480	2470	5340	3400	3480	2930	2640	3100	2450	552
MIN	592	549	694	320	343	251	202	152	174	133	69	91
CFSM	.92	.69	.83	.45	.80	.50	.46	.36	.48	.47	.19	.19
IN.	1.06	.77	.96	.51	.83	.57	.51	.41	.54	.54	.22	.22

CAL YR 1986	TOTAL	618432	MEAN	1694	MAX	7810	MIN	91	CFSM	.96	IN.	13.01
WTR YR 1987	TOTAL	340235	MEAN	932	MAX	5340	MIN	69	CFSM	.53	IN.	7.16

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. 14-16, 29, 30, Jan. 10, 18, 19, 23-30, Feb. 9-11, and 16. Records fair.

AVERAGE DISCHARGE.--5 years, 9.46 ft^3/s, 13.29 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 and 1984 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)
Oct. 4	0545	198	6.55	June 15	2130	171	6.01
June 3	0200	*315	*8.67	July 1	2230	171	6.01

Minimum daily discharge, 0.05 ft^3/s Sept. 1, 4-8, 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63	2.7	11	3.0	5.9	36	8.8	2.3	12	64	.64	.05
2	69	2.4	68	3.0	14	21	9.7	2.2	65	125	.64	.06
3	112	2.5	42	2.3	15	11	5.9	1.9	210	68	.87	.06
4	153	2.8	22	2.2	8.3	7.1	4.7	1.6	76	42	.53	.05
5	91	3.1	12	2.2	6.5	6.7	4.7	1.5	44	25	.44	.05
6	51	2.6	9.7	2.7	6.1	6.1	5.2	1.8	27	16	.39	.05
7	32	2.3	8.3	2.4	8.0	5.6	4.8	1.7	18	11	.35	.05
8	20	2.6	7.9	1.9	9.2	5.7	4.4	1.4	11	8.1	.33	.05
9	13	2.2	17	2.2	6.1	4.8	3.5	1.4	8.1	6.8	.36	.07
10	7.9	1.6	19	2.1	4.9	3.3	3.3	1.4	6.0	5.2	.33	.07
11	5.3	2.1	12	2.0	4.3	3.2	3.5	1.4	4.9	13	.29	.07
12	4.2	1.7	8.3	1.9	5.1	2.7	2.9	1.5	14	19	.27	.09
13	4.3	1.3	5.4	1.7	4.0	2.5	2.3	1.3	9.2	12	.26	.08
14	12	1.2	3.6	4.3	4.4	2.9	3.5	1.6	5.9	26	.25	.07
15	7.1	1.7	3.1	10	3.3	2.6	54	2.3	38	10	.24	.06
16	5.1	1.5	2.8	6.3	2.5	2.1	45	1.3	70	7.4	.22	.07
17	3.7	1.3	4.1	5.1	3.1	1.9	27	1.2	31	4.9	.23	.08
18	2.9	1.3	4.2	4.1	2.9	2.3	15	5.6	16	3.6	.21	.10
19	2.5	1.0	3.3	3.5	2.4	2.3	9.9	7.4	10	2.8	.19	.09
20	2.4	2.1	3.0	3.2	2.0	1.9	7.8	2.8	8.5	2.2	.17	.08
21	2.4	4.0	2.5	4.9	2.3	1.9	6.6	9.0	10	1.9	.17	.08
22	2.4	3.4	2.6	3.9	2.4	1.8	5.9	37	9.2	1.7	.18	.09
23	2.9	3.1	2.8	2.5	2.2	1.8	6.3	11	4.8	1.5	.16	.09
24	3.3	2.2	4.4	1.7	1.8	1.9	4.5	5.9	3.4	1.3	.12	.08
25	5.4	2.1	7.8	1.5	1.8	2.1	3.5	9.4	2.8	1.1	.13	.07
26	13	65	6.3	1.4	1.7	1.8	3.2	25	2.3	1.2	.19	.07
27	9.2	42	5.0	1.3	1.9	1.6	3.3	8.5	1.9	1.3	.29	.06
28	6.0	22	4.2	1.3	5.8	1.5	2.8	5.2	1.6	1.1	.13	.05
29	4.9	13	3.4	1.4	---	1.5	3.1	3.8	1.8	.88	.09	.06
30	3.5	9.9	3.0	1.7	---	10	2.4	13	3.9	.81	.07	.08
31	2.9	---	2.8	2.7	---	7.8	---	32	---	.71	.06	---
TOTAL	717.3	206.7	311.5	90.4	137.9	165.4	267.5	203.4	726.3	485.50	8.80	2.08
MEAN	23.1	6.89	10.0	2.92	4.92	5.34	8.92	6.56	24.2	15.7	.28	.07
MAX	153	65	68	10	15	36	54	37	210	125	.87	.10
MIN	2.4	1.0	2.5	1.3	1.7	1.5	2.3	1.2	1.6	.71	.06	.05
CFSM	2.39	.71	1.03	.30	.51	.55	.92	.68	2.50	1.62	.03	.01
IN.	2.76	.80	1.20	.35	.53	.64	1.03	.78	2.79	1.87	.03	.01

CAL YR 1986	TOTAL	5102.57	MEAN	14.0	MAX	153	MIN	.15	CFSM	1.45	IN.	19.63
WTR YR 1987	TOTAL	3322.78	MEAN	9.10	MAX	210	MIN	.05	CFSM	.94	IN.	12.78

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. 14-16, 29, 30, Jan. 10, 11, 13, 14, 18-29, and Feb. 10, 11, 16. Records fair.

AVERAGE DISCHARGE.--41 years, 127 ft^3/s, 12.98 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)
Oct. 3	1300	2,420	11.25	July 2	0300	2,430	11.26
June 3	0700	*6,510	*13.92				

Minimum daily discharge, 3.6 ft^3/s, Sept. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	977	33	97	45	143	397	124	28	73	656	14	6.1
2	950	30	805	46	370	269	130	28	288	1540	14	6.1
3	1950	29	439	38	400	141	78	25	4520	427	30	6.3
4	1740	43	222	35	231	86	59	21	1750	192	17	6.1
5	575	50	132	34	174	84	70	20	309	95	13	5.9
6	290	51	97	38	157	101	101	21	173	68	11	5.3
7	189	39	83	38	157	79	84	21	112	56	10	5.0
8	132	37	94	31	159	72	67	20	77	47	9.3	4.8
9	93	33	341	32	78	63	53	18	61	45	8.7	6.0
10	71	25	343	31	52	43	46	17	51	48	9.0	5.9
11	59	28	148	28	46	39	47	15	45	74	9.0	5.8
12	51	30	99	26	63	37	42	22	142	106	8.4	7.5
13	73	25	63	24	53	33	33	17	96	377	8.4	8.7
14	247	22	51	35	51	36	81	15	56	388	8.1	5.5
15	125	24	46	235	40	34	689	17	76	92	7.9	5.5
16	81	24	43	118	31	30	407	13	244	65	6.9	5.9
17	62	22	47	67	38	27	262	12	79	48	6.8	5.8
18	47	21	60	54	33	28	172	70	52	37	6.5	5.0
19	41	23	53	44	29	33	119	240	42	29	6.5	4.8
20	38	56	45	37	26	28	90	158	115	24	6.7	4.2
21	36	168	40	31	28	27	74	234	120	23	6.4	3.7
22	32	84	41	28	28	25	65	469	93	27	6.4	3.8
23	30	62	42	25	28	24	92	159	44	20	5.8	4.3
24	28	48	65	23	24	25	63	71	34	18	5.2	4.3
25	42	40	155	22	23	29	48	139	29	16	5.7	4.2
26	146	950	114	21	23	26	43	712	26	15	10	4.5
27	115	431	73	21	24	24	40	194	22	25	12	4.0
28	73	224	59	20	50	23	37	91	20	25	13	3.7
29	55	151	48	30	---	22	35	55	18	18	8.1	3.6
30	42	106	44	72	---	132	32	143	49	17	6.1	4.5
31	35	---	42	80	---	144	---	188	---	16	5.4	---
TOTAL	8425	2909	4031	1409	2559	2161	3283	3253	8816	4634	295.3	156.8
MEAN	272	97.0	130	45.5	91.4	69.7	109	105	294	149	9.53	5.23
MAX	1950	950	805	235	400	397	689	712	4520	1540	30	8.7
MIN	28	21	40	20	23	22	32	12	18	15	5.2	3.6
CFSM	2.05	.73	.98	.34	.69	.52	.82	.79	2.21	1.12	.07	.04
IN.	2.36	.81	1.13	.39	.72	.60	.92	.91	2.47	1.30	.08	.04

CAL YR 1986	TOTAL	66468.8	MEAN	182	MAX	4630	MIN	3.1	CFSM	1.37	IN.	18.59
WTR YR 1987	TOTAL	41932.1	MEAN	115	MAX	4520	MIN	3.6	CFSM	.86	IN.	11.73

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: Jan. 19-29 and Feb. 17. Records fair except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--16 years, 27.4 ft^3/s, 12.74 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)
Oct. 1	1800	*328	*9.29

Minimum daily discharge, 0.41 ft^3/s Sept. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	163	3.3	13	11	44	214	24	4.8	3.5	56	3.6	1.2
2	144	2.9	162	12	130	119	19	4.7	3.5	210	22	1.1
3	100	2.8	91	9.0	170	54	10	4.3	51	62	3.1	1.0
4	148	3.9	41	8.4	105	28	7.1	3.9	12	37	1.9	.97
5	57	5.2	19	9.1	74	27	6.5	4.1	5.2	13	1.5	.93
6	14	4.3	13	7.9	60	32	6.1	4.1	3.8	8.2	1.2	.88
7	6.8	3.5	11	8.6	61	23	5.7	4.1	3.3	6.2	1.1	.87
8	4.6	3.1	21	6.6	62	18	5.4	3.7	3.0	4.7	1.2	.95
9	3.5	2.8	102	5.3	27	15	4.9	3.6	2.9	4.0	1.5	.96
10	2.8	2.3	113	6.0	16	8.8	4.8	3.6	2.7	5.1	1.6	.78
11	2.6	2.2	34	4.5	14	7.2	5.8	3.6	2.4	3.7	1.2	.78
12	2.7	2.6	18	3.5	17	6.8	5.9	4.9	11	3.9	1.1	.84
13	5.8	2.1	9.3	2.9	15	6.4	5.2	3.9	19	6.9	1.0	.66
14	44	1.8	7.4	18	14	6.6	7.6	3.3	4.3	73	1.0	.65
15	12	1.8	6.6	182	10	6.4	138	2.9	2.9	18	.98	.66
16	5.0	2.1	6.1	79	8.0	5.6	96	2.7	3.7	9.3	.96	.76
17	3.5	2.0	7.2	35	6.4	5.1	67	2.7	2.7	5.3	.92	.67
18	2.7	2.0	17	24	6.2	5.1	32	3.2	1.9	4.0	1.3	.65
19	2.4	3.1	16	21	5.6	7.3	18	4.9	1.8	3.5	1.1	.66
20	2.3	6.2	10	14	5.2	6.6	11	4.8	19	3.1	1.0	.57
21	2.2	40	8.1	11	5.7	5.7	10	11	4.4	2.8	1.0	.54
22	2.2	16	8.7	8.0	5.9	5.3	9.5	69	61	2.5	1.1	.54
23	2.2	8.8	8.6	5.2	6.2	4.8	10	14	10	2.3	1.2	.59
24	2.2	6.7	14	4.7	5.4	5.0	8.0	5.9	3.9	2.5	1.4	.53
25	3.8	5.2	64	4.3	5.3	5.8	6.7	4.9	2.8	2.2	2.0	.48
26	39	165	35	4.1	5.3	5.4	6.3	86	2.3	2.5	3.6	.45
27	43	108	17	4.0	5.2	5.0	6.1	17	1.9	4.1	8.2	.47
28	16	47	12	4.0	23	4.8	5.8	7.0	1.8	4.2	5.5	.42
29	7.9	26	9.4	4.5	---	4.6	5.8	4.8	2.0	2.9	2.4	.41
30	5.0	16	8.6	19	---	29	5.8	4.0	25	3.0	1.5	.42
31	3.8	---	7.8	24	---	36	---	4.0	---	2.5	1.2	---
TOTAL	854.0	498.7	910.8	560.6	912.4	713.3	554.0	305.4	274.7	568.4	78.36	21.39
MEAN	27.5	16.6	29.4	18.1	32.6	23.0	18.5	9.85	9.16	18.3	2.53	.71
MAX	163	165	162	182	170	214	138	86	61	210	22	1.2
MIN	2.2	1.8	6.1	2.9	5.2	4.6	4.8	2.7	1.8	2.2	.92	.41
CFSM	.94	.57	1.01	.62	1.12	.79	.63	.34	.31	.63	.09	.02
IN.	1.09	.64	1.16	.71	1.16	.91	.71	.39	.35	.72	.10	.03

CAL YR 1986	TOTAL	9921.94	MEAN	27.2	MAX	490	MIN	.56	CFSM	.93	IN.	12.64
WTR YR 1987	TOTAL	6252.05	MEAN	17.1	MAX	214	MIN	.41	CFSM	.59	IN.	7.96

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: Jan. 20-28. Records good. Flow periodically regulated by dam above station.

AVERAGE DISCHARGE.--64 years, 627 ft^3/s, 12.48 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)
June 5	0400	*4,860	*7.38

Minimum daily discharge, 25 ft^3/s Sept. 4.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	308	203	415	258	352	1030	504	170	725	257	144	80
2	1480	182	714	258	674	1770	434	162	410	1390	115	71
3	2430	171	1970	266	1610	1100	387	152	824	3170	112	58
4	2590	170	1420	255	1830	618	321	202	3690	2120	132	25
5	3420	168	735	242	1130	458	265	139	4280	744	110	28
6	2150	177	490	243	806	410	244	131	1470	481	111	29
7	785	199	400	250	750	399	244	127	502	469	98	34
8	508	205	379	249	778	364	253	125	233	315	88	45
9	382	185	546	240	609	335	239	122	292	241	94	49
10	304	173	1340	237	445	298	220	118	224	198	87	48
11	254	167	1210	241	364	256	217	115	187	219	84	60
12	229	158	600	219	340	229	217	147	226	206	80	50
13	230	151	416	197	321	213	201	135	241	210	74	51
14	268	153	317	208	304	206	362	125	389	1260	70	50
15	496	150	310	841	275	202	878	120	231	1170	68	49
16	427	145	295	1290	220	197	1800	107	247	500	65	50
17	306	142	267	719	204	185	1540	99	440	327	74	54
18	252	151	274	487	216	173	1000	78	297	255	63	60
19	217	148	298	419	209	188	628	64	196	197	58	55
20	191	156	302	340	193	197	463	314	373	162	56	53
21	175	174	271	282	184	193	378	931	619	142	54	53
22	166	324	247	266	180	182	332	1350	632	128	54	51
23	160	338	238	240	178	174	338	1160	514	118	55	50
24	156	261	247	176	173	169	315	593	268	110	164	48
25	166	228	322	154	167	172	287	356	181	106	58	48
26	212	507	544	162	159	175	241	419	142	115	204	48
27	437	1890	476	176	155	170	217	1350	123	109	225	48
28	461	1680	367	192	185	165	96	606	112	104	89	43
29	341	742	310	201	---	156	169	461	138	170	81	48
30	268	519	291	224	---	243	182	271	183	195	101	49
31	231	---	274	259	---	397	---	245	---	143	227	---
TOTAL	20000	10017	16285	9791	13011	11024	12972	10494	18389	15331	3095	1485
MEAN	645	334	525	316	465	356	432	339	613	495	99.8	49.5
MAX	3420	1890	1970	1290	1830	1770	1800	1350	4280	3170	227	80
MIN	156	142	238	154	155	156	96	64	112	104	54	25
CFSM	.95	.49	.77	.46	.68	.52	.63	.50	.90	.73	.15	.07
IN.	1.09	.55	.89	.53	.71	.60	.71	.57	1.00	.84	.17	.08

CAL YR 1986 TOTAL 263663 MEAN 722 MAX 7070 MIN 68 CFSM 1.06 IN. 14.38
WTR YR 1987 TOTAL 141894 MEAN 389 MAX 4280 MIN 25 CFSM .57 IN. 7.74

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. 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.--35 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, 3,870 ft^3/s June 5; minimum daily, 45 ft^3/s Apr. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	466	900	599	326	53	1110	52	51	909	351	346	69
2	806	985	452	272	54	1760	53	51	619	544	253	69
3	1080	981	1020	248	81	1350	54	51	416	2250	252	69
4	473	977	1810	248	1760	105	54	51	2180	3340	158	69
5	979	972	1450	249	3760	51	55	50	3870	1640	110	69
6	1680	1050	788	278	2490	53	55	49	3310	573	110	69
7	2010	1110	561	150	776	54	45	49	1510	406	110	69
8	2380	1110	516	197	54	55	48	49	595	322	110	69
9	2240	1100	482	241	56	56	48	49	359	223	110	69
10	1210	1140	800	113	58	57	49	49	359	223	98	69
11	682	1190	1270	52	1230	57	49	49	260	206	77	69
12	450	1180	1310	53	1890	58	49	49	225	212	68	69
13	178	1120	543	224	1470	116	50	49	226	229	68	69
14	178	942	211	508	450	149	50	49	122	887	68	69
15	200	803	305	506	50	58	51	48	47	1120	68	69
16	597	799	575	1210	52	58	53	47	47	932	68	69
17	478	794	432	640	52	58	56	48	90	374	59	69
18	207	790	315	55	318	139	58	48	341	193	47	69
19	142	695	248	57	506	121	59	48	548	193	47	69
20	142	594	248	57	504	54	60	48	588	171	47	69
21	142	592	249	591	332	55	61	48	625	155	47	312
22	142	589	297	1150	51	55	61	49	652	135	47	445
23	142	822	355	1290	52	56	62	50	652	110	47	444
24	142	1100	293	607	52	56	62	92	501	110	47	443
25	257	939	242	52	695	56	62	199	310	110	59	384
26	355	791	328	52	2140	57	62	261	216	110	352	422
27	688	1330	578	53	1930	54	54	931	102	110	240	422
28	1360	2040	478	557	1200	50	50	1010	89	110	356	422
29	1620	2430	361	483	---	50	50	406	89	136	210	421
30	1310	1500	361	261	---	51	51	288	162	257	69	492
31	993	---	361	200	---	51	---	333	---	407	69	---
TOTAL	23729	31365	17838	10980	22116	6110	1623	4649	20019	16139	3817	5587
MEAN	765	1046	575	354	790	197	54.1	150	667	521	123	186
MAX	2380	2430	1810	1290	3760	1760	62	1010	3870	3340	356	492
MIN	142	589	211	52	50	50	45	47	47	110	47	69

CAL YR 1986	TOTAL	306102	MEAN	839	MAX	3710	MIN	47
WTR YR 1987	TOTAL	163972	MEAN	449	MAX	3870	MIN	45

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: Jan. 21 to Feb. 2. Records good except for estimated daily discharges, which are poor. Flow regulated by Huntington Lake, Salamonie Lake, and Mississinewa Lake.

AVERAGE DISCHARGE.--44 years, 2,370 ft^3/s, 11.98 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, 9,840 ft^3/s Feb. 6, gage height, 9.53 ft; minimum daily, 206 ft^3/s Aug. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1590	2150	3210	1170	600	2710	554	342	1710	667	854	579
2	3470	1980	2470	1080	650	4480	515	337	1650	1790	669	497
3	4390	1930	3900	1050	1130	5630	618	353	1690	5020	598	398
4	4320	1870	5560	1090	5100	3010	670	342	3920	6890	524	367
5	4180	1820	5370	1120	8910	2270	562	339	6280	5380	402	359
6	5720	1860	3360	1190	8380	2340	450	325	6470	3300	348	334
7	5780	1940	2230	1140	4370	2630	443	310	4120	2150	304	323
8	5170	1900	1990	1120	2270	2040	431	304	2090	1230	306	318
9	4730	1860	2210	1020	1820	1520	420	300	1270	999	532	304
10	3480	1890	3640	946	1180	950	457	295	1130	701	388	279
11	2570	2020	4170	714	3680	697	525	289	850	599	340	298
12	2290	2030	4050	594	4670	607	640	314	663	539	354	275
13	1400	1980	2780	537	4000	546	723	337	1080	525	354	256
14	1420	1760	1960	1290	2790	625	724	337	1340	882	340	245
15	1220	1540	1430	1760	982	474	2690	299	991	2420	283	244
16	1650	1540	1800	3570	680	442	4030	278	656	2740	269	457
17	1830	1550	1510	3550	618	407	3710	274	512	1900	270	647
18	1450	1690	1320	986	1080	452	2880	322	533	1080	249	640
19	1110	1750	1110	722	1490	612	1880	1010	736	816	260	649
20	1000	1640	1170	905	1220	431	1080	2050	879	648	243	641
21	923	2060	1170	2600	1050	329	730	2040	1270	478	231	746
22	884	2810	1200	2400	523	312	610	1990	1380	485	224	1060
23	985	3080	1240	2000	479	318	596	3400	1540	442	206	1070
24	1010	3150	1110	1100	474	353	564	1920	2010	390	278	1070
25	1090	2670	1140	400	711	381	499	933	1170	332	215	1070
26	1280	2360	1310	400	2300	388	439	936	729	303	535	1050
27	1870	4280	1810	500	2360	370	405	1410	427	302	3360	1050
28	2880	5640	1750	900	1870	344	364	2300	304	300	2710	1050
29	3520	6260	1400	1000	---	336	342	1400	304	303	1980	1180
30	3200	5170	1310	750	---	331	341	919	365	612	1150	1160
31	2600	---	1220	650	---	342	---	1780	---	759	736	---
TOTAL	79012	74180	69900	38254	65387	36677	28892	27785	48069	44982	19512	18616
MEAN	2549	2473	2255	1234	2335	1183	963	896	1602	1451	629	621
MAX	5780	6260	5560	3570	8910	5630	4030	3400	6470	6890	3360	1180
MIN	884	1540	1110	400	474	312	341	274	304	300	206	244
CFSM	.95	.92	.84	.46	.87	.44	.36	.33	.60	.54	.23	.23
IN.	1.09	1.03	.97	.53	.91	.51	.40	.38	.67	.62	.27	.26

CAL YR 1986 TOTAL 1032956 MEAN 2830 MAX 11100 MIN 143 CFSM 1.05 IN. 14.31
WTR YR 1987 TOTAL 551266 MEAN 1510 MAX 8910 MIN 206 CFSM .56 IN. 7.63

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. 13, 14, Jan. 20 to Feb. 3, and Feb. 16-18. Records good.

AVERAGE DISCHARGE.--19 years, 148 ft^3/s, 12.64 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)
May 22	1900	*895	*7.15

Minimum daily discharge, 7.7 ft^3/s Aug. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	26	55	48	105	277	40	55	127	91	39	22
2	48	23	98	49	175	435	40	55	85	185	33	18
3	56	21	185	48	310	285	37	53	86	128	27	15
4	58	21	150	45	307	188	35	48	95	79	21	14
5	49	22	104	45	317	154	34	44	69	78	17	13
6	40	20	80	48	265	131	35	43	57	49	15	12
7	31	18	72	52	323	113	35	44	49	59	14	11
8	25	17	72	47	383	106	34	43	61	90	13	11
9	22	16	100	46	256	101	33	40	161	56	13	11
10	21	15	208	52	185	83	33	39	92	37	13	11
11	19	14	162	50	158	74	39	38	60	30	12	12
12	18	13	120	41	160	69	77	43	68	30	11	12
13	19	13	82	41	142	64	76	38	123	29	11	10
14	26	12	74	43	132	65	87	36	68	23	10	9.6
15	27	12	69	142	111	62	469	34	50	21	9.8	9.3
16	26	12	59	323	76	56	491	31	42	21	9.4	11
17	23	13	55	224	76	51	354	29	36	19	9.9	13
18	21	14	55	165	74	51	241	104	32	18	9.2	12
19	19	15	51	137	71	52	177	298	30	16	8.4	11
20	18	15	46	100	66	50	142	316	29	15	8.1	9.9
21	18	20	43	80	64	47	121	171	61	14	8.0	9.3
22	17	21	39	76	63	45	110	700	61	13	8.2	9.3
23	16	19	38	64	62	43	104	548	36	13	8.2	9.2
24	16	18	42	52	56	45	89	259	29	13	7.7	8.8
25	18	16	74	50	53	47	76	172	25	12	8.4	8.6
26	36	67	85	48	50	45	70	131	24	12	21	8.1
27	54	156	74	46	50	43	68	104	21	21	161	8.9
28	57	122	65	46	60	41	66	85	20	19	128	8.3
29	45	86	60	50	---	40	63	73	22	17	70	17
30	36	67	58	60	---	42	61	67	56	70	41	15
31	30	---	52	62	---	42	---	208	---	65	29	---
TOTAL	929	924	2527	2380	4150	2947	3337	3949	1775	1343	794.3	350.3
MEAN	30.0	30.8	81.5	76.8	148	95.1	111	127	59.2	43.3	25.6	11.7
MAX	58	156	208	323	383	435	491	700	161	185	161	22
MIN	16	12	38	41	50	40	33	29	20	12	7.7	8.1
CFSM	.19	.19	.51	.48	.93	.60	.70	.80	.37	.27	.16	.07
IN.	.22	.22	.59	.56	.97	.69	.78	.92	.42	.31	.19	.08

CAL YR 1986	TOTAL	58235	MEAN	160	MAX	1990	MIN	12	CFSM	1.01	IN.	13.62
WTR YR 1987	TOTAL	25405.6	MEAN	69.6	MAX	700	MIN	7.7	CFSM	.44	IN.	5.94

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. 13-15, Jan. 19 to Feb. 3, and Feb. 14-19. Records good. Records include flow of Pony Creek.

AVERAGE DISCHARGE.--58 years, 366 ft^3/s, 11.92 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)
Oct. 4	1000	*2,210	*7.18

Minimum daily discharge, 59 ft^3/s Aug. 24, Sept. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1100	213	316	226	260	1650	187	184	527	244	94	133
2	1400	203	760	229	290	1900	187	188	382	192	89	98
3	1380	196	999	227	400	1170	184	238	792	146	86	85
4	2160	187	663	223	496	732	176	573	439	130	83	78
5	1940	179	450	229	556	663	171	417	285	116	81	74
6	1690	173	361	230	485	1090	171	304	228	114	77	71
7	1170	164	331	230	533	881	169	252	196	117	74	69
8	727	158	511	225	900	642	164	222	169	286	71	67
9	555	155	869	220	834	514	160	200	158	240	105	72
10	456	151	1020	224	541	413	157	186	150	167	87	70
11	381	149	689	224	441	357	157	174	141	136	77	84
12	327	146	467	207	621	333	239	268	187	128	74	78
13	299	142	350	200	858	308	277	217	344	130	71	71
14	495	138	310	206	720	296	263	182	193	119	69	67
15	453	136	285	452	500	288	1880	174	154	117	65	66
16	336	138	269	769	370	269	1810	173	139	128	63	74
17	283	137	262	471	320	252	1240	165	123	123	62	101
18	247	142	284	363	280	243	779	727	115	121	62	89
19	224	151	284	300	265	244	579	1670	113	106	61	79
20	214	176	263	240	254	237	466	1600	109	97	61	73
21	205	725	249	220	256	227	386	1000	115	92	60	70
22	191	787	240	210	250	220	335	769	144	90	62	70
23	182	569	236	205	296	210	320	690	139	87	60	69
24	175	438	235	200	309	204	296	457	116	85	59	66
25	192	353	266	200	310	204	262	358	111	82	62	63
26	365	592	256	195	304	204	242	306	103	90	99	62
27	490	855	245	190	280	199	227	270	95	88	464	60
28	374	585	237	190	304	196	216	238	91	85	293	59
29	301	434	228	190	---	188	203	212	94	93	165	135
30	259	360	233	210	---	189	192	192	139	222	117	206
31	227	---	227	240	---	190	---	404	---	114	135	---
TOTAL	18798	8932	12395	7945	12233	14713	12095	13010	6091	4085	3088	2459
MEAN	606	298	400	256	437	475	403	420	203	132	99.6	82.0
MAX	2160	855	1020	769	900	1900	1880	1670	792	286	464	206
MIN	175	136	227	190	250	188	157	165	91	82	59	59
CFSM	1.45	.71	.96	.61	1.05	1.14	.97	1.01	.49	.32	.24	.20
IN.	1.68	.80	1.11	.71	1.09	1.31	1.08	1.16	.54	.36	.28	.22

CAL YR 1986	TOTAL	174521	MEAN	478	MAX	2800	MIN	89	CFSM	1.15	IN.	15.57
WTR YR 1987	TOTAL	115844	MEAN	317	MAX	2160	MIN	59	CFSM	.76	IN.	10.33

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: Nov. 26 to Dec. 9, Jan. 19 to Feb. 3, and Feb. 14-19. Records good.

AVERAGE DISCHARGE.--17 years, 10.14 ft^3/s, 15.52 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)
May 19	1400	*210	*4.85

Minimum daily discharge, 0.68 ft^3/s Aug. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	80	4.9	13	5.2	5.4	83	3.7	3.3	3.7	5.9	2.5	3.9
2	55	4.3	32	5.3	6.0	45	3.8	3.3	7.6	3.9	2.9	2.5
3	72	4.1	21	5.2	13	21	3.4	3.2	23	2.9	1.8	1.9
4	63	4.1	14	5.0	20	13	3.3	3.0	7.9	2.2	1.4	1.6
5	26	3.8	10	5.0	18	12	3.2	2.9	5.2	2.1	1.2	1.5
6	14	3.6	8.0	4.9	13	11	3.1	2.8	4.1	2.1	1.1	1.4
7	8.5	3.3	7.2	4.7	18	9.5	3.1	2.7	3.7	2.2	.94	1.3
8	6.4	3.2	11	4.4	57	8.3	3.3	2.7	3.4	16	.91	1.4
9	5.7	3.3	20	4.1	27	7.8	3.1	2.6	3.3	4.5	7.6	1.3
10	4.9	3.1	38	4.7	14	6.4	3.1	2.6	3.1	2.9	3.7	1.3
11	4.5	3.1	16	3.9	18	5.9	4.3	2.6	3.0	2.3	1.8	1.9
12	4.5	3.0	10	3.7	47	5.7	13	7.8	4.2	2.2	1.4	1.6
13	5.2	2.8	7.2	3.6	41	5.6	7.3	4.1	3.3	2.2	1.2	1.3
14	7.8	2.7	6.5	4.1	18	5.7	13	3.5	2.9	2.1	.99	1.1
15	6.6	2.9	5.9	37	11	5.5	56	4.5	2.7	2.4	.86	1.2
16	5.3	2.7	5.5	28	8.0	5.0	36	3.3	2.5	2.4	.78	1.4
17	4.6	2.7	5.5	12	6.4	4.8	18	2.9	2.4	2.0	.74	1.5
18	4.0	2.8	6.2	8.7	5.8	4.9	12	48	2.2	1.7	.79	1.4
19	3.7	3.0	5.8	5.6	5.4	4.9	8.8	122	2.2	1.5	.74	1.3
20	3.5	6.3	5.3	4.7	5.4	4.6	7.1	73	2.6	1.3	.69	1.2
21	3.4	23	4.9	4.3	5.6	4.5	6.3	36	3.3	1.3	.75	1.2
22	3.3	15	4.9	4.1	5.8	4.3	5.6	17	2.6	1.2	.82	1.2
23	3.3	10	4.8	4.0	6.5	4.2	5.7	11	2.3	1.1	.71	1.2
24	3.4	7.6	5.1	3.8	6.5	4.2	5.1	8.3	2.1	1.1	.68	1.0
25	5.4	6.6	8.0	3.7	6.1	4.2	4.6	6.7	2.0	1.1	.88	.99
26	20	25	7.2	3.7	6.0	4.8	4.5	6.3	2.0	1.1	1.9	1.1
27	15	64	6.0	3.6	5.5	4.0	4.0	5.1	2.3	1.5	12	.84
28	10	32	5.4	3.6	12	4.0	3.9	4.5	1.8	1.4	6.5	1.1
29	7.5	20	5.1	3.7	---	3.8	3.8	4.1	3.3	2.1	3.6	2.5
30	6.1	15	4.9	4.2	---	4.0	3.8	3.9	7.9	5.8	2.5	2.5
31	5.4	---	4.9	4.7	---	3.8	---	3.9	---	2.1	4.0	---
TOTAL	468.0	287.9	309.3	203.2	411.4	315.4	255.9	407.6	122.6	84.6	68.38	45.63
MEAN	15.1	9.60	9.98	6.55	14.7	10.2	8.53	13.1	4.09	2.73	2.21	1.52
MAX	80	64	38	37	57	83	56	122	23	16	12	3.9
MIN	3.3	2.7	4.8	3.6	5.4	3.8	3.1	2.6	1.8	1.1	.68	.84
CFSM	1.70	1.08	1.13	.74	1.66	1.15	.96	1.48	.46	.31	.25	.17
IN.	1.96	1.21	1.30	.85	1.73	1.32	1.07	1.71	.51	.35	.29	.19

CAL YR 1986	TOTAL	5317.6	MEAN	14.6	MAX	172	MIN	1.4	CFSM	1.65	IN.	22.30
WTR YR 1987	TOTAL	2979.91	MEAN	8.16	MAX	122	MIN	.68	CFSM	.92	IN.	12.50

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 05120105, 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. 13-15, Jan. 19 to Feb. 7, and Feb. 14-19. Records good.

AVERAGE DISCHARGE.--44 years, 749 ft^3/s, 12.89 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)
May 20	0500	*4,030	*7.16

Minimum daily discharge, 104 ft^3/s Aug. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1080	398	628	462	520	1690	357	350	773	292	282	398
2	2130	373	665	466	600	3490	352	337	636	385	295	369
3	1860	356	1570	467	800	2440	347	340	892	331	236	284
4	2680	346	1370	459	950	1520	335	394	1070	259	184	243
5	2770	331	937	452	1100	1090	325	650	624	224	165	220
6	2310	321	730	460	1000	1210	320	513	463	204	156	209
7	1900	313	646	462	1000	1430	317	426	382	197	146	196
8	1280	303	691	456	1530	1120	311	377	332	224	141	198
9	900	292	1110	448	1830	887	303	346	327	418	164	195
10	730	281	1920	451	1280	726	297	322	292	335	276	188
11	629	272	1470	451	962	613	310	302	268	251	223	211
12	559	268	968	432	1160	554	426	355	267	213	166	243
13	514	261	660	409	1630	532	601	396	344	219	147	227
14	508	253	600	408	1400	507	533	344	628	208	141	189
15	705	248	550	478	900	497	1940	309	373	189	132	171
16	624	251	537	1220	750	481	3310	291	292	186	124	172
17	512	255	513	1120	660	448	2440	280	248	204	117	184
18	450	262	513	803	610	426	1600	397	220	181	111	234
19	406	271	532	560	570	421	1120	2600	204	175	108	227
20	378	335	519	440	554	418	864	3610	209	158	104	198
21	361	477	493	430	535	405	716	2220	333	142	106	185
22	348	1150	471	420	536	396	628	1370	308	140	111	175
23	332	1000	460	410	537	387	586	1100	274	157	108	172
24	321	800	463	400	585	383	549	889	250	148	106	169
25	327	668	499	395	590	383	499	678	205	141	111	155
26	398	668	564	390	584	383	456	578	187	138	166	149
27	699	1350	529	385	570	379	426	511	171	148	990	148
28	758	1170	497	380	569	373	405	455	159	162	1820	145
29	593	874	479	380	---	371	385	407	155	153	900	174
30	500	715	468	430	---	366	368	371	223	206	545	375
31	440	---	468	490	---	363	---	350	---	391	398	---
TOTAL	28002	14862	22520	15414	24312	24689	21426	21868	11109	6779	8779	6403
MEAN	903	495	726	497	868	796	714	705	370	219	283	213
MAX	2770	1350	1920	1220	1830	3490	3310	3610	1070	418	1820	398
MIN	321	248	460	380	520	363	297	280	155	138	104	145
CFSM	1.14	.63	.92	.63	1.10	1.01	.90	.89	.47	.28	.36	.27
IN.	1.32	.70	1.06	.73	1.15	1.16	1.01	1.03	.52	.32	.41	.30

CAL YR 1986	TOTAL	331467	MEAN	908	MAX	6510	MIN	178	CFSM	1.15	IN.	15.63
WTR YR 1987	TOTAL	206163	MEAN	565	MAX	3610	MIN	104	CFSM	.72	IN.	9.72

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: Jan. 22 to Feb. 2. Records good except for estimated daily discharges, which are fair. Flow partially regulated by Huntington Lake, Salamonie Lake, and Mississinewa Lake.

AVERAGE DISCHARGE.--64 years (water years 1924 to current year), 3,323 ft^3/s, 11.94 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, 11,400 ft^3/s Feb. 6, gage height, 7.68 ft; minimum daily, 260 ft^3/s Aug. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2610	2880	4190	1750	1300	3840	943	1010	2520	949	1160	940
2	5220	2560	3260	1690	1500	8370	1000	987	2750	1900	1040	863
3	6520	2520	5080	1630	2080	8870	1000	979	2270	4530	868	707
4	7220	2450	7090	1660	5320	4920	1110	992	4300	7230	772	605
5	6930	2380	6840	1690	10100	3450	1060	1280	6500	6190	624	561
6	7960	2370	4470	1740	10600	3260	892	1160	7270	3750	557	528
7	7760	2460	3230	1730	6460	3990	874	1050	4840	2560	497	505
8	6540	2420	2910	1700	4430	3200	851	992	2800	1730	479	503
9	5490	2360	3300	1630	4310	2530	802	948	1880	1470	605	498
10	4080	2340	5370	1590	2880	1840	794	913	1610	1190	765	460
11	2980	2460	5880	1390	4070	1470	920	886	1400	956	615	507
12	2740	2450	5380	1240	6250	1260	1150	986	1110	865	509	553
13	1830	2440	4000	1100	6150	1190	1370	1020	1290	857	438	508
14	1730	2230	2920	1490	4940	1170	1360	1020	2160	880	410	443
15	1740	2010	2430	2170	2760	1130	4170	930	1590	2230	391	413
16	1750	1980	2460	4460	1890	1040	8360	873	1190	2710	371	478
17	2290	2010	2290	5530	1670	990	6940	840	938	2150	361	833
18	1740	2110	2070	2430	1780	959	5160	982	861	1390	340	880
19	1440	2260	1880	1610	2320	1140	3620	3430	1020	1060	309	889
20	1220	2130	1830	1200	1960	1060	2570	5820	1160	882	312	849
21	1170	2390	1810	2280	1820	904	2010	4480	1630	695	305	823
22	1080	3780	1770	3400	1430	859	1700	3720	1760	676	285	1140
23	1150	3960	1810	2700	1220	834	1610	4950	1800	642	260	1180
24	1180	4000	1740	1500	1250	860	1530	3600	2310	596	267	1170
25	1260	3550	1740	900	1250	897	1410	2180	1700	524	359	1170
26	1560	3050	1910	900	2530	907	1280	1780	1200	472	522	1150
27	2210	5310	2350	900	3150	896	1200	1780	838	470	4100	1140
28	3500	6800	2390	1100	2600	861	1140	2980	663	498	4950	1140
29	4100	7320	2060	1500	---	840	1080	2140	596	526	2990	1300
30	3900	6410	1890	1300	---	836	1040	1570	759	683	1780	1410
31	3220	---	1820	1300	---	806	---	2050	---	1120	1260	---
TOTAL	104120	93390	98170	57210	98020	65179	58946	58328	62715	52381	28501	24146
MEAN	3359	3113	3167	1845	3501	2103	1965	1882	2091	1690	919	805
MAX	7960	7320	7090	5530	10600	8870	8360	5820	7270	7230	4950	1410
MIN	1080	1980	1740	900	1220	806	794	840	596	470	260	413
CFSM	.89	.82	.84	.49	.93	.56	.52	.50	.55	.45	.24	.21
IN.	1.02	.92	.97	.56	.96	.64	.58	.57	.62	.52	.28	.24

CAL YR 1986	TOTAL	1427847	MEAN	3912	MAX	17200	MIN	450	CFSM	1.04	IN.	14.06
WTR YR 1987	TOTAL	801106	MEAN	2195	MAX	10600	MIN	260	CFSM	.58	IN.	7.89

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. 14, 15, Jan. 19 to Feb. 4, and Feb. 15-20. Records good.

AVERAGE DISCHARGE.--19 years, 6.76 ft^3/s, 13.44 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 456 ft^3/s June 5, 1981, gage height, 5.12 ft; maximum gage height, 5.30 ft June 14, 1975; minimum daily discharge, 0.10 ft^3/s Sept. 8-10, 13, 14, 1983.

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)
May 19	1100	*89	3.72

Minimum daily discharge, 0.31 ft^3/s Aug. 20, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.4	1.5	3.0	1.8	3.5	13	2.3	3.0	2.7	1.9	1.1	1.1
2	5.2	1.4	8.8	1.8	5.0	11	2.3	3.1	2.7	1.6	.96	.91
3	6.7	1.5	6.6	1.6	10	7.2	2.1	3.0	2.7	1.2	.66	.80
4	6.8	1.4	4.7	1.6	13	5.9	2.3	2.8	2.3	1.0	.61	.72
5	3.5	2.0	3.9	1.6	12	5.6	2.5	2.7	2.2	.97	.54	.64
6	2.4	1.4	3.3	1.8	10	4.8	2.4	2.7	2.1	3.8	.49	.60
7	2.0	1.3	3.2	1.6	17	4.5	2.3	2.7	2.0	4.5	.46	.61
8	1.7	1.3	4.2	1.5	22	4.5	2.3	2.5	1.9	4.1	.50	.67
9	1.6	1.3	6.6	1.6	11	4.2	2.3	2.5	2.0	2.1	.79	.64
10	1.5	1.1	6.3	2.0	8.7	3.7	2.3	2.4	1.8	1.4	.55	.56
11	1.5	1.2	5.0	1.5	8.1	3.6	3.0	2.5	1.8	1.3	.48	.54
12	1.5	1.1	3.9	1.5	8.1	3.5	3.5	6.2	1.9	1.0	.46	.52
13	1.5	.98	3.0	1.5	7.2	3.4	2.9	3.4	1.8	1.0	.46	.50
14	1.4	1.0	2.9	2.1	6.6	3.6	4.0	2.9	1.6	.95	.45	.50
15	1.3	1.2	2.9	8.5	5.0	3.3	7.4	2.6	1.6	.92	.40	.52
16	1.3	1.2	2.8	6.7	4.3	3.0	7.6	2.4	1.4	.91	.38	.68
17	1.2	1.2	2.7	5.1	3.8	2.9	6.4	2.3	1.4	.82	.38	.64
18	1.2	1.3	2.6	4.6	3.6	3.1	5.2	4.6	1.3	.79	.33	.57
19	1.2	1.2	2.3	4.0	3.5	3.0	4.4	40	1.4	.78	.32	.52
20	1.2	1.3	2.3	3.5	3.5	2.7	4.0	22	1.4	.75	.31	.52
21	1.2	1.3	2.1	3.1	3.7	2.7	3.7	13	1.3	.74	.39	.52
22	1.3	1.1	2.0	2.7	3.7	2.6	4.3	8.5	1.3	.71	.36	.54
23	1.3	1.2	2.1	2.5	3.4	2.5	6.8	6.1	1.2	.69	.31	.52
24	1.3	1.2	2.2	2.3	3.1	2.6	5.1	4.9	1.1	.66	.32	.52
25	2.2	1.1	2.2	2.3	3.1	2.7	4.3	4.5	1.1	.59	.48	.51
26	2.9	6.7	1.9	2.2	3.0	2.5	4.0	4.1	1.1	.65	4.6	.50
27	2.7	5.3	1.8	2.2	3.1	2.4	3.8	3.7	.98	.66	40	.49
28	2.2	3.8	1.8	2.2	4.0	2.3	3.4	3.3	.96	.64	11	.49
29	2.0	3.1	1.9	2.3	---	2.4	3.4	3.2	1.1	.62	3.5	2.3
30	1.7	2.6	1.9	2.5	---	2.3	3.1	3.2	1.7	.65	1.5	2.0
31	1.5	---	1.7	2.8	---	2.3	---	3.0	---	.85	1.4	---
TOTAL	73.4	53.28	102.6	83.0	193.0	123.8	113.4	173.8	49.84	39.25	74.49	21.15
MEAN	2.37	1.78	3.31	2.68	6.89	3.99	3.78	5.61	1.66	1.27	2.40	.70
MAX	8.4	6.7	8.8	8.5	22	13	7.6	40	2.7	4.5	40	2.3
MIN	1.2	.98	1.7	1.5	3.0	2.3	2.1	2.3	.96	.59	.31	.49
CFSM	.35	.26	.48	.39	1.01	.58	.55	.82	.24	.19	.35	.10
IN.	.40	.29	.56	.45	1.05	.67	.62	.95	.27	.21	.41	.12

CAL YR 1986	TOTAL	2534.85	MEAN	6.94	MAX	171	MIN	.44	CFSM	1.02	IN.	13.81
WTR YR 1987	TOTAL	1101.01	MEAN	3.02	MAX	40	MIN	.31	CFSM	.44	IN.	6.00

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: Oct. 1-15, Dec. 13-15, Jan. 20 to Feb. 5, and Feb. 16-20. Records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--44 years, 240 ft^3/s, 11.89 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. 5	1815	(a)	*6.42	May 19	1145	*1,540	5.53

Minimum daily discharge, 21 ft^3/s Aug. 20.

(a) Backwater from ice jam.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	150	54	90	74	130	304	82	105	106	138	90	83
2	120	49	103	74	160	541	82	101	109	177	116	68
3	140	47	137	73	300	396	78	97	194	149	124	59
4	140	50	149	71	580	282	73	91	134	111	90	53
5	130	47	120	68	470	243	71	81	105	80	55	47
6	95	47	102	69	343	219	71	78	92	85	44	44
7	75	46	98	71	388	197	72	77	83	303	37	43
8	65	45	96	72	579	187	71	75	81	200	34	100
9	62	44	106	68	471	180	69	71	148	135	36	75
10	59	42	146	73	328	158	69	68	117	92	32	60
11	57	42	182	78	270	141	86	66	93	72	30	52
12	55	41	161	70	262	135	133	103	83	60	29	47
13	53	39	120	67	249	130	149	81	86	53	28	45
14	52	45	100	71	232	125	150	69	79	50	27	43
15	50	38	92	94	207	127	434	63	70	49	25	40
16	55	39	88	249	155	117	675	60	65	46	24	45
17	57	39	85	219	148	108	511	57	58	44	23	54
18	51	42	83	188	143	106	358	75	54	41	22	52
19	48	44	79	165	140	111	274	1100	51	37	22	47
20	46	46	75	133	138	106	229	1130	52	34	21	43
21	45	47	71	117	135	100	202	561	62	32	22	41
22	44	46	67	108	128	96	187	351	80	32	22	40
23	43	49	65	100	127	94	184	255	61	30	23	38
24	44	47	67	95	118	93	163	204	63	29	23	37
25	54	46	74	91	112	101	143	179	53	27	26	35
26	65	72	90	87	110	95	130	305	48	27	54	34
27	67	135	97	86	109	91	126	186	43	27	686	32
28	81	151	89	86	119	88	122	148	40	26	526	32
29	74	120	83	90	---	85	117	128	43	27	256	57
30	64	100	81	100	---	85	113	123	94	47	160	107
31	58	---	80	113	---	83	---	120	---	56	113	---
TOTAL	2199	1699	3076	3120	6651	4924	5224	6208	2447	2316	2820	1553
MEAN	70.9	56.6	99.2	101	238	159	174	200	81.6	74.7	91.0	51.8
MAX	150	151	182	249	580	541	675	1130	194	303	686	107
MIN	43	38	65	67	109	83	69	57	40	26	21	32
CFSM	.26	.21	.36	.37	.87	.58	.64	.73	.30	.27	.33	.19
IN.	.30	.23	.42	.42	.90	.67	.71	.84	.33	.31	.38	.21

CAL YR 1986	TOTAL	81923	MEAN	224	MAX	2710	MIN	27	CFSM	.82	IN.	11.12
WTR YR 1987	TOTAL	42237	MEAN	116	MAX	1130	MIN	21	CFSM	.42	IN.	5.73

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, 0.4 mi southeast of North Webster, at the intersection of State Road 13 and County Road 550 North.

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.--Estimated daily discharges: Dec. 13 to Jan. 28. Records fair except for estimated daily discharges, which are poor. 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; minimum daily, 2.2 ft^3/s Aug. 15, 16, 1987.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 256 ft^3/s Oct. 6, gage height, 5.44 ft; minimum daily, 2.2 ft^3/s Aug. 15, 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	85	60	100	77	57	34	13	12	29	43	14	5.7
2	77	59	98	75	69	75	13	12	29	56	14	5.7
3	158	59	97	72	68	78	12	62	30	22	14	5.3
4	238	52	95	70	67	80	11	98	31	22	14	5.3
5	245	49	93	69	66	83	26	100	29	20	13	5.2
6	253	48	91	67	65	86	77	101	29	20	12	5.6
7	255	48	90	66	64	88	75	101	29	19	13	5.9
8	251	43	89	64	64	92	53	100	26	26	12	6.6
9	246	26	88	63	62	85	13	89	15	25	13	7.0
10	231	26	88	62	62	78	13	71	14	24	12	7.0
11	217	26	87	58	61	76	13	70	11	23	11	9.6
12	172	26	85	58	62	74	13	72	11	23	10	8.8
13	89	26	83	57	61	73	12	71	12	23	7.1	9.2
14	88	25	82	56	60	73	28	73	13	22	2.3	12
15	87	24	81	54	59	71	101	72	17	21	2.2	13
16	86	24	79	52	59	67	100	50	18	21	2.2	12
17	85	24	76	50	58	67	101	33	19	20	3.0	13
18	84	23	110	48	56	65	97	66	20	19	2.4	13
19	81	20	149	46	55	65	94	184	20	17	2.4	13
20	54	20	149	45	55	64	102	180	20	17	2.4	12
21	26	21	139	43	54	63	83	176	21	17	2.4	12
22	27	21	128	45	38	64	95	171	22	12	4.5	11
23	27	21	120	46	17	65	95	122	31	12	3.9	10
24	28	21	115	47	17	64	100	70	31	11	4.6	9.9
25	30	20	110	48	17	64	92	39	23	11	4.5	9.4
26	31	21	102	48	17	63	35	39	17	10	5.5	9.5
27	31	22	97	48	16	62	9.1	38	17	9.5	5.0	9.5
28	31	54	92	48	17	48	8.7	38	18	9.3	4.5	3.9
29	30	105	87	47	---	15	9.6	33	17	12	7.0	5.2
30	36	101	83	48	---	14	11	28	20	12	8.2	5.5
31	60	---	80	47	---	14	---	28	---	13	5.9	---
TOTAL	3439	1115	3063	1724	1423	2010	1505.4	2399	639	611.8	232.0	260.8
MEAN	111	37.2	98.8	55.6	50.8	64.8	50.2	77.4	21.3	19.7	7.48	8.69
MAX	255	105	149	77	69	92	102	184	31	56	14	13
MIN	26	20	76	43	16	14	8.7	12	11	9.3	2.2	3.9
CFSM	2.25	.75	2.00	1.13	1.03	1.31	1.02	1.57	.43	.40	.15	.18
IN.	2.59	.84	2.31	1.30	1.07	1.52	1.14	1.81	.48	.46	.18	.20

WTR YR 1987 TOTAL 18422.0 MEAN 50.5 MAX 255 MIN 2.2 CFSM 1.02 IN. 13.90

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 fair. Periodic regulation by gates at lake outlet.

AVERAGE DISCHARGE.--38 years, 104 ft^3/s, 12.47 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, 350 ft^3/s Oct. 9, gage height, 7.80 ft; minimum daily, 26 ft^3/s Apr. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	133	126	125	91	112	112	75	28	70	34	102	56
2	153	127	135	89	115	127	73	45	72	59	51	39
3	205	125	141	87	117	148	73	79	86	106	35	39
4	254	124	148	85	119	165	71	117	108	103	36	39
5	283	121	154	85	122	184	51	149	92	98	35	39
6	311	117	157	85	123	198	26	152	64	76	34	39
7	330	114	163	84	125	207	28	157	48	29	34	39
8	339	109	168	83	128	213	31	180	34	30	34	39
9	347	101	172	84	130	219	32	175	36	31	33	40
10	342	97	173	87	132	216	63	154	56	32	33	40
11	333	92	175	85	134	210	94	125	70	33	33	42
12	327	85	176	85	135	205	94	129	51	33	32	42
13	310	80	176	84	138	201	90	126	32	52	32	41
14	291	75	173	82	140	197	89	124	31	72	32	41
15	275	72	173	84	142	194	114	124	32	67	31	41
16	263	69	170	84	142	187	174	114	32	64	30	50
17	251	67	167	83	141	180	194	74	31	51	32	73
18	240	69	164	90	139	174	213	119	30	28	31	71
19	227	68	157	99	137	167	216	206	30	28	30	60
20	214	66	145	107	134	160	216	234	30	28	30	38
21	198	68	135	110	132	155	214	249	29	28	30	37
22	184	70	126	112	130	114	211	257	42	28	29	37
23	171	71	119	115	123	84	207	259	50	28	28	37
24	161	73	113	117	116	97	202	251	30	28	28	37
25	155	74	111	116	111	132	195	239	30	27	28	37
26	148	80	107	114	107	131	184	224	30	28	30	37
27	144	84	103	114	103	130	166	210	29	28	32	37
28	139	88	100	113	102	128	147	195	28	27	33	37
29	134	102	97	113	---	100	111	173	28	31	43	37
30	130	116	95	113	---	80	28	136	30	95	57	37
31	127	---	94	113	---	78	---	93	---	104	59	---
TOTAL	7119	2730	4412	2993	3529	4893	3682	4897	1361	1506	1137	1278
MEAN	230	91.0	142	96.5	126	158	123	158	45.4	48.6	36.7	42.6
MAX	347	127	176	117	142	219	216	259	108	106	102	73
MIN	127	66	94	82	102	78	26	28	28	27	28	37
CFSM	2.04	.81	1.26	.85	1.12	1.40	1.09	1.40	.40	.43	.32	.38
IN.	2.34	.90	1.45	.99	1.16	1.61	1.21	1.61	.45	.50	.37	.42

CAL YR 1986	TOTAL	46184	MEAN	127	MAX	347	MIN	23	CFSM	1.12	IN.	15.20
WTR YR 1987	TOTAL	39537	MEAN	108	MAX	347	MIN	26	CFSM	.96	IN.	13.02

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. 25-30, Jan. 17-21, 23-31, and Feb. 1-5. Records good except for estimated daily discharges, which are poor. Flow occasionally regulated by lakes upstream.

AVERAGE DISCHARGE.--18 years, 17.9 ft^3/s, 12.40 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 561 ft^3/s June 13, 1981, gage height, 5.38 ft; minimum daily, 0.44 ft^3/s Sept. 8, 1983.

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)
Oct. 4	1100	*90	*2.75	Jan. 24	1200	82	2.67

Minimum daily discharge, 1.4 ft^3/s Aug. 21-24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	13	24	16	13	46	11	10	8.8	16	6.2	6.8
2	18	12	27	16	14	62	11	10	11	13	5.4	5.4
3	58	12	33	16	15	54	10	12	14	9.7	4.9	4.5
4	88	11	32	15	17	45	10	13	10	7.6	4.0	3.8
5	76	11	28	15	19	40	9.9	12	8.6	6.3	3.3	3.3
6	58	9.9	25	15	21	37	9.9	12	7.4	6.1	2.8	2.9
7	43	10	23	14	23	33	9.7	11	6.4	5.6	2.5	2.6
8	31	11	26	14	24	31	9.3	9.8	5.8	4.9	2.3	2.7
9	26	11	31	13	26	28	9.1	9.3	5.5	4.4	2.6	2.7
10	22	10	35	13	26	25	9.1	8.7	5.1	3.6	2.4	2.9
11	17	9.9	32	14	24	23	9.8	9.2	4.8	3.3	2.3	6.0
12	15	9.5	27	13	25	21	16	22	6.7	3.0	2.1	5.2
13	15	8.9	22	13	29	20	18	14	13	3.4	2.0	4.6
14	17	8.5	19	13	30	19	23	11	11	3.4	1.9	4.0
15	16	8.3	17	16	30	19	48	9.9	9.0	3.3	1.7	3.8
16	14	8.0	16	21	27	17	50	9.3	7.8	3.7	1.6	3.9
17	12	8.4	16	18	23	16	46	8.8	6.9	3.5	2.5	4.9
18	11	9.2	17	17	20	15	42	42	6.1	3.2	1.9	5.0
19	9.7	11	17	25	17	15	38	56	5.6	2.8	1.7	4.9
20	8.9	12	17	23	16	15	33	58	5.5	2.4	1.5	4.6
21	8.3	20	16	19	16	15	28	48	5.8	2.2	1.4	4.2
22	8.0	26	15	17	15	14	23	40	10	2.2	1.4	4.1
23	7.8	30	15	14	17	13	21	31	10	2.1	1.4	3.8
24	7.6	27	14	12	18	12	19	25	8.5	1.9	1.4	3.6
25	8.8	23	14	11	19	13	16	21	7.8	1.8	1.5	3.5
26	12	28	14	12	19	13	15	19	6.5	2.4	6.1	3.2
27	17	37	14	13	19	13	14	16	5.4	2.4	22	3.0
28	22	36	14	13	20	13	13	14	4.6	2.3	20	2.7
29	22	31	15	12	---	12	12	12	4.5	4.8	15	3.7
30	18	27	15	12	---	12	11	9.7	14	7.4	11	4.9
31	15	---	15	12	---	11	---	8.9	---	7.5	8.5	---
TOTAL	714.1	489.6	645	467	582	722	594.8	592.6	236.1	146.2	145.3	121.2
MEAN	23.0	16.3	20.8	15.1	20.8	23.3	19.8	19.1	7.87	4.72	4.69	4.04
MAX	88	37	35	25	30	62	50	58	14	16	22	6.8
MIN	7.6	8.0	14	11	13	11	9.1	8.7	4.5	1.8	1.4	2.6
CFSM	1.17	.83	1.06	.77	1.06	1.19	1.01	.97	.40	.24	.24	.21
IN.	1.36	.93	1.22	.89	1.10	1.37	1.13	1.12	.45	.28	.28	.23

CAL YR 1986	TOTAL	6734.3	MEAN	18.5	MAX	88	MIN	1.3	CFSM	.94	IN.	12.78
WTR YR 1987	TOTAL	5455.9	MEAN	14.9	MAX	88	MIN	1.4	CFSM	.76	IN.	10.36

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: Jan. 21 to Feb. 4 and Apr. 17-20. Records good below 1,000 ft^3/s and fair above except for Jan. 21 to Feb. 4, which are poor.

AVERAGE DISCHARGE.--44 years, 841 ft^3/s, 13.34 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,660 ft^3/s June 15, 1981, gage height, 15.08 ft; 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)
Oct. 5	2300	*4,410	*12.60

Minimum daily discharge, 250 ft^3/s Aug. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	829	848	1150	792	1000	1090	647	617	760	447	475	511
2	1020	818	1170	792	1050	1470	632	582	799	486	576	453
3	1800	801	1280	791	1050	1530	621	537	992	503	571	409
4	3140	783	1260	786	1040	1390	603	551	999	466	499	377
5	4190	763	1160	786	1030	1320	587	597	866	447	438	353
6	4180	747	1090	783	1020	1310	578	601	785	454	378	333
7	3600	729	1080	778	990	1290	566	595	703	438	351	322
8	3100	718	1130	774	1040	1240	544	587	626	433	330	314
9	2620	703	1240	773	1160	1180	514	575	561	416	352	305
10	2180	682	1340	789	1130	1100	499	556	506	376	363	301
11	1840	673	1300	791	1090	1030	508	552	477	387	325	310
12	1610	670	1200	769	1140	979	552	586	522	380	309	325
13	1470	644	1110	762	1290	941	630	590	567	471	297	330
14	1400	622	1110	755	1330	924	663	581	583	504	284	325
15	1350	607	1030	776	1320	911	821	602	544	508	276	308
16	1280	599	995	942	1230	897	1010	615	496	708	270	312
17	1220	594	959	984	1110	868	1150	590	457	587	266	321
18	1160	601	943	952	1020	850	1130	647	419	491	269	320
19	1100	622	934	926	1010	837	1080	1190	393	436	274	323
20	1070	644	919	764	945	810	1040	1860	397	396	279	327
21	1030	737	897	740	911	786	989	2250	461	352	266	321
22	989	861	873	730	908	770	951	2110	431	327	260	310
23	936	918	853	730	905	752	934	1900	441	305	254	290
24	887	922	832	720	905	738	886	1660	422	286	250	278
25	874	895	831	720	905	716	848	1440	412	274	252	271
26	923	964	831	750	905	693	815	1250	401	265	321	266
27	966	1340	823	800	899	683	779	1100	370	268	648	261
28	950	1410	818	780	905	686	731	994	357	279	886	254
29	917	1290	805	800	---	686	691	902	351	287	754	286
30	884	1210	796	870	---	683	651	822	374	334	682	311
31	867	---	793	970	---	670	---	767	---	385	588	---
TOTAL	50382	24415	31552	24875	29238	29830	22650	28806	16472	12696	12343	9727
MEAN	1625	814	1018	802	1044	962	755	929	549	410	398	324
MAX	4190	1410	1340	984	1330	1530	1150	2250	999	708	886	511
MIN	829	594	793	720	899	670	499	537	351	265	250	254
CFSM	1.90	.95	1.19	.94	1.22	1.12	.88	1.09	.64	.48	.46	.38
IN.	2.19	1.06	1.37	1.08	1.27	1.30	.98	1.25	.72	.55	.54	.42

CAL YR 1986	TOTAL	365917	MEAN	1003	MAX	4190	MIN	257	CFSM	1.17	IN.	15.90
WTR YR 1987	TOTAL	292986	MEAN	803	MAX	4190	MIN	250	CFSM	.94	IN.	12.73

03333000 TIPPECANOE RIVER NEAR DELPHI, IN

LOCATION.--Lat 40°37'02", long 86°45'39", in NW¼NE¼ sec.16, T.25 N., R.3 W., Carroll County, Hydrologic Unit 05120106, on right bank 2 mi northeast of Springboro, 1.7 mi downstream from Big Creek, 5 mi northwest of Delphi, and at mile 15.1.

DRAINAGE AREA.--1,865 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 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 552.01 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Mar. 14, 1903, to July 20, 1906, and Nov. 2 to Dec. 31, 1908, nonrecording gage at site 5.5 mi downstream at different datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by upstream reservoirs.

AVERAGE DISCHARGE.--48 years (water years 1940 to current year), 1,685 ft^3/s, 12.27 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,600 ft^3/s Feb. 10, 1959, gage height, 15.10 ft; minimum daily, 1.0 ft^3/s Nov. 2, 3, 1954, caused by repair work at Oakdale Dam, 6.5 mi upstream.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,460 ft^3/s May 19, gage height, 8.43 ft; minimum daily, 399 ft^3/s Aug. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2460	1520	2270	1540	1910	2580	1240	1340	1790	1050	1490	1200
2	2810	1520	2510	1400	1980	3030	1400	1290	1920	791	2480	1090
3	2760	1280	2990	1510	2280	3140	1230	1190	2810	745	1610	836
4	4380	1350	2510	1520	2550	2860	1270	1180	2550	890	1220	746
5	5630	1030	2440	1220	2450	2750	1250	1170	2140	756	1060	696
6	5830	677	2030	1310	2450	2540	1090	998	1880	914	664	907
7	5610	1080	2040	1490	2600	2410	1180	1250	1500	1440	819	594
8	4810	1350	2560	1230	2830	2480	1140	1000	1360	1230	603	608
9	4030	1140	2570	1440	3330	2150	1210	1160	1380	1090	1040	813
10	3750	994	2750	1350	2830	2070	926	1160	1210	772	1080	454
11	3250	581	2720	1300	2650	2150	1240	981	942	748	896	639
12	2770	1130	2320	1420	2920	1910	1260	1190	1120	983	572	609
13	2630	1160	1810	1260	3330	1910	1320	1190	1020	1220	577	559
14	2330	934	1860	1310	3030	1710	1620	1270	1090	1100	578	573
15	2120	1040	2090	1440	3000	2100	2060	1090	1060	942	581	571
16	2280	1280	1930	1950	2410	1690	2550	1150	787	1280	582	693
17	1890	778	1840	2110	2480	1710	2750	1240	953	1420	554	844
18	2070	599	1820	1940	2130	1610	2430	1360	784	1060	448	593
19	1820	1120	1670	1910	2090	1590	2300	4570	776	911	412	726
20	1930	593	1910	1050	1950	1530	1990	6180	809	750	448	480
21	1710	949	1580	1420	1920	1530	2000	4490	795	733	453	820
22	1660	1340	1530	1270	1770	1530	1970	4260	723	554	662	453
23	1520	1750	1770	1380	1710	1530	2210	3620	602	516	401	747
24	1530	1080	1670	1320	1870	1410	2240	3140	1050	591	399	477
25	1760	548	1510	938	1780	1460	1900	2800	709	600	522	568
26	1530	1030	1860	1440	1860	1380	1690	2690	574	400	866	415
27	1850	2630	1450	1530	1710	1510	1790	2350	760	544	2750	415
28	1890	2800	1420	1320	1660	1150	1520	2050	443	519	2460	427
29	1710	2560	1530	1530	---	1400	1710	1980	909	491	1980	1210
30	1720	2410	1520	1600	---	1460	1220	1680	552	860	1810	848
31	1520	---	1390	1870	---	1280	---	1410	---	1110	1410	---
TOTAL	83560	38253	61870	45318	65480	59560	49706	62429	34998	27010	31427	20611
MEAN	2695	1275	1996	1462	2339	1921	1657	2014	1167	871	1014	687
MAX	5830	2800	2990	2110	3330	3140	2750	6180	2810	1440	2750	1210
MIN	1520	548	1390	938	1660	1150	926	981	443	400	399	415
CFSM	1.45	.68	1.07	.78	1.25	1.03	.89	1.08	.63	.47	.54	.37
IN.	1.67	.76	1.23	.90	1.31	1.19	.99	1.25	.70	.54	.63	.41

CAL YR 1986 TOTAL 739668 MEAN 2026 MAX 8790 MIN 347 CFSM 1.09 IN. 14.75
WTR YR 1987 TOTAL 580222 MEAN 1590 MAX 6180 MIN 399 CFSM .85 IN. 11.57

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. 13, 14, Jan. 19 to Feb. 2, and Feb. 16-20. Records good except for Jan. 19 to Feb. 2, which are fair.

AVERAGE DISCHARGE.--26 years, 130 ft^3/s, 12.09 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)
May 22	0115	*798	*5.48

Minimum daily discharge, 1.6 ft^3/s Aug. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	21	46	43	60	317	43	47	114	77	10	6.7
2	63	20	100	45	90	433	41	46	74	147	16	5.1
3	45	18	137	43	250	272	36	46	82	99	10	4.0
4	43	20	101	40	206	180	33	41	79	62	7.7	3.3
5	50	22	74	42	205	148	33	36	60	47	6.3	3.0
6	36	22	61	47	167	126	33	36	49	37	5.1	2.8
7	25	22	57	53	188	109	33	37	43	34	4.7	2.6
8	19	17	54	48	225	104	32	35	38	31	4.2	2.8
9	17	17	75	47	167	101	31	34	35	23	6.6	3.4
10	15	14	151	54	134	78	31	33	31	20	7.1	3.0
11	13	13	117	53	113	72	34	33	29	17	5.8	3.7
12	12	13	93	39	109	69	37	41	32	15	5.8	4.2
13	14	12	62	39	95	62	33	38	34	14	3.9	3.7
14	18	11	57	40	90	63	35	34	33	12	2.8	3.6
15	19	10	54	168	77	63	169	31	28	11	2.2	3.9
16	18	13	49	340	60	55	237	28	26	12	1.9	5.1
17	17	15	45	212	62	48	199	28	28	10	2.6	5.9
18	15	14	46	157	55	48	141	30	25	9.2	2.7	5.5
19	13	13	42	110	51	55	110	41	22	8.5	2.0	6.0
20	12	13	38	85	49	51	93	74	21	7.6	1.6	5.1
21	11	14	35	72	50	46	85	144	21	6.9	1.9	4.6
22	11	14	32	69	51	46	81	742	20	6.4	3.3	5.1
23	12	13	31	55	50	43	81	369	18	6.2	2.7	5.0
24	12	12	35	46	44	44	71	169	16	5.6	1.8	4.5
25	16	12	64	44	42	45	60	111	14	5.3	2.2	4.1
26	33	54	83	43	40	44	56	97	13	8.2	9.7	3.7
27	56	131	69	42	40	40	56	90	12	13	29	3.3
28	49	90	60	41	48	37	54	66	12	7.8	37	2.9
29	37	68	55	47	---	36	51	56	15	6.8	24	4.4
30	30	54	55	54	---	43	52	88	55	11	14	6.1
31	25	---	48	56	---	46	---	213	---	9.9	9.1	---
TOTAL	781	782	2026	2274	2818	2924	2081	2914	1079	780.4	243.7	127.1
MEAN	25.2	26.1	65.4	73.4	101	94.3	69.4	94.0	36.0	25.2	7.86	4.24
MAX	63	131	151	340	250	433	237	742	114	147	37	6.7
MIN	11	10	31	39	40	36	31	28	12	5.3	1.6	2.6
CFSM	.17	.18	.45	.50	.69	.65	.48	.64	.25	.17	.05	.03
IN.	.20	.20	.52	.58	.72	.75	.53	.74	.27	.20	.06	.03

CAL YR 1986	TOTAL	45356.1	MEAN	124	MAX	1360	MIN	5.0	CFSM	.85	IN.	11.56
WTR YR 1987	TOTAL	18830.2	MEAN	51.6	MAX	742	MIN	1.6	CFSM	.35	IN.	4.80

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: Nov. 15-25, Jan. 25-28, and Sept. 13-30. Records good except for Nov. 15-25 and Sept. 13-30, which are poor.

AVERAGE DISCHARGE.--28 years, 21.7 ft^3/s, 11.93 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,040 ft^3/s Apr. 20, 1964, gage height, 9.88 ft; minimum daily, 0.08 ft^3/s Aug. 20, 1975.

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)
May 22	0600	*85	*2.90

Minimum daily discharge, 0.49 ft^3/s Aug. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	7.1	11	7.5	13	57	7.1	9.3	6.4	9.3	3.8	1.8
2	15	7.3	16	8.1	26	56	7.2	9.5	7.0	13	4.0	1.5
3	9.3	6.2	16	7.0	53	37	6.5	9.0	7.2	9.4	2.3	1.3
4	11	6.2	13	6.4	45	28	6.1	8.0	5.4	9.5	1.4	1.4
5	12	5.5	10	6.5	45	25	6.7	7.5	4.6	6.6	.99	1.1
6	7.5	5.1	8.9	8.2	38	21	6.4	7.6	4.3	4.7	.77	.91
7	5.4	4.4	8.6	9.1	48	19	6.2	7.7	3.9	11	.66	.93
8	3.9	4.4	10	7.3	50	19	6.0	7.2	3.7	7.4	.65	1.1
9	3.2	4.7	17	7.4	33	18	5.9	6.9	3.7	4.4	1.1	1.3
10	2.8	4.2	22	9.8	27	13	5.8	6.7	3.5	3.2	.80	1.2
11	2.4	3.8	17	8.5	24	13	7.2	6.7	3.4	2.7	.78	1.4
12	2.4	3.9	13	6.2	24	12	8.4	8.8	4.0	2.2	.73	1.5
13	3.1	3.6	8.6	6.5	21	11	7.1	7.0	4.0	2.0	.66	1.4
14	3.9	3.3	8.5	7.2	21	11	13	6.6	3.3	1.9	.59	1.3
15	4.1	3.2	8.1	36	17	11	55	6.2	3.0	2.0	.51	1.5
16	3.9	4.1	7.2	43	14	9.5	48	5.6	2.7	1.9	.49	1.9
17	3.6	4.6	6.9	28	15	8.5	36	5.7	2.5	1.6	1.1	2.1
18	3.2	4.3	7.5	24	13	9.3	28	8.2	2.3	1.4	.65	2.0
19	3.6	4.1	6.2	20	12	11	23	38	2.2	1.3	.57	2.1
20	2.6	4.1	5.4	17	11	8.9	19	39	2.5	1.2	.50	1.9
21	2.5	4.5	4.8	14	11	8.4	18	24	2.8	1.1	1.2	1.7
22	2.7	4.4	4.4	14	11	8.1	17	67	2.6	1.1	1.5	1.8
23	3.1	3.9	4.4	9.5	11	7.9	16	35	2.4	.94	1.1	1.7
24	3.6	3.8	6.1	8.0	9.4	8.2	13	21	2.1	.85	.99	1.6
25	7.8	5.0	16	7.5	9.1	8.8	12	15	1.9	.85	1.5	1.5
26	16	15	15	7.0	9.0	8.4	11	12	2.0	.86	4.7	1.3
27	19	18	12	6.8	9.2	7.7	11	9.6	1.7	.97	9.2	1.2
28	14	14	10	6.8	12	7.2	11	8.2	1.7	1.1	9.4	1.1
29	11	10	9.4	7.4	---	7.0	11	7.3	3.0	1.4	5.6	2.2
30	8.2	10	9.4	11	---	8.0	10	6.7	6.6	2.6	3.5	1.9
31	7.3	---	7.7	10	---	7.6	---	7.0	---	3.5	2.7	---
TOTAL	214.1	182.7	320.1	375.7	631.7	485.5	438.6	424.0	106.4	111.97	64.44	45.64
MEAN	6.91	6.09	10.3	12.1	22.6	15.7	14.6	13.7	3.55	3.61	2.08	1.52
MAX	19	18	22	43	53	57	55	67	7.2	13	9.4	2.2
MIN	2.4	3.2	4.4	6.2	9.0	7.0	5.8	5.6	1.7	.85	.49	.91
CFSM	.28	.25	.42	.49	.91	.64	.59	.55	.14	.15	.08	.06
IN.	.32	.28	.48	.57	.95	.73	.66	.64	.16	.17	.10	.07

CAL YR 1986	TOTAL	7354.26	MEAN	20.1	MAX	330	MIN	.60	CFSM	.81	IN.	11.08
WTR YR 1987	TOTAL	3400.85	MEAN	9.32	MAX	67	MIN	.49	CFSM	.38	IN.	5.12

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.

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.--No estimated daily discharges. Records good. 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.--32 years, 229 ft^3/s, 12.85 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; 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)
May 22	1800	*1,180	*5.60

Minimum daily discharge, 25 ft^3/s several days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	146	46	96	80	120	336	60	80	192	121	56	34
2	69	43	97	78	179	758	61	80	149	102	67	31
3	58	44	166	74	382	540	61	79	125	77	53	30
4	64	45	173	71	425	345	61	84	104	98	35	29
5	45	41	138	70	386	270	60	75	87	80	32	26
6	38	36	106	75	338	220	60	70	75	105	30	25
7	34	34	98	78	346	182	57	69	67	116	29	26
8	32	37	95	81	400	168	54	68	67	79	28	38
9	40	37	122	84	349	170	53	65	72	66	42	30
10	30	35	175	91	268	139	52	61	65	61	29	29
11	27	34	205	88	222	105	95	73	63	57	29	35
12	35	30	159	83	203	104	77	102	78	55	29	27
13	64	31	119	79	188	95	63	66	56	55	28	26
14	49	35	96	85	171	59	150	63	49	47	28	27
15	42	33	95	147	154	53	296	64	48	53	26	38
16	35	31	89	460	121	53	473	56	46	44	26	47
17	32	34	85	391	126	52	391	52	48	41	31	40
18	31	35	87	283	124	51	280	135	44	38	29	30
19	30	34	77	240	110	54	209	259	44	35	32	25
20	30	43	72	195	101	48	170	184	59	36	29	25
21	33	30	65	141	96	45	150	115	107	33	55	32
22	29	31	63	142	95	45	155	735	54	32	32	30
23	28	29	60	120	97	46	138	777	44	31	26	27
24	33	31	80	91	94	53	138	315	41	29	27	25
25	59	33	88	90	86	55	104	211	38	27	49	26
26	48	95	118	85	83	56	91	144	37	26	168	25
27	45	95	119	83	79	54	89	129	33	25	204	25
28	42	145	106	82	121	54	87	104	30	25	72	26
29	40	115	97	88	---	60	87	87	81	42	46	92
30	51	103	94	110	---	69	88	78	73	44	36	29
31	49	---	88	110	---	62	---	182	---	51	35	---
TOTAL	1388	1445	3328	3975	5464	4401	3910	4662	2076	1731	1438	955
MEAN	44.8	48.2	107	128	195	142	130	150	69.2	55.8	46.4	31.8
MAX	146	145	205	460	425	758	473	777	192	121	204	92
MIN	27	29	60	70	79	45	52	52	30	25	26	25
CFSM	.19	.20	.44	.53	.81	.59	.54	.62	.29	.23	.19	.13
IN.	.21	.22	.51	.61	.84	.68	.60	.72	.32	.27	.22	.15

CAL YR 1986	TOTAL	84396	MEAN	231	MAX	3110	MIN	25	CFSM	.95	IN.	12.97
WTR YR 1987	TOTAL	34773	MEAN	95.3	MAX	777	MIN	25	CFSM	.39	IN.	5.35

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. 14, 15, Jan. 19 to Feb. 5, and Feb. 15-19. Records good. Backwater from Middle Fork at times on peaks.

AVERAGE DISCHARGE.--44 years, 238 ft^3/s, 13.30 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)
June 3	1100	*1,010	*5.00

Minimum daily discharge, 26 ft^3/s Aug. 18-20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	57	78	64	97	201	73	90	81	263	63	50
2	85	54	90	61	110	446	73	86	200	374	47	45
3	88	52	101	61	230	346	71	84	868	258	40	41
4	94	55	95	60	310	256	68	80	535	171	37	38
5	82	59	87	56	270	211	64	74	310	211	35	36
6	69	57	80	55	269	189	63	70	212	150	34	34
7	67	56	78	54	253	162	64	70	156	180	33	33
8	59	55	78	55	310	150	63	70	127	228	32	58
9	55	53	82	57	292	146	62	69	112	141	39	40
10	51	50	95	58	221	132	61	67	98	110	54	39
11	47	50	105	63	188	115	76	65	88	88	42	36
12	46	51	106	55	173	112	87	103	85	73	38	34
13	46	52	89	54	163	109	77	105	92	67	33	33
14	49	49	80	60	147	104	81	83	124	69	32	34
15	54	50	78	76	120	105	117	73	88	63	30	32
16	53	49	75	197	96	100	231	67	75	61	29	36
17	54	49	70	213	99	92	237	63	75	59	27	41
18	51	49	69	172	100	89	195	71	65	53	26	43
19	48	49	66	140	100	101	161	234	61	49	26	37
20	45	50	62	120	99	99	141	281	69	46	26	33
21	44	51	57	115	97	89	129	355	211	42	27	32
22	43	52	55	95	90	86	127	256	210	41	28	32
23	42	49	53	80	89	84	136	160	111	40	29	36
24	44	48	56	72	86	82	125	122	79	39	27	34
25	53	48	62	69	80	85	111	105	66	37	32	32
26	75	64	69	67	78	87	101	134	59	37	68	30
27	76	97	77	67	78	82	100	132	53	43	163	29
28	82	106	74	67	84	80	100	102	49	38	200	31
29	77	95	72	70	---	77	95	85	53	37	121	42
30	67	83	70	83	---	74	92	81	170	37	81	61
31	60	---	68	88	---	74	---	78	---	48	61	---
TOTAL	1859	1739	2377	2604	4329	4165	3181	3515	4582	3153	1560	1132
MEAN	60.0	58.0	76.7	84.0	155	134	106	113	153	102	50.3	37.7
MAX	94	106	106	213	310	446	237	355	868	374	200	61
MIN	42	48	53	54	78	74	61	63	49	37	26	29
CFSM	.25	.24	.32	.35	.64	.55	.44	.47	.63	.42	.21	.16
IN.	.28	.27	.36	.40	.66	.64	.49	.54	.70	.48	.24	.17

CAL YR 1986	TOTAL	66267	MEAN	182	MAX	2200	MIN	24	CFSM	.75	IN.	10.14
WTR YR 1987	TOTAL	34196	MEAN	93.7	MAX	868	MIN	26	CFSM	.39	IN.	5.23

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: Jan. 22 to Feb. 5, Feb. 16-19, May 9, 10, 16, 17, and June 7, 13, 14, 20, 23-29. Records fair.

AVERAGE DISCHARGE.--33 years, 757 ft^3/s, 12.94 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)
May 21	0600	*2,340	*6.97

Minimum daily discharge, 83 ft^3/s Aug. 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	172	166	255	265	340	451	248	302	264	501	188	196
2	257	168	274	253	400	1140	235	285	543	673	198	167
3	331	164	299	242	600	1250	234	277	1250	564	189	156
4	296	166	299	234	840	992	225	267	979	378	177	143
5	268	167	348	226	920	783	224	256	614	380	142	131
6	225	172	324	219	921	681	225	252	459	323	123	128
7	197	166	291	220	877	591	216	243	360	522	116	126
8	174	159	261	220	954	535	212	238	324	606	114	184
9	164	153	265	224	957	506	212	230	317	380	139	158
10	154	148	280	241	801	480	213	225	282	303	144	138
11	151	145	346	252	671	434	259	223	269	239	138	124
12	143	145	422	250	603	392	338	289	265	205	127	126
13	141	145	332	230	570	372	354	368	290	190	117	126
14	143	144	326	238	528	359	318	331	340	191	109	126
15	181	145	341	265	471	340	501	252	262	182	102	114
16	170	143	292	425	390	304	922	220	242	177	98	128
17	161	140	275	679	370	282	1050	215	217	192	92	135
18	148	140	267	680	370	274	889	233	205	188	89	148
19	137	139	257	572	380	283	707	1160	205	178	83	143
20	132	139	252	431	395	290	582	1470	250	156	94	126
21	129	140	235	419	384	269	504	1750	416	152	101	119
22	123	146	223	330	316	256	483	859	548	136	110	114
23	121	154	217	290	305	248	484	930	300	119	121	117
24	124	143	212	260	297	245	448	942	250	121	121	128
25	144	137	211	250	287	248	398	601	220	124	133	107
26	172	183	250	240	271	261	373	713	190	129	302	100
27	228	241	276	230	267	257	344	565	175	131	646	92
28	219	271	302	230	275	248	330	408	160	117	1050	92
29	200	289	298	250	---	246	322	320	200	103	600	136
30	184	291	283	300	---	235	308	275	242	105	391	210
31	170	---	272	310	---	246	---	258	---	197	246	---
TOTAL	5559	5049	8785	9475	14760	13498	12158	14957	10638	7962	6400	4038
MEAN	179	168	283	306	527	435	405	482	355	257	206	135
MAX	331	291	422	680	957	1250	1050	1750	1250	673	1050	210
MIN	121	137	211	219	267	235	212	215	160	103	83	92
CFSM	.23	.21	.36	.39	.66	.55	.51	.61	.45	.32	.26	.17
IN.	.26	.24	.41	.44	.69	.63	.57	.70	.50	.37	.30	.19

CAL YR 1986	TOTAL	225410	MEAN	618	MAX	4900	MIN	101	CFSM	.78	IN.	10.56
WTR YR 1987	TOTAL	113279	MEAN	310	MAX	1750	MIN	83	CFSM	.39	IN.	5.31

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: Jan. 20 to Feb. 2. Records good except for estimated daily discharges, which are poor. Flow partially regulated by upstream reservoirs and power development.

AVERAGE DISCHARGE.--64 years (1923 to current year), 6,486 ft^3/s, 12.12 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, 14,700 ft^3/s May 20, gage height, 9.68 ft; minimum daily, 1,120 ft^3/s Aug. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5270	5210	7960	4060	3900	6850	2890	3230	4670	2740	2990	3140
2	5940	4780	6740	4010	4100	11900	3090	3180	5510	3070	4040	2650
3	8590	4490	7000	3800	5150	13000	3090	2980	6670	4300	3560	2260
4	9860	4450	8870	3910	6910	11800	3010	2890	7200	6850	3060	2140
5	12400	4160	9550	3710	11300	8560	3200	2890	8280	8020	2380	1770
6	12400	3610	8330	3810	13800	7220	2830	3040	9300	6530	2130	1740
7	13300	3930	6740	3810	11700	7330	2970	2970	8580	5990	1900	1570
8	12600	4160	5910	3830	9820	7430	2710	2880	6510	5020	1800	1730
9	10700	4060	6070	3690	9580	6610	2750	2730	4840	3760	1940	1790
10	9300	3980	6920	3840	8040	5700	2500	2710	4010	3180	2070	1660
11	7730	3550	8830	3740	7080	4960	2890	2520	3580	2620	2180	1400
12	6630	3680	8540	3470	9250	4530	3490	2940	3230	2300	1970	1520
13	6040	4230	7080	3060	10200	4260	3740	2930	2910	2360	1600	1520
14	5020	3650	5700	3310	9440	4090	3880	2870	3420	2490	1540	1440
15	4950	3990	5560	3680	7700	4160	4990	2850	3870	2520	1500	1380
16	4700	3310	4930	5250	5790	3900	10200	2740	3130	4030	1460	1450
17	4760	3840	5010	7980	5110	3650	11800	2560	2800	4360	1430	1670
18	5020	2900	4740	7480	4740	3650	10000	2680	2340	3790	1330	1930
19	4320	3510	4360	5190	5150	3630	8090	5260	2260	3040	1240	2000
20	4130	3750	4360	3800	5010	3680	6720	13600	2450	2360	1150	1920
21	3870	3240	4230	3500	4680	3490	5530	12800	2860	2100	1220	1700
22	3770	4550	3970	4500	4450	3290	5050	9730	3550	1890	1260	1960
23	3470	5660	4130	5200	3970	3230	5070	9130	3410	1660	1350	1940
24	3530	5930	4060	4600	3920	3210	4870	9290	3300	1640	1120	2250
25	3790	5300	4090	3000	3930	3150	4510	7020	3770	1700	1260	2130
26	3870	4550	4150	3000	4360	3100	4140	6110	2960	1440	1740	1950
27	4180	6160	4330	3000	5550	3320	3920	5390	2410	1500	4960	1940
28	5080	8730	4600	3000	5300	3120	3720	5160	2030	1370	9870	1910
29	6070	9540	4630	3300	---	2930	3540	5580	1850	1440	7410	2440
30	6260	9420	4270	3700	---	3060	3290	4620	2310	1560	5310	2760
31	5840	---	4100	3800	---	2920	---	4200	---	2260	3970	---
TOTAL	203390	142320	179760	126030	189930	161730	138480	149480	124010	97890	80740	57660
MEAN	6561	4744	5799	4065	6783	5217	4616	4822	4134	3158	2605	1922
MAX	13300	9540	9550	7980	13800	13000	11800	13600	9300	8020	9870	3140
MIN	3470	2900	3970	3000	3900	2920	2500	2520	1850	1370	1120	1380
CFSM	.90	.65	.80	.56	.93	.72	.64	.66	.57	.43	.36	.26
IN.	1.04	.73	.92	.65	.97	.83	.71	.77	.63	.50	.41	.30

CAL YR 1986 TOTAL 2634980 MEAN 7219 MAX 30800 MIN 1250 CFSM .99 IN. 13.49
WTR YR 1987 TOTAL 1651420 MEAN 4524 MAX 13800 MIN 1120 CFSM .62 IN. 8.45

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. 13-15, 29, 30, Jan. 2, 3, 6, 7, 9, 10, 12, 13, 22-31, Feb. 1, 2, 16-18, Aug. 9, 27-31, Sept. 1, 29, 30. Records good until June 30, poor thereafter.

AVERAGE DISCHARGE.--16 years (1972 to current year), 39.6 ft^3/s, 13.65 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,420 ft^3/s June 2, 1980, gage height, 11.67 ft; minimum daily, 0.16 ft^3/s Sept. 14, 1983.

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)
May 18	1530	*616	*7.76

Minimum daily discharge, 0.67 ft^3/s Sept. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	9.6	15	9.3	21	100	13	26	32	31	4.6	3.8
2	18	8.4	63	9.0	28	76	12	25	37	16	3.5	2.1
3	15	8.6	42	8.4	37	55	11	23	73	8.3	5.2	1.8
4	24	8.8	30	8.0	41	46	10	18	37	5.7	2.7	1.6
5	13	7.7	22	8.0	42	44	11	18	28	4.9	2.0	1.6
6	8.1	7.3	21	8.6	40	37	10	18	24	4.6	1.8	1.4
7	6.0	6.6	20	8.2	51	35	10	18	20	3.9	1.6	1.3
8	5.1	6.8	25	8.0	107	35	10	16	17	3.3	1.5	1.7
9	4.4	6.4	38	7.8	83	31	9.9	16	82	3.0	6.2	1.4
10	3.7	5.4	41	8.3	63	31	10	15	38	2.9	3.0	1.2
11	3.6	5.5	34	7.7	72	25	25	15	25	2.7	2.0	1.2
12	3.5	5.8	26	8.1	127	23	28	114	20	2.4	1.7	1.3
13	3.6	6.9	19	8.7	122	22	22	46	16	2.9	1.5	.94
14	3.7	4.7	16	9.6	100	24	103	32	15	3.6	1.3	.81
15	3.4	5.2	14	36	78	22	144	24	13	3.1	1.2	.74
16	3.1	5.3	16	45	51	19	103	21	11	3.1	1.1	.99
17	3.0	5.0	17	34	42	17	77	19	9.4	2.8	.96	2.4
18	2.7	4.6	16	30	37	20	60	250	8.4	2.4	.90	2.1
19	2.7	4.2	14	42	35	22	49	235	8.1	2.3	.85	1.4
20	2.7	4.7	13	68	34	17	43	128	8.0	2.1	.85	.99
21	2.7	4.7	12	38	35	17	40	90	8.3	1.9	.85	.96
22	2.7	4.1	11	26	36	17	42	141	7.0	1.8	.98	.89
23	2.7	4.3	12	18	35	16	53	80	5.8	1.7	.96	.85
24	3.1	3.8	13	14	31	17	43	61	5.0	1.6	.96	.82
25	24	3.7	13	11	30	17	39	53	4.9	1.4	1.0	.74
26	42	28	11	12	29	16	36	43	4.9	1.4	1.4	.74
27	24	28	10	13	30	15	36	36	3.9	1.6	94	.74
28	17	20	10	13	39	14	31	31	3.4	1.8	27	.67
29	14	16	9.8	14	---	14	32	27	6.5	1.5	14	33
30	12	14	9.5	14	---	13	26	40	27	1.8	8.2	13
31	10	---	9.4	17	---	12	---	45	---	3.5	5.4	---
TOTAL	311.5	254.1	622.7	562.7	1476	869	1138.9	1724	598.6	131.0	199.21	83.18
MEAN	10.0	8.47	20.1	18.2	52.7	28.0	38.0	55.6	20.0	4.23	6.43	2.77
MAX	42	28	63	68	127	100	144	250	82	31	94	33
MIN	2.7	3.7	9.4	7.7	21	12	9.9	15	3.4	1.4	.85	.67
CFSM	.25	.21	.51	.46	1.34	.71	.96	1.41	.51	.11	.16	.07
IN.	.29	.24	.59	.53	1.39	.82	1.08	1.63	.57	.12	.19	.08

CAL YR 1986	TOTAL	15013.63	MEAN	41.1	MAX	1100	MIN	.64	CFSM	1.04	IN.	14.18
WTR YR 1987	TOTAL	7970.89	MEAN	21.8	MAX	250	MIN	.67	CFSM	.55	IN.	7.53

03335700 BIG PINE CREEK NEAR WILLIAMSPORT, IN

LOCATION.--Lat 40°19'03", long 87°17'26", in SW¼SE¼ sec.26, T.22 N., R.8 W., Warren County, Hydrologic Unit 05120108, on downstream side of county road bridge, 1.6 mi north of city limits of Williamsport, and 3.7 mi upstream from mouth.

DRAINAGE AREA.--323 mi^2.

PERIOD OF RECORD.--October 1955 to September 1987. (Discontinued)

REVISED RECORDS.--WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 511.68 ft above National Geodetic Vertical Datum of 1929 (levels by State of Indiana, Department of Natural Resources). Prior to May 19, 1967, nonrecording gage and crest-stage gage at same site and datum.

REMARKS.--Estimated daily discharges: Dec. 10-16, 30, 31, Jan. 1-5, 7, 8, 11-13, 18-31, Feb. 1-6, 16-21, June 27-29, July 4-8, and 10-13. Records fair.

AVERAGE DISCHARGE.--32 years, 270 ft^3/s, 11.35 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 12,600 ft^3/s Feb. 10, 1959, from rating curve extended above 8,000 ft^3/s on basis of contracted-opening measurement, gage height, 16.00 ft, from floodmark; minimum daily, 6.5 ft^3/s Oct. 6-8, 1966.

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)
May 12	0100	*1,390	*6.98

Minimum daily discharge, 14 ft^3/s Sept. 27, 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	174	73	125	79	178	393	99	194	220	154	271	70
2	163	68	247	76	246	417	103	192	710	153	139	56
3	124	63	290	72	320	314	94	180	895	116	101	43
4	126	62	220	71	354	243	88	160	481	89	71	34
5	129	61	175	70	372	223	88	150	324	67	57	28
6	99	59	154	72	340	211	91	150	259	56	44	24
7	83	55	149	71	425	208	90	148	225	51	35	21
8	75	53	152	70	627	204	87	139	200	86	29	20
9	64	50	177	69	652	205	86	131	273	103	51	20
10	57	48	230	79	495	175	86	127	287	61	52	20
11	51	45	245	72	433	173	131	132	208	48	41	20
12	49	42	185	69	542	165	400	591	189	41	32	18
13	48	40	140	74	613	155	310	300	171	43	26	17
14	48	39	120	82	534	157	547	228	156	48	25	16
15	46	39	108	126	450	164	840	195	145	48	23	15
16	43	37	122	231	361	151	701	175	132	44	22	16
17	41	38	129	222	285	134	562	169	122	44	21	26
18	39	37	127	156	240	137	443	687	115	45	19	26
19	36	36	119	125	212	156	368	1190	109	38	18	24
20	35	35	112	160	208	138	312	816	114	33	17	19
21	35	35	105	206	204	127	280	533	130	29	17	17
22	34	35	98	155	217	125	314	897	112	26	18	17
23	33	35	95	120	216	122	398	534	96	25	18	16
24	34	33	101	98	198	123	378	371	87	24	16	15
25	58	30	108	92	189	131	309	315	96	22	16	15
26	176	115	100	100	183	122	277	286	100	21	50	15
27	163	254	91	108	182	114	284	249	72	25	788	14
28	125	194	86	113	200	110	246	223	63	23	485	14
29	104	152	84	115	---	106	232	204	67	21	229	210
30	90	128	81	119	---	107	213	250	110	21	136	263
31	78	---	79	142	---	102	---	264	---	163	92	---
TOTAL	2460	1991	4354	3414	9476	5412	8457	10180	6268	1768	2959	1129
MEAN	79.4	66.4	140	110	338	175	282	328	209	57.0	95.5	37.6
MAX	176	254	290	231	652	417	840	1190	895	163	788	263
MIN	33	30	79	69	178	102	86	127	63	21	16	14
CFSM	.25	.21	.43	.34	1.05	.54	.87	1.02	.65	.18	.30	.12
IN.	.28	.23	.50	.39	1.09	.62	.97	1.17	.72	.20	.34	.13

CAL YR 1986	TOTAL	100683	MEAN	276	MAX	3600	MIN	20	CFSM	.85	IN.	11.60
WTR YR 1987	TOTAL	57868	MEAN	159	MAX	1190	MIN	14	CFSM	.49	IN.	6.66

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: Oct. 15 to Nov. 12, Jan. 14 to Mar. 12, May 19 to June 15, and July 5 to Aug. 18. Records poor. Flow partially regulated by upstream reservoirs and power development.

AVERAGE DISCHARGE.--48 years, 7,410 ft^3/s, 12.24 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 daily discharge, 16,000 ft^3/s May 20; minimum daily, 1,220 ft^3/s Aug. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6120	5800	9580	4030	4500	8000	3160	3580	5300	2720	3800	4440
2	6140	5400	8160	3840	4800	13000	3110	3480	7500	3290	4500	3540
3	7480	5000	7280	3590	6400	14000	3310	3390	9500	3560	3800	3040
4	9490	4700	8140	3530	8000	12000	3230	3180	9000	4990	3100	2610
5	11200	4600	9750	3620	12000	9000	3190	3070	9500	8000	2500	2430
6	12500	4300	9890	3580	15000	7800	3310	3090	10000	7000	2200	2080
7	13100	4200	8260	3140	13000	7900	3030	3130	9500	6200	2000	2020
8	13300	4300	6770	3170	11500	8100	3040	3100	7000	5200	1900	1870
9	12100	4300	6300	3290	11200	7200	2840	2950	5700	4000	2100	1980
10	10500	4200	6570	3440	10000	6200	2840	2850	4800	3400	2300	2030
11	9170	4000	8020	3310	8200	5500	2760	2860	4300	2800	2300	1860
12	7590	3800	9280	3260	10000	5000	3340	3220	3800	2400	2100	1650
13	6570	3710	8590	3170	12000	4890	4080	3440	3400	2500	1800	1740
14	5850	4080	7150	3300	11000	4670	4330	3190	3800	2600	1700	1740
15	5000	3670	6230	3600	9000	4500	5270	3070	4100	2600	1650	1660
16	4900	3810	5710	5000	7200	4600	7690	2960	4440	4200	1600	1630
17	4900	3420	5130	8500	6000	4250	12500	2860	3730	4500	1500	1690
18	4800	3590	4900	8000	5600	4030	12400	2850	3330	4000	1400	1840
19	4700	2990	4710	6500	5700	4000	10500	8000	2920	3500	1360	2030
20	4500	3520	4300	5000	5600	4000	8610	16000	2840	3000	1290	2100
21	4200	3550	4030	4300	5300	3970	7080	14000	3000	2500	1250	2030
22	4000	3310	4030	4500	5100	3810	6120	12500	3230	2300	1300	1880
23	3800	4690	3920	5300	4900	3620	5860	10500	3700	1900	1330	2070
24	3700	5640	4150	4700	4700	3530	5880	10000	3620	1800	1380	2190
25	3700	5670	3900	3700	4600	3480	5580	8000	3650	1750	1220	2350
26	4500	5330	3640	3300	4900	3450	5020	7000	3990	1600	1460	2280
27	4700	5110	3800	3300	5800	3370	4660	6000	3190	1550	3100	2120
28	5500	7300	3900	3300	6200	3490	4400	5500	2690	1500	8300	2080
29	6400	9440	4220	3400	---	3280	4090	5800	2330	1550	10100	2520
30	6600	10000	4190	3700	---	3160	3900	6000	2310	1600	7580	3190
31	6200	---	4090	4200	---	3240	---	5700	---	2300	5720	---
TOTAL	213210	143430	188590	128570	218200	177040	155130	171270	146170	100810	87640	66690
MEAN	6878	4781	6084	4147	7793	5711	5171	5525	4872	3252	2827	2223
MAX	13300	10000	9890	8500	15000	14000	12500	16000	10000	8000	10100	4440
MIN	3700	2990	3640	3140	4500	3160	2760	2850	2310	1500	1220	1630
CFSM	.84	.58	.74	.50	.95	.69	.63	.67	.59	.40	.34	.27
IN.	.97	.65	.85	.58	.99	.80	.70	.78	.66	.46	.40	.30

CAL YR 1986 TOTAL 2947490 MEAN 8075 MAX 32100 MIN 1240 CFSM .98 IN. 13.34
WTR YR 1987 TOTAL 1796750 MEAN 4923 MAX 16000 MIN 1220 CFSM .60 IN. 8.13

03339000 VERMILION RIVER NEAR DANVILLE, IL

LOCATION.--Lat 40°06'03", long 87°35'52", in NW¼NW¼ sec.22, T.19 N., R.11 W., Vermilion County, Hydrologic Unit 05120109, on right bank at Danville sewage-treatment plant, 1.7 mi upstream from Stony Creek, 2.2 mi southeast of Danville, and at mile 19.5.

DRAINAGE AREA.--1,290 mi^2.

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

REVISED RECORDS.--WSP 853: 1936(M). WSP 973: 1939. WSP 1305: 1915-16, 1920, 1929. WSP 1335: 1934(m). WSP 1909: 1960. WDR IL-75-1: Drainage area. WDR IL-84-1: 1983.

GAGE.--Water-stage recorder. Datum of gage is 503.33 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Jan. 9, 1935, nonrecording gage at site and datum. Jan. 9, 1935, to Aug. 30, 1982, at site 0.3 mi downstream at same datum.

REMARKS.--Estimated daily discharges: Dec. 14, 15 and Jan. 25-28. Records good except for estimated daily discharges, which are poor. Flow regulated at times by storage at Lake Vermilion on North Fork Vermilion River, 4.5 mi above station, usable capacity, 7,440 acre-ft, and by Danville sewage-treatment plant. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--66 years, 980 ft^3/s, 10.32 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 48,700 ft^3/s Mar. 13, 1939, gage height, 28.59 ft; minimum daily, 2 ft^3/s Oct. 9-14, 1920, Aug. 10, 1930.

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)
Apr. 15	1200	*4,920	*9.41

Minimum daily discharge, 66 ft^3/s July 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	936	305	921	244	497	739	379	662	561	454	1670	191
2	1400	282	1580	241	694	1220	378	703	1040	740	998	171
3	710	272	2640	236	1430	1140	364	744	1470	865	585	138
4	750	295	2260	216	2400	976	342	593	1460	571	327	132
5	1010	326	1590	202	2090	835	325	450	821	447	247	133
6	743	316	1190	206	1920	764	301	390	571	579	202	122
7	475	284	990	225	2110	723	287	369	520	453	176	116
8	385	265	892	221	3000	686	283	404	480	340	156	113
9	327	252	951	202	3170	682	280	395	455	345	153	108
10	281	254	1240	224	2400	637	279	391	427	310	182	110
11	258	235	1140	249	1760	567	354	373	417	244	226	108
12	230	220	939	231	1640	557	516	383	438	182	163	106
13	222	208	770	225	1750	534	1180	438	432	164	139	98
14	218	177	700	235	1620	530	2040	484	435	168	124	88
15	194	190	740	361	1440	555	4630	401	457	179	118	86
16	175	203	651	754	1140	565	3930	326	391	153	111	90
17	162	202	530	992	891	535	2820	300	311	164	136	111
18	156	191	501	913	817	564	2020	398	273	181	119	134
19	137	175	465	778	783	585	1550	2580	309	138	134	156
20	126	175	431	613	712	651	1460	3050	560	115	102	114
21	123	168	399	549	682	579	1320	1720	589	100	98	99
22	117	174	367	740	677	524	1140	951	491	92	96	92
23	110	162	349	525	668	479	1290	899	436	87	102	89
24	122	150	378	363	627	474	1570	757	432	74	100	89
25	192	155	389	340	577	499	1310	664	332	66	91	78
26	386	410	364	320	551	501	1120	596	352	67	139	81
27	544	1720	303	325	551	457	1040	731	407	153	298	71
28	498	1670	265	340	584	435	1000	676	285	274	1170	67
29	442	1180	259	372	---	421	922	536	239	211	603	187
30	382	1220	263	406	---	408	799	486	292	142	417	141
31	338	---	256	456	---	399	---	569	---	751	320	---
TOTAL	12149	11836	24713	12304	37181	19221	35229	22419	15683	8809	9502	3419
MEAN	392	395	797	397	1328	620	1174	723	523	284	307	114
MAX	1400	1720	2640	992	3170	1220	4630	3050	1470	865	1670	191
MIN	110	150	256	202	497	399	279	300	239	66	91	67
CFSM	.30	.31	.62	.31	1.03	.48	.91	.56	.41	.22	.24	.09
IN.	.35	.34	.71	.35	1.07	.55	1.02	.65	.45	.25	.27	.10

CAL YR 1986	TOTAL	344368	MEAN	943	MAX	15500	MIN	49	CFSM	.73	IN.	9.93
WTR YR 1987	TOTAL	212465	MEAN	582	MAX	4630	MIN	66	CFSM	.45	IN.	6.13

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: Oct. 10-23, Oct. 30 to Nov. 3, Nov. 8-13, Dec. 12-14, 22-24, Jan. 19 to Feb. 3, Feb. 16-19, and June 22, 23. Records fair except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--19 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, 3.5 ft^3/s Jan. 16, 17, Feb. 6, 7, 1977.

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)
July 31	1430	*1,680	*8.31

Minimum daily discharge, 5.4 ft^3/s Sept. 27, 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	10	11	11	25	25	9.3	13	8.9	33	128	7.6
2	17	10	41	11	45	26	9.4	13	124	28	60	7.3
3	11	10	26	10	60	18	9.1	13	248	15	38	6.9
4	17	17	18	10	38	15	9.0	12	60	13	28	6.7
5	15	18	15	9.8	29	14	9.4	12	33	11	23	6.3
6	11	15	13	9.5	25	13	10	12	22	10	20	6.3
7	9.0	13	13	9.7	24	12	10	12	18	13	19	6.3
8	8.2	10	12	10	25	12	9.5	11	15	9.5	18	6.8
9	7.7	10	14	9.7	22	12	9.5	11	14	17	19	7.0
10	7.5	9.7	19	14	19	11	9.5	11	12	15	16	6.6
11	7.3	9.6	16	11	17	10	13	10	11	9.6	15	6.3
12	7.1	9.5	14	10	16	10	11	12	15	8.4	15	6.3
13	7.1	9.3	13	10	16	10	11	11	17	12	14	5.9
14	7.0	9.3	12	10	15	10	22	9.9	12	15	13	5.9
15	7.5	10	12	28	15	11	39	9.5	10	9.6	13	5.9
16	7.0	11	12	33	13	11	25	9.0	9.4	8.6	13	7.3
17	6.8	9.6	11	23	13	9.6	20	8.9	8.7	8.0	50	10
18	6.7	9.1	12	19	14	9.7	17	8.8	8.2	7.2	16	7.6
19	6.6	9.0	11	19	12	11	16	9.3	80	7.0	11	6.6
20	6.6	9.1	11	17	10	9.7	15	9.2	24	6.6	10	5.9
21	6.6	10	10	14	11	9.5	14	9.4	17	6.2	10	5.9
22	6.6	9.1	9.4	12	11	9.5	15	8.6	47	5.9	10	6.0
23	6.6	9.1	9.3	11	11	9.5	30	8.1	39	5.9	9.6	6.0
24	9.9	8.9	9.2	10	11	9.6	22	8.1	25	5.9	9.2	5.7
25	20	8.6	14	9.8	10	11	18	8.2	20	5.5	9.7	5.5
26	27	20	16	9.8	10	10	16	8.6	16	5.6	13	5.5
27	17	22	14	9.8	10	9.7	17	8.0	14	6.6	32	5.4
28	13	15	13	11	11	9.7	16	7.3	12	6.5	18	5.4
29	12	13	12	12	---	9.5	15	7.1	11	5.9	12	19
30	11	11	12	15	---	9.5	14	7.3	39	8.5	9.2	11
31	11	---	11	19	---	9.5	---	11	---	584	8.1	---
TOTAL	330.8	344.9	435.9	418.1	538	367.0	460.7	309.3	990.2	903.0	679.8	210.9
MEAN	10.7	11.5	14.1	13.5	19.2	11.8	15.4	9.98	33.0	29.1	21.9	7.03
MAX	27	22	41	33	60	26	39	13	248	584	128	19
MIN	6.6	8.6	9.2	9.5	10	9.5	9.0	7.1	8.2	5.5	8.1	5.4
CFSM	.32	.34	.42	.40	.57	.35	.46	.30	.99	.87	.66	.21
IN.	.37	.38	.49	.47	.60	.41	.51	.34	1.10	1.01	.76	.23

CAL YR 1986	TOTAL	8758.4	MEAN	24.0	MAX	308	MIN	5.9	CFSM	.72	IN.	9.75
WTR YR 1987	TOTAL	5988.6	MEAN	16.4	MAX	584	MIN	5.4	CFSM	.49	IN.	6.67

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: Jan. 19 to Feb. 6 and Feb. 17-23. Records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--49 years, 486 ft^3/s, 12.97 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)
June 2	2400	*2,990	*3.82

Minimum daily discharge, 20 ft^3/s Aug. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	482	115	173	157	200	727	125	135	96	295	87	37
2	895	104	289	155	250	1180	123	130	314	460	55	33
3	412	98	381	151	450	780	117	136	2590	254	45	30
4	356	111	309	143	600	521	109	124	1690	177	41	28
5	370	127	240	136	550	432	105	110	797	140	36	28
6	242	124	196	136	500	372	105	105	470	129	32	28
7	167	117	184	140	583	316	108	105	315	110	30	27
8	128	110	176	133	674	296	106	105	235	91	29	29
9	106	107	197	115	521	291	104	100	186	78	30	30
10	90	98	359	130	416	248	101	93	150	72	31	27
11	82	92	350	166	355	209	119	94	132	65	31	28
12	78	91	269	124	336	200	126	143	158	62	30	26
13	79	85	161	121	308	188	121	166	155	68	28	24
14	87	79	163	137	286	185	136	127	140	104	26	23
15	101	81	166	427	260	192	283	107	130	86	24	23
16	95	81	161	942	175	180	473	94	110	72	23	32
17	85	81	153	622	190	158	381	86	96	62	23	38
18	75	79	153	465	170	153	311	106	88	54	23	37
19	69	76	148	350	160	177	250	214	80	48	28	32
20	66	72	138	290	150	174	215	333	116	44	29	30
21	64	76	130	260	150	155	195	403	120	41	24	27
22	62	76	122	210	155	147	194	219	159	39	23	25
23	60	72	120	180	165	143	230	140	113	37	21	25
24	62	72	131	160	161	143	205	114	85	34	20	25
25	104	71	240	140	152	156	170	105	73	33	21	24
26	352	162	306	150	147	147	153	211	66	31	30	23
27	329	388	253	160	149	143	162	164	60	33	53	23
28	237	312	216	160	168	136	161	125	54	46	108	23
29	179	236	194	160	---	131	145	102	72	44	89	33
30	147	190	187	160	---	130	142	100	172	52	60	39
31	129	---	170	170	---	132	---	121	---	50	45	---
TOTAL	5790	3583	6435	6950	8381	8542	5275	4417	9022	2911	1175	857
MEAN	187	119	208	224	299	276	176	142	301	93.9	37.9	28.6
MAX	895	388	381	942	674	1180	473	403	2590	460	108	39
MIN	60	71	120	115	147	130	101	86	54	31	20	23
CFSM	.37	.23	.41	.44	.59	.54	.35	.28	.59	.18	.07	.06
IN.	.42	.26	.47	.51	.61	.62	.39	.32	.66	.21	.09	.06

CAL YR 1986	TOTAL	144057	MEAN	395	MAX	5350	MIN	18	CFSM	.78	IN.	10.53
WTR YR 1987	TOTAL	63338	MEAN	174	MAX	2590	MIN	20	CFSM	.34	IN.	4.63

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 downstream side of first pier from left bank of bridge on U.S. Highway 36 at Montezuma, 2.0 mi upstream from 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 at same site and datum.

REMARKS.--Estimated daily discharges: Dec. 13-15 and Jan. 21 to Feb. 5. Records good except for estimated daily discharges, which are poor. Flow partially regulated by upstream reservoirs.

AVERAGE DISCHARGE.--60 years, 9,830 ft^3/s, 12.00 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, 20,000 ft^3/s June 3, gage height, 13.23 ft; minimum daily, 1,500 ft^3/s Aug. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6400	6940	10900	5070	6200	7100	3820	4850	5560	3980	5530	4960
2	8730	6290	10700	4920	7000	8530	3730	4490	8030	7060	5230	3940
3	8380	5870	10900	4850	8000	12200	3730	4460	18600	5800	4820	3300
4	11200	5570	10900	4680	9500	14800	3810	4290	16100	5480	4680	2930
5	12500	5460	11500	4650	11200	13900	3660	3970	12200	7030	3780	2590
6	13500	5350	11800	4550	16400	11100	3740	3780	10800	9650	3210	2420
7	13600	4970	10700	4470	17400	9390	3650	3760	11000	10000	2780	2180
8	14000	4750	9100	4500	17000	8940	3530	3730	10300	7420	2450	2160
9	13600	4960	8000	4580	15900	9020	3440	3700	8330	6430	2330	2010
10	12200	5000	8110	4400	14700	8320	3380	3520	6650	5830	2260	2110
11	10900	4870	8940	4590	12700	7350	3440	3480	5610	4710	2380	2120
12	9100	4650	10400	4530	10700	6450	3550	3520	4960	3930	2520	1940
13	7700	4410	9400	4310	11600	5990	4480	3990	6170	3530	2410	1810
14	6900	4730	8600	4110	13100	5570	5690	3950	5630	3420	2190	1830
15	6080	4640	8000	4320	12800	5430	8700	3760	4950	3380	1980	1800
16	5780	4530	7330	5550	11100	5360	11500	3590	5000	3400	1900	1750
17	5800	4340	6660	7410	8820	5320	14300	3380	4550	3950	1890	1820
18	5790	4410	6350	9700	7390	4880	15500	3290	3840	4590	1860	1910
19	5620	4100	6000	9930	6850	4830	13400	4060	3510	4480	1780	2060
20	5400	3950	5640	7520	6620	4800	11100	7830	4200	3800	1660	2160
21	5000	4350	5470	6000	6770	4800	9430	14400	4860	3210	1580	2180
22	4740	4080	5300	5500	6410	4650	8050	14500	5820	2810	1540	2040
23	4480	4500	4960	5300	6210	4430	7700	12000	5050	2600	1540	2030
24	4320	5740	5050	5100	5800	4300	7770	10500	4550	2390	1590	2070
25	4390	6260	5220	4600	5350	4300	7500	10200	4190	2230	1540	2240
26	5000	6260	5330	3800	5280	4230	6810	8630	4450	2190	1500	2280
27	5550	6460	5300	3600	5230	4190	6270	7230	4070	2170	1950	2220
28	5660	8250	5430	3600	6120	4120	5890	6660	3430	2100	5020	2130
29	6050	10300	5510	3800	---	4100	5530	5930	3020	2150	9750	2430
30	6800	11200	5570	4600	---	3850	5170	6170	3180	2480	8640	3310
31	7130	---	5370	5400	---	3850	---	6170	---	2500	6470	---
TOTAL	242300	167190	238440	159940	272150	206100	198270	183790	198610	134700	98760	70730
MEAN	7816	5573	7692	5159	9720	6648	6609	5929	6620	4345	3186	2358
MAX	14000	11200	11800	9930	17400	14800	15500	14500	18600	10000	9750	4960
MIN	4320	3950	4960	3600	5230	3850	3380	3290	3020	2100	1500	1750
CFSM	.70	.50	.69	.46	.87	.60	.59	.53	.60	.39	.29	.21
IN.	.81	.56	.80	.54	.91	.69	.66	.61	.66	.45	.33	.24

CAL YR 1986 TOTAL 3669650 MEAN 10050 MAX 38400 MIN 1670 CFSM .90 IN. 12.28
WTR YR 1987 TOTAL 2170980 MEAN 5948 MAX 18600 MIN 1500 CFSM .53 IN. 7.26

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: Dec. 11-15, Jan. 20 to Feb. 5, and July 27 to Sept. 30. Records good except those for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--30 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, 1.8 ft^3/s Sept. 16, 17, and Oct. 5, 6, 1964.

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)
Oct. 1	2300	*2,980	*10.22	Oct. 4	0900	1,950	8.31

Minimum daily discharge, 4.2 ft^3/s Sept. 24-28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1640	84	93	73	90	160	40	42	36	430	11	5.0
2	1110	78	225	73	150	228	40	40	61	501	10	4.8
3	726	71	216	68	250	154	39	40	1160	146	10	4.7
4	1550	83	160	60	200	118	36	38	302	497	9.6	4.6
5	554	88	124	59	160	106	34	33	151	173	9.3	4.6
6	307	89	106	60	154	98	36	31	98	118	8.7	4.5
7	215	82	97	62	159	86	36	31	71	115	8.5	4.5
8	163	78	92	55	164	83	34	31	56	76	8.2	4.5
9	128	72	123	49	125	83	33	29	45	58	8.1	4.5
10	105	63	214	63	116	72	33	27	39	51	7.9	4.5
11	90	60	150	65	105	65	40	27	34	43	7.7	4.4
12	81	60	110	49	102	63	44	38	37	37	7.5	4.4
13	78	52	94	52	92	60	41	44	146	67	7.3	4.4
14	104	46	82	60	89	60	66	36	56	78	7.2	4.4
15	107	48	76	313	83	64	112	84	38	56	7.0	4.3
16	86	52	73	353	62	62	111	52	46	42	6.8	5.4
17	76	49	71	221	80	54	91	36	32	35	12	6.5
18	65	46	72	172	73	52	77	32	25	29	9.6	5.3
19	56	43	67	159	64	58	66	37	108	26	8.0	4.7
20	51	41	60	130	64	54	59	46	196	23	7.2	4.5
21	48	43	57	100	63	50	55	132	58	21	6.7	4.4
22	45	38	53	91	64	49	55	58	66	20	6.3	4.3
23	42	37	52	82	63	47	69	42	43	18	6.1	4.3
24	45	36	63	76	58	47	62	32	29	18	5.8	4.2
25	148	35	158	72	55	54	53	29	24	16	5.6	4.2
26	335	122	164	69	54	51	49	229	22	16	5.6	4.2
27	229	208	124	67	55	47	54	101	19	15	7.5	4.2
28	166	147	104	67	62	45	54	57	17	14	6.6	4.2
29	132	118	93	68	---	43	47	41	16	13	5.8	4.8
30	110	99	89	72	---	45	45	45	28	12	5.4	5.8
31	93	---	77	77	---	43	---	41	---	11	5.2	---
TOTAL	8685	2168	3339	3037	2856	2301	1611	1581	3059	2775	238.2	139.1
MEAN	280	72.3	108	98.0	102	74.2	53.7	51.0	102	89.5	7.68	4.64
MAX	1640	208	225	353	250	228	112	229	1160	501	12	6.5
MIN	42	35	52	49	54	43	33	27	16	11	5.2	4.2
CFSM	2.01	.52	.78	.71	.73	.53	.39	.37	.73	.64	.06	.03
IN.	2.32	.58	.89	.81	.76	.62	.43	.42	.82	.74	.06	.04

CAL YR 1986	TOTAL	49141.9	MEAN	135	MAX	2150	MIN	3.6	CFSM	.97	IN.	13.15
WTR YR 1987	TOTAL	31789.3	MEAN	87.1	MAX	1640	MIN	4.2	CFSM	.63	IN.	8.51

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.--217 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. 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.--31 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, 1,250 ft^3/s, Oct. 17; no flow, Mar. 11, 12, 18, 19.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	360	703	107	123	169	56	28	22	23	21	20	19
2	408	697	107	115	231	144	28	22	23	22	20	19
3	411	692	109	107	231	319	28	22	24	22	20	19
4	266	686	202	107	313	181	28	22	25	22	20	19
5	141	680	356	107	431	54	29	22	25	22	20	19
6	322	654	354	75	395	54	29	22	23	23	20	19
7	655	614	352	53	247	55	29	22	20	23	20	19
8	946	610	228	67	202	55	29	22	20	23	19	19
9	1120	605	107	80	209	55	29	22	20	23	19	19
10	1160	600	77	80	209	28	29	22	20	23	19	19
11	772	595	86	80	208	.00	29	22	20	21	19	19
12	136	590	133	97	162	.00	29	22	20	19	19	19
13	136	540	167	107	96	14	29	22	20	19	19	19
14	136	491	198	107	107	27	29	22	20	19	19	20
15	440	487	232	170	138	27	29	22	20	19	19	24
16	1140	483	231	385	169	28	29	22	20	19	19	28
17	1250	479	190	492	99	14	26	22	20	19	19	28
18	870	475	123	489	56	.00	21	22	21	19	19	28
19	766	433	123	391	56	.00	21	22	21	19	19	28
20	997	398	123	231	56	9.0	22	22	21	19	19	28
21	620	395	104	231	56	28	22	22	21	19	19	40
22	617	392	86	230	56	28	22	22	21	19	19	43
23	613	389	86	148	56	28	22	22	21	19	19	40
24	610	386	86	107	56	28	22	22	21	19	19	40
25	607	349	86	107	56	28	22	22	21	19	19	40
26	607	290	125	107	56	28	22	23	21	19	19	40
27	605	290	145	107	56	28	22	23	21	19	19	40
28	603	334	178	107	56	28	22	23	21	13	19	40
29	601	406	213	107	---	28	22	23	21	19	19	45
30	650	232	298	107	---	28	22	23	21	19	19	44
31	707	---	203	107	---	28	---	23	---	20	19	---
TOTAL	19272	14975	5215	4928	4232	1428.00	770	688	636	620	596	843
MEAN	622	499	168	159	151	46.1	25.7	22.2	21.2	20.0	19.2	28.1
MAX	1250	703	356	492	431	319	29	23	25	23	20	45
MIN	136	232	77	53	56	.00	21	22	20	13	19	19

CAL YR 1986 TOTAL 104601.00 MEAN 287 MAX 1650 MIN .00
WTR YR 1987 TOTAL 54203.00 MEAN 149 MAX 1250 MIN .00

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 current year. 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.--Estimated daily discharges: Jan. 25-30. Records good. Flow regulated by Cecil M. Harden Lake.

AVERAGE DISCHARGE.--31 years, 495 ft^3/s, 15.00 in/yr.

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 discharge, 2,820 ft^3/s Oct. 4, gage height, 10.83 ft; minimum daily, 60 ft^3/s Sept. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	951	785	307	251	299	315	121	155	106	930	388	66
2	1220	777	577	239	428	352	119	150	132	2120	229	65
3	830	764	459	225	494	417	116	148	930	1210	180	65
4	2490	774	380	219	488	457	113	139	471	887	155	64
5	1140	777	478	200	543	266	110	129	303	607	140	63
6	744	764	501	194	613	236	109	125	229	1090	128	63
7	829	708	497	161	509	223	109	121	186	1370	127	62
8	1030	699	449	153	401	216	107	116	158	628	122	64
9	1240	687	331	163	371	211	104	112	138	725	120	63
10	1330	673	326	165	365	200	105	109	123	663	115	62
11	1220	669	285	186	360	171	127	104	113	404	106	63
12	451	660	285	173	358	151	135	109	117	321	100	62
13	348	634	277	185	278	143	138	115	139	299	97	62
14	318	548	337	199	264	144	433	119	116	304	93	61
15	306	540	354	367	258	153	591	111	103	266	90	60
16	1020	533	350	585	278	163	576	101	114	281	87	66
17	1320	528	334	690	281	149	429	96	101	223	88	75
18	1120	524	262	672	231	132	341	95	91	197	86	69
19	588	502	240	675	224	127	284	97	95	179	82	65
20	1160	459	231	472	226	121	250	104	376	168	80	64
21	710	455	224	421	228	121	227	103	221	158	79	64
22	680	447	195	422	223	127	241	90	262	151	77	70
23	676	445	185	360	217	125	348	85	165	143	75	71
24	667	439	194	320	212	127	276	82	129	133	74	68
25	753	420	221	223	208	165	236	101	200	129	73	67
26	839	452	269	250	206	151	213	122	315	124	75	66
27	792	466	300	256	210	142	208	91	155	123	83	66
28	753	434	284	260	220	135	195	84	122	121	78	65
29	728	462	284	264	---	129	178	80	108	121	74	91
30	721	608	378	270	---	130	167	84	145	368	71	91
31	783	---	344	281	---	127	---	126	---	600	69	---
TOTAL	27757	17633	10138	9501	8993	5826	6706	3403	5963	15043	3441	2003
MEAN	895	588	327	306	321	188	224	110	199	485	111	66.8
MAX	2490	785	577	690	613	457	591	155	930	2120	388	91
MIN	306	420	185	153	206	121	104	80	91	121	69	60
CFSM	2.00	1.31	.73	.68	.72	.42	.50	.25	.44	1.08	.25	.15
IN.	2.30	1.46	.84	.79	.75	.48	.56	.28	.50	1.25	.29	.17

CAL YR 1986	TOTAL	188482	MEAN	516	MAX	2690	MIN	58	CFSM 1.15	IN. 15.65
WTR YR 1987	TOTAL	116407	MEAN	319	MAX	2490	MIN	60	CFSM .71	IN. 9.67

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, 3.2 mi upstream from Sugar Creek, and 3.4 mi downstream from Lost Creek.

DRAINAGE AREA.--12,263 mi^2.

PERIOD OF RECORD.--August 1902 to December 1903 (gage height only), February 1905 to July 1906, October 1927 to current year. Gage-height records collected at site 3,300 ft upstream June 1891 to June 1897 and since December 1904 are contained in reports of 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 (corrected) above National Geodetic Vertical Datum of 1929. Prior to Oct. 17, 1984, water-stage recorder at Wabash Avenue bridge 4,000 ft downstream at datum 2.88 ft lower. See WSP 1725 for history of changes prior to Oct. 27, 1928.

REMARKS.--Estimated daily discharges: Jan. 22-31. Records good except for estimated daily discharges, which are fair. Flow partially regulated by upstream reservoirs.

AVERAGE DISCHARGE.--60 years, 10,850 ft^3/s, 12.01 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, 21,600 ft^3/s July 7, gage height, 12.31 ft; minimum daily, 1,870 ft^3/s Aug. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6760	7380	11100	5630	6570	7440	4170	5390	6140	5300	4610	5900
2	9120	6910	11600	5360	7050	8460	4060	4990	6770	10300	6130	4730
3	8910	6430	11500	5230	8140	10700	3980	4840	15700	8130	5390	3900
4	13900	6100	11300	5090	9860	14000	4060	4730	18100	6520	5360	3420
5	14300	5920	11400	4960	11600	14600	4000	4430	14000	7550	4710	3050
6	13200	5840	12000	4920	14700	12500	3940	4160	11500	15100	4050	2800
7	13500	5620	11500	4790	17300	10400	4000	4060	11100	19300	3510	2570
8	13800	5200	10200	4770	17500	9430	3820	4050	10900	11300	3160	2440
9	13800	5190	8950	4820	16600	9380	3770	4010	9480	8660	2930	2380
10	12900	5300	8520	4790	15400	9130	3660	3880	7760	8630	2820	2310
11	11700	5240	8910	4770	14000	8270	3690	3770	6510	6810	2800	2370
12	10300	5100	10100	4900	11900	7370	3730	3760	5710	5550	2940	2310
13	8580	4820	10600	4730	11300	6710	4220	3990	6160	5060	2970	2110
14	7580	4820	9770	4570	12800	6230	5720	4210	6450	5120	2810	2080
15	6830	5020	8670	4750	13200	5960	8190	4060	5910	4690	2570	2090
16	6200	4790	8080	5880	12200	5860	11300	3890	5330	5200	2400	2080
17	6390	4790	7500	7280	10300	5840	13500	3700	5270	4820	2320	2100
18	6430	4580	6960	9250	8590	5500	15500	3590	4510	5210	2290	2140
19	6180	4620	6670	10600	7760	5240	14500	3680	3980	5350	2240	2220
20	5930	4210	6300	9410	7260	5190	12300	5730	4330	4870	2130	2380
21	5760	4430	5940	7290	7270	5180	10500	11300	6110	4210	2030	2420
22	5270	4500	5800	6100	7120	5090	9100	14300	5740	3660	1960	2380
23	4960	4350	5530	5800	6810	4900	8380	12700	6000	3360	1920	2250
24	4800	5280	5360	5600	6510	4710	8310	10800	5130	3150	1910	2360
25	4820	6170	5560	5200	6040	4710	8220	10400	4730	2910	1980	2380
26	5310	6550	5650	4100	5750	4690	7620	9560	4860	2790	1870	2550
27	5790	6650	5620	3900	5700	4580	6970	7990	4740	2770	2040	2510
28	6010	7510	5760	3900	6050	4460	6520	7160	4090	2740	3310	2450
29	6150	9450	5810	4300	---	4470	6160	6460	3550	2720	7700	2540
30	6730	10800	5930	5000	---	4320	5730	6240	3380	3440	9200	3130
31	7270	---	5910	6000	---	4170	---	6590	---	3640	7480	---
TOTAL	259180	173570	254500	173690	285280	219490	209620	188420	213940	188860	109540	80350
MEAN	8361	5786	8210	5603	10190	7080	6987	6078	7131	6092	3534	2678
MAX	14300	10800	12000	10600	17500	14600	15500	14300	18100	19300	9200	5900
MIN	4800	4210	5360	3900	5700	4170	3660	3590	3380	2720	1870	2080
CFSM	.68	.47	.67	.46	.83	.58	.57	.50	.58	.50	.29	.22
IN.	.79	.53	.77	.53	.87	.67	.64	.57	.65	.57	.33	.24

CAL YR 1986	TOTAL	3933770	MEAN	10780	MAX	39600	MIN	1850	CFSM	.88	IN.	11.93
WTR YR 1987	TOTAL	2356440	MEAN	6456	MAX	19300	MIN	1870	CFSM	.53	IN.	7.15

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.--No estimated daily discharges. Records good. Flow partially regulated by upstream reservoirs.

AVERAGE DISCHARGE.--49 years, 11,890 ft^3/s, 12.27 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, 24,400 ft^3/s July 7, gage height, 14.83 ft; minimum daily, 2,150 ft^3/s Aug. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5750	7670	11500	6260	6710	8140	4830	6490	7250	5380	4110	7380
2	8720	7690	13700	6000	7240	9430	4780	6150	6970	11500	5150	6060
3	9660	7220	13500	5760	7990	9930	4680	5820	8780	12300	6260	5080
4	12900	6800	12600	5620	9170	12400	4630	5690	17100	9260	5790	4350
5	16700	6490	12200	5480	10900	14900	4680	5510	17100	11300	5690	3880
6	14900	6310	12300	5350	12600	14900	4610	5190	14200	13300	5080	3520
7	14200	6180	12600	5280	15800	12900	4570	4900	12200	23300	4460	3270
8	14100	5920	12000	5160	17500	11100	4580	4780	11800	20700	3940	3050
9	14400	5560	10800	5170	17600	10200	4420	4730	11500	13900	3580	2870
10	14200	5560	9800	5230	16800	10100	4340	4670	10200	11500	3310	2790
11	13300	5650	9350	5130	15800	9600	4300	4530	8420	9890	3170	2700
12	12100	5570	9730	5190	14300	8720	4460	4470	7270	7890	3130	2720
13	10600	5390	10800	5250	12500	7850	4660	4470	7490	7200	3240	2660
14	9070	5120	11000	5140	12400	7270	6970	4680	7490	6890	3250	2480
15	8030	5140	10100	5940	13600	6860	9030	4840	7340	6400	3090	2400
16	7230	5260	9160	6920	13700	6690	11000	4700	6710	6180	2850	2430
17	6740	5100	8560	7280	12600	6570	13300	4500	6180	6150	2680	2450
18	6840	5030	7950	8440	10600	6490	15200	4330	6040	5790	2600	2410
19	6830	4890	7460	10400	9010	6150	16300	4320	5420	5980	2550	2400
20	6540	4840	7120	11300	8190	5940	15000	4430	4820	6000	2490	2460
21	6330	4500	6720	9600	7820	5860	13100	6970	5130	5560	2390	2590
22	6070	4660	6390	7690	7820	5820	11300	12400	6660	4930	2280	2650
23	5650	4700	6220	6720	7610	5700	9960	14100	6540	4360	2190	2630
24	5380	4670	6030	6310	7340	5550	9330	12800	6610	3970	2160	2510
25	5550	5640	6070	6140	7030	5450	9150	11500	5920	3690	2170	2550
26	6070	6770	6200	5660	6600	5470	8880	11000	5480	3440	2220	2600
27	6110	7480	6200	4410	6400	5400	8280	10100	5420	3300	2150	2720
28	6380	7340	6150	4240	6420	5280	7680	8570	5410	3560	2260	2690
29	6490	8320	6200	4220	---	5170	7260	7770	4890	3380	3680	2730
30	6650	10200	6240	4580	---	5160	6880	7260	4290	3250	7920	2830
31	7220	---	6330	5480	---	4980	---	7290	---	3900	8780	---
TOTAL	280710	181670	280980	191350	302050	245980	238160	208960	240630	244150	114620	93860
MEAN	9055	6056	9064	6173	10790	7935	7939	6741	8021	7876	3697	3129
MAX	16700	10200	13700	11300	17600	14900	16300	14100	17100	23300	8780	7380
MIN	5380	4500	6030	4220	6400	4980	4300	4320	4290	3250	2150	2400
CFSM	.69	.46	.69	.47	.82	.60	.60	.51	.61	.60	.28	.24
IN.	.79	.51	.79	.54	.85	.70	.67	.59	.68	.69	.32	.27

CAL YR 1986 TOTAL 4268060 MEAN 11690 MAX 37200 MIN 2230 CFSM .89 IN. 12.06
WTR YR 1987 TOTAL 2623120 MEAN 7187 MAX 23300 MIN 2150 CFSM .55 IN. 7.41

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.

GAGE.--Water-stage recorder. Concrete control since Sept. 12, 1969. Datum of gage is 480.00 ft above National Geodetic Vertical Datum of 1929 (U.S. Soil Conservation Service benchmark).

REMARKS.--Estimated daily discharges: Dec. 13-15, Dec. 26 to Jan. 9, Jan. 23-31, Feb. 9-10, Mar. 8-16, and Mar. 20-23. Records fair. Flow affected by U.S. Soil Conservation Service floodwater-retarding structures.

AVERAGE DISCHARGE.--21 years, 18.5 ft^3/s, 15.04 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, 224 ft^3/s July 6, maximum gage height, 13.35 ft Apr. 14; minimum daily discharge, no flow Sept. 15, 26-28.

REVISIONS.--Revised figures for discharges for water years 1982-86, superseding those published in corresponding annual reports, are given herein.

EXTREMES FOR WATER YEARS 1982-86.--Annual maximum discharges.

Water year	Date	Time	Discharge (ft^3/s)	Gage height (ft)	Water year	Date	Time	Discharge (ft^3/s)	Gage height (ft)
1982	July 8	1215	1,160	19.16	1985	Mar. 31	0330	756	17.82
1983	Dec. 3	1830	961	18.55	1986	Nov. 19	1630	793	17.87
1984	Apr. 22	0330	710	17.56					

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.16	.60	5.7	17	84	21	9.5	3.1	111	1.6	.76	519
2	.12	.76	3.1	20	50	18	8.5	2.8	55	1.6	.68	284
3	.09	.68	2.7	98	32	16	27	2.5	39	35	.53	74
4	.06	.46	2.4	136	20	34	14	2.6	26	13	.46	53
5	.07	.93	2.1	58	15	23	14	3.1	17	7.0	1.9	37
6	.53	1.0	1.9	44	13	18	14	2.4	10	4.4	3.1	23
7	.34	.76	1.8	34	11	14	11	19	33	4.2	1.7	12
8	.24	.76	1.6	27	9.5	10	11	13	29	439	1.3	6.2
9	.24	.84	1.4	17	8.5	7.9	14	8.1	17	143	.93	3.3
10	.19	.68	1.4	12	8.1	7.9	12	5.5	11	103	.76	2.8
11	.15	.68	1.2	8.2	7.7	40	11	3.8	7.0	101	.93	2.7
12	.12	.60	1.1	6.7	7.2	32	11	2.8	4.3	59	.70	2.4
13	.10	.60	1.0	5.4	6.8	86	11	2.1	3.0	42	.55	2.1
14	.08	.53	.95	4.7	6.5	42	8.8	1.5	2.2	27	.47	1.9
15	.24	.53	.88	4.3	7.3	65	7.2	1.0	2.7	17	.40	1.5
16	.29	.68	.82	3.9	94	120	34	.75	31	12	.33	1.2
17	1.7	.68	.76	3.7	285	54	100	.55	22	8.1	.28	.97
18	3.6	.60	.71	3.5	205	45	47	.60	14	5.2	.25	1.3
19	1.8	.68	.66	3.4	119	209	32	1.0	14	14	.23	.91
20	1.3	.93	.60	3.3	195	92	25	20	10	9.8	.20	.76
21	1.0	.76	2.4	4.8	193	53	17	36	7.7	5.0	.18	.55
22	1.0	.60	18	52	127	42	14	31	6.4	3.8	.17	.46
23	1.0	.84	99	248	97	34	11	11	5.3	2.8	.17	.40
24	.68	1.2	69	73	76	28	8.7	6.4	4.6	2.2	.20	.71
25	.60	1.0	39	47	55	32	7.1	4.2	3.3	1.9	.45	1.2
26	.93	1.1	16	39	42	26	6.1	4.5	3.0	1.8	.84	1.0
27	1.2	1.8	80	30	32	21	4.6	35	2.7	1.6	.76	1.0
28	1.0	1.4	39	17	25	18	3.9	14	2.8	1.6	.40	.97
29	.84	1.3	25	16	---	16	3.6	247	3.6	1.2	.19	.62
30	.68	1.8	20	363	---	14	3.5	133	3.2	1.0	3.1	.63
31	.60	---	13	209	---	12	---	127	---	.84	2.8	---
TOTAL	20.95	25.78	453.18	1608.9	1831.6	1250.8	501.5	745.30	500.8	1070.64	25.72	1037.58
MEAN	.68	.86	14.6	51.9	65.4	40.3	16.7	24.0	16.7	34.5	.83	34.6
MAX	3.6	1.8	99	363	285	209	100	247	111	439	3.1	519
MIN	.06	.46	.60	3.3	6.5	7.9	3.5	.55	2.2	.84	.17	.40
CFSM	.04	.05	.87	3.11	3.92	2.41	1.00	1.44	1.00	2.07	.05	2.07
IN.	.05	.06	1.01	3.58	4.08	2.79	1.12	1.66	1.12	2.38	.06	2.31

CAL YR 1981 TOTAL 5394.76 MEAN 14.8 MAX 624 MIN .05 CFSM .89 IN. 12.02
WTR YR 1982 TOTAL 9072.75 MEAN 24.9 MAX 519 MIN .06 CFSM 1.49 IN. 20.21

03342100 BUSSERON CREEK NEAR HYMERA, IN--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.26	.00	17	32	30	2.6	37	195	4.3	.68	.58	.23
2	.00	.23	35	22	157	2.3	149	357	3.7	.60	.14	.08
3	.00	.35	521	17	80	2.1	93	173	227	.46	.04	.03
4	.00	.14	500	15	52	2.0	56	80	91	.68	.04	.00
5	.00	.07	246	13	35	3.4	58	58	62	.46	.04	.00
6	.46	.02	109	12	25	46	67	44	170	.34	.02	.00
7	7.0	.11	78	9.5	19	18	68	31	72	.34	.00	.00
8	4.4	.18	57	8.1	19	12	39	22	52	.34	.00	.10
9	12	.09	39	7.6	13	10	68	16	36	.24	.00	.03
10	8.1	.13	26	7.3	11	8.8	49	13	24	.24	.00	.00
11	4.4	.31	20	6.8	11	7.7	29	12	15	.24	.00	.00
12	2.8	2.3	15	6.1	8.5	6.9	20	13	12	.15	.00	.16
13	1.8	1.7	12	6.8	7.1	6.3	137	15	11	.15	.00	.39
14	1.1	1.3	10	5.2	6.6	5.8	337	33	8.9	.15	.00	.20
15	.77	.98	12	4.6	6.0	5.2	90	25	7.2	.12	.00	.08
16	.32	.86	16	4.0	5.7	5.0	63	17	5.9	.09	.00	.03
17	.10	.76	13	3.7	5.3	4.9	48	13	5.2	.06	.00	.02
18	.08	.75	11	3.3	5.0	7.1	34	12	4.4	.06	.02	.02
19	.05	.84	9.8	2.8	4.9	8.2	23	12	3.6	.04	.00	.00
20	.43	1.0	8.7	2.7	4.4	97	16	10	3.3	.02	.00	.03
21	.10	1.2	7.1	3.5	4.1	88	14	8.8	2.6	.02	.00	.11
22	.07	1.1	7.1	13	4.0	49	12	26	1.9	.02	.00	.05
23	.07	11	7.6	14	3.8	33	11	13	1.7	.01	.00	.00
24	.04	9.2	162	13	3.3	23	10	8.8	1.3	.01	.00	.00
25	.02	6.4	381	12	2.6	17	8.8	7.1	1.2	.01	.00	.00
26	.00	12	115	11	2.2	15	8.3	5.7	1.0	.01	.00	.00
27	.00	12	187	9.2	2.3	65	8.0	4.8	1.0	.01	.00	.00
28	.00	58	183	8.1	2.9	54	7.7	15	.84	.06	.00	.00
29	.00	32	84	9.8	---	33	7.2	8.9	.84	.04	.29	.00
30	.00	20	64	19	---	23	78	6.4	1.0	2.6	.51	.00
31	.02	---	47	13	---	14	---	5.2	---	.42	.33	---
TOTAL	44.39	175.02	3000.3	315.1	530.7	675.3	1646.0	1260.7	831.88	8.67	2.01	1.56
MEAN	1.43	5.83	96.8	10.2	19.0	21.8	54.9	40.7	27.7	.28	.06	.05
MAX	12	58	521	32	157	97	337	357	227	2.6	.58	.39
MIN	.00	.00	7.1	2.7	2.2	2.0	7.2	4.8	.84	.01	.00	.00
CFSM	.09	.35	5.80	.61	1.14	1.31	3.29	2.44	1.66	.02	.00	.00
IN.	.10	.39	6.68	.70	1.18	1.50	3.67	2.81	1.85	.02	.00	.00

CAL YR 1982	TOTAL	11792.55	MEAN	32.3	MAX	521	MIN	.00	CFSM	1.93	IN.	26.27
WTR YR 1983	TOTAL	8491.63	MEAN	23.3	MAX	521	MIN	.00	CFSM	1.40	IN.	18.92

03342100 BUSSERON CREEK NEAR HYMERA, IN--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.00	.15	24	1.3	1.2	11	16	12	2.4	.24	.06	.00
2	.00	.24	16	1.2	4.0	9.2	12	10	1.9	.19	.06	.00
3	.00	.53	12	1.1	22	13	16	9.8	1.7	.19	.06	.00
4	.05	.40	108	1.0	13	13	187	10	1.6	.76	.09	.00
5	.19	.24	38	1.0	7.0	79	203	7.9	1.4	.60	.15	.00
6	.06	.19	80	4.0	4.0	59	75	22	1.1	.53	.12	.00
7	.01	.19	36	15	2.7	40	54	16	1.6	.53	.12	.00
8	.00	.19	25	11	2.4	27	43	12	1.6	.34	3.1	.00
9	.00	.15	17	6.0	2.2	20	38	8.7	1.4	.24	12	.00
10	.00	.53	24	17	64	15	30	6.8	1.3	.15	8.1	.01
11	.00	.93	209	10	45	13	22	5.4	1.2	.09	3.5	.03
12	.00	.60	102	8.2	42	11	28	5.7	1.2	.09	1.7	.05
13	.04	.46	57	5.0	110	9.6	31	15	1.2	.06	.53	.03
14	.01	.34	136	3.5	44	9.7	20	9.5	.84	.06	.34	.24
15	.00	.46	68	2.9	28	56	17	6.1	.76	.06	.34	.14
16	.00	.84	48	2.3	20	180	20	4.6	.76	.06	.19	.09
17	.00	.84	32	1.8	16	64	26	3.6	.76	.06	.12	.05
18	.00	.76	20	1.4	15	50	20	3.0	.68	.04	.09	.02
19	.01	.68	14	1.2	16	41	15	2.5	.60	.04	.06	.01
20	8.1	1.1	10	.94	13	203	12	20	.53	.06	.02	.00
21	16	1.1	7.0	.88	9.8	82	340	20	.53	.06	.01	.00
22	6.4	.93	5.6	.84	8.4	90	398	55	.76	.06	.93	.03
23	3.3	34	4.5	.80	7.8	58	124	102	.84	.06	.34	1.6
24	2.1	15	3.8	1.5	12	45	74	26	.60	.06	.15	.46
25	1.4	5.9	3.2	2.5	15	115	53	14	.40	.06	.09	.59
26	1.1	3.8	2.7	4.0	11	116	40	16	.29	.09	.02	.77
27	.76	155	4.8	6.6	9.2	78	36	8.7	.40	.15	.01	.28
28	.46	99	2.0	10	28	74	27	6.8	.40	.19	.01	.21
29	.29	50	1.6	7.0	16	47	22	4.4	.40	.46	.01	.14
30	.19	35	1.5	4.0	---	31	20	3.5	.29	.19	.00	.09
31	.15	---	1.3	2.3	---	22	---	2.6	---	.09	.00	---
TOTAL	40.62	409.55	1114.0	136.26	588.7	1681.5	2019	449.6	29.44	5.86	32.32	4.84
MEAN	1.31	13.7	35.9	4.40	20.3	54.2	67.3	14.5	.98	.19	1.04	.16
MAX	16	155	209	17	110	203	398	102	2.4	.76	12	1.6
MIN	.00	.15	1.3	.80	1.2	9.2	12	2.5	.29	.04	.00	.00
CFSM	.08	.82	2.15	.26	1.22	3.25	4.03	.87	.06	.01	.06	.01
IN.	.09	.91	2.48	.30	1.31	3.75	4.50	1.00	.07	.01	.07	.01

CAL YR 1983	TOTAL	6836.09	MEAN	18.7	MAX	357	MIN	.00	CFSM	1.12	IN.	15.23
WTR YR 1984	TOTAL	6511.69	MEAN	17.8	MAX	398	MIN	.00	CFSM	1.07	IN.	14.51

03342100 BUSSERON CREEK NEAR HYMERA, IN--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.04	104	39	69	2.3	37	113	41	3.6	1.8	.80	.42
2	.02	54	26	57	2.2	32	60	404	3.7	1.8	.74	.27
3	.01	26	20	43	2.1	24	44	110	4.6	20	.68	.64
4	.00	13	12	32	1.9	57	36	64	4.1	6.0	.65	1.2
5	.01	7.5	8.0	23	1.8	43	62	35	3.7	3.7	177	.78
6	.01	4.9	4.5	17	1.7	27	108	25	3.3	2.7	55	.23
7	.03	2.4	3.5	13	1.7	74	69	16	3.2	2.2	41	.15
8	.08	1.5	3.0	9.8	1.6	102	45	11	3.0	1.7	39	.12
9	.08	1.1	3.6	8.0	1.6	51	31	8.6	2.7	1.4	27	.21
10	.04	44	6.3	6.7	2.5	37	25	9.3	2.5	1.2	18	4.0
11	.02	17	4.9	5.4	10	163	29	12	5.9	1.1	14	3.9
12	.02	10	4.9	4.8	23	77	22	7.2	4.5	1.0	13	2.3
13	.05	6.2	22	4.3	25	50	18	7.8	3.1	1.0	11	1.2
14	.07	3.8	116	3.8	20	39	15	12	2.8	.97	15	.49
15	.08	4.2	45	3.5	16	28	16	39	3.5	.89	58	.24
16	.05	2.9	30	3.3	12	21	14	24	2.9	.79	97	.15
17	.04	1.9	23	3.1	9.0	17	12	48	2.6	1.5	44	.15
18	.05	2.3	17	3.0	10	20	10	21	2.5	2.0	31	.15
19	.24	3.6	13	2.8	14	15	9.1	13	2.2	.95	21	.14
20	1.2	2.0	38	2.7	25	11	8.2	9.1	1.9	.83	19	.13
21	15	1.5	73	2.6	80	8.6	7.5	15	1.8	.87	16	.12
22	2.2	1.4	41	2.6	180	7.5	6.9	11	1.8	1.0	12	.12
23	1.0	1.3	29	2.5	270	6.3	6.2	9.3	1.7	.82	8.4	.27
24	.71	1.2	17	2.5	320	5.4	5.9	6.2	1.7	.73	6.1	1.0
25	11	1.1	13	2.4	99	4.6	5.2	4.9	2.5	.65	4.0	2.3
26	4.0	1.0	11	2.3	74	4.4	4.7	4.3	1.7	.64	3.0	1.2
27	1.6	35	9.1	2.3	60	4.6	4.3	7.5	1.4	.64	3.0	.42
28	1.0	207	15	2.3	45	4.6	3.6	13	1.4	1.0	2.5	.28
29	.79	78	285	2.4	---	39	3.0	6.7	4.1	.52	1.1	.16
30	.71	56	176	2.4	---	328	2.6	5.0	2.6	.40	.62	.17
31	.57	---	80	2.3	---	482	---	4.2	---	.59	.82	---
TOTAL	40.72	695.8	1188.8	341.8	1311.4	1820.0	796.2	1004.1	87.0	61.39	740.41	22.91
MEAN	1.31	23.2	38.3	11.0	46.8	58.7	26.5	32.4	2.90	1.98	23.9	.76
MAX	15	207	285	69	320	482	113	404	5.9	20	177	4.0
MIN	.00	1.0	3.0	2.3	1.6	4.4	2.6	4.2	1.4	.40	.62	.12
CFSM	.08	1.39	2.29	.66	2.80	3.51	1.59	1.94	.17	.12	1.43	.05
IN.	.09	1.55	2.65	.76	2.92	4.05	1.77	2.24	.19	.14	1.65	.05

CAL YR 1984	TOTAL	6872.84	MEAN	18.8	MAX	398	MIN	.00	CFSM	1.13	IN.	15.31
WTR YR 1985	TOTAL	8110.53	MEAN	22.2	MAX	482	MIN	.00	CFSM	1.33	IN.	18.07

03342100 BUSSERON CREEK NEAR HYMERA, IN--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.24	1.0	51	.54	.50	21	4.8	2.3	8.1	1.2	1.0	.10
2	.19	4.8	35	.42	1.4	17	6.7	1.5	5.6	22	.46	.10
3	.16	3.0	24	.48	7.0	13	5.4	1.4	5.2	24	1.3	.09
4	.14	2.3	16	.48	117	11	4.5	1.3	3.7	17	4.2	.08
5	.12	1.6	11	.45	122	9.2	5.2	1.3	1.8	10	9.0	.07
6	.11	1.2	7.2	.38	75	8.2	7.8	1.2	25	7.9	4.0	.05
7	.10	.88	5.0	.32	147	7.0	9.0	2.9	29	5.6	1.1	.04
8	.10	1.1	3.2	.28	72	5.9	5.1	20	20	2.8	.70	.03
9	.13	.87	1.8	.28	53	5.3	3.8	5.8	11	1.1	1.8	.03
10	.11	42	43	.27	40	9.7	3.3	2.9	6.6	.73	9.3	.04
11	.10	43	147	.26	31	26	3.1	1.8	4.8	2.3	4.7	3.7
12	.09	55	124	.27	24	46	2.9	1.4	5.0	26	2.4	1.5
13	.09	44	63	.26	18	78	2.8	1.0	4.6	29	.87	.63
14	.16	39	46	.24	13	38	3.1	1.1	3.3	25	1.1	.47
15	.91	45	35	.25	11	25	3.4	.84	1.9	19	2.7	.39
16	.42	110	26	.26	9.2	17	3.2	.96	1.0	13	2.6	.29
17	.24	45	17	.33	15	14	2.7	.64	.63	3.4	.90	.23
18	.19	36	13	.54	25	20	2.4	15	.55	1.5	.30	3.8
19	.21	465	10	.76	25	108	2.3	14	.55	.84	.33	.71
20	1.2	425	8.0	.63	20	52	6.6	6.1	.48	.70	1.1	12
21	.79	105	6.0	.57	16	28	48	4.0	.39	.60	.56	3.1
22	.56	57	4.5	.62	13	21	17	2.3	.33	.57	.31	1.1
23	.45	42	3.5	.52	11	17	16	2.1	.32	1.1	.20	.53
24	.37	31	3.1	.43	9.8	13	8.4	8.0	.28	13	.16	.49
25	.32	23	2.5	.37	12	11	5.4	7.1	1.7	22	.13	.38
26	.28	55	2.0	.30	21	12	3.7	26	4.5	16	.13	2.4
27	.24	206	1.7	.25	28	9.1	3.3	67	4.8	12	.15	1.1
28	.21	188	1.5	.24	26	7.3	6.2	33	4.6	10	.11	.57
29	.20	70	1.1	.22	---	6.3	5.0	29	3.4	11	.08	.45
30	.22	52	.90	.21	---	5.5	3.0	27	1.9	5.8	.08	1.2
31	.28	---	.62	.20	---	5.1	---	15	---	2.8	.07	---
TOTAL	8.93	2194.75	713.62	11.63	962.90	666.6	204.1	303.94	161.03	307.94	51.84	35.67
MEAN	.29	73.2	23.0	.38	34.4	21.5	6.80	9.80	5.37	9.93	1.67	1.19
MAX	1.2	465	147	.76	147	108	48	67	29	29	9.3	12
MIN	.09	.87	.62	.20	.50	5.1	2.3	.64	.28	.57	.07	.03
CFSM	.02	4.38	1.38	.02	2.06	1.29	.41	.59	.32	.59	.10	.07
IN.	.02	4.89	1.59	.03	2.14	1.48	.45	.68	.36	.69	.12	.08

CAL YR 1985 TOTAL 9102.51 MEAN 24.9 MAX 482 MIN .09 CFSM 1.49 IN. 20.28
WTR YR 1986 TOTAL 5622.95 MEAN 15.4 MAX 465 MIN .03 CFSM .92 IN. 12.53

03342100 BUSSERON CREEK NEAR HYMERA, IN--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.2	.63	52	3.0	12	114	5.3	1.8	.22	40	6.9	.02
2	2.3	.56	48	2.5	19	45	4.3	1.5	.88	29	3.1	.02
3	1.2	.56	23	2.3	15	24	3.3	1.4	1.3	16	6.0	.02
4	27	.63	16	2.1	9.2	16	3.0	2.2	.27	10	8.2	.02
5	11	1.7	16	1.9	7.0	10	2.7	4.2	.15	12	3.4	.02
6	4.2	1.3	11	1.7	6.4	7.1	2.7	1.9	.14	62	1.1	.01
7	1.5	.86	7.8	1.6	5.4	5.9	2.7	.85	.13	43	.46	.01
8	.72	.80	5.9	1.5	4.4	5.0	2.3	.58	.13	24	.20	.01
9	.60	.74	16	3.0	4.0	4.5	2.4	.49	.12	37	.15	.01
10	.48	.56	12	16	3.5	4.2	2.0	.47	.12	47	.13	.02
11	.65	.66	7.4	6.0	3.2	3.9	11	2.3	.12	19	.10	.02
12	.83	.60	5.1	4.8	2.9	3.6	36	5.3	.15	24	.07	.02
13	1.6	.44	4.5	5.3	2.5	3.4	52	4.7	2.6	63	.82	.01
14	1.2	.41	4.1	24	2.6	3.2	139	3.0	1.3	43	1.9	.01
15	.59	.43	3.8	62	2.8	3.0	64	2.7	.23	26	.79	.00
16	.48	.45	3.7	28	2.5	9.0	59	2.4	.16	27	.11	.02
17	.43	.45	3.3	20	3.2	8.4	51	2.8	.13	19	.06	.06
18	.36	.44	2.8	15	5.0	7.3	42	4.3	.09	10	.06	.06
19	.34	.41	2.3	28	5.7	6.4	31	2.0	.07	2.4	.05	.03
20	.31	.50	1.9	22	5.7	5.5	26	.90	.07	1.3	.04	.02
21	.29	.50	1.6	14	4.2	5.0	24	.46	.07	7.4	.03	.02
22	.29	.43	1.5	9.6	3.7	4.5	25	.37	.07	12	.03	.02
23	.29	.51	1.5	8.0	3.4	4.0	17	.25	.06	8.2	.03	.02
24	.35	.48	9.9	7.0	3.2	5.0	10	.20	.05	7.5	.03	.01
25	32	.96	21	6.0	3.0	18	6.3	.26	.05	1.7	.03	.01
26	12	28	15	5.5	3.0	9.2	4.0	.26	.05	.25	.03	.00
27	4.6	12	9.0	5.0	3.9	6.1	3.4	.21	.04	42	.05	.00
28	1.9	4.9	6.0	4.5	41	6.3	2.9	.17	.03	54	.06	.00
29	1.6	3.3	5.0	4.0	---	8.4	2.7	.16	.03	39	.05	.08
30	1.4	3.1	4.0	5.0	---	8.8	2.2	.83	.03	29	.03	.08
31	.75	---	3.5	7.0	---	5.9	---	.39	---	17	.03	---
TOTAL	120.46	67.31	324.6	326.3	187.4	370.6	639.2	49.35	8.86	772.75	34.04	.65
MEAN	3.89	2.24	10.5	10.5	6.69	12.0	21.3	1.59	.30	24.9	1.10	.02
MAX	32	28	52	62	41	114	139	5.3	2.6	63	8.2	.08
MIN	.29	.41	1.5	1.5	2.5	3.0	2.0	.16	.03	.25	.03	.00
CFSM	.23	.13	.63	.63	.40	.72	1.28	.10	.02	1.49	.07	.00
IN.	.27	.15	.72	.73	.42	.83	1.42	.11	.02	1.72	.08	.00

CAL YR 1986	TOTAL	3218.02	MEAN	8.82	MAX	147	MIN	.03	CFSM	.53	IN.	7.17
WTR YR 1987	TOTAL	2901.52	MEAN	7.95	MAX	139	MIN	.00	CFSM	.48	IN.	6.46

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 474.73 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 6-11, 15-23, Oct. 30 to Nov. 4, Dec. 28-30, Jan. 1-9, Jan. 20 to Feb. 1, Mar. 8, 9, 12-14, 19-24, Apr. 1-11, June 9-20, July 15 to Aug. 1, Aug. 4-16, 18-31, and Sept. 1-12, 14, 15, 18-30. Records poor. Flow affected by surface-mined areas.

AVERAGE DISCHARGE.--6 years, 14.1 ft^3/s, 20.90 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge recorded, 458 ft^3/s May 29, 1986, gage height, 10.9 ft but may have been greater during period of no gage-height record Nov. 14 to Dec. 18, 1985; minimum daily, 0.34 ft^3/s Sept. 28, 1987.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 243 ft^3/s July 4, gage height, 8.31 ft; minimum daily, 0.34 ft^3/s Sept. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	1.9	67	5.7	6.0	45	7.4	5.4	4.5	31	2.1	.70
2	5.3	1.9	50	5.5	8.3	13	8.2	5.0	2.0	5.5	2.4	.67
3	4.6	1.9	15	5.3	6.8	7.9	7.0	4.5	3.1	3.6	2.2	.63
4	74	2.1	10	5.2	5.9	6.1	6.0	6.5	2.1	63	2.0	.60
5	8.2	5.7	8.2	5.1	5.6	5.7	5.2	5.0	1.9	41	2.1	.56
6	5.0	3.6	7.7	5.0	5.5	4.8	4.8	4.0	1.8	32	2.0	.53
7	4.2	2.9	7.9	5.0	5.3	4.7	4.5	3.5	1.6	33	1.9	.52
8	3.8	2.7	7.7	4.9	5.2	4.5	4.2	3.0	1.5	12	1.8	.51
9	3.5	2.5	21	4.8	4.2	4.4	4.0	2.7	1.4	11	2.5	.50
10	3.3	2.1	10	7.9	4.3	4.3	3.9	2.5	1.3	7.8	1.9	.49
11	3.2	2.5	7.5	6.9	4.5	4.3	12	2.3	1.2	5.0	1.8	.48
12	6.2	2.0	7.0	6.8	4.5	4.3	36	2.6	2.5	12	1.7	.54
13	16	1.5	5.8	8.5	3.9	4.2	44	5.0	2.0	39	1.7	.93
14	8.0	1.8	5.8	16	4.0	4.0	123	8.0	1.8	16	1.6	.49
15	3.6	1.8	5.9	15	3.8	6.2	40	3.5	1.6	8.5	1.7	.47
16	2.5	1.9	6.8	8.7	3.7	7.8	21	3.1	1.4	6.2	2.0	.70
17	2.2	1.8	6.5	7.3	3.5	6.0	16	2.5	1.3	5.0	4.0	5.5
18	2.0	1.8	5.6	7.8	4.0	5.6	11	2.6	1.3	3.8	1.2	1.1
19	1.9	1.5	5.1	13	3.8	5.2	9.3	2.7	1.2	2.9	1.2	.74
20	1.8	1.9	5.2	7.0	3.8	5.0	8.4	2.6	2.2	2.6	1.1	.56
21	1.7	1.6	5.1	5.0	5.1	4.7	8.3	2.3	11	2.9	1.1	.48
22	1.6	1.6	4.9	4.1	4.8	4.5	9.5	2.0	5.0	2.9	1.0	.42
23	1.6	2.1	4.8	3.8	4.2	4.3	9.9	1.8	2.3	2.4	1.0	.38
24	2.6	1.8	16	3.6	3.9	8.0	9.5	1.7	1.9	2.0	.97	.36
25	39	4.8	14	3.5	3.8	12	8.6	1.6	1.7	1.9	.90	.36
26	7.8	52	8.1	3.6	4.0	7.9	7.6	1.8	1.5	1.8	1.3	.35
27	3.5	17	7.4	3.7	6.2	7.3	6.6	1.7	1.4	1.9	1.4	.35
28	2.3	11	6.8	3.8	61	7.0	6.2	1.6	1.3	2.6	1.0	.34
29	2.1	9.0	6.4	4.0	---	7.6	6.6	1.5	1.2	2.2	.83	3.0
30	2.0	7.9	6.1	4.3	---	14	6.0	4.0	1.2	2.6	.75	1.2
31	1.9	---	5.8	4.8	---	9.3	---	12	---	2.2	.72	---
TOTAL	242.4	154.6	351.1	195.6	189.6	239.6	454.7	109.0	66.2	366.3	49.87	24.46
MEAN	7.82	5.15	11.3	6.31	6.77	7.73	15.2	3.52	2.21	11.8	1.61	.82
MAX	74	52	67	16	61	45	123	12	11	63	4.0	5.5
MIN	1.6	1.5	4.8	3.5	3.5	4.0	3.9	1.5	1.2	1.8	.72	.34
CFSM	.85	.56	1.23	.69	.74	.84	1.66	.38	.24	1.29	.18	.09
IN.	.98	.63	1.43	.79	.77	.97	1.85	.44	.27	1.49	.20	.10

CAL YR 1986	TOTAL	4408.8	MEAN	12.1	MAX	219	MIN	1.2	CFSM	1.32	IN.	17.90
WTR YR 1987	TOTAL	2443.43	MEAN	6.69	MAX	123	MIN	.34	CFSM	.73	IN.	9.92

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 7.2 mi 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: Oct. 20-24, Dec. 14, 15, and Jan. 22 to Feb. 1. Records good except for estimated daily discharges, which are fair. Flow affected by U.S. Soil Conservation Service floodwater-retarding structures and surface-mined areas.

AVERAGE DISCHARGE.--44 years, 229 ft^3/s, 13.64 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)
Apr. 16	0100	*1,250	*11.05

Minimum daily discharge, 2.7 ft^3/s Sept. 26, 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	110	49	289	81	101	1080	119	81	50	245	24	4.9
2	118	45	950	78	165	937	110	73	35	257	19	4.8
3	68	41	741	72	185	551	96	68	86	123	15	4.6
4	510	39	383	69	158	318	85	102	53	85	14	4.5
5	361	37	287	66	136	242	78	76	38	426	15	4.2
6	158	38	231	66	127	199	73	64	29	280	13	4.0
7	95	38	201	63	122	166	71	54	25	649	11	4.0
8	67	35	185	57	117	148	68	46	23	394	9.2	4.0
9	51	33	304	58	98	133	63	41	20	253	8.9	4.2
10	43	29	311	63	87	118	59	38	19	260	8.8	4.7
11	36	28	181	82	86	113	77	35	18	200	7.8	4.5
12	37	28	138	76	85	103	282	42	18	146	7.2	4.3
13	68	26	98	79	80	91	362	64	37	436	6.9	4.5
14	109	21	81	159	77	88	950	62	26	500	6.7	4.2
15	67	26	74	457	73	87	1180	55	23	294	7.9	3.7
16	49	25	80	418	68	122	1130	43	23	233	8.2	3.6
17	40	25	86	245	68	112	779	39	21	154	7.5	4.4
18	33	25	102	189	65	97	498	39	19	117	8.3	8.0
19	28	24	88	236	72	92	339	41	18	94	6.3	5.2
20	26	22	79	327	70	85	255	40	21	72	4.9	4.3
21	24	23	71	221	75	82	204	33	22	59	4.7	3.7
22	22	22	62	132	87	74	178	30	60	54	4.6	3.3
23	21	23	58	101	85	68	189	27	51	53	4.8	3.3
24	20	28	111	83	76	80	169	25	30	47	4.7	2.9
25	229	29	234	71	71	302	141	24	25	41	4.4	2.9
26	331	360	190	62	70	238	120	29	23	36	5.5	2.7
27	178	372	142	67	73	156	106	26	21	43	6.0	2.7
28	117	207	124	66	310	128	96	24	18	66	5.2	3.0
29	86	141	106	65	---	112	104	22	16	63	5.1	5.5
30	68	110	99	70	---	153	92	106	16	42	5.1	9.1
31	56	---	88	78	---	149	---	176	---	30	5.0	---
TOTAL	3226	1949	6174	3957	2887	6424	8073	1625	884	5752	264.7	129.7
MEAN	104	65.0	199	128	103	207	269	52.4	29.5	186	8.54	4.32
MAX	510	372	950	457	310	1080	1180	176	86	649	24	9.1
MIN	20	21	58	57	65	68	59	22	16	30	4.4	2.7
CFSM	.46	.29	.87	.56	.45	.91	1.18	.23	.13	.82	.04	.02
IN.	.53	.32	1.01	.65	.47	1.05	1.32	.27	.14	.94	.04	.02

CAL YR 1986	TOTAL	63476.4	MEAN	174	MAX	2050	MIN	3.9	CFSM	.76	IN.	10.36
WTR YR 1987	TOTAL	41345.4	MEAN	113	MAX	1180	MIN	2.7	CFSM	.50	IN.	6.75

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.--No estimated daily discharges. Records good. Flow partially regulated by upstream reservoirs.

AVERAGE DISCHARGE.--58 years, 12,052 ft^3/s, 11.94 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, 23,300 ft^3/s July 8, gage height, 13.04 ft; minimum daily, 2,380 ft^3/s Aug. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5660	7840	11800	6800	6580	10100	5330	7230	7740	4950	4660	8530
2	7270	8100	15200	6680	7410	11300	5260	6860	7440	10200	4570	7080
3	9580	7900	15800	6380	8130	11300	5120	6540	7710	13600	6200	5900
4	12400	7420	14500	6200	9190	12000	4980	6510	13400	11900	6280	5010
5	16600	7060	13300	6080	10600	14600	4990	6220	17300	11000	5980	4410
6	16900	6820	12900	5960	12300	15700	5020	5880	15700	11800	5640	4020
7	15500	6710	13200	5900	14700	14600	4920	5510	13400	19400	4980	3660
8	14700	6560	13000	5760	17200	12600	4890	5270	12400	23000	4420	3380
9	14500	6200	12200	5650	17800	11300	4780	5230	12100	18800	4020	3130
10	14500	5900	11300	5760	17500	10800	4650	5120	11100	14100	3610	3010
11	14000	6030	10300	5740	16700	10500	4630	5020	9550	11900	3370	2900
12	13000	6040	10100	5660	15600	9810	4750	4910	8180	9730	3250	2850
13	11800	5880	10800	5770	13800	8890	5130	4900	7880	8640	3280	2850
14	10400	5630	11500	5840	12700	8110	7310	4970	7700	8550	3380	2740
15	9010	5480	11100	6400	13400	7560	10800	5200	7940	7510	3310	2620
16	8140	5650	10100	7640	14100	7330	12500	5190	7330	7390	3090	2600
17	7380	5640	9370	8010	13700	7120	14600	5010	6680	6690	2930	2670
18	7190	5520	8790	8530	12100	6980	15800	4880	6400	6290	2780	2610
19	7230	5330	8180	10100	10300	6790	16900	4810	5940	6150	2730	2570
20	7110	5360	7780	11900	9140	6430	16500	4900	5360	6300	2680	2590
21	6820	5100	7410	11300	8530	6290	14800	5790	5070	6030	2630	2660
22	6650	4960	7020	9260	8350	6220	12900	9970	6470	5430	2550	2770
23	6270	5180	6790	7710	8290	6140	11400	13800	6830	4830	2450	2800
24	5950	5120	6730	6990	7980	6060	10400	13600	6990	4360	2400	2750
25	6090	5500	6820	7080	7700	6080	9970	12200	6400	4030	2390	2690
26	6830	7300	6850	6630	7280	6130	9770	11500	5810	3760	2420	2740
27	6820	8370	6840	6040	6980	6030	9350	10900	5600	3500	2450	2840
28	6790	8240	6760	5180	7400	5830	8680	9570	5660	3610	2380	2920
29	6930	8270	6700	4810	---	5690	8170	8470	5260	3790	2660	2970
30	6980	9770	6730	4910	---	5650	7700	8020	4710	3470	5800	3000
31	7250	---	6780	5460	---	5580	---	8060	---	3880	9050	---
TOTAL	296250	194880	306650	212130	315460	269520	262000	222040	250050	264590	118340	103270
MEAN	9556	6496	9892	6843	11270	8694	8733	7163	8335	8535	3817	3442
MAX	16900	9770	15800	11900	17800	15700	16900	13800	17300	23000	9050	8530
MIN	5660	4960	6700	4810	6580	5580	4630	4810	4710	3470	2380	2570
CFSM	.70	.47	.72	.50	.82	.63	.64	.52	.61	.62	.28	.25
IN.	.80	.53	.83	.58	.86	.73	.71	.60	.68	.72	.32	.28

CAL YR 1986	TOTAL	4485790	MEAN	12290	MAX	36500	MIN	2350	CFSM	.90	IN.	12.18
WTR YR 1987	TOTAL	2815180	MEAN	7713	MAX	23000	MIN	2380	CFSM	.56	IN.	7.64

03345500 EMBARRAS RIVER AT STE. MARIE, IL

LOCATION.--Lat 38°56'10", long 88°01'10", in NW¼NW¼ sec.30, T.6 N., R.14 W., Jasper County, Hydrologic Unit 05120112, on right bank at upstream side of highway bridge at Ste. Marie and at mile 48.2.

DRAINAGE AREA.--1,516 mi^2.

PERIOD OF RECORD.--October 1909 to December 1912, August 1914 to current year.

REVISED RECORDS.--WSP 1083: 1934. WSP 1113: 1910-31, 1933, 1939-40, 1945(M). WDR IL-75-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 445.75 ft above National Geodetic Vertical Datum of 1929. (levels by U.S. Army Corps of Engineers). Prior to June 29, 1940, nonrecording gage and June 29, 1940, to Jan. 24, 1967, water-stage recorder at same site at datum 1.00 ft higher.

REMARKS.--Estimated daily discharges: Jan. 24 to Feb. 2. Records good except for estimated daily discharges, which are fair.

AVERAGE DISCHARGE.--76 years, 1,229 ft^3/s, 11.01 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 44,800 ft^3/s Jan. 4, 1950, gage height, 25.95 ft, present datum, from rating curve extended above 29,000 ft^3/s; maximum gage height, 26.54 ft, present datum, June 30, 1957; minimum discharge, 1 ft^3/s Oct. 5-9, 1914.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)
July 2	0415	*5,460	*14.25

Minimum daily discharge, 30 ft^3/s Sept. 27, 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	100	375	829	312	700	1480	287	602	234	2100	305	45
2	1040	324	2210	307	1300	1380	277	571	193	4400	314	48
3	614	286	1900	306	2100	875	266	586	194	1130	290	69
4	1970	258	1550	299	2010	720	255	924	229	423	320	66
5	4910	243	1440	287	1990	643	249	587	707	390	305	58
6	3120	238	1280	278	1790	578	241	608	1400	652	252	51
7	1130	233	1080	272	1770	537	233	646	1380	2010	200	47
8	777	229	892	282	1690	511	224	552	1080	3330	167	45
9	588	225	814	325	1560	494	221	480	716	2600	158	43
10	457	216	868	310	1440	470	219	435	541	2070	140	41
11	373	209	753	296	1350	451	227	396	444	1580	125	40
12	323	198	667	320	1240	433	262	370	380	1370	121	38
13	283	193	632	312	1100	408	319	352	345	1880	112	36
14	254	185	589	325	978	386	1750	346	636	1170	102	34
15	233	177	534	1250	891	379	3040	331	342	888	94	33
16	210	169	493	1990	828	397	3160	318	317	782	88	35
17	190	163	480	1540	755	437	2490	292	302	748	80	37
18	170	160	459	1310	687	415	2090	305	268	626	72	36
19	153	158	431	1350	640	392	1810	285	280	533	69	35
20	139	160	409	1290	615	376	1510	304	753	453	64	36
21	127	174	388	1120	584	362	1250	413	528	385	62	42
22	117	158	365	969	562	350	1070	269	357	332	58	36
23	108	151	343	772	540	337	963	250	528	292	55	32
24	105	146	345	700	523	329	919	231	398	258	53	31
25	242	142	561	660	502	328	927	213	330	225	53	31
26	744	338	546	620	473	331	896	197	270	204	56	31
27	728	718	450	600	462	331	832	182	221	207	54	30
28	609	610	390	580	553	321	759	172	189	186	53	30
29	580	643	354	560	---	314	701	165	167	194	50	53
30	507	682	331	540	---	305	647	172	152	345	50	47
31	435	---	317	540	---	292	---	211	---	281	48	---
TOTAL	21336	8161	22700	20622	29633	15362	28094	11765	13881	32044	3970	1236
MEAN	688	272	732	665	1058	496	936	380	463	1034	128	41.2
MAX	4910	718	2210	1990	2100	1480	3160	924	1400	4400	320	69
MIN	100	142	317	272	462	292	219	165	152	186	48	30
CFSM	.45	.18	.48	.44	.70	.33	.62	.25	.31	.68	.08	.03
IN.	.52	.20	.56	.51	.73	.38	.69	.29	.34	.79	.10	.03

CAL YR 1986	TOTAL	255089	MEAN	699	MAX	5880	MIN	45	CFSM	.46	IN. 6.26
WTR YR 1987	TOTAL	208804	MEAN	572	MAX	4910	MIN	30	CFSM	.38	IN. 5.12

03346000 NORTH FORK EMBARRAS RIVER NEAR OBLONG, IL

LOCATION.--Lat 39°00'37", long 87°56'47", in NW¼NW¼ sec.35, T.7 N., R.14 W., Crawford County, Hydrologic Unit 05120112, on left bank at downstream side of bridge on State Highway 33, 0.8 mi upstream from Illinois Central Gulf Railroad bridge, 2 mi west of Oblong, and at mile 10.5.

DRAINAGE AREA.--318 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 456.19 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 11, 1940, nonrecording gage and Dec. 11, 1940, to Sept. 30, 1964, water-stage recorder at same site at datum 2.00 ft higher. Oct. 8, 1971, to May 15, 1979, water-stage recorder at site 0.8 mi downstream at present datum.

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

AVERAGE DISCHARGE.--47 years, 260 ft^3/s, 11.10 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 27,100 ft^3/s Jan. 4, 1950, gage height, 24.38 ft, present datum, from rating curve extended above 16,000 ft^3/s; no flow for many days in 1953-54, 1964.

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)
July 2	1945	*3,090	*16.58

Minimum daily discharge, 0.93 ft^3/s Sept. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.9	45	116	47	101	539	34	41	28	744	23	2.6
2	484	36	909	45	188	549	32	39	18	2470	20	2.2
3	153	33	861	45	359	211	30	76	62	1860	17	2.1
4	617	30	332	45	364	116	28	232	51	158	15	1.9
5	1590	32	170	43	243	85	27	50	28	210	13	1.9
6	1280	35	114	45	207	74	26	37	15	342	12	1.9
7	248	39	89	53	171	67	25	32	11	1040	11	1.9
8	120	39	82	57	169	60	26	30	8.9	1370	9.8	1.8
9	83	34	97	52	144	55	25	28	7.7	406	9.7	1.7
10	63	28	242	44	103	50	25	26	6.9	218	9.8	1.7
11	52	26	172	47	85	44	26	25	6.1	181	8.9	1.9
12	45	24	91	54	77	40	44	41	5.8	118	8.2	2.0
13	41	23	61	52	73	38	97	35	245	310	7.7	2.1
14	38	22	54	71	65	37	779	27	633	303	7.2	3.1
15	34	22	50	642	59	37	1300	25	122	171	6.9	1.3
16	30	21	48	1290	57	43	825	25	35	134	6.8	1.4
17	27	21	49	587	52	56	470	20	22	199	6.4	1.5
18	25	21	51	256	47	53	249	20	15	88	6.2	2.3
19	23	24	52	238	44	45	167	112	12	57	5.6	2.2
20	21	23	47	259	47	43	128	94	66	43	5.1	1.9
21	20	21	41	172	48	41	104	35	40	36	4.7	1.4
22	19	20	38	166	56	37	87	23	28	31	4.6	.93
23	18	19	35	133	62	36	97	18	110	28	4.2	1.1
24	19	19	41	107	57	35	99	15	26	25	3.9	1.4
25	94	20	138	83	50	37	78	20	13	23	4.1	1.3
26	513	72	184	63	46	46	65	17	8.6	20	4.0	1.1
27	283	388	108	54	46	46	58	15	6.6	20	3.6	1.0
28	146	248	73	49	103	40	53	14	5.7	22	3.5	1.1
29	94	121	57	48	---	37	49	12	5.6	64	3.3	2.8
30	69	82	51	56	---	36	44	20	4.8	36	3.2	3.8
31	54	---	49	72	---	34	---	40	---	30	3.1	---
TOTAL	6307.9	1588	4502	4975	3123	2667	5097	1244	1646.7	10757	251.5	55.33
MEAN	203	52.9	145	160	112	86.0	170	40.1	54.9	347	8.11	1.84
MAX	1590	388	909	1290	364	549	1300	232	633	2470	23	3.8
MIN	4.9	19	35	43	44	34	25	12	4.8	20	3.1	.93
CFSM	.64	.17	.46	.50	.35	.27	.53	.13	.17	1.09	.03	.01
IN.	.74	.19	.53	.58	.37	.31	.60	.15	.19	1.26	.03	.01

CAL YR 1986	TOTAL	55624.5	MEAN	152	MAX	3350	MIN	2.1	CFSM	.48	IN.	6.51
WTR YR 1987	TOTAL	42214.43	MEAN	116	MAX	2470	MIN	.93	CFSM	.36	IN.	4.94

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: Jan. 21-30 and Feb. 16-18. Records good except for discharge above 2,000 ft^3/s, which are poor. 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.--56 years (1931 to current year), 210 ft^3/s, 11.83 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)
Oct. 5	0900	3,550	8.55	July 2	1300	2,590	7.69
June 3	2100	*8,540	*11.91				

Minimum daily discharge, 11 ft^3/s Sept. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	437	71	152	97	198	396	187	73	226	520	59	18
2	1090	69	571	97	310	462	160	70	272	2360	59	18
3	1080	65	696	95	478	303	137	67	4980	1430	82	17
4	2200	67	450	88	348	214	118	63	4650	585	91	15
5	2980	73	289	83	267	195	107	57	945	317	60	15
6	1250	75	219	84	233	186	101	55	423	243	50	14
7	562	72	188	83	225	168	98	54	299	208	39	14
8	335	70	175	81	222	160	95	54	226	160	35	12
9	243	70	230	80	181	150	90	51	180	128	49	11
10	197	66	394	85	167	135	85	46	149	113	39	21
11	174	65	284	82	152	124	85	41	126	114	33	25
12	157	69	210	77	144	118	83	51	145	259	32	27
13	155	67	165	71	134	110	79	51	153	585	26	26
14	202	61	144	88	113	92	92	44	123	1170	23	26
15	195	62	133	234	103	91	391	45	136	605	20	24
16	129	66	119	229	98	86	605	35	285	342	18	26
17	105	65	117	174	94	80	478	33	214	241	15	28
18	92	65	120	147	90	77	322	49	129	178	16	29
19	81	67	116	162	89	90	229	82	192	141	15	33
20	72	72	100	177	86	92	172	91	170	113	17	33
21	69	97	94	160	86	86	140	261	182	89	17	26
22	65	107	87	130	87	82	124	907	138	76	17	24
23	63	104	84	120	88	78	125	511	130	68	18	23
24	60	95	97	100	82	78	127	249	96	62	17	26
25	64	88	162	90	76	79	108	174	78	55	20	27
26	98	432	171	80	75	80	96	663	71	54	35	26
27	127	667	141	80	74	76	84	359	65	69	45	27
28	121	399	122	90	101	74	80	195	59	74	48	25
29	102	255	111	100	---	74	77	123	63	72	39	23
30	89	186	105	113	---	105	73	100	77	72	31	23
31	79	---	101	165	---	169	---	164	---	59	24	---
TOTAL	12673	3787	6147	3542	4401	4310	4748	4818	14982	10562	1089	682
MEAN	409	126	198	114	157	139	158	155	499	341	35.1	22.7
MAX	2980	667	696	234	478	462	605	907	4980	2360	91	33
MIN	60	61	84	71	74	74	73	33	59	54	15	11
CFSM	1.70	.52	.82	.47	.65	.58	.66	.64	2.07	1.41	.15	.09
IN.	1.96	.58	.95	.55	.68	.67	.73	.74	2.31	1.63	.17	.11

CAL YR 1986	TOTAL	107929	MEAN	296	MAX	2980	MIN	25	CFSM	1.23	IN.	16.66
WTR YR 1987	TOTAL	71741	MEAN	197	MAX	4980	MIN	11	CFSM	.82	IN.	11.07

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: Jan. 23-28, Feb. 16, July 27 to Aug. 24, Aug. 28 to Sept. 2, and Sept. 13-30. Records good.

AVERAGE DISCHARGE.--33 years, 36.2 ft^3/s, 13.85 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)
Oct. 4	1400	518	8.54	July 1	2200	*606	*9.17
June 3	0400	451	8.01				

Minimum daily discharge, 8 ft^3/s Sept. 27, 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	138	24	30	23	33	70	36	21	29	193	19	9.8
2	84	23	65	23	46	47	35	21	42	261	20	9.6
3	121	23	53	22	54	35	31	20	221	78	29	9.5
4	437	25	41	23	40	30	28	19	61	43	22	8.8
5	144	25	35	23	36	29	28	20	38	32	19	9.0
6	77	24	32	22	33	27	26	20	31	32	17	9.5
7	57	24	31	23	32	26	26	21	28	28	15	9.3
8	47	23	30	22	31	25	25	20	25	24	14	10
9	41	23	38	22	28	25	24	20	24	22	14	13
10	35	21	44	22	27	24	24	20	22	21	14	12
11	33	22	34	21	26	24	24	20	21	20	13	10
12	31	22	31	20	26	23	23	25	22	20	13	10
13	33	21	27	20	25	23	22	20	20	30	13	9.5
14	40	20	26	25	25	22	26	21	19	32	12	9.0
15	33	21	26	45	23	22	73	20	19	22	12	9.5
16	31	21	26	36	22	22	49	19	19	20	12	10
17	29	20	26	30	22	22	41	19	16	20	11	9.8
18	27	20	27	28	21	22	35	20	15	20	11	9.5
19	25	20	25	34	21	28	31	22	16	19	10	9.2
20	24	21	23	33	21	25	29	19	17	19	10	8.8
21	24	23	23	29	20	24	28	25	15	19	10	8.5
22	24	21	22	28	20	23	27	38	15	18	10	8.8
23	24	21	22	25	20	23	28	21	14	17	10	9.2
24	24	20	25	23	20	23	24	18	13	17	10	9.4
25	28	19	28	20	20	23	23	24	12	17	11	9.0
26	34	83	26	19	20	22	21	38	11	18	12	8.5
27	31	52	24	19	20	22	23	25	11	20	12	8.0
28	28	39	24	20	26	22	21	21	11	18	11	8.0
29	27	34	23	21	---	22	21	20	11	17	10	8.6
30	26	31	23	25	---	31	21	40	23	24	10	9.0
31	24	---	23	26	---	33	---	76	---	19	10	---
TOTAL	1781	786	933	772	758	839	873	753	841	1160	416	282.8
MEAN	57.5	26.2	30.1	24.9	27.1	27.1	29.1	24.3	28.0	37.4	13.4	9.43
MAX	437	83	65	45	54	70	73	76	221	261	29	13
MIN	24	19	22	19	20	22	21	18	11	17	10	8.0
CFSM	1.62	.74	.85	.70	.76	.76	.82	.68	.79	1.05	.38	.27
IN.	1.87	.82	.98	.81	.79	.88	.91	.79	.88	1.22	.44	.30

CAL YR 1986	TOTAL	15163	MEAN	41.5	MAX	437	MIN	14	CFSM	1.17	IN.	15.89
WTR YR 1987	TOTAL	10194.8	MEAN	27.9	MAX	437	MIN	8.0	CFSM	.79	IN.	10.68

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: Jan. 20-31 and Feb. 17-19. Records good. Prior to Sept. 15, 1973, the City of Anderson diverted water for its municipal supply above the gage then in use.

AVERAGE DISCHARGE.--57 years, 385 ft^3/s, 12.88 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)
Oct. 5	2000	4,740	9.52	July 2	1300	3,800	8.70
June 4	1500	*8,860	*12.76				

Minimum daily discharge, 79 ft^3/s Sept. 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	462	188	293	211	374	515	306	201	332	542	194	95
2	1310	181	531	209	410	733	308	189	383	3320	210	87
3	1190	176	914	208	604	535	276	184	2390	2400	389	86
4	2800	184	668	202	556	383	254	178	7340	1080	297	87
5	4060	186	462	196	434	338	237	170	2650	598	232	85
6	2210	188	367	196	378	328	228	163	697	483	197	82
7	941	188	322	196	361	305	216	163	517	422	177	79
8	592	183	302	198	351	288	206	165	417	353	160	83
9	437	179	337	196	321	279	203	160	353	289	194	82
10	359	175	540	203	280	257	196	154	298	264	171	80
11	308	173	467	201	266	235	196	150	263	249	143	88
12	290	174	369	187	258	226	193	186	298	300	132	93
13	292	172	298	176	249	223	187	162	297	784	127	94
14	322	169	316	180	231	209	199	152	261	1190	120	91
15	361	167	260	328	220	201	469	156	237	979	111	94
16	269	167	245	431	189	197	847	140	389	565	106	91
17	232	167	239	335	200	189	755	132	380	421	100	94
18	209	167	241	291	195	183	561	145	261	336	98	93
19	197	168	240	299	190	222	429	211	301	284	97	92
20	187	169	221	319	190	215	345	209	582	245	93	90
21	181	196	208	260	180	205	300	267	348	223	93	91
22	172	198	200	215	180	194	282	825	329	203	96	92
23	166	199	196	200	180	184	290	714	275	197	93	90
24	165	198	211	185	176	180	278	437	237	190	90	85
25	173	194	253	180	171	190	251	328	202	178	101	85
26	201	421	286	180	169	181	234	656	184	174	153	84
27	236	916	267	180	167	176	223	589	171	188	154	81
28	242	611	245	210	182	176	214	386	159	197	135	82
29	225	431	230	240	---	174	209	285	163	197	122	86
30	208	340	227	270	---	237	208	244	238	257	107	88
31	197	---	223	310	---	274	---	327	---	213	102	---
TOTAL	19194	7225	10178	7192	7662	8232	9100	8428	20952	17321	4594	2630
MEAN	619	241	328	232	274	266	303	272	698	559	148	87.7
MAX	4060	916	914	431	604	733	847	825	7340	3320	389	95
MIN	165	167	196	176	167	174	187	132	159	174	90	79
CFSM	1.52	.59	.81	.57	.67	.66	.75	.67	1.72	1.38	.36	.22
IN.	1.76	.66	.93	.66	.70	.75	.83	.77	1.92	1.59	.42	.24

CAL YR 1986	TOTAL	191405	MEAN	524	MAX	4110	MIN	101	CFSM	1.29	IN.	17.54
WTR YR 1987	TOTAL	122708	MEAN	336	MAX	7340	MIN	79	CFSM	.83	IN.	11.24

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: Jan. 22-26 and Feb. 17, 18. Records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--19 years, 24.9 ft^3/s, 13.26 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)
June 20	2400	*248	9.39

Minimum daily discharge, 1.9 ft^3/s Sept. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47	7.3	16	13	28	82	19	8.9	12	14	6.4	3.7
2	67	6.8	53	13	52	67	16	9.0	15	80	6.7	3.5
3	50	7.0	52	13	69	42	13	8.5	89	42	7.8	3.2
4	73	8.3	34	12	50	29	12	7.8	45	24	6.8	3.2
5	48	9.5	22	13	41	24	11	7.4	26	17	5.8	3.1
6	26	9.6	18	13	34	22	10	7.4	18	15	5.1	3.0
7	17	9.3	16	13	33	19	10	7.0	15	13	4.6	2.7
8	13	8.9	16	12	32	18	9.7	6.7	13	11	4.4	2.7
9	11	8.5	32	12	23	16	9.1	6.4	12	9.6	6.1	2.6
10	9.1	7.5	54	13	20	14	8.7	6.4	10	9.7	7.0	2.5
11	8.5	7.7	30	12	18	13	9.0	7.0	9.8	8.6	5.4	2.8
12	8.3	7.5	21	11	18	12	8.7	8.3	12	7.9	4.8	2.9
13	9.4	6.7	16	10	16	11	7.9	8.0	15	24	4.6	2.7
14	15	6.3	14	14	16	11	8.6	6.8	10	37	4.4	2.7
15	14	6.8	14	69	14	11	54	6.3	9.5	19	4.2	2.4
16	10	7.3	13	44	12	10	48	6.0	36	15	3.9	2.4
17	9.2	6.5	13	27	11	9.5	40	5.8	16	12	3.8	2.5
18	8.1	6.3	14	21	11	9.7	27	6.2	11	9.7	3.6	2.6
19	7.5	6.1	14	20	11	11	21	14	12	8.6	3.4	2.7
20	7.1	6.8	12	18	10	12	17	13	199	7.7	3.3	2.5
21	7.0	11	12	16	10	10	15	58	119	7.0	3.2	2.4
22	7.4	10	11	14	11	9.8	15	126	40	6.6	3.3	2.3
23	7.8	9.4	11	13	11	9.1	17	58	26	7.1	3.4	2.5
24	7.7	8.3	13	12	9.7	9.0	14	35	18	5.4	3.2	2.1
25	9.4	7.3	28	11	9.5	9.7	12	26	15	5.3	3.1	2.4
26	24	63	23	11	9.2	9.1	11	36	13	5.3	4.0	2.0
27	18	58	17	11	9.2	8.3	11	29	11	6.2	7.7	1.9
28	12	35	15	12	12	8.1	10	20	9.9	6.0	8.0	2.0
29	10	25	14	12	---	7.8	10	16	8.8	5.7	5.2	2.4
30	9.0	19	14	16	---	18	9.6	15	11	9.9	4.2	3.1
31	7.8	---	12	18	---	23	---	13	---	7.7	3.9	---
TOTAL	578.3	396.7	644	519	600.6	565.1	484.3	588.9	857.0	457.0	151.3	79.5
MEAN	18.7	13.2	20.8	16.7	21.4	18.2	16.1	19.0	28.6	14.7	4.88	2.65
MAX	73	63	54	69	69	82	54	126	199	80	8.0	3.7
MIN	7.0	6.1	11	10	9.2	7.8	7.9	5.8	8.8	5.3	3.1	1.9
CFSM	.73	.52	.82	.65	.84	.71	.63	.75	1.12	.58	.19	.10
IN.	.84	.58	.94	.76	.88	.82	.71	.86	1.25	.67	.22	.12

CAL YR 1986	TOTAL	8816.4	MEAN	24.2	MAX	352	MIN	1.5	CFSM	.95	IN.	12.86
WTR YR 1987	TOTAL	5921.7	MEAN	16.2	MAX	199	MIN	1.9	CFSM	.64	IN.	8.64

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. 14, Jan. 20 to Feb. 1, Feb. 16-19, and Sept. 3-20. Records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--19 years, 102 ft^3/s, 12.26 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,340 ft^3/s June 3, 1980, gage height, 14.78 ft; minimum daily, 3.6 ft^3/s Oct. 3, 1983.

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)
Oct. 2	0200	*419	*6.23

Minimum daily discharge, 5.7 ft^3/s Sept. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	160	41	60	51	80	315	75	38	24	19	16	10
2	316	38	209	53	127	307	59	36	30	33	20	9.2
3	167	36	206	52	217	173	47	36	119	25	17	8.7
4	196	41	123	49	159	116	42	35	94	43	15	8.4
5	160	43	85	51	137	98	40	31	52	24	13	8.0
6	98	43	68	54	114	87	38	32	37	21	12	7.7
7	72	39	61	58	117	76	37	29	30	19	11	7.4
8	59	37	61	54	123	70	35	29	26	16	9.8	7.1
9	50	36	100	51	93	66	34	28	23	14	17	7.0
10	43	33	209	54	78	53	32	27	21	13	14	7.1
11	38	32	125	50	71	46	34	26	19	12	12	7.4
12	37	32	94	43	70	43	34	30	38	12	11	7.6
13	41	30	71	40	65	40	31	27	33	14	9.8	7.5
14	80	28	60	45	62	40	32	25	24	21	9.4	7.2
15	77	27	58	223	57	39	108	24	21	16	9.0	6.7
16	59	29	54	202	51	37	143	21	39	14	8.6	6.6
17	48	29	53	121	46	34	126	20	21	13	8.3	7.0
18	40	27	56	97	43	34	97	23	17	12	8.3	7.3
19	36	27	56	90	41	43	77	32	18	11	8.2	7.1
20	35	28	52	74	39	41	66	32	58	11	7.9	6.9
21	32	31	47	62	39	38	60	27	29	9.9	8.2	6.7
22	30	33	44	56	40	35	56	152	22	9.7	8.7	6.6
23	30	33	43	51	41	33	59	115	18	9.3	8.2	6.6
24	32	32	50	47	39	33	63	63	16	9.0	7.8	6.5
25	35	29	89	43	37	35	51	44	14	8.9	9.0	6.1
26	78	160	89	42	36	33	46	38	14	9.6	18	5.9
27	106	229	72	43	36	31	43	35	12	15	21	5.9
28	81	124	63	46	46	30	42	29	12	12	21	5.7
29	63	89	59	47	---	29	40	25	11	10	16	5.9
30	52	69	58	54	---	70	40	25	14	28	12	6.8
31	44	---	52	52	---	104	---	28	---	21	12	---
TOTAL	2395	1505	2527	2055	2104	2229	1687	1162	906	505.4	379.2	214.6
MEAN	77.3	50.2	81.5	66.3	75.1	71.9	56.2	37.5	30.2	16.3	12.2	7.15
MAX	316	229	209	223	217	315	143	152	119	43	21	10
MIN	30	27	43	40	36	29	31	20	11	8.9	7.8	5.7
CFSM	.68	.44	.72	.59	.66	.64	.50	.33	.27	.14	.11	.06
IN.	.79	.50	.83	.68	.69	.73	.56	.38	.30	.17	.12	.07

CAL YR 1986	TOTAL	35773.0	MEAN	98.0	MAX	1100	MIN	9.0	CFSM	.87	IN.	11.78
WTR YR 1987	TOTAL	17669.2	MEAN	48.4	MAX	316	MIN	5.7	CFSM	.43	IN.	5.82

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: Jan. 10-12, 20-26, and Feb. 18-19. Records good. Flow slightly regulated by powerplant above station.

AVERAGE DISCHARGE.--41 years, 836 ft^3/s, 13.23 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)
June 5	1100	*6,050	*12.08

Minimum daily discharge, 119 ft^3/s Sept. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	616	344	649	438	581	1110	638	366	534	453	288	170
2	1840	321	898	432	747	2020	604	357	550	1970	331	164
3	2040	308	1730	432	1190	1510	550	344	1930	3230	330	156
4	2620	320	1490	415	1340	1000	481	318	4350	1940	522	153
5	3890	335	1030	405	1060	798	438	300	5080	1030	366	152
6	3550	344	795	416	908	734	419	289	1360	734	283	147
7	1750	340	690	426	844	675	404	283	838	637	243	144
8	1040	340	639	424	849	624	389	273	656	522	220	140
9	733	316	679	416	790	595	374	266	538	433	225	141
10	582	303	1080	410	688	538	363	255	450	372	277	139
11	494	299	1150	400	630	485	370	247	397	344	238	140
12	453	301	869	390	592	454	366	276	401	319	213	143
13	459	293	702	376	555	434	355	291	500	707	200	141
14	505	286	579	373	525	423	373	266	420	1430	195	141
15	576	278	536	642	474	399	606	276	360	1670	186	139
16	539	274	509	1360	405	387	1280	263	427	952	176	139
17	434	275	481	998	412	369	1370	236	560	671	171	140
18	387	276	483	792	410	358	1080	233	432	509	164	140
19	351	270	481	730	385	406	829	324	346	417	163	138
20	327	276	460	650	377	439	690	456	830	362	161	135
21	315	288	419	540	370	410	604	364	782	328	160	132
22	300	303	396	470	367	381	547	675	620	295	163	132
23	290	318	386	400	365	361	556	1490	427	267	165	131
24	284	314	411	350	362	357	539	834	370	253	156	129
25	305	306	575	320	350	366	486	553	312	241	159	126
26	378	500	681	340	335	365	433	522	282	232	217	124
27	511	1650	641	392	332	351	412	945	256	267	254	119
28	543	1440	560	362	358	341	402	623	236	255	242	120
29	466	980	504	345	---	329	391	460	228	257	212	124
30	407	758	486	406	---	426	381	388	293	337	192	127
31	370	---	465	525	---	597	---	351	---	346	176	---
TOTAL	27355	12956	21454	15375	16601	18042	16730	13124	24765	21780	7048	4166
MEAN	882	432	692	496	593	582	558	423	826	703	227	139
MAX	3890	1650	1730	1360	1340	2020	1370	1490	5080	3230	522	170
MIN	284	270	386	320	332	329	355	233	228	232	156	119
CFSM	1.03	.50	.81	.58	.69	.68	.65	.49	.96	.82	.26	.16
IN.	1.19	.56	.93	.67	.72	.78	.73	.57	1.07	.94	.31	.18

CAL YR 1986	TOTAL	342593	MEAN	939	MAX	6800	MIN	152	CFSM	1.09	IN.	14.85
WTR YR 1987	TOTAL	199396	MEAN	546	MAX	5080	MIN	119	CFSM	.64	IN.	8.65

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. 11-13, Jan. 21-31, Feb. 17-19, and Sept. 8-30. Records good except for estimated daily discharges, which are poor. Flow regulated by Morse Reservoir.

AVERAGE DISCHARGE.--32 years (1951-80, 1986 to current year), 194 ft^3/s, 12.20 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, 675 ft^3/s June 3, gage height, 6.90 ft; minimum daily, 1.1 ft^3/s Sept. 25-29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	81	28	62	64	78	369	47	49	37	16	5.0	3.4
2	102	31	100	62	104	565	69	61	82	87	5.0	3.0
3	98	8.9	111	54	198	408	54	63	494	98	5.4	2.2
4	119	31	91	53	242	258	115	50	523	103	4.7	2.3
5	76	31	74	49	215	204	53	29	258	122	4.7	7.8
6	34	23	61	48	192	174	14	29	151	117	5.4	9.4
7	17	22	62	65	183	149	19	41	103	101	4.4	8.2
8	12	33	63	50	203	138	30	36	65	79	3.8	1.7
9	23	35	89	54	182	164	32	36	68	43	3.5	1.4
10	8.8	7.0	107	74	154	101	36	38	38	31	3.0	1.4
11	8.1	24	85	72	135	80	51	19	28	35	3.1	1.8
12	6.6	26	70	47	127	83	57	74	46	30	3.1	2.8
13	15	34	60	46	110	84	52	51	91	25	2.2	7.5
14	23	2.6	56	51	105	83	75	44	85	56	1.8	1.8
15	16	2.0	57	123	98	97	198	69	50	15	4.4	1.4
16	11	1.9	54	282	74	85	313	54	48	23	3.9	1.3
17	19	2.2	55	234	71	65	287	45	39	17	2.9	1.3
18	9.7	23	65	192	70	66	221	24	32	27	2.0	1.2
19	11	12	43	184	69	94	172	34	28	21	2.3	1.2
20	4.7	24	42	127	68	77	139	38	94	6.5	2.1	1.2
21	7.8	13	40	90	67	70	123	39	91	8.4	1.7	1.2
22	6.8	3.4	37	72	70	65	115	50	49	7.8	4.1	1.2
23	5.9	10	36	60	69	63	114	85	37	6.2	4.2	1.2
24	12	16	72	52	65	60	116	64	21	5.2	2.2	1.2
25	39	5.7	83	49	60	64	80	39	13	11	1.6	1.1
26	52	90	107	46	57	63	75	30	13	9.7	1.9	1.1
27	55	126	100	45	59	66	79	36	5.4	4.8	2.3	1.1
28	46	113	87	46	85	60	68	30	3.8	4.9	3.4	1.1
29	46	91	78	50	---	60	65	26	5.4	5.0	15	1.1
30	34	81	81	60	---	124	59	29	5.4	7.7	14	2.5
31	20	---	66	68	---	77	---	36	---	6.6	6.7	---
TOTAL	1019.4	950.7	2194	2569	3210	4116	2928	1348	2604.0	1129.8	129.8	75.1
MEAN	32.9	31.7	70.8	82.9	115	133	97.6	43.5	86.8	36.4	4.19	2.50
MAX	119	126	111	282	242	565	313	85	523	122	15	9.4
MIN	4.7	1.9	36	45	57	60	14	19	3.8	4.8	1.6	1.1

CAL YR 1986	TOTAL	67333.9	MEAN	184	MAX	2120	MIN	1.3
WTR YR 1987	TOTAL	22273.8	MEAN	61.0	MAX	565	MIN	1.1

03350700 STONY CREEK NEAR NOBLESVILLE, IN

LOCATION.--Lat 40°01'44", long 85°59'42", in NE¼NE¼ sec.7, T.18 N., R.5 E., Hamilton County, Hydrologic Unit 05120201, on left bank at downstream side of county road bridge, 1.4 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).

REMARKS.--Estimated daily discharges: Jan. 21 to Feb. 1 and Feb. 17, 18. Records fair except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--20 years, 47.7 ft^3/s, 12.75 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)
Oct. 1	1715	309	3.94	Oct. 4	0900	*338	*4.08

Minimum daily discharge, 3.4 ft^3/s Sept. 29, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	172	23	44	31	28	101	29	16	49	28	19	4.9
2	148	22	128	31	40	87	26	16	37	94	69	4.6
3	107	20	104	30	56	62	23	16	250	48	32	4.3
4	296	23	73	28	48	49	21	15	113	40	18	4.3
5	160	24	57	27	44	45	20	14	68	38	13	4.3
6	91	25	48	30	41	39	20	14	46	26	11	4.2
7	66	25	44	30	40	36	20	14	33	27	9.3	4.0
8	46	23	42	27	42	35	19	14	27	21	8.4	4.0
9	33	22	53	26	33	33	19	13	22	15	7.9	3.9
10	27	20	78	28	32	28	17	13	19	13	7.8	3.8
11	25	20	60	27	30	27	20	13	16	12	7.3	3.8
12	23	20	50	24	29	25	19	16	15	10	6.8	3.8
13	26	19	39	23	26	24	18	14	15	86	6.2	3.8
14	50	17	36	24	25	23	20	13	14	232	6.1	3.8
15	41	17	34	60	24	23	45	13	13	94	5.9	3.7
16	30	19	32	69	20	22	46	12	16	61	5.6	3.6
17	26	18	31	53	21	20	45	11	16	40	5.3	3.6
18	23	17	31	47	20	20	37	16	12	27	5.2	3.6
19	20	17	29	46	19	24	30	38	11	20	5.0	3.7
20	20	18	27	47	19	23	27	43	30	15	5.0	3.8
21	19	17	25	35	19	22	25	26	27	13	5.0	3.7
22	18	17	25	25	19	21	23	19	18	11	5.0	3.6
23	18	16	24	22	19	20	24	15	13	10	4.8	3.6
24	17	16	31	20	19	20	21	14	11	8.9	4.8	3.6
25	21	16	68	19	19	20	19	13	9.3	8.3	5.0	3.6
26	51	100	58	19	18	20	19	13	8.9	8.3	6.8	3.6
27	56	114	48	20	18	20	19	12	8.0	9.0	7.1	3.6
28	44	77	42	20	24	19	19	11	7.5	8.5	6.8	3.5
29	34	60	38	20	---	18	17	11	7.4	8.4	6.1	3.4
30	29	50	37	23	---	30	17	65	16	55	5.6	3.4
31	25	---	33	24	---	38	---	108	---	35	5.3	---
TOTAL	1762	892	1469	955	792	994	724	641	948.1	1122.4	316.1	115.1
MEAN	56.8	29.7	47.4	30.8	28.3	32.1	24.1	20.7	31.6	36.2	10.2	3.84
MAX	296	114	128	69	56	101	46	108	250	232	69	4.9
MIN	17	16	24	19	18	18	17	11	7.4	8.3	4.8	3.4
CFSM	1.12	.58	.93	.61	.56	.63	.47	.41	.62	.71	.20	.08
IN.	1.29	.65	1.08	.70	.58	.73	.53	.47	.69	.82	.23	.08

CAL YR 1986	TOTAL	21186.7	MEAN	58.0	MAX	618	MIN	5.6	CFSM	1.14	IN.	15.51
WTR YR 1987	TOTAL	10730.7	MEAN	29.4	MAX	296	MIN	3.4	CFSM	.58	IN.	7.86

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: Jan. 10-13, 22-29. Records good. Flow slightly regulated by Morse Reservoir.

AVERAGE DISCHARGE.--58 years, 1,102 ft^3/s, 12.28 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)
June 5	1915	*6,300	*8.79

Minimum daily discharge, 153 ft^3/s Sept. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1660	494	806	616	747	1270	767	481	717	657	418	220
2	1910	477	1090	603	886	2520	746	469	644	1460	436	212
3	2490	438	1780	593	1340	2180	698	461	1670	3400	430	199
4	3450	447	1840	576	1780	1540	663	445	4030	2490	577	194
5	3940	478	1390	561	1530	1200	641	401	5720	1550	505	193
6	4100	488	1060	565	1350	1070	553	379	2840	1050	401	186
7	2330	480	901	583	1230	962	517	379	1270	874	336	185
8	1420	474	828	571	1240	882	510	376	929	720	299	182
9	1030	457	880	565	1150	854	495	364	754	607	286	172
10	837	431	1210	550	992	786	482	350	644	546	327	180
11	708	408	1440	540	871	683	503	340	553	473	342	183
12	657	415	1180	520	803	649	503	380	504	442	291	180
13	661	426	945	500	755	626	494	420	622	745	267	178
14	715	396	761	520	710	606	570	390	624	1750	253	177
15	750	377	708	692	668	599	875	405	556	1910	242	179
16	754	369	678	1580	594	580	1480	390	539	1370	230	181
17	646	365	648	1480	558	536	1760	330	635	912	227	189
18	571	365	652	1160	588	518	1510	320	609	695	213	184
19	512	381	639	1060	575	608	1190	310	472	584	204	184
20	473	369	614	1010	550	631	974	564	749	494	196	178
21	444	395	583	889	522	593	846	549	1040	423	198	171
22	426	390	544	800	514	549	770	532	837	388	198	171
23	408	404	518	690	517	518	762	1490	628	350	203	172
24	399	419	578	560	511	505	743	1140	499	324	197	169
25	458	402	764	520	494	509	681	757	427	304	191	162
26	593	775	888	540	473	511	606	624	375	303	248	160
27	701	1640	880	580	466	498	582	939	337	339	303	157
28	769	1850	782	560	527	485	564	829	311	338	332	153
29	689	1310	707	590	---	464	526	616	298	323	298	164
30	616	975	677	634	---	640	518	506	334	515	267	165
31	542	---	654	696	---	767	---	840	---	514	243	---
TOTAL	35659	17095	27625	21904	22941	25339	22529	16776	30167	26850	9158	5380
MEAN	1150	570	891	707	819	817	751	541	1006	866	295	179
MAX	4100	1850	1840	1580	1780	2520	1760	1490	5720	3400	577	220
MIN	399	365	518	500	466	464	482	310	298	303	191	153
CFSM	.94	.47	.73	.58	.67	.67	.62	.44	.83	.71	.24	.15
IN.	1.09	.52	.84	.67	.70	.77	.69	.51	.92	.82	.28	.16

CAL YR 1986	TOTAL	477115	MEAN	1307	MAX	9790	MIN	190	CFSM	1.07	IN.	14.56
WTR YR 1987	TOTAL	261423	MEAN	716	MAX	5720	MIN	153	CFSM	.59	IN.	7.98

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, 4, Dec. 14-17, 20-23, Jan. 11-14, 22-31, Feb. 25, 26, and July 27 to Aug. 24. Records fair.

AVERAGE DISCHARGE.--18 years, 18.7 ft^3/s, 14.19 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 5,500 ft^3/s June 26, 1978, gage height, 13.31 ft; minimum daily, 0.47 ft^3/s Dec. 2, 1971.

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)
Oct. 1	1245	*1,740	*8.63	Oct. 4	0345	1,570	8.17

Minimum daily discharge, 0.63 ft^3/s Sept. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	610	7.9	30	13	14	82	15	6.6	2.9	131	6.2	1.0
2	94	7.8	61	12	16	35	13	6.3	11	29	4.2	.99
3	110	7.8	29	12	19	23	11	5.9	27	11	9.8	.89
4	619	13	21	11	14	18	10	5.4	5.3	9.9	8.8	.84
5	78	11	17	10	12	17	10	5.0	3.5	7.7	6.7	.78
6	37	11	15	10	12	15	9.6	4.5	2.7	19	4.6	.80
7	27	8.3	14	9.8	12	15	9.4	4.5	2.4	13	3.9	.87
8	21	7.4	14	9.2	11	14	8.8	4.2	2.2	7.5	3.3	1.0
9	16	6.8	32	9.1	9.3	13	8.5	3.9	2.2	10	2.8	1.1
10	13	5.9	26	11	8.0	12	8.1	3.8	1.9	16	2.5	1.0
11	10	7.9	17	9.7	7.6	11	16	3.4	1.8	6.7	2.3	1.2
12	8.9	8.6	15	8.8	8.1	10	11	25	2.7	9.5	2.2	1.5
13	21	6.3	13	8.2	7.3	9.9	14	7.1	2.9	85	2.0	2.1
14	24	5.2	11	11	7.2	9.8	71	4.4	1.8	39	1.9	1.1
15	14	5.3	9.8	38	6.7	11	62	4.0	1.7	14	1.8	.76
16	11	5.7	9.5	26	5.9	13	31	3.1	3.9	9.9	1.6	1.6
17	8.2	5.7	11	18	6.0	10	25	2.8	2.3	6.6	1.5	6.7
18	7.2	5.5	14	16	6.2	13	19	10	1.7	5.2	1.4	2.7
19	6.5	5.3	12	24	6.8	47	15	9.1	1.7	3.9	1.3	1.6
20	5.8	6.3	9.8	21	6.8	19	13	7.9	2.6	3.3	1.2	1.0
21	5.7	8.0	9.2	16	7.2	15	12	4.4	2.8	3.3	1.1	.79
22	5.9	5.6	8.6	12	6.8	13	13	3.8	5.7	3.2	1.2	.85
23	6.1	5.6	8.0	10	6.8	12	18	3.7	3.1	2.9	1.1	.88
24	7.0	5.7	27	8.5	6.7	11	12	3.1	2.5	2.8	1.0	.99
25	33	5.8	28	7.3	6.6	13	10	4.9	2.2	2.9	1.1	.83
26	34	134	18	6.4	6.5	11	9.0	6.9	2.3	2.6	2.0	.70
27	16	45	15	6.0	8.0	9.7	14	3.9	1.7	4.3	2.9	.63
28	12	27	13	6.7	51	9.3	11	3.1	1.3	3.2	2.1	.83
29	10	21	13	7.4	---	9.1	8.4	2.7	9.1	2.3	1.7	3.5
30	9.0	18	14	9.2	---	47	7.6	5.7	16	14	1.3	3.0
31	8.0	---	14	11	---	20	---	5.6	---	11	1.0	---
TOTAL	1888.3	424.4	548.9	388.3	295.5	567.8	495.4	174.7	130.9	489.7	86.5	42.53
MEAN	60.9	14.1	17.7	12.5	10.6	18.3	16.5	5.64	4.36	15.8	2.79	1.42
MAX	619	134	61	38	51	82	71	25	27	131	9.8	6.7
MIN	5.7	5.2	8.0	6.0	5.9	9.1	7.6	2.7	1.3	2.3	1.0	.63
CFSM	3.40	.79	.99	.70	.59	1.02	.92	.32	.24	.88	.16	.08
IN.	3.92	.88	1.14	.81	.61	1.18	1.03	.36	.27	1.02	.18	.09

CAL YR 1986	TOTAL	9555.3	MEAN	26.2	MAX	619	MIN	1.1	CFSM	1.46	IN.	19.86
WTR YR 1987	TOTAL	5532.93	MEAN	15.2	MAX	619	MIN	.63	CFSM	.85	IN.	11.50

03351400 SUGAR CREEK NEAR MIDDLETOWN, IN

LOCATION.--Lat 40°02'27", long 85°31'30", in NW¼SE¼ sec.5, T.18 N., R.9 E., Henry County, Hydrologic Unit 05120201, on right bank 90 ft upstream from bridge on County Road 750 North, 1 mi southeast of Middletown.

DRAINAGE AREA.--5.80 mi^2.

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

REVISED RECORDS.--WDR IN-75-1: 1969-74.

GAGE.--Water-stage recorder. Datum of gage is 950.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Dec. 12-14, Jan. 12, Jan. 20 to Feb. 1, and Feb. 9, 15-20. Records good except for estimated daily discharges, which are fair.

AVERAGE DISCHARGE.--19 years, 5.83 ft^3/s, 13.65 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,100 ft^3/s April 28, 1975, gage height, 7.72 ft; minimum daily, 0.02 ft^3/s Aug. 30 to Sept. 2, 1972.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 120 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 1	1300	227	5.96	July 1	1930	390	6.49
Oct. 4	0430	*691	*7.13				

Minimum daily discharge, 0.09 ft^3/s Sept. 27, 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66	1.4	4.5	2.6	5.4	22	4.6	2.4	1.3	122	2.9	.16
2	25	1.3	15	2.8	14	11	4.2	2.4	1.9	81	2.5	.15
3	38	1.4	11	2.5	13	6.4	3.3	2.3	9.0	27	25	.15
4	232	1.8	8.0	2.5	8.6	4.8	3.0	2.0	3.1	17	7.0	.16
5	31	2.2	5.7	3.0	6.9	4.5	2.9	1.9	2.0	7.9	3.3	.14
6	16	2.4	4.7	3.4	6.2	3.8	2.5	1.9	1.7	8.6	2.1	.12
7	9.0	2.2	4.2	4.9	6.1	3.4	2.5	1.9	1.4	6.3	1.5	.12
8	5.5	2.3	4.0	3.9	5.5	3.4	2.4	1.8	1.3	4.2	1.2	.13
9	3.2	2.0	5.1	3.7	4.0	3.1	2.3	1.8	1.2	3.2	1.2	.13
10	2.3	1.6	9.9	3.6	3.4	2.6	2.2	1.7	1.1	2.7	.91	.12
11	1.9	2.0	5.9	2.8	3.1	2.4	2.4	1.5	1.0	2.4	.72	.15
12	1.7	2.1	4.3	2.6	3.0	2.3	2.1	2.0	1.3	2.2	.55	.16
13	1.7	1.6	3.6	2.5	2.5	2.2	1.9	1.5	1.2	13	.51	.14
14	3.1	1.6	3.3	6.1	2.6	2.4	3.5	1.4	1.0	23	.45	.13
15	2.0	1.8	3.0	16	2.1	2.2	15	1.4	8.3	7.8	.37	.13
16	1.7	1.7	2.8	8.0	1.9	2.0	8.6	1.2	5.4	5.1	.33	.16
17	1.4	1.5	2.7	5.7	1.8	1.9	6.5	1.2	2.0	3.6	.30	.16
18	1.1	1.4	3.0	4.9	1.9	2.1	5.0	1.6	1.4	2.9	.27	.16
19	.99	1.1	2.6	6.6	1.8	3.3	4.2	3.1	22	2.5	.25	.14
20	.97	1.6	2.5	5.5	1.6	2.8	3.7	2.6	12	2.2	.22	.14
21	.97	1.8	2.3	4.0	1.8	2.6	3.4	1.9	4.2	1.9	.22	.13
22	.94	1.7	2.2	3.4	1.8	2.4	3.4	1.8	6.2	1.7	.26	.14
23	.85	1.8	2.2	3.1	1.6	2.3	3.3	1.4	2.8	1.5	.26	.13
24	.87	1.4	2.8	2.9	1.4	2.3	2.8	1.3	1.9	1.4	.21	.12
25	1.3	1.4	4.3	2.7	1.4	2.5	2.6	3.1	1.5	1.2	.36	.11
26	4.5	24	3.7	2.5	1.3	2.2	2.5	7.9	1.3	1.4	.58	.10
27	6.7	13	3.3	2.5	1.5	2.1	2.6	3.0	1.0	2.0	.52	.09
28	3.6	7.6	3.0	2.6	4.9	2.0	2.4	2.1	.92	1.5	.39	.09
29	2.8	5.8	2.8	2.8	---	2.0	2.5	1.7	.89	1.5	.31	.12
30	1.9	4.7	2.9	3.1	---	3.8	2.4	1.5	4.7	11	.22	.11
31	1.6	---	2.5	3.7	---	4.0	---	1.4	---	3.7	.16	---
TOTAL	470.59	98.2	137.8	126.9	111.1	116.8	110.7	64.7	105.01	373.4	55.07	3.99
MEAN	15.2	3.27	4.45	4.09	3.97	3.77	3.69	2.09	3.50	12.0	1.78	.13
MAX	232	24	15	16	14	22	15	7.9	22	122	25	.16
MIN	.85	1.1	2.2	2.5	1.3	1.9	1.9	1.2	.89	1.2	.16	.09
CFSM	2.62	.56	.77	.71	.68	.65	.64	.36	.60	2.07	.31	.02
IN.	3.02	.63	.88	.81	.71	.75	.71	.41	.67	2.39	.35	.03

CAL YR 1986	TOTAL	2350.54	MEAN	6.44	MAX	232	MIN	.17	CFSM	1.11	IN.	15.08
WTR YR 1987	TOTAL	1774.26	MEAN	4.86	MAX	232	MIN	.09	CFSM	.84	IN.	11.38

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: Jan. 21 to Feb. 1, and Feb. 17, 18. Records good except for estimated daily discharges, which are fair.

AVERAGE DISCHARGE.--46 years, 167 ft^3/s, 13.42 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)
Oct. 5	1100	*3,030	*7.78	July 3	0100	1,390	5.88

Minimum daily discharge, 28 ft^3/s Sept. 27-29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	407	96	157	112	150	316	140	90	86	329	129	38
2	886	92	296	116	207	353	131	87	81	1120	172	37
3	577	90	317	111	281	253	113	84	322	885	224	36
4	1900	98	254	106	244	193	102	80	223	457	257	35
5	2730	104	201	105	214	171	96	76	145	300	154	33
6	781	108	172	108	195	161	92	75	113	236	118	33
7	386	105	161	113	190	147	90	72	93	228	95	33
8	281	99	154	115	186	140	88	71	81	173	81	33
9	220	98	177	109	156	136	84	68	73	137	85	32
10	179	90	262	117	151	120	80	68	68	120	80	32
11	155	90	213	108	140	113	87	65	66	108	69	34
12	145	92	180	97	139	110	86	84	68	101	64	35
13	162	87	148	94	132	108	81	80	73	228	60	35
14	190	81	131	99	128	107	94	70	66	500	57	33
15	170	81	129	223	122	107	237	66	62	320	54	31
16	144	85	124	259	103	102	262	62	123	228	50	31
17	129	83	123	198	110	95	224	58	90	171	48	32
18	116	79	127	174	109	95	186	61	65	141	45	34
19	105	77	118	185	108	124	158	97	58	118	43	33
20	99	78	110	216	104	132	141	153	238	104	40	32
21	94	85	104	170	106	117	126	105	161	87	40	31
22	86	82	100	140	107	112	121	179	114	82	41	30
23	85	83	98	120	108	107	133	208	101	76	41	33
24	85	85	116	105	103	103	124	130	77	74	39	31
25	95	80	175	98	100	107	109	106	64	74	40	29
26	132	222	164	93	99	105	106	178	58	75	60	29
27	146	344	143	93	99	101	103	153	53	90	58	28
28	132	245	130	96	113	97	101	109	48	87	57	28
29	114	198	122	100	---	94	96	90	47	77	50	28
30	104	169	122	115	---	142	92	92	79	155	46	32
31	102	---	116	120	---	172	---	113	---	146	42	---
TOTAL	10937	3406	4944	4015	4004	4340	3683	3030	2996	7027	2439	971
MEAN	353	114	159	130	143	140	123	97.7	99.9	227	78.7	32.4
MAX	2730	344	317	259	281	353	262	208	322	1120	257	38
MIN	85	77	98	93	99	94	80	58	47	74	39	28
CFSM	2.09	.67	.94	.77	.85	.83	.73	.58	.59	1.34	.47	.19
IN.	2.41	.75	1.09	.68	.88	.96	.81	.67	.66	1.55	.54	.21

CAL YR 1986	TOTAL	77775	MEAN	213	MAX	2730	MIN	28	CFSM	1.26	IN.	17.12
WTR YR 1987	TOTAL	51792	MEAN	142	MAX	2730	MIN	28	CFSM	.84	IN.	11.40

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: Jan. 10, 12, 23-28, and Feb. 18, 19. Records good except for estimated daily discharges, which are fair. Flow regulated by Geist Reservoir.

AVERAGE DISCHARGE.--58 years, 285 ft^3/s, 12.99 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, 4,530 ft^3/s Oct. 4, gage height, 10.23 ft; minimum daily, 46 ft^3/s Sept. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1450	152	276	189	240	585	245	116	143	475	167	64
2	1660	148	645	186	284	661	220	117	127	1180	168	57
3	1350	133	646	181	375	517	214	120	442	1340	164	59
4	4010	169	519	175	394	391	195	144	441	861	217	62
5	3840	173	406	169	352	322	165	92	274	521	201	71
6	2760	162	323	165	318	281	150	81	184	381	142	70
7	1060	159	283	166	300	254	148	94	134	327	106	70
8	638	156	267	169	291	238	148	85	101	248	87	69
9	474	150	311	174	272	275	143	84	93	184	74	67
10	350	140	417	170	240	237	137	83	82	146	74	59
11	272	140	394	165	224	136	149	83	71	126	70	73
12	245	139	330	160	214	146	155	155	70	108	59	71
13	279	125	271	165	207	155	163	136	98	336	56	69
14	328	118	231	165	196	156	205	105	86	800	73	69
15	302	118	215	261	193	186	333	116	93	649	59	67
16	252	122	206	402	170	185	417	87	172	410	61	58
17	230	127	201	348	167	146	389	83	132	269	63	57
18	190	131	199	308	160	139	326	90	98	194	61	55
19	165	133	189	333	155	248	275	161	75	151	62	48
20	153	116	178	353	155	223	237	151	85	121	61	46
21	143	120	168	320	152	198	213	153	161	101	60	49
22	140	121	158	289	155	181	202	133	153	88	60	53
23	130	121	153	230	154	170	191	185	124	79	60	53
24	134	120	203	185	152	159	212	182	98	70	60	52
25	193	121	324	150	145	156	167	143	79	66	60	52
26	268	371	321	160	141	155	138	136	68	65	63	51
27	277	552	278	190	147	158	148	169	67	117	64	50
28	248	460	244	180	194	149	145	148	67	109	56	50
29	215	355	223	173	---	140	126	118	71	81	57	55
30	197	307	215	198	---	266	141	103	95	308	62	52
31	163	---	201	213	---	270	---	161	---	257	56	---
TOTAL	22116	5459	8995	6692	6147	7483	6097	3814	3984	10168	2683	1778
MEAN	713	182	290	216	220	241	203	123	133	328	86.5	59.3
MAX	4010	552	646	402	394	661	417	185	442	1340	217	73
MIN	130	116	153	150	141	136	126	81	67	65	56	46
CFSM	2.39	.61	.97	.72	.74	.81	.68	.41	.45	1.10	.29	.20
IN.	2.76	.68	1.12	.84	.77	.93	.76	.48	.50	1.27	.33	.22

CAL YR 1986	TOTAL	137984	MEAN	378	MAX	4010	MIN	45	CFSM	1.27	IN.	17.22
WTR YR 1987	TOTAL	85416	MEAN	234	MAX	4010	MIN	46	CFSM	.79	IN.	10.66

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: Jan. 10-12, 22-27, Feb. 18-19, Mar. 27 to Apr. 6, May 25-26, and June 3-11. Records good except for estimated daily discharges, which are fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,370 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, 6,370 ft^3/s Oct. 4, gage height, 11.92 ft; minimum daily, 19 ft^3/s Sept. 3.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2060	152	295	241	212	506	245	113	144	815	178	43
2	1580	144	593	235	244	630	220	111	186	1070	161	23
3	1280	131	658	221	322	518	205	111	480	1310	163	19
4	4970	160	552	219	378	385	170	133	350	916	195	26
5	4490	170	430	213	344	285	150	98	260	535	205	39
6	3220	154	337	209	306	264	125	78	190	396	141	36
7	1150	138	282	194	274	238	119	74	130	315	102	41
8	671	137	265	199	262	217	127	78	98	241	87	28
9	493	138	306	202	245	229	127	76	82	177	83	35
10	378	137	428	200	212	230	131	69	71	127	66	29
11	292	125	459	195	196	128	147	70	62	100	66	46
12	263	119	385	195	180	109	146	144	59	113	57	54
13	290	111	312	199	173	129	160	179	79	491	42	52
14	328	110	273	202	173	129	255	108	73	625	60	40
15	316	116	230	243	163	150	301	107	74	607	48	50
16	279	116	219	382	145	162	397	100	189	404	45	59
17	241	126	218	363	122	125	403	71	148	277	61	57
18	209	123	216	346	120	118	348	134	116	213	45	39
19	186	129	218	347	120	219	304	158	94	176	47	32
20	162	110	219	358	119	205	253	152	82	130	42	24
21	153	115	218	355	120	178	218	158	157	110	47	26
22	147	120	195	290	122	167	206	122	163	98	44	26
23	136	117	184	240	120	147	197	176	110	96	40	33
24	132	117	226	200	121	141	194	208	90	93	36	30
25	191	118	327	170	118	137	185	185	82	91	37	24
26	256	431	354	140	119	123	138	155	59	97	44	35
27	285	527	347	150	128	120	150	140	53	175	59	27
28	254	489	317	156	193	118	145	149	61	114	48	25
29	220	382	268	155	---	115	125	132	84	84	33	54
30	214	315	258	174	---	285	127	90	141	241	39	46
31	171	---	255	189	---	275	---	155	---	224	40	---
TOTAL	25017	5377	9844	7182	5351	6782	6018	3834	3967	10461	2361	1098
MEAN	807	179	318	232	191	219	201	124	132	337	76.2	36.6
MAX	4970	527	658	382	378	630	403	208	480	1310	205	59
MIN	132	110	184	140	118	109	119	69	53	84	33	19
CFSM	2.55	.56	1.00	.73	.60	.69	.63	.39	.42	1.06	.24	.12
IN.	2.94	.63	1.16	.84	.63	.80	.71	.45	.47	1.23	.28	.13

CAL YR 1986 TOTAL 144201 MEAN 395 MAX 4970 MIN 30 CFSM 1.25 IN. 16.92
WTR YR 1987 TOTAL 87292 MEAN 239 MAX 4970 MIN 19 CFSM .75 IN. 10.24

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, 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: Jan. 10-12, 22-25, and Feb. 18, 19. 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 releases from Eagle Creek Reservoir.

AVERAGE DISCHARGE.--58 years (water years 1905, 1931 to current year), 1,401 ft^3/s, 11.64 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)
Oct. 1	1345	9,410	10.53	Oct. 4	0445	*14,300	*12.80

Minimum daily discharge, 73 ft^3/s Sept. 25, 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5790	562	1280	720	816	1830	885	493	667	3280	526	151
2	3720	492	1930	690	995	2940	797	479	703	2640	451	139
3	3690	469	2280	662	1520	2740	752	486	1770	4120	506	124
4	10400	540	2440	625	2060	1980	666	470	3550	3570	470	116
5	7120	534	1870	607	1870	1450	646	421	4970	2340	634	111
6	6500	524	1420	601	1610	1230	566	353	3750	1780	462	113
7	3710	546	1210	602	1430	1090	519	367	1380	1340	337	115
8	2190	489	993	610	1370	962	518	378	895	989	264	114
9	1540	511	1160	606	1320	893	504	327	665	759	251	112
10	1160	440	1490	580	1170	880	492	312	577	661	230	106
11	902	535	1820	574	1010	684	554	306	494	554	257	152
12	841	548	1520	565	927	606	547	532	476	556	235	139
13	923	512	1180	582	820	603	579	438	478	1410	194	127
14	1040	508	960	600	727	584	972	360	560	2510	185	126
15	921	479	801	823	665	587	1440	325	480	2560	175	111
16	923	473	802	1730	590	658	1660	340	543	2140	152	133
17	780	471	696	1970	535	540	2130	288	519	1420	172	156
18	643	461	735	1530	540	535	1990	367	563	1050	163	136
19	567	465	680	1490	540	873	1550	482	480	833	141	121
20	527	472	658	1400	544	732	1240	514	524	675	124	105
21	491	464	620	1230	520	649	1050	575	1060	555	110	95
22	466	478	597	880	515	588	962	529	1010	502	123	94
23	439	477	542	660	513	545	954	1050	672	452	115	92
24	435	395	721	580	503	529	818	1320	506	346	114	97
25	672	389	1010	550	489	536	815	849	405	230	114	73
26	948	1520	1180	596	461	524	634	619	339	260	142	78
27	936	1980	1340	616	470	502	691	647	262	542	224	75
28	976	2420	1310	591	741	492	584	878	234	419	230	73
29	829	1830	1000	596	---	478	555	567	276	300	223	112
30	746	1410	848	676	---	1010	561	438	472	787	202	97
31	596	---	797	721	---	890	---	604	---	797	181	---
TOTAL	61421	21394	35890	25263	25271	29140	26631	16114	29280	40377	7707	3393
MEAN	1981	713	1158	815	903	940	888	520	976	1302	249	113
MAX	10400	2420	2440	1970	2060	2940	2130	1320	4970	4120	634	156
MIN	435	389	542	550	461	478	492	288	234	230	110	73
CFSM	1.21	.44	.71	.50	.55	.57	.54	.32	.60	.80	.15	.07
IN.	1.40	.49	.82	.57	.57	.66	.61	.37	.67	.92	.18	.08

CAL YR 1986	TOTAL	622740	MEAN	1706	MAX	11900	MIN	115	CFSM	1.04	IN.	14.17
WTR YR 1987	TOTAL	321881	MEAN	882	MAX	10400	MIN	73	CFSM	.54	IN.	7.32

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. 30, 31, Jan. 1-3, 6, 7, 10-14, 19, 21-31, and Feb. 18, 19. Records fair.

AVERAGE DISCHARGE.--27 years (water years 1961 to current year), 7.84 ft^3/s, 14.05 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)
Oct. 1	0715	1,310	9.28	July 1	1130	1,290	9.20
Oct. 4	0145	*1,990	*11.48	July 30	1000	643	6.73

Minimum daily discharge, 0.21 ft^3/s Sept. 20, 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	274	1.7	26	2.1	5.1	36	4.1	1.2	8.0	368	3.2	.37
2	14	1.7	31	2.0	5.5	9.9	3.4	1.2	16	22	2.3	.37
3	55	1.8	10	1.9	4.4	5.7	2.8	2.3	11	5.2	4.3	.41
4	385	9.5	6.2	1.9	3.3	4.1	2.3	1.0	1.7	2.8	1.5	.39
5	19	5.4	4.7	1.8	2.8	3.6	2.1	.97	1.1	2.0	1.3	.40
6	7.5	2.8	3.7	1.8	2.7	3.0	2.2	.97	.82	16	1.5	.53
7	4.4	1.8	3.3	1.9	2.6	2.6	2.0	1.1	.59	7.2	1.1	.45
8	3.1	1.9	3.2	2.0	2.6	2.4	1.8	.93	.53	2.3	1.4	.58
9	2.3	2.1	17	2.0	2.0	2.2	1.8	.91	.60	1.6	2.3	1.0
10	1.8	1.8	6.6	2.5	2.0	1.9	1.7	.93	.53	1.3	1.0	.79
11	1.6	6.9	4.5	2.2	1.9	1.9	7.2	.97	.57	1.1	1.0	11
12	10	2.5	3.7	2.0	2.0	1.8	3.2	18	7.2	14	.89	1.2
13	13	1.7	2.7	1.8	1.7	1.6	8.6	2.2	1.7	44	.99	.42
14	5.9	1.5	2.4	2.0	1.7	1.6	39	1.6	.83	9.3	1.2	.22
15	3.3	1.5	2.4	9.6	1.4	2.9	15	2.6	.65	3.3	.84	.98
16	2.0	1.5	2.6	5.4	1.7	6.7	7.6	.96	.74	2.3	1.0	2.8
17	1.7	1.5	2.9	4.1	1.7	1.9	5.0	.91	.61	1.5	1.2	2.5
18	1.4	1.4	3.4	5.0	1.8	14	3.5	7.1	.46	1.2	1.1	.59
19	1.3	1.3	2.4	11	2.1	28	2.8	2.6	15	1.1	.76	.39
20	1.1	5.0	2.1	8.3	2.3	6.1	2.4	1.3	4.1	1.0	.61	.21
21	1.2	1.9	1.8	5.0	2.4	4.1	2.1	1.1	16	1.1	.80	.21
22	1.4	1.3	1.8	3.3	2.2	3.0	4.0	3.7	6.9	1.0	.98	.30
23	1.1	3.3	1.8	2.3	2.0	2.7	3.5	1.0	1.1	1.0	.62	.42
24	2.2	1.9	17	1.8	1.8	2.7	1.9	.80	.81	1.5	.49	.68
25	21	6.9	6.7	1.5	1.8	3.3	1.5	2.6	1.1	1.6	.69	.46
26	7.3	50	4.2	1.4	1.8	2.3	1.3	2.1	1.0	11	4.8	.47
27	3.7	9.2	3.4	1.7	4.6	2.1	5.6	.81	.59	19	3.5	.49
28	2.3	5.7	2.9	2.0	43	1.8	1.9	.62	.49	2.9	.95	.51
29	1.9	4.3	2.5	2.4	---	2.2	1.6	.52	9.4	5.5	.48	5.0
30	1.7	3.3	2.3	3.1	---	36	1.3	1.3	6.2	94	.31	.59
31	1.6	---	2.2	4.2	---	5.9	---	1.1	---	7.7	.33	---
TOTAL	852.8	143.1	187.4	100.0	110.9	204.0	143.2	65.40	116.32	653.5	43.44	34.73
MEAN	27.5	4.77	6.05	3.23	3.96	6.58	4.77	2.11	3.88	21.1	1.40	1.16
MAX	385	50	31	11	43	36	39	18	16	368	4.8	11
MIN	1.1	1.3	1.8	1.4	1.4	1.6	1.3	.52	.46	1.0	.31	.21
CFSM	3.63	.63	.80	.43	.52	.87	.63	.28	.51	2.78	.18	.15
IN.	4.19	.70	.92	.49	.54	1.00	.70	.32	.57	3.21	.21	.17

CAL YR 1986 TOTAL 3651.30 MEAN 10.0 MAX 385 MIN .20 CFSM 1.32 IN. 17.92
WTR YR 1987 TOTAL 2654.79 MEAN 7.27 MAX 385 MIN .21 CFSM .96 IN. 13.03

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. 4, 5, Dec. 13, 29-31, Jan. 1-4, 7-15, 21-30, Feb. 9, 16-18, and July 6-14. Records fair except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--17 years, 5.25 ft^3/s, 16.20 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 770 ft^3/s June 25, 1978, gage height, 7.77 ft; minimum daily, 0.38 ft^3/s Oct. 2, 1983.

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)
Oct. 1	0630	396	5.86	July 1	1130	448	6.17
Oct. 4	0200	*549	*6.73	July 1	1700	387	5.80

Minimum daily discharge, 0.72 ft^3/s Sept. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	96	2.0	13	1.9	2.8	15	3.1	2.3	2.0	177	2.2	1.1
2	7.8	2.0	13	1.9	3.1	5.7	3.0	2.2	12	18	1.9	1.1
3	14	2.2	5.2	1.9	2.9	4.1	3.1	2.4	6.7	5.8	1.6	1.0
4	158	4.2	3.6	2.0	2.5	3.4	3.4	2.1	1.9	3.8	1.7	.91
5	16	3.3	3.1	1.9	2.3	3.3	4.0	2.1	1.8	3.2	1.5	.84
6	6.8	2.2	2.8	2.3	2.3	2.9	3.9	2.2	1.7	9.0	1.5	.89
7	4.8	2.0	2.6	2.1	2.3	2.7	4.0	2.1	1.6	6.8	1.4	.90
8	3.7	1.9	2.6	2.0	2.2	2.6	3.6	2.3	1.5	4.9	1.4	.88
9	3.2	1.9	6.9	1.9	2.2	2.5	3.5	1.9	1.4	3.6	1.5	.98
10	2.9	1.9	3.4	2.1	2.1	2.5	3.5	2.0	1.5	2.9	1.3	.96
11	2.6	3.3	2.9	2.1	2.1	2.6	7.7	1.9	1.4	2.6	1.3	4.2
12	7.0	2.1	2.6	2.0	2.2	2.5	4.7	4.8	2.6	8.8	1.3	1.3
13	7.5	1.9	2.5	1.9	2.1	2.6	9.0	2.1	1.3	22	1.3	.94
14	4.6	1.9	2.2	2.1	2.2	2.8	26	2.0	1.4	7.4	1.3	1.0
15	3.4	2.0	2.1	3.0	1.9	3.7	9.5	2.0	1.3	3.8	1.2	1.7
16	3.0	1.8	2.2	3.1	1.9	6.1	5.8	1.8	1.5	3.2	1.2	1.7
17	2.7	1.9	2.4	2.8	1.8	2.9	4.5	1.8	1.5	2.6	1.4	1.8
18	2.3	1.9	2.6	3.0	2.0	6.8	3.6	4.1	1.4	2.4	1.3	.94
19	2.0	1.8	2.2	8.0	2.2	11	3.0	2.3	12	2.2	1.2	.80
20	2.2	2.9	2.1	3.7	2.1	3.6	2.7	1.9	3.0	2.0	1.1	.72
21	2.2	2.1	1.9	2.8	2.2	3.0	2.7	1.9	9.7	1.9	1.1	.84
22	2.2	2.0	1.9	2.4	2.1	2.7	3.9	3.6	4.4	1.8	1.5	.96
23	2.1	2.4	2.0	2.2	2.0	2.7	3.1	1.9	2.1	1.9	1.0	1.1
24	3.0	1.8	6.9	2.0	2.0	3.0	2.6	1.8	1.8	1.6	.96	.89
25	10	4.8	3.2	1.9	2.0	3.1	2.5	2.3	2.0	1.5	1.1	.96
26	4.6	26	2.5	1.8	1.9	2.7	2.4	2.3	1.7	7.0	2.1	.80
27	2.9	5.6	2.2	2.4	3.2	2.7	4.0	1.9	1.5	11	1.9	.73
28	2.7	4.0	2.0	2.8	17	2.4	2.4	1.9	1.6	2.4	1.2	.73
29	2.5	3.2	2.0	2.9	---	2.9	2.4	1.8	3.0	3.4	1.0	2.7
30	2.2	2.9	2.0	3.0	---	16	2.2	2.2	2.5	11	.96	.81
31	2.1	---	2.0	2.9	---	3.7	---	1.7	---	2.8	1.0	---
TOTAL	387.0	99.9	108.6	78.8	77.6	134.2	139.8	69.6	89.8	338.3	42.42	35.18
MEAN	12.5	3.33	3.50	2.54	2.77	4.33	4.66	2.25	2.99	10.9	1.37	1.17
MAX	158	26	13	8.0	17	16	26	4.8	12	177	2.2	4.2
MIN	2.0	1.8	1.9	1.8	1.8	2.4	2.2	1.7	1.3	1.5	.96	.72
CFSM	2.84	.76	.80	.58	.63	.98	1.06	.51	.68	2.48	.31	.27
IN.	3.27	.84	.92	.67	.66	1.13	1.18	.59	.76	2.86	.36	.30

CAL YR 1986	TOTAL	2190.47	MEAN	6.00	MAX	158	MIN	.85	CFSM 1.36	IN. 18.52
WTR YR 1987	TOTAL	1601.20	MEAN	4.39	MAX	177	MIN	.72	CFSM 1.00	IN. 13.54

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: Dec. 12-14, 30, Jan. 2, 3, 6, 7, 9-11, 15-30, and Feb. 16-19. Records good except those under 10 ft^3/s, which are fair, and those for estimated daily discharges, which are poor. Low flow is affected by the Zionsville well field located on the right bank below the gage.

AVERAGE DISCHARGE.--30 years, 101.6 ft^3/s, 13.40 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.

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)
June 3	0500	*1,180	5.80

Minimum daily discharge, 0.05 ft^3/s Sept. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	232	23	65	38	57	481	38	29	7.3	27	5.1	1.1
2	126	22	165	41	107	281	39	29	34	92	3.8	.42
3	127	19	135	40	217	167	31	28	754	42	3.3	.28
4	423	28	98	34	146	116	29	25	257	68	2.2	.18
5	151	33	72	35	134	98	29	24	119	39	1.6	.14
6	68	36	58	41	115	81	29	22	68	27	1.3	.10
7	38	32	53	42	126	70	27	22	47	22	1.0	.09
8	26	32	50	34	134	66	26	21	35	15	.83	.09
9	20	28	103	37	90	63	25	20	28	11	1.1	.07
10	16	22	160	37	74	49	24	18	22	8.5	.89	.08
11	12	22	100	36	66	44	32	18	18	7.3	.83	.23
12	12	22	67	29	66	41	30	28	18	6.5	.77	.16
13	15	18	56	28	60	39	27	25	18	18	.69	.14
14	32	15	51	30	58	38	83	20	14	38	.64	.12
15	27	16	44	82	51	38	338	20	13	17	.56	.24
16	19	19	39	116	46	37	215	20	27	14	.56	.20
17	16	18	37	86	41	32	168	17	16	11	.64	.26
18	12	19	38	74	37	34	118	17	9.0	7.8	.53	.30
19	10	16	35	81	35	56	89	18	7.5	4.5	.40	.23
20	9.3	18	32	100	33	45	74	18	52	3.6	.34	.20
21	8.2	20	30	98	34	40	64	37	75	2.3	.26	.17
22	9.6	18	26	69	35	36	60	23	49	2.0	.25	.18
23	9.9	17	24	52	35	34	62	17	27	1.7	.23	.19
24	12	17	39	41	32	34	51	14	16	1.7	.15	.16
25	45	16	95	34	31	37	42	14	11	1.3	.12	.12
26	152	206	85	30	30	34	38	16	7.8	1.2	.38	.10
27	97	218	65	31	32	31	42	13	5.9	2.6	.49	.09
28	59	123	53	33	75	30	38	10	4.6	2.0	.55	.05
29	42	89	47	35	---	29	34	8.4	3.9	1.6	1.3	.07
30	34	69	48	36	---	52	33	7.1	4.0	9.3	1.4	.10
31	28	---	39	31	---	47	---	8.6	---	9.5	1.3	---
TOTAL	1888.0	1251	2009	1531	1997	2280	1935	607.1	1768.0	514.4	33.51	5.86
MEAN	60.9	41.7	64.8	49.4	71.3	73.5	64.5	19.6	58.9	16.6	1.08	.20
MAX	423	218	165	116	217	481	338	37	754	92	5.1	1.1
MIN	8.2	15	24	28	30	29	24	7.1	3.9	1.2	.12	.05
CFSM	.59	.40	.63	.48	.69	.71	.63	.19	.57	.16	.01	.00
IN.	.68	.45	.73	.55	.72	.82	.70	.22	.64	.19	.01	.00

CAL YR 1986	TOTAL	34487.99	MEAN	94.5	MAX	1760	MIN	.12	CFSM	.92	IN.	12.46
WTR YR 1987	TOTAL	15819.87	MEAN	43.3	MAX	754	MIN	.05	CFSM	.42	IN.	5.71

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, 25,120 acre-ft June 3, elevation, 790.80 ft; minimum, 15,560 acre-ft Jan. 31, elevation, 783.05 ft.

MONTHEND ELEVATION AND CONTENTS, AT 2400, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	789.16	22,910	
Oct. 31	790.09	24,130	+1,220
Nov. 30	786.20	19,140	-4,990
Dec. 31	783.21	15,730	-3,410
CAL YR 1986			-8,970
Jan. 31	783.05	15,560	-170
Feb. 28	783.28	15,810	+250
Mar. 31	787.68	20,980	+5,170
Apr. 30	790.49	24,690	+3,710
May 31	790.20	24,280	-410
June 30	790.26	24,360	+80
July 31	790.19	24,270	-90
Aug. 31	789.00	22,700	-1,570
Sept. 30	787.74	20,060	-2,640
WTR YR 1987			-2,850

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: Jan. 23-27. Records good. Flow regulated since November 1969 by Eagle Creek Reservoir, 4.7 mi upstream (see sta 03353450).

AVERAGE DISCHARGE.--48 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, 3,340 ft^3/s Oct. 4, gage height, 5.49 ft; minimum daily, 5.1 ft^3/s Sept. 10.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	913	84	221	72	38	298	16	19	9.6	194	12	8.2
2	347	16	234	66	149	478	15	19	28	118	11	8.1
3	479	16	217	61	364	57	14	18	480	113	9.3	7.9
4	1650	95	212	56	289	21	13	16	335	20	9.5	7.7
5	282	21	53	52	237	20	12	15	19	11	12	7.5
6	182	75	124	50	188	19	13	14	137	124	10	6.8
7	72	37	167	56	167	19	12	104	13	21	9.1	7.2
8	49	14	18	52	173	19	12	16	12	16	10	7.1
9	99	92	144	52	165	19	12	14	13	12	9.3	5.6
10	24	60	193	66	130	18	13	14	13	11	9.6	5.1
11	20	212	190	63	110	16	16	13	12	26	9.1	7.3
12	19	250	115	55	99	15	14	19	12	21	9.0	8.3
13	124	196	74	49	91	15	18	13	11	160	9.1	7.8
14	31	195	22	51	83	15	60	13	11	40	8.8	6.9
15	20	187	71	121	79	15	43	13	10	14	8.9	6.7
16	94	179	122	311	51	21	27	12	9.9	15	9.4	15
17	18	174	16	259	57	22	34	13	9.2	16	9.9	15
18	17	170	115	193	59	19	273	28	9.0	12	11	13
19	17	167	17	188	58	20	179	16	8.7	11	10	13
20	17	165	87	167	64	16	62	45	13	10	8.2	12
21	18	163	17	137	55	15	95	18	12	9.2	9.2	14
22	20	159	92	122	52	14	113	132	9.4	9.1	11	13
23	18	114	16	78	52	12	135	19	9.2	8.7	9.1	13
24	19	15	117	70	49	12	54	17	9.0	11	8.7	13
25	128	15	119	60	47	14	85	20	8.6	11	8.0	13
26	252	212	226	60	33	13	21	15	8.1	13	9.6	13
27	167	226	682	55	40	13	123	14	7.9	20	9.4	13
28	99	215	674	49	79	13	21	13	8.2	14	8.7	13
29	95	212	255	49	---	15	118	12	14	13	8.5	15
30	28	204	128	63	---	38	29	9.0	22	15	8.1	13
31	17	---	86	49	---	19	---	9.6	---	12	7.9	---
TOTAL	5335	3940	4824	2832	3058	1320	1652	712.6	1273.8	1101.0	293.4	309.2
MEAN	172	131	156	91.4	109	42.6	55.1	23.0	42.5	35.5	9.46	10.3
MAX	1650	250	682	311	364	478	273	132	480	194	12	15
MIN	17	14	16	49	33	12	12	9.0	7.9	8.7	7.9	5.1
CFSM	.99	.75	.90	.53	.63	.24	.32	.13	.24	.20	.05	.06
IN.	1.14	.84	1.03	.61	.65	.28	.35	.15	.27	.24	.06	.07

CAL YR 1986	TOTAL	62992.4	MEAN	173	MAX	3160	MIN	9.2	CFSM	.99	IN.	13.47
WTR YR 1987	TOTAL	26651.0	MEAN	73.0	MAX	1650	MIN	5.1	CFSM	.42	IN.	5.70

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: Dec. 14 to Jan. 30, Feb. 9, 16, Aug. 5 to Sept. 9, and Sept. 29, 30. Records good except for estimated daily discharge, which are poor.

AVERAGE DISCHARGE.--23 years (water years 1965 to current year) 22.0 ft^3/s, 12.50 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)
Oct. 1	1115	*2,590	*10.18	June 30	2245	602	5.34
Oct. 4	0300	2,080	9.08	July 1	1700	820	6.02

Minimum daily discharge, 0.56 ft^3/s Sept. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1050	7.3	44	18	19	109	19	6.1	3.6	410	3.7	.74
2	105	6.9	90	16	20	44	15	6.3	41	78	3.3	.68
3	131	6.2	40	16	23	26	12	6.3	66	20	9.7	.62
4	891	19	25	15	18	19	10	4.6	11	9.4	4.2	.58
5	88	14	18	14	15	16	9.6	4.1	5.4	5.7	3.1	.56
6	39	14	15	14	15	14	9.1	5.3	3.6	31	2.9	.58
7	25	12	14	13	15	12	9.1	4.8	2.4	20	2.7	.60
8	19	12	14	12	15	11	8.2	3.9	1.8	6.7	2.4	.63
9	16	12	53	12	12	11	8.1	3.2	1.5	3.5	2.1	.68
10	13	9.9	35	15	10	8.7	7.5	2.7	1.3	8.8	1.9	.66
11	10	14	21	13	10	8.0	22	2.4	1.7	3.7	1.7	.73
12	12	16	17	12	10	8.0	11	35	3.6	21	1.6	.81
13	36	12	15	11	9.3	6.6	23	6.3	2.7	137	1.5	.87
14	33	9.3	12	15	9.0	6.6	118	3.7	1.7	58	1.4	.75
15	15	9.0	11	52	8.5	9.1	112	3.2	1.4	16	1.3	.75
16	11	9.3	11	34	8.0	22	49	2.8	1.3	10	1.2	1.5
17	8.8	10	16	25	6.0	9.5	32	2.4	1.2	6.5	1.1	16
18	7.8	11	19	22	10	19	21	34	.98	4.9	1.0	4.5
19	6.1	9.5	16	32	9.3	66	18	13	1.0	3.6	.98	2.2
20	5.8	14	14	26	8.3	25	13	26	1.7	2.6	.90	1.9
21	5.6	15	12	21	7.6	17	12	6.5	1.5	2.2	.82	.89
22	4.6	9.2	11	15	8.1	13	17	4.4	9.1	2.4	.90	.73
23	4.2	10	10	13	8.1	11	18	3.7	2.8	2.2	.82	1.7
24	7.0	10	36	11	7.8	12	11	3.1	1.9	2.1	.74	2.1
25	80	15	38	9.6	7.2	16	8.3	14	1.6	2.0	.80	1.5
26	63	204	25	8.4	6.6	11	7.6	12	2.0	1.9	1.5	.87
27	24	66	21	8.0	8.5	9.3	19	4.8	1.4	26	2.1	.85
28	16	33	18	9.2	76	9.1	10	3.6	1.2	11	1.5	.75
29	12	23	18	10	---	9.7	8.1	3.0	28	5.8	1.3	2.6
30	9.5	18	19	12	---	93	7.0	9.1	100	18	1.0	2.2
31	8.2	---	19	14	---	29	---	5.6	---	5.6	.74	---
TOTAL	2756.6	630.6	727	518.2	380.3	680.6	644.6	245.9	304.38	935.6	60.90	50.53
MEAN	88.9	21.0	23.5	16.7	13.6	22.0	21.5	7.93	10.1	30.2	1.96	1.68
MAX	1050	204	90	52	76	109	118	35	100	410	9.7	16
MIN	4.2	6.2	10	8.0	6.0	6.6	7.0	2.4	.98	1.9	.74	.56
CFSM	3.72	.88	.98	.70	.57	.92	.90	.33	.42	1.26	.08	.07
IN.	4.29	.98	1.13	.81	.59	1.06	1.00	.38	.47	1.46	.09	.08

CAL YR 1986 TOTAL 12941.1 MEAN 35.5 MAX 1050 MIN 1.0 CFSM 1.49 IN. 20.14
WTR YR 1987 TOTAL 7935.21 MEAN 21.7 MAX 1050 MIN .56 CFSM .91 IN. 12.35

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. 12, 13, 30, 31, Jan. 1-3, 10-15, 21, 23-31, Feb. 8, 9, 12, 14, and July 30 to Aug. 20. Records fair.

AVERAGE DISCHARGE.--17 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)
Oct. 1	0945	991	5.72	June 19	1500	765	5.01
Oct. 4	0645	1,220	6.38	July 1	1715	*2,010	*8.45
Oct. 4	1630	600	4.45	July 12	2230	623	4.53

Minimum daily discharge, 0.22 ft^3/s Sept. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	442	6.3	35	6.6	22	107	10	4.8	1.2	974	5.2	.49
2	59	6.2	94	7.4	27	41	8.6	3.9	17	217	3.5	.54
3	48	5.9	31	6.9	19	20	6.8	4.7	35	54	2.8	.62
4	673	12	19	6.6	12	13	6.2	3.5	4.6	25	2.3	.68
5	102	10	14	6.3	9.5	11	6.1	3.6	2.3	15	2.0	.69
6	35	8.6	10	6.6	9.1	8.4	6.5	3.2	1.7	38	1.7	.61
7	20	6.3	9.1	6.5	8.7	7.2	7.7	3.2	1.3	20	1.5	.59
8	11	6.2	8.8	5.9	8.3	6.9	6.5	3.1	1.0	10	2.8	.72
9	8.6	6.1	26	6.1	8.0	6.6	4.7	3.1	.96	6.7	2.1	.90
10	7.1	5.0	18	7.0	7.8	5.2	4.3	3.0	.86	4.9	1.5	1.1
11	6.2	8.2	11	6.5	7.8	4.9	12	3.0	.81	3.7	1.3	1.3
12	24	6.5	9.0	5.9	7.5	4.6	12	11	2.8	44	1.2	1.6
13	31	4.7	7.7	5.6	7.2	4.5	13	4.1	4.8	153	1.6	1.3
14	25	3.7	6.8	6.8	6.8	4.5	67	3.4	1.7	61	1.4	.53
15	14	5.0	6.3	10	6.6	6.4	63	3.1	.86	25	1.2	1.0
16	9.2	4.1	6.3	15	6.5	17	29	2.3	.71	15	1.0	1.6
17	7.5	4.0	6.8	11	6.2	6.2	19	1.8	.63	9.3	.89	1.9
18	6.0	3.8	8.5	11	6.8	13	13	7.4	.57	6.7	.96	.99
19	5.2	3.6	7.0	30	7.5	60	9.1	5.7	93	5.0	.78	.49
20	4.9	5.4	5.9	21	7.4	19	7.9	2.4	22	3.6	.70	.26
21	4.8	5.8	5.5	14	7.6	12	7.0	1.7	18	3.1	.74	.27
22	4.8	4.1	5.3	11	8.0	8.5	8.4	9.6	28	2.7	.77	.34
23	4.5	5.3	5.1	8.2	7.6	7.4	8.9	2.5	7.7	2.6	.66	.37
24	6.3	4.7	23	6.5	6.5	7.5	9.1	1.5	5.1	2.3	.62	.40
25	25	7.2	20	5.6	6.4	7.6	5.7	1.7	2.9	1.8	.97	.39
26	21	112	13	4.9	5.9	6.3	4.9	3.1	2.1	2.0	1.3	.38
27	11	31	9.0	4.5	11	5.5	8.3	1.7	1.4	4.0	3.0	.24
28	9.5	18	7.9	4.9	76	4.9	5.4	1.2	1.1	4.8	1.5	.22
29	7.2	13	7.3	5.5	---	4.9	4.7	1.1	3.0	3.5	.96	1.3
30	6.8	10	7.0	7.1	---	58	4.2	1.3	5.7	12	.63	.45
31	6.4	---	6.8	8.8	---	16	---	1.7	---	8.5	.44	---
TOTAL	1646.0	332.7	450.1	269.7	330.7	505.0	379.0	107.4	268.80	1738.2	48.02	22.27
MEAN	53.1	11.1	14.5	8.70	11.8	16.3	12.6	3.46	8.96	56.1	1.55	.74
MAX	673	112	94	30	76	107	67	11	93	974	5.2	1.9
MIN	4.5	3.6	5.1	4.5	5.9	4.5	4.2	1.1	.57	1.8	.44	.22
CFSM	3.40	.71	.93	.56	.76	1.04	.81	.22	.57	3.60	.10	.05
IN.	3.93	.79	1.07	.64	.79	1.20	.90	.26	.64	4.14	.11	.05

CAL YR 1986	TOTAL	7634.48	MEAN	20.9	MAX	673	MIN	.24	CFSM	1.34	IN.	18.21
WTR YR 1987	TOTAL	6097.89	MEAN	16.7	MAX	974	MIN	.22	CFSM	1.07	IN.	14.54

03353660 WHITE RIVER AT WAVERLY, IN

LOCATION.--Lat 39°33'35", long 86°16'29", in NW¼NE¼ sec.23, T.13 N., R.2 E., Morgan County, Hydrologic Unit 05120201, on left bank 82 ft upstream from bridge on State Highway 144, 0.6 mi downstream from North Bluff Creek, and at mile 211.0.

DRAINAGE AREA.--2,026 mi^2.

PERIOD OF RECORD.--July 1, 1986 to current year.

GAGE.--Water-stage recorder. Datum of gage is 620.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Oct. 6, 7, Nov. 12-14, Dec. 4-15, 20, 23, 26-29, Jan. 5, 12, 13, 17, 20-29, Feb. 4, 5, 8-11, 13, 15-19, and Mar. 2, 10-12, 31. Records fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,300 ft^3/s Oct. 4, 1986, gage height, 19.23 ft; minimum daily, 292 ft^3/s Sept. 28, 1987.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 16,300 ft^3/s Oct. 4, gage height, 19.23 ft; minimum daily, 292 ft^3/s Sept. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5120	1030	1870	1200	1380	2770	1370	856	1040	3630	905	393
2	6910	986	2810	1140	1520	3250	1290	810	939	5270	780	379
3	4730	906	2840	1100	2020	3400	1120	837	2170	3800	787	381
4	12900	1040	2700	1040	2250	2270	1120	788	3360	4040	766	368
5	11100	1010	2250	1020	2350	2140	1050	757	4700	2710	903	354
6	6400	1010	1900	1010	2240	1830	977	689	4750	2720	804	334
7	4300	1040	1650	1010	1990	1670	887	659	2120	2060	679	327
8	2770	949	1450	1020	1850	1530	852	730	1420	1490	573	340
9	2380	982	1450	989	1750	1440	830	636	1120	1190	531	353
10	1940	836	1950	1070	1650	1320	800	592	965	1040	513	341
11	1600	1020	2150	1100	1550	1220	890	573	848	913	539	400
12	1450	1040	2050	1050	1480	1120	1080	826	826	832	529	403
13	1550	1000	1700	1000	1380	1040	963	837	757	2280	478	368
14	1730	970	1450	1030	1310	1000	1520	741	841	2770	438	358
15	1480	954	1360	1300	1250	1010	2710	667	792	2630	433	356
16	1510	939	1340	1790	1180	1250	2150	639	820	2420	390	398
17	1420	938	1210	2300	1140	999	2570	601	799	1710	412	436
18	1220	927	1210	2010	990	913	2520	582	841	1270	428	415
19	1090	922	1180	1900	980	1450	2130	936	779	1030	393	361
20	1020	944	1140	2050	1010	1330	1840	806	879	899	360	342
21	982	934	1090	1700	968	1160	1590	955	1060	783	349	329
22	945	911	1020	1500	935	1040	1440	906	1440	692	350	341
23	904	925	950	1320	935	969	1520	1020	1040	652	347	324
24	892	843	1130	1200	919	915	1280	1700	814	626	324	324
25	1130	687	1510	1100	906	932	1280	1270	693	575	339	333
26	1640	2230	1550	1000	871	898	1100	1100	618	521	360	302
27	1600	2590	1650	1050	863	866	1110	932	529	810	486	298
28	1510	2990	1800	1050	1040	832	1050	1220	458	932	484	292
29	1400	2530	1650	1050	---	811	931	993	474	663	486	365
30	1300	2060	1390	1240	---	1510	978	806	725	1040	436	380
31	1110	---	1300	1250	---	1580	---	786	---	1210	412	---
TOTAL	86033	36143	50700	39589	38707	44465	40948	26250	38617	53208	16014	10695
MEAN	2775	1205	1635	1277	1382	1434	1365	847	1287	1716	517	357
MAX	12900	2990	2840	2300	2350	3400	2710	1700	4750	5270	905	436
MIN	892	687	950	989	863	811	800	573	458	521	324	292
CFSM	1.37	.59	.81	.63	.68	.71	.67	.42	.64	.85	.26	.18
IN.	1.58	.66	.93	.73	.71	.82	.75	.48	.71	.98	.29	.20

WTR YR 1987 TOTAL 481369 MEAN 1319 MAX 12900 MIN 292 CFSM .65 IN. 8.84

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, 0.1 mi east of city limits of Danville, 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. 27-31, Dec. 13, 14, and Jan. 20-31. Records fair except for estimated daily discharges, which are poor. Low flow affected by releases from Danville Filtration Plant.

AVERAGE DISCHARGE.--29 years, 29.9 ft^3/s, 14.10 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)
Oct. 1	1130	1,370	7.76	July 1	1745	964	6.11
Oct. 4	0245	*1,500	*8.28				

Minimum daily discharge, no flow Sept. 7, 8.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	493	20	39	18	37	161	11	8.0	6.5	424	2.3	.04
2	157	16	114	18	70	96	9.7	8.0	21	263	1.9	.03
3	100	15	70	15	74	60	8.0	7.2	173	112	1.6	.03
4	742	21	42	14	49	40	7.3	5.9	55	65	1.3	.02
5	196	22	29	15	40	34	7.8	5.0	20	30	1.2	.02
6	103	25	24	16	35	28	7.0	5.2	9.2	63	.99	.01
7	64	21	22	14	40	24	7.1	5.2	5.9	47	.87	.00
8	43	20	20	12	39	23	6.5	4.8	4.3	21	.79	.00
9	30	15	46	17	27	21	6.1	5.3	3.3	13	.81	.02
10	22	11	50	37	21	15	5.9	4.2	2.6	9.6	.75	.29
11	16	13	32	11	20	14	9.5	4.0	2.4	6.9	.65	.26
12	14	11	23	13	19	13	7.7	18	3.7	5.6	.52	.05
13	21	7.7	18	11	16	12	9.3	8.3	3.2	47	.49	.04
14	42	8.1	15	21	17	13	32	6.0	2.3	42	.42	.03
15	24	8.9	13	134	13	13	78	5.0	14	13	.37	.21
16	17	9.1	13	85	14	14	50	4.1	11	8.6	.31	.26
17	13	7.7	13	46	15	11	45	3.9	2.4	5.9	.50	.53
18	9.3	7.0	13	34	12	13	33	4.4	1.5	4.5	.31	.11
19	8.1	5.6	11	52	13	14	26	4.7	2.3	3.6	.24	.09
20	7.0	7.5	9.6	35	9.9	11	22	4.0	3.7	3.0	.23	.05
21	6.5	6.4	8.7	25	9.5	10	20	3.4	4.5	2.4	.29	.07
22	5.7	5.5	8.3	17	9.6	9.4	22	2.8	3.6	2.1	.30	.06
23	5.6	6.2	8.4	13	8.9	9.0	20	2.4	2.0	1.9	.25	.07
24	7.0	5.4	31	12	7.7	9.9	16	2.3	1.4	1.6	.49	.05
25	107	6.5	87	12	7.7	11	12	4.2	1.1	1.4	.16	.05
26	136	170	47	11	7.3	8.8	12	6.7	.92	3.6	.44	.07
27	50	121	31	11	9.0	8.2	15	3.9	.72	9.9	.33	.03
28	35	71	24	11	41	7.7	11	3.2	.61	9.5	.21	.02
29	27	46	22	11	---	7.9	10	2.7	4.1	4.0	.18	.63
30	22	34	19	12	---	18	9.1	14	43	3.1	.12	.08
31	19	---	17	13	---	14	---	15	---	2.5	.09	---
TOTAL	2542.2	743.6	920.0	766	681.6	743.9	536.0	181.8	409.25	1229.7	19.41	3.22
MEAN	82.0	24.8	29.7	24.7	24.3	24.0	17.9	5.86	13.6	39.7	.63	.11
MAX	742	170	114	134	74	161	78	18	173	424	2.3	.63
MIN	5.6	5.4	8.3	11	7.3	7.7	5.9	2.3	.61	1.4	.09	.00
CFSM	2.85	.86	1.03	.86	.84	.83	.62	.20	.47	1.38	.02	.00
IN.	3.28	.96	1.19	.99	.88	.96	.69	.23	.53	1.59	.03	.00

CAL YR 1986	TOTAL	13141.54	MEAN	36.0	MAX	742	MIN	.03	CFSM	1.25	IN.	16.97
WTR YR 1987	TOTAL	8776.68	MEAN	24.0	MAX	742	MIN	.00	CFSM	.83	IN.	11.34

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: Oct. 14 to Nov. 4 and Jan. 21-28. Records good below 2,000 ft^3/s and fair above, except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--30 years, 221 ft^3/s, 14.13 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 19,000 ft^3/s July 13, 1979, gage height, 23.31 ft; minimum daily, 2.0 ft^3/s Dec. 24, 25, 1960, Sept. 2, 1966.

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)
Oct. 1	1800	6,680	18.60	July 1	2000	3,410	15.43
Oct. 4	0800	*9,480	*19.93				

Minimum daily discharge, 8.3 ft^3/s Sept. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2430	122	188	136	127	743	119	82	63	1400	48	12
2	1180	114	489	136	174	525	104	79	60	1020	44	12
3	520	106	409	135	250	322	93	84	492	325	35	12
4	6080	117	295	126	276	240	88	75	239	258	31	10
5	1490	123	209	121	268	189	84	69	124	208	29	10
6	661	120	172	119	252	163	83	66	87	525	26	10
7	412	118	159	121	223	144	82	65	69	252	24	10
8	294	114	152	114	218	135	80	64	58	155	24	9.6
9	227	110	176	110	205	132	76	61	52	116	23	9.2
10	183	104	296	119	171	117	75	59	46	113	21	8.9
11	156	98	230	125	148	106	87	56	41	94	20	8.8
12	141	93	183	109	136	103	96	75	48	90	19	10
13	138	88	146	104	128	99	88	89	53	488	18	9.4
14	180	82	127	114	121	98	154	73	49	395	18	8.6
15	185	78	128	388	116	101	532	64	41	178	18	8.7
16	140	75	122	522	110	114	412	59	48	126	17	11
17	110	73	122	327	102	103	317	55	41	99	20	14
18	100	71	126	238	96	97	237	75	33	80	17	15
19	92	70	131	246	93	112	181	193	56	68	16	11
20	83	69	130	302	93	108	151	132	72	59	15	9.9
21	76	72	126	224	93	99	134	85	58	53	15	9.6
22	71	69	120	145	95	95	125	65	61	48	14	9.4
23	68	67	117	118	95	93	135	56	46	45	14	9.5
24	66	69	135	101	91	91	119	49	37	42	13	9.2
25	200	68	349	93	101	100	107	46	31	40	13	9.4
26	520	620	323	89	100	96	98	52	28	39	14	9.2
27	375	701	228	95	105	89	102	51	24	76	16	9.0
28	255	372	177	97	142	86	102	44	22	90	16	8.3
29	208	270	155	99	---	84	92	39	21	58	15	9.7
30	166	213	150	102	---	149	86	51	35	88	14	12
31	142	---	143	110	---	151	---	91	---	56	13	---
TOTAL	16949	4466	6013	4985	4129	4884	4239	2204	2135	6684	640	305.4
MEAN	547	149	194	161	147	158	141	71.1	71.2	216	20.6	10.2
MAX	6080	701	489	522	276	743	532	193	492	1400	48	15
MIN	66	67	117	89	91	84	75	39	21	39	13	8.3
CFSM	2.58	.70	.92	.76	.69	.75	.67	.34	.34	1.02	.10	.05
IN.	2.97	.78	1.06	.87	.72	.86	.74	.39	.37	1.17	.11	.05

CAL YR 1986	TOTAL	92307.7	MEAN	253	MAX	6080	MIN	7.6	CFSM	1.19	IN. 16.20
WTR YR 1987	TOTAL	57633.4	MEAN	158	MAX	6080	MIN	8.3	CFSM	.75	IN. 10.11

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.--No estimated daily discharges. Records good. Flow regulated by upstream reservoirs.

AVERAGE DISCHARGE.--42 years (1930-31, 1946 to current year), 2,430 ft^3/s, 13.50 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)
Oct. 2	0400	14,100	11.51	July 2	0300	13,900	11.39
Oct. 5	0400	*21,800	*14.37	July 6	1100	9,960	9.05

Minimum daily discharge, 329 ft^3/s Sept. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4800	1240	2410	1590	1720	4250	1830	1190	1260	4600	1340	494
2	10400	1210	3810	1520	1950	4630	1740	1120	1200	9680	1120	496
3	5200	1080	3810	1490	2470	4650	1620	1170	3250	4930	1040	452
4	13500	1170	3840	1420	2950	3570	1520	1080	3770	5350	1050	415
5	18200	1230	3310	1380	3030	2840	1440	1060	5100	3990	1110	400
6	10200	1230	2600	1370	2720	2400	1370	970	5630	6520	1080	379
7	7240	1240	2400	1350	2510	2170	1270	920	2930	3960	923	354
8	4380	1130	2070	1350	2410	2010	1210	975	1840	2610	789	359
9	3260	1110	2090	1320	2290	1890	1180	901	1460	2050	717	378
10	2680	1030	2710	1400	2120	1820	1130	832	1240	1830	674	369
11	2180	1070	2800	1470	1950	1660	1210	775	1110	1560	692	377
12	1900	1230	2730	1400	1820	1480	1850	967	1090	1350	691	467
13	1980	1180	2250	1340	1710	1410	1510	1170	1020	3470	646	408
14	2380	1090	1960	1360	1620	1370	2520	1020	1040	4060	587	375
15	2050	1060	1720	1880	1550	1360	5010	912	1010	3650	595	378
16	1860	1040	1700	2590	1440	1580	3530	842	990	3320	546	408
17	1800	1030	1630	3160	1340	1410	3700	803	1010	2490	536	435
18	1530	1020	1550	2780	1320	1280	3470	750	1000	1920	592	491
19	1350	990	1590	2760	1350	1660	3020	1340	980	1560	542	416
20	1220	1010	1440	2890	1310	1740	2550	1300	1170	1340	507	381
21	1140	1020	1450	2410	1280	1550	2200	1290	1170	1190	490	362
22	1070	996	1320	2270	1250	1430	1980	1180	1700	1020	463	375
23	1010	985	1320	1940	1240	1340	2050	1160	1360	944	446	350
24	968	949	1370	1680	1220	1280	1770	1880	1090	869	410	355
25	1170	859	2110	1440	1210	1290	1680	1580	945	842	419	357
26	2440	2920	2150	1360	1180	1260	1560	1490	853	752	435	349
27	2260	4050	2270	1390	1170	1220	1440	1220	729	1060	534	339
28	1970	3800	2490	1380	1420	1180	1520	1390	629	1470	588	329
29	1830	3360	2170	1370	---	1160	1310	1280	609	1020	601	362
30	1630	2740	1830	1540	---	1940	1320	1050	910	1540	548	477
31	1390	---	1700	1600	---	2090	---	996	---	1760	502	---
TOTAL	114988	44069	68600	54200	49550	60920	59510	34613	48095	82707	21213	11887
MEAN	3709	1469	2213	1748	1770	1965	1984	1117	1603	2668	684	396
MAX	18200	4050	3840	3160	3030	4650	5010	1880	5630	9680	1340	496
MIN	968	859	1320	1320	1170	1160	1130	750	609	752	410	329
CFSM	1.52	.60	.91	.72	.72	.80	.81	.46	.66	1.09	.28	.16
IN.	1.75	.67	1.04	.82	.75	.93	.91	.53	.73	1.26	.32	.18

CAL YR 1986	TOTAL	1070515	MEAN	2933	MAX	18200	MIN	344	CFSM	1.20	IN.	16.29
WTR YR 1987	TOTAL	650352	MEAN	1782	MAX	18200	MIN	329	CFSM	.73	IN.	9.90

03354000 WHITE RIVER NEAR CENTERTON, IN--Continued
(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 1986 TO SEPTEMBER 1987

DATE	TIME	STREAM-FLOW, INSTAN-TANEOUS (CFS)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE AIR (DEG C)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	BARO-METRIC PRES-SURE (MM OF HG)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT											
28...	1530	1920	738	7.60	21.0	15.0	14	9.8	750	K1800	370
DEC											
01...	1530	2310	646	8.00	7.0	7.0	13	10.4	742	2100	620
FEB											
11...	1200	1950	755	8.10	11.0	4.5	2.1	12.4	742	K14000	K20
APR											
29...	0900	1330	797	8.12	--	16.0	0.60	11.2	744	K180	380
JUN											
29...	1250	571	868	8.40	--	26.0	2.0	14.2	767	210	640
AUG											
17...	1200	548	995	8.11	8.0	27.5	2.9	12.2	758	310	640

DATE	HARD-NESS (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY, CARBON-ATE IT-FLD (MG/L - CACO3)	BICAR-BONATE IT-FLD (MG/L AS HCO3)	CAR-BONATE IT-FLD (MG/L AS CO3)
OCT										
28...	320	85	27	36	19	0.9	4.9	267	326	0
DEC										
01...	300	77	25	28	17	0.7	3.6	227	277	0
FEB										
11...	330	86	29	36	19	0.9	3.3	262	320	0
APR										
29...	340	86	30	47	23	1	3.6	270	329	0
JUN										
29...	310	80	27	69	32	2	5.3	237	289	0
AUG										
17...	330	84	30	80	34	2	6.7	232	283	0

DATE	ALKA-LINITY WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	SOLIDS, DIS-SOLVED (TONS PER AC-FT)	SOLIDS, DIS-SOLVED (TONS PER DAY)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)
OCT										
28...	269	68	52	0.30	9.6	442	440	0.60	2290	3.50
DEC										
01...	227	57	46	0.30	7.2	396	380	0.54	2470	--
FEB										
11...	262	68	59	0.30	4.2	459	450	0.62	2420	4.50
APR										
29...	266	81	72	0.30	2.7	491	490	0.67	1760	2.70
JUN										
29...	241	98	90	0.20	6.2	530	520	0.72	817	4.00
AUG										
17...	232	120	110	0.60	4.1	600	580	0.82	888	4.80

03354000 WHITE RIVER NEAR CENTERTON, IN--Continued
(National stream-quality accounting network station)

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS NH4)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS, TOTAL (MG/L AS P)	PHOSPHORUS, DISSOLVED (MG/L AS P)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)	PHOSPHATE, ORTHO, DISSOLVED (MG/L AS PO4)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)
OCT 28...	0.060	0.08	0.60	0.500	0.440	0.340	1.0	10	2	73
DEC 01...	--	--	--	--	--	--	--	--	--	--
FEB 11...	0.110	0.14	2.5	0.580	0.510	0.460	1.4	20	2	71
APR 29...	0.020	0.03	1.9	0.610	0.380	0.290	0.89	--	--	--
JUN 29...	0.040	0.05	1.9	1.40	0.080	1.10	3.4	20	2	66
AUG 17...	0.020	0.03	1.7	1.20	1.50	1.20	3.7	10	2	57

DATE	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)
OCT 28...	<0.5	<1	7	<3	3	12	<5	11	18	<0.1
DEC 01...	--	--	--	--	--	--	--	--	--	--
FEB 11...	<0.5	<1	2	<3	3	17	<5	13	39	<0.1
APR 29...	--	--	--	--	--	--	--	--	--	--
JUN 29...	<0.5	<1	<1	<3	10	15	<5	12	30	0.1
AUG 17...	<0.5	<1	<1	<3	9	12	<5	11	26	0.1

DATE	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 28...	<10	5	<1	<1	270	<6	23	58	301	88
DEC 01...	--	--	--	--	--	--	--	40	249	74
FEB 11...	<10	5	<1	<1	270	<6	28	12	63	67
APR 29...	--	--	--	--	--	--	--	31	111	97
JUN 29...	10	<1	<1	<1	270	<6	24	16	25	95
AUG 17...	<10	10	1	<1	280	<6	33	18	27	99

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 and concrete control. Datum of gage is 673.65 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Estimated daily discharges: Nov. 9-11, Jan. 23-27, Feb. 9-11, and May 7 to Sept. 30. Records fair before May 7, and poor thereafter.

AVERAGE DISCHARGE.--36 years, 15.9 ft^3/s, 14.79 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)
Apr. 14	1945	*507	*5.37

Minimum daily discharge, no flow, Sept. 21-28, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	2.5	15	5.8	4.0	68	21	5.0	2.0	10	.80	.04
2	16	2.1	57	5.8	4.7	34	27	4.4	2.0	7.0	.60	.04
3	10	2.1	27	5.5	4.9	24	23	4.8	8.0	5.2	.45	.03
4	38	2.3	21	5.4	4.6	21	19	4.2	4.0	4.5	.38	.03
5	19	2.7	18	5.2	5.2	18	16	3.5	2.5	7.3	.32	.03
6	10	2.9	16	5.1	4.9	15	15	3.2	1.8	15	.28	.03
7	8.9	2.2	14	4.9	4.6	13	14	2.8	1.3	9.0	.24	.02
8	7.4	2.5	13	4.7	4.4	12	13	2.4	1.2	6.0	.20	.02
9	6.0	2.4	14	4.7	2.6	10	11	2.1	1.1	6.7	.22	.02
10	5.2	1.6	14	4.9	3.0	8.2	11	1.9	.95	5.2	.25	.02
11	4.7	2.0	12	4.9	2.8	6.7	11	1.7	.90	4.0	.23	.02
12	4.4	2.4	11	4.9	3.7	6.1	46	5.2	3.9	3.1	.20	.02
13	4.7	2.1	6.4	4.9	4.2	5.6	34	3.2	3.9	2.4	.19	.02
14	4.9	2.0	5.4	5.3	4.4	5.4	156	2.4	3.3	1.9	.17	.01
15	4.3	2.3	5.8	5.5	4.2	5.0	97	1.9	1.3	1.4	.16	.01
16	3.9	2.4	5.8	5.5	4.0	6.6	42	1.6	1.1	1.1	.15	.01
17	3.7	2.3	5.8	5.3	4.0	5.8	28	1.5	1.0	.90	.16	.02
18	3.4	2.2	5.6	5.4	4.0	5.2	20	1.5	.98	.74	.14	.01
19	3.4	2.1	5.3	7.6	4.2	6.3	18	10	.93	.62	.13	.01
20	3.2	2.2	4.9	9.4	3.8	6.6	16	7.0	.90	.55	.12	.01
21	3.2	2.3	4.9	7.4	3.8	6.0	16	3.0	2.7	.48	.11	.00
22	3.4	2.2	4.9	5.5	3.6	5.5	17	2.5	3.1	.42	.10	.00
23	3.2	2.3	4.7	3.5	3.4	5.1	17	2.2	1.7	.38	.09	.00
24	3.0	2.4	6.6	2.4	3.2	4.8	14	2.0	1.2	.36	.08	.00
25	5.0	2.5	11	2.4	3.0	5.1	13	2.5	1.0	.35	.07	.00
26	6.7	48	9.2	2.2	3.0	4.5	9.3	3.4	.86	.34	.07	.00
27	5.0	21	7.9	2.4	3.1	4.3	7.1	2.5	.80	.34	.06	.00
28	4.0	17	7.0	3.1	30	4.1	5.7	1.7	.82	.33	.06	.00
29	3.5	13	6.7	3.6	---	3.9	3.6	1.5	.78	.60	.05	.03
30	3.3	11	6.4	4.5	---	16	4.7	1.3	.75	1.8	.05	.00
31	2.7	---	5.9	3.9	---	22	---	1.5	---	1.0	.04	---
TOTAL	249.1	167.0	352.2	151.6	135.3	363.8	745.4	94.4	56.77	99.01	6.17	.45
MEAN	8.04	5.57	11.4	4.89	4.83	11.7	24.8	3.05	1.89	3.19	.20	.01
MAX	45	48	57	9.4	30	68	156	10	8.0	15	.80	.04
MIN	2.7	1.6	4.7	2.2	2.6	3.9	3.6	1.3	.75	.33	.04	.00
CFSM	.55	.38	.78	.33	.33	.80	1.70	.21	.13	.22	.01	.00
IN.	.63	.43	.90	.39	.34	.93	1.90	.24	.14	.25	.02	.00

CAL YR 1986	TOTAL	4297.30	MEAN	11.8	MAX	226	MIN	.00	CFSM	.81	IN.	10.95
WTR YR 1987	TOTAL	2421.20	MEAN	6.63	MAX	156	MIN	.00	CFSM	.45	IN.	6.17

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: Nov. 19-21, Jan. 20-31, Feb. 1, 2, 5, 6, 10, 11, 14-16, and 21-23. Records fair except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--18 years, 3.68 ft^3/s, 16.66 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 744 ft^3/s June 30, 1977, gage height, 5.75 ft; no flow at times during 1970, 1975-77, 1983-87.

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)
Oct. 1	0945	292	3.66	June 2	2200	199	3.32
Oct. 4	0045	*341	*3.90	July 1	1600	247	3.48

Minimum daily discharge, no flow Sept. 6-15, 24-28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	1.1	3.9	1.6	2.7	9.7	1.0	.95	.29	65	.09	.01
2	4.5	.97	8.4	1.5	3.8	5.4	.95	.91	29	10	.08	.01
3	6.0	.96	4.9	1.3	4.7	3.8	.88	.87	13	4.3	.08	.01
4	66	1.5	3.5	1.3	3.6	2.9	.82	.72	3.1	24	.07	.01
5	8.7	1.6	2.7	1.2	2.9	2.7	.83	.66	1.6	7.1	.07	.01
6	4.2	1.5	2.4	1.3	2.5	2.2	.83	.65	1.1	11	.06	.00
7	2.8	1.3	2.2	1.1	3.3	2.1	.82	.62	.83	5.6	.07	.00
8	1.9	1.3	2.1	.97	3.0	2.0	.77	.57	.64	3.3	.06	.00
9	1.4	1.0	4.9	.86	2.1	1.8	.75	.55	.51	2.3	.07	.00
10	1.2	.84	3.9	1.4	1.8	1.5	.73	.51	.41	1.9	.06	.00
11	.97	1.0	2.9	1.1	1.6	1.5	1.2	.46	.36	1.5	.06	.00
12	1.0	.86	2.3	1.0	2.0	1.4	.93	1.0	3.8	1.2	.06	.00
13	2.1	.77	1.5	1.0	1.7	1.4	1.3	.55	1.4	1.6	.06	.00
14	2.5	.83	1.6	3.4	1.4	1.5	3.6	.47	.68	1.5	.05	.00
15	1.6	.77	1.6	13	1.2	1.5	4.8	.46	5.5	1.1	.05	.00
16	1.3	.68	1.6	6.0	1.1	1.5	3.5	.32	2.2	.99	.04	.04
17	1.0	.59	1.7	4.2	1.3	1.2	2.8	.28	.74	.77	.08	.02
18	.81	.66	1.6	3.6	1.3	1.3	2.2	.35	.42	.62	.05	.01
19	.71	.76	1.4	5.5	1.3	1.4	1.8	.44	.44	.53	.04	.01
20	.66	.70	1.2	3.0	1.3	1.2	1.6	.25	.76	.42	.04	.01
21	.68	.64	1.1	2.0	1.2	1.1	1.5	.19	.54	.33	.04	.01
22	.62	.58	1.1	1.4	1.1	1.1	2.3	.32	.42	.27	.04	.01
23	.66	.63	1.1	1.2	1.1	1.1	2.5	.15	.27	.23	.03	.01
24	.79	.53	3.0	1.1	1.2	1.1	1.7	.13	.23	.18	.03	.00
25	5.2	.62	4.1	1.0	1.2	1.5	1.5	5.8	.19	.14	.04	.00
26	4.8	12	2.8	.95	1.1	1.2	1.4	2.8	.16	.13	.04	.00
27	3.1	6.1	2.2	.93	1.3	1.1	1.6	.96	.13	.19	.02	.00
28	2.2	4.2	2.0	.92	3.2	1.0	1.3	.61	.11	.13	.02	.00
29	1.8	3.2	1.9	.94	---	1.0	1.2	.40	.24	.11	.02	.17
30	1.4	2.6	1.9	1.0	---	1.4	1.0	.33	1.1	.11	.02	.01
31	1.2	---	1.6	1.3	---	1.1	---	.35	---	.11	.01	---
TOTAL	179.80	50.79	79.1	67.07	56.0	60.7	48.11	23.63	70.17	146.66	1.55	.35
MEAN	5.80	1.69	2.55	2.16	2.00	1.96	1.60	.76	2.34	4.73	.05	.01
MAX	66	12	8.4	13	4.7	9.7	4.8	5.8	29	65	.09	.17
MIN	.62	.53	1.1	.86	1.1	1.0	.73	.13	.11	.11	.01	.00
CFSM	1.93	.56	.85	.72	.67	.65	.53	.25	.78	1.58	.02	.00
IN.	2.23	.63	.98	.83	.69	.75	.60	.29	.87	1.82	.02	.00

CAL YR 1986	TOTAL	1075.56	MEAN	2.95	MAX	66	MIN	.01	CFSM	.98	IN.	13.34
WTR YR 1987	TOTAL	783.93	MEAN	2.15	MAX	66	MIN	.00	CFSM	.72	IN.	9.72

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: Jan. 21 to Feb. 1 and Feb. 11-16. Records good except for estimated daily discharges, which are fair. Flow partly regulated by Soil Conservation Service control structures on tributaries to Little Walnut Creek beginning in 1971.

AVERAGE DISCHARGE.--38 years, 352 ft^3/s, 14.66 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)
Oct. 1	1900	3,370	9.55	July 2	0200	*8,710	*15.34
Oct. 4	1000	7,000	14.11	July 6	0900	6,910	14.02

Minimum daily discharge, 18 ft^3/s Sept. 27, 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1580	183	276	193	254	609	136	133	133	3550	73	39
2	1460	168	645	189	343	826	131	129	98	4820	68	37
3	585	157	556	185	446	534	126	130	1390	1440	65	34
4	5960	164	413	174	459	388	121	122	823	1200	62	32
5	2460	178	324	167	369	325	116	113	419	1040	58	31
6	1120	185	273	163	339	291	114	108	263	3370	55	29
7	642	176	251	164	325	257	114	102	192	1320	55	28
8	441	166	241	158	337	239	111	100	156	756	50	27
9	337	158	290	154	291	230	108	97	136	714	49	26
10	271	147	395	151	257	208	106	94	124	562	49	25
11	231	139	355	182	236	186	132	92	117	410	47	24
12	210	139	298	164	218	178	140	93	166	311	45	23
13	217	130	241	149	202	172	165	101	203	350	47	22
14	260	119	223	181	188	168	516	98	149	347	45	21
15	242	119	211	548	177	174	580	95	120	277	44	22
16	207	122	203	806	170	210	580	95	150	248	42	32
17	185	121	198	552	165	179	459	88	132	186	59	35
18	166	118	197	423	168	162	356	89	106	155	84	29
19	151	113	188	437	161	166	287	93	101	135	80	25
20	141	112	175	497	170	163	243	96	297	123	80	23
21	132	114	167	333	166	151	215	86	193	108	78	22
22	126	111	160	244	165	146	223	82	152	102	70	21
23	121	108	154	198	161	141	304	79	125	97	64	20
24	120	107	179	168	153	139	238	73	107	92	58	19
25	390	106	316	152	146	182	200	74	116	88	59	19
26	618	353	354	143	142	161	176	195	129	82	54	19
27	477	622	285	148	146	148	175	165	92	81	62	18
28	340	434	247	156	185	141	174	109	84	81	59	18
29	269	328	225	158	---	134	155	91	88	81	53	28
30	232	272	218	168	---	149	142	84	151	139	47	27
31	203	---	207	186	---	147	---	143	---	85	44	---
TOTAL	19894	5469	8465	7691	6539	7304	6643	3249	6512	22350	1805	775
MEAN	642	182	273	248	234	236	221	105	217	721	58.2	25.8
MAX	5960	622	645	806	459	826	580	195	1390	4820	84	39
MIN	120	106	154	143	142	134	106	73	84	81	42	18
CFSM	1.97	.56	.84	.76	.72	.72	.68	.32	.67	2.21	.18	.08
IN.	2.27	.62	.97	.88	.75	.83	.76	.37	.74	2.55	.21	.09

CAL YR 1986 TOTAL 135268 MEAN 371 MAX 5960 MIN 23 CFSM 1.14 IN. 15.44
WTR YR 1987 TOTAL 96696 MEAN 265 MAX 5960 MIN 18 CFSM .81 IN. 11.03

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 right 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: Oct. 5 to Dec. 18, Dec. 24-31, Jan. 15 to Mar. 17, Mar. 31 to Apr. 3, and Apr. 12 to June 1. Records poor prior to June, and good thereafter.

AVERAGE DISCHARGE.--38 years, 264 ft^3/s, 14.63 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)
Oct. 5	1800	2,820	12.89	July 6	1500	*4,560	*15.74
July 2	2400	3,830	14.61				

Minimum daily discharge, 6.8 ft^3/s Sept. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	591	89	210	132	140	1540	156	80	80	1700	67	12
2	1440	84	470	130	170	1500	120	73	69	3770	267	11
3	371	79	430	117	178	800	104	74	868	3550	85	10
4	1620	79	310	108	174	430	95	77	255	1490	54	10
5	2610	75	260	105	168	260	87	68	130	505	44	9.8
6	2720	75	220	106	152	212	85	63	89	3420	38	9.6
7	1090	89	190	106	135	183	84	62	69	3960	33	9.2
8	350	84	185	91	120	169	79	58	56	2010	29	8.9
9	173	75	230	89	110	151	74	55	47	947	29	8.7
10	137	66	300	105	95	125	71	50	39	1100	27	9.5
11	110	63	240	110	86	113	87	48	35	378	24	13
12	99	62	200	84	79	109	259	183	100	317	23	16
13	89	60	180	96	75	107	350	138	279	2000	22	12
14	84	59	160	124	71	105	579	80	91	1020	21	9.5
15	89	58	150	350	68	111	626	63	57	475	20	8.6
16	99	57	130	600	65	131	605	48	55	447	18	8.7
17	99	56	120	430	63	122	529	46	46	246	18	13
18	79	55	115	330	62	109	370	37	33	176	18	17
19	75	55	98	270	62	118	276	224	28	137	16	13
20	70	55	91	290	63	115	219	446	802	109	15	10
21	62	54	84	210	62	103	187	183	296	89	14	8.7
22	58	52	79	160	61	96	167	105	162	77	14	8.1
23	54	51	78	130	60	90	216	78	96	68	14	7.6
24	54	51	115	114	58	88	169	58	61	60	13	7.5
25	62	52	227	109	57	111	140	84	87	53	12	7.4
26	370	250	219	103	56	104	124	198	187	48	13	7.8
27	289	450	200	100	60	90	119	134	56	52	13	7.2
28	187	340	178	100	156	87	116	89	36	59	15	6.8
29	146	250	162	102	---	82	99	67	31	47	14	8.2
30	121	220	154	108	---	169	89	57	132	314	14	12
31	99	---	135	120	---	212	---	59	---	87	13	---
TOTAL	13497	3145	5920	5129	2706	7742	6281	3085	4372	28711	1017	300.8
MEAN	435	105	191	165	96.6	250	209	99.5	146	926	32.8	10.0
MAX	2720	450	470	600	178	1540	626	446	868	3960	267	17
MIN	54	51	78	84	56	82	71	37	28	47	12	6.8
CFSM	1.78	.43	.78	.67	.39	1.02	.85	.41	.60	3.78	.13	.04
IN.	2.05	.48	.90	.78	.41	1.18	.95	.47	.66	4.36	.15	.05

CAL YR 1986	TOTAL	89253.1	MEAN	245	MAX	3300	MIN	3.8	CFSM	1.00	IN.	13.55
WTR YR 1987	TOTAL	81905.8	MEAN	224	MAX	3960	MIN	6.8	CFSM	.91	IN.	12.44

03359000 MILL CREEK NEAR MANHATTAN, IN

LOCATION (Revised).--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. 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.--49 years (1938 to current year), 311 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, 1,830 ft^3/s July 21; minimum daily, 21 ft^3/s Sept. 4-14.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	88	138	797	143	125	104	307	99	203	175	1630	22
2	96	69	412	143	203	300	161	109	177	82	1800	22
3	101	76	546	143	493	705	82	126	508	85	1770	22
4	102	89	829	118	677	1110	83	126	745	483	1730	21
5	105	93	643	102	337	1240	83	126	399	489	1390	21
6	108	106	333	102	183	876	113	125	106	137	396	21
7	318	106	204	102	143	307	167	87	95	94	75	21
8	826	117	204	102	144	204	167	64	82	397	75	21
9	1350	154	252	102	170	204	86	64	69	503	75	21
10	1560	154	457	102	169	204	46	64	69	97	75	21
11	1580	153	392	125	103	147	47	46	50	341	75	21
12	1560	153	204	143	67	102	260	31	70	863	51	21
13	1530	152	181	143	41	102	412	31	276	268	35	21
14	1500	153	102	143	41	102	197	32	379	807	35	21
15	1380	151	102	352	41	102	96	32	194	1230	35	57
16	718	151	102	724	41	139	219	32	139	1350	35	73
17	132	131	102	737	42	307	824	32	82	1350	35	99
18	212	84	102	358	42	285	1060	32	69	1520	30	111
19	224	90	112	333	175	61	1050	540	69	1600	22	111
20	124	109	143	485	561	61	1040	832	95	1760	22	110
21	69	108	143	617	494	61	1020	361	573	1830	22	84
22	69	108	143	358	83	82	701	89	665	1810	22	71
23	69	108	134	204	102	102	342	89	287	1790	22	71
24	69	108	102	183	102	102	273	89	126	1430	22	71
25	69	107	130	143	102	102	204	89	59	935	22	71
26	260	203	327	143	102	113	169	215	72	1730	22	71
27	499	468	618	143	102	134	148	200	169	1670	22	70
28	518	688	342	119	102	133	115	130	110	1260	22	70
29	209	886	123	102	---	133	98	75	50	969	22	70
30	208	1020	143	102	---	139	99	50	159	1570	22	70
31	208	---	143	102	---	323	---	83	---	1400	22	---
TOTAL	15861	6233	8567	6918	4987	8086	9669	4100	6146	30025	9633	1577
MEAN	512	208	276	223	178	261	322	132	205	969	311	52.6
MAX	1580	1020	829	737	677	1240	1060	832	745	1830	1800	111
MIN	69	69	102	102	41	61	46	31	50	82	22	21

CAL YR 1986	TOTAL	139733	MEAN	383	MAX	2180	MIN	19
WTR YR 1987	TOTAL	111802	MEAN	306	MAX	1830	MIN	21

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: Jan. 21 to Feb. 1. Records good except for estimated daily discharges, which are fair. Flow regulated by Cagles Mill Lake.

AVERAGE DISCHARGE.--56 years, 883 ft^3/s, 14.45 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, 14,300 ft^3/s July 2, gage height, 19.77 ft; minimum daily, 53 ft^3/s Sept. 14, 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1090	476	1360	461	450	1360	585	348	319	2740	1570	94
2	2670	358	1760	452	668	1620	426	332	374	11800	1850	87
3	876	338	1360	442	915	1400	315	382	1250	6740	1810	82
4	4380	348	1460	415	1380	1540	290	360	1940	1910	1780	78
5	6940	369	1220	361	913	1670	275	320	1100	2200	1710	74
6	1970	392	790	353	699	1540	268	301	487	7660	887	71
7	1180	385	603	349	615	790	336	285	372	10100	278	69
8	1380	368	579	343	616	587	337	241	301	2180	234	66
9	1710	398	691	336	572	562	307	232	255	2030	216	64
10	1850	387	1020	347	572	526	216	221	227	1980	201	62
11	1830	373	1000	381	474	479	254	211	205	1050	189	61
12	1780	370	652	415	446	402	528	189	406	1510	178	58
13	1770	363	558	390	384	387	791	190	718	2030	150	56
14	1830	347	437	485	361	377	1890	190	680	1830	143	53
15	1750	336	443	1210	352	376	1570	177	387	1800	134	53
16	1260	345	430	1800	328	471	1290	173	329	2080	126	94
17	506	340	424	1590	303	529	1520	166	304	1830	132	118
18	486	280	420	1100	301	613	1720	163	220	1780	133	144
19	517	265	405	992	309	372	1560	360	190	1870	176	133
20	401	277	420	1240	590	352	1460	797	470	1880	171	124
21	322	283	408	1100	920	330	1390	609	706	1990	170	117
22	302	280	397	700	362	316	1340	242	980	1950	164	89
23	286	276	388	560	369	339	923	213	565	1900	149	85
24	278	274	410	500	357	340	819	198	345	1840	134	84
25	614	270	705	460	345	476	604	194	219	915	124	82
26	1130	857	763	450	336	431	546	375	318	1750	125	80
27	1170	1430	988	420	341	403	500	581	262	1820	118	79
28	1130	1300	832	370	432	386	479	319	304	1550	129	79
29	664	1320	477	350	---	370	402	235	173	966	121	92
30	580	1400	498	360	---	447	373	188	323	1830	110	107
31	530	---	483	370	---	503	---	213	---	1610	101	---
TOTAL	43182	14805	22381	19102	14710	20294	23314	9005	14729	85121	13513	2535
MEAN	1393	494	722	616	525	655	777	290	491	2746	436	84.5
MAX	6940	1430	1760	1800	1380	1670	1890	797	1940	11800	1850	144
MIN	278	265	388	336	301	316	216	163	173	915	101	53
CFSM	1.68	.60	.87	.74	.63	.79	.94	.35	.59	3.31	.53	.10
IN.	1.94	.66	1.00	.86	.66	.91	1.04	.40	.66	3.82	.61	.11

CAL YR 1986	TOTAL	352490	MEAN	966	MAX	8350	MIN	53	CFSM	1.16	IN.	15.80
WTR YR 1987	TOTAL	282691	MEAN	774	MAX	11800	MIN	53	CFSM	.93	IN.	12.67

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: Jan. 23-27. Records good. Flow regulated by upstream reservoirs.

AVERAGE DISCHARGE.--59 years, 4,760 ft^3/s, 13.79 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, 19,300 ft^3/s July 8, gage height, 15.66 ft; minimum daily, 580 ft^3/s Sept. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1920	2830	5290	3170	3000	7520	3980	2620	1710	2910	3870	905
2	2900	2600	8450	3020	3050	8780	3840	2500	1680	8590	3710	852
3	8440	2380	8340	2870	3490	8420	3500	2360	2200	12700	3990	824
4	9600	2260	7130	2760	3890	7620	3110	2360	3350	14000	3540	792
5	10500	2170	6390	2670	4700	6830	2810	2340	5180	15700	3350	771
6	12900	2220	5890	2550	4660	6080	2620	2130	5280	13100	3240	735
7	14900	2250	4920	2480	4360	5340	2480	2010	5690	16800	2800	720
8	14800	2240	4210	2430	4060	4390	2390	1890	4940	18800	2120	697
9	10300	2230	4210	2350	3780	3800	2290	1780	3280	17900	1840	659
10	6890	2150	4670	2350	3590	3440	2180	1740	2560	12900	1670	648
11	5960	2130	4640	2410	3450	3170	2120	1640	2180	8620	1530	647
12	5350	2110	4720	2480	3300	2970	3000	1590	1970	5610	1440	665
13	4990	2090	4370	2550	3070	2700	4690	1540	2250	5300	1370	652
14	5100	2130	3900	2650	2900	2520	8560	1750	3930	6700	1340	690
15	5000	2120	3480	3240	2730	2440	11700	1780	3030	7080	1270	668
16	4840	2070	3220	4410	2580	2530	12000	1590	2290	7070	1200	658
17	4220	2030	3070	4820	2440	2660	10600	1480	1960	6830	1200	678
18	3450	2010	3020	5100	2330	2730	8810	1450	1820	5970	1130	711
19	3060	1960	2880	5590	2240	2640	7890	1460	1690	5140	1070	740
20	2870	1900	2780	6350	2210	2470	6950	1590	1630	4690	1070	787
21	2640	1880	2680	5990	2370	2630	6110	2510	1810	4320	1070	731
22	2420	1870	2580	5250	2720	2530	5450	2570	2560	4160	1040	685
23	2270	1880	2510	3800	2440	2330	5610	2110	2700	3930	995	661
24	2160	1890	2510	3000	2200	2220	5130	1850	2620	3710	954	630
25	2320	1870	3750	2800	2150	2330	4470	1900	2090	3530	920	612
26	3590	3430	4150	2700	2090	2610	3860	2460	1750	2870	892	597
27	3900	5980	4050	2600	2070	2430	3560	2330	1600	2960	888	587
28	4160	6670	4000	2610	2560	2270	3240	2330	1500	4050	884	580
29	3900	5970	4040	2610	---	2170	3070	2050	1380	3700	909	591
30	3410	5650	3770	2700	---	2620	2860	2010	1330	3110	952	590
31	3030	---	3430	3160	---	3580	---	2010	---	3440	958	---
TOTAL	171790	80970	133050	103470	84430	116770	148880	61730	77960	236190	53212	20763
MEAN	5542	2699	4292	3338	3015	3767	4963	1991	2599	7619	1717	692
MAX	14900	6670	8450	6350	4700	8780	12000	2620	5690	18800	3990	905
MIN	1920	1870	2510	2350	2070	2170	2120	1450	1330	2870	884	580
CFSM	1.18	.58	.92	.71	.64	.80	1.06	.42	.55	1.63	.37	.15
IN.	1.36	.64	1.06	.82	.67	.93	1.18	.49	.62	1.87	.42	.16

CAL YR 1986 TOTAL 1969678 MEAN 5396 MAX 21400 MIN 815 CFSM 1.15 IN. 15.63
WTR YR 1987 TOTAL 1289215 MEAN 3532 MAX 18800 MIN 580 CFSM .75 IN. 10.23

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: Jan. 23-30 and Feb. 16-18. Records good. Flow partly regulated by Big Blue River Conservancy District control structures on tributaries to Big Blue River beginning in 1969.

AVERAGE DISCHARGE.--37 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)
Oct. 2	0100	4,800	10.35	July 2	0600	2,610	8.10
Oct. 4	1700	*5,290	*10.76				

Minimum daily discharge, 46 ft^3/s Sept. 15, 21.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1630	135	186	128	160	474	184	117	186	864	129	53
2	2810	130	407	131	220	358	181	115	145	1930	123	52
3	848	127	391	126	278	246	157	113	420	823	166	51
4	3600	143	284	125	214	195	142	109	234	486	130	50
5	2820	141	223	126	190	174	134	107	159	276	111	49
6	838	139	196	129	175	161	129	105	128	272	98	47
7	534	133	183	146	174	147	125	104	112	241	87	48
8	426	132	175	142	172	142	120	102	102	183	82	48
9	350	131	198	137	147	137	116	99	96	151	80	48
10	297	123	247	145	139	125	112	97	90	135	76	48
11	257	128	206	133	134	119	120	93	86	120	75	47
12	237	128	182	125	133	117	193	109	94	112	72	50
13	242	122	157	123	127	114	165	96	92	174	70	52
14	270	117	147	133	124	114	196	92	83	289	69	47
15	229	122	145	245	119	115	645	89	79	168	66	46
16	200	120	143	224	105	111	476	84	76	137	62	51
17	183	118	143	183	108	106	378	83	72	117	64	56
18	167	117	145	171	110	111	285	89	69	107	63	53
19	159	113	137	195	110	182	231	138	68	99	60	51
20	151	120	133	200	108	157	201	131	72	91	58	49
21	146	126	128	171	108	137	181	104	94	87	58	46
22	139	122	125	163	109	127	171	166	104	84	59	48
23	135	122	124	140	109	122	188	115	83	82	58	48
24	139	118	141	110	105	120	159	97	73	78	54	48
25	150	116	160	105	103	125	142	101	68	75	57	48
26	190	426	151	100	103	117	137	151	66	77	74	48
27	191	411	142	100	105	112	135	116	62	199	61	47
28	174	281	135	105	130	109	128	98	60	111	61	47
29	160	228	132	110	---	107	125	88	63	95	60	50
30	150	199	136	130	---	173	121	121	103	317	56	51
31	139	---	129	135	---	179	---	350	---	185	55	---
TOTAL	17961	4688	5531	4436	3919	4833	5777	3579	3239	8165	2394	1477
MEAN	579	156	178	143	140	156	193	115	108	263	77.2	49.2
MAX	3600	426	407	245	278	474	645	350	420	1930	166	56
MIN	135	113	124	100	103	106	112	83	60	75	54	46
CFSM	3.15	.85	.97	.78	.76	.85	1.05	.62	.59	1.43	.42	.27
IN.	3.63	.95	1.12	.90	.79	.98	1.17	.72	.65	1.65	.48	.30

CAL YR 1986	TOTAL	85717	MEAN	235	MAX	3600	MIN	47	CFSM	1.28	IN.	17.33
WTR YR 1987	TOTAL	65999	MEAN	181	MAX	3600	MIN	46	CFSM	.98	IN.	13.34

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: Jan. 22-28. Records good.

AVERAGE DISCHARGE.--44 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)
Oct. 3	0800	6,200	14.00	July 3	0900	4,390	12.15
Oct. 5	2300	*7,220	*14.86				

Minimum daily discharge, 64 ft^3/s Sept. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1160	281	462	264	307	887	501	247	418	795	385	83
2	3960	265	914	269	399	1100	500	242	315	3190	353	80
3	5170	254	1130	262	545	736	428	238	976	3740	570	78
4	3020	260	850	251	474	532	372	224	837	1580	771	77
5	5880	276	632	250	399	438	338	210	478	856	442	73
6	5400	273	505	255	368	391	314	206	328	902	314	71
7	1690	260	443	267	364	348	297	204	259	851	245	69
8	1150	255	411	269	367	327	281	201	220	581	204	69
9	876	251	447	259	323	316	264	193	197	450	184	69
10	709	238	662	276	292	283	251	187	180	398	171	69
11	597	237	579	266	280	256	265	182	167	349	159	69
12	521	249	473	241	273	245	652	197	169	358	148	74
13	502	243	385	232	259	234	685	199	175	442	139	73
14	547	228	338	241	249	231	695	179	160	848	134	72
15	536	228	324	341	242	236	1640	173	147	625	127	69
16	445	231	311	465	217	240	1570	166	139	423	120	80
17	400	227	302	378	220	220	1310	160	131	330	115	83
18	352	222	303	343	222	223	964	166	123	273	113	82
19	319	213	290	358	213	553	735	192	125	235	109	78
20	301	210	273	481	206	586	592	228	124	209	103	74
21	284	225	258	388	205	430	501	194	132	190	99	70
22	272	219	247	320	208	357	446	234	176	178	99	70
23	259	216	242	290	209	316	431	263	155	167	101	71
24	254	213	273	220	203	299	394	199	129	158	96	69
25	265	210	379	215	195	301	345	182	116	148	92	68
26	375	680	370	210	192	282	316	377	109	156	99	66
27	475	1280	333	210	195	260	302	304	103	444	109	65
28	438	874	307	215	230	246	293	221	97	388	99	64
29	378	655	288	229	---	235	273	192	101	244	98	71
30	335	523	289	267	---	339	264	181	126	478	93	69
31	304	---	275	290	---	485	---	440	---	579	88	---
TOTAL	37174	9996	13295	8822	7856	11932	16219	6781	6912	20565	5979	2175
MEAN	1199	333	429	285	281	385	541	219	230	663	193	72.5
MAX	5880	1280	1130	481	545	1100	1640	440	976	3740	771	83
MIN	254	210	242	210	192	220	251	160	97	148	88	64
CFSM	2.85	.79	1.02	.68	.67	.91	1.29	.52	.55	1.57	.46	.17
IN.	3.28	.88	1.17	.78	.69	1.05	1.43	.60	.61	1.82	.53	.19

CAL YR 1986	TOTAL	191438	MEAN	524	MAX	5880	MIN	67	CFSM	1.24	IN.	16.92
WTR YR 1987	TOTAL	147706	MEAN	405	MAX	5880	MIN	64	CFSM	.96	IN.	13.05

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: Jan. 22-30. Records good.

AVERAGE DISCHARGE.--20 years, 102 ft^3/s, 14.75 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)
Oct. 1	2000	1,590	8.77	July 1	2300	1,030	7.18
Oct. 4	1300	*1,880	*9.50				

Minimum daily discharge, 3.7 ft^3/s Sept. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	813	48	99	60	84	210	82	44	39	397	48	8.2
2	920	45	239	59	111	250	74	43	36	579	45	7.4
3	767	45	240	58	150	177	66	42	80	500	74	7.1
4	1610	46	177	57	149	123	56	39	53	358	72	6.6
5	1530	47	129	55	118	99	52	37	46	156	60	6.4
6	1270	49	102	56	106	88	52	34	35	114	41	6.3
7	492	49	89	56	101	78	52	32	29	99	31	6.2
8	260	49	83	55	98	73	51	32	25	85	26	5.9
9	189	47	93	55	85	71	51	31	22	65	23	6.0
10	147	43	127	59	72	64	50	29	20	52	20	5.7
11	119	43	125	58	69	58	52	28	19	45	19	5.9
12	102	42	100	52	66	55	57	31	19	41	17	5.8
13	103	40	82	49	62	53	55	30	20	92	16	6.5
14	122	38	74	50	59	51	71	28	19	189	15	5.8
15	110	38	66	95	56	51	148	26	17	181	14	5.9
16	91	39	62	156	50	52	191	24	16	106	13	6.4
17	77	39	60	121	49	48	162	23	14	74	12	6.7
18	67	38	61	98	52	48	128	24	13	57	11	6.8
19	62	36	59	125	47	92	100	25	12	46	10	6.2
20	56	37	56	141	44	82	85	24	13	39	9.9	5.0
21	51	37	53	121	44	74	75	48	15	33	9.2	4.3
22	47	35	50	96	44	64	69	61	22	28	9.4	4.4
23	46	36	48	78	45	59	68	167	16	26	8.8	4.5
24	44	36	58	61	43	56	64	87	20	24	7.6	4.2
25	52	35	103	52	42	56	59	61	17	21	7.5	3.8
26	80	163	105	49	41	54	54	61	14	20	9.0	4.2
27	78	264	88	50	42	52	54	121	12	32	11	3.8
28	80	195	76	53	59	49	51	70	11	34	11	3.7
29	70	137	69	55	---	47	48	50	10	27	11	4.0
30	60	107	66	56	---	72	46	42	12	76	9.9	4.7
31	53	---	63	70	---	84	---	40	---	51	9.0	---
TOTAL	9568	1903	2902	2256	1988	2490	2223	1434	696	3647	680.3	168.4
MEAN	309	63.4	93.6	72.8	71.0	80.3	74.1	46.3	23.2	118	21.9	5.61
MAX	1610	264	240	156	150	250	191	167	80	579	74	8.2
MIN	44	35	48	49	41	47	46	23	10	20	7.5	3.7
CFSM	3.29	.68	1.00	.78	.76	.86	.79	.49	.25	1.26	.23	.06
IN.	3.79	.75	1.15	.89	.79	.99	.88	.57	.28	1.44	.27	.07

CAL YR 1986	TOTAL	43691.6	MEAN	120	MAX	1610	MIN	5.5	CFSM	1.28	IN.	17.31
WTR YR 1987	TOTAL	29955.7	MEAN	82.1	MAX	1610	MIN	3.7	CFSM	.87	IN.	11.87

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. 6-20, Oct. 29 to Nov. 7, Dec. 14, 15, 20, 21, Jan. 22-28, and Feb. 10, 17, 18. Records good before May and fair thereafter. Low flow is effected by regulation.

AVERAGE DISCHARGE.--20 years, 91.2 ft^3/s, 15.72 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)
Oct. 2	0100	1,700	9.59	July 2	0500	2,380	10.66
Oct. 4	2000	*3,120	*11.59				

Minimum daily discharge, 0.81 ft^3/s Sept. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	868	36	93	46	73	436	69	21	27	661	37	7.0
2	1040	33	485	48	99	230	60	26	27	1580	26	7.0
3	541	32	250	43	113	144	48	28	178	283	20	4.9
4	2640	32	155	40	87	103	43	23	62	159	17	4.8
5	1720	34	109	39	74	83	40	21	30	110	15	6.3
6	740	37	85	40	70	73	34	16	20	152	9.3	6.8
7	390	39	74	38	70	64	31	17	16	133	6.3	6.8
8	185	37	68	33	67	60	33	22	13	88	9.4	6.4
9	136	29	98	33	47	57	31	20	12	56	9.8	4.7
10	102	30	134	39	40	46	30	17	10	43	9.5	4.7
11	85	33	94	36	44	39	38	15	10	38	8.9	4.6
12	73	36	72	32	43	34	91	30	15	37	8.4	6.3
13	74	30	50	28	38	33	58	21	20	379	8.4	9.1
14	108	27	37	38	45	37	112	19	14	286	8.2	4.9
15	82	29	35	141	44	38	231	19	14	153	8.2	4.4
16	64	30	38	113	37	53	151	18	16	102	7.8	4.7
17	54	28	43	79	32	37	121	17	17	67	7.9	4.1
18	48	27	46	69	30	43	89	18	15	47	9.2	5.5
19	44	25	41	128	28	220	69	23	35	35	8.4	7.2
20	40	25	35	152	29	130	57	17	41	28	7.2	4.1
21	35	25	31	109	29	88	47	15	15	23	6.7	2.1
22	32	23	30	69	32	65	44	66	50	22	5.1	3.3
23	30	24	28	46	28	54	45	27	19	20	5.2	5.5
24	29	27	66	35	29	53	36	16	14	21	6.1	4.7
25	66	26	142	31	23	51	33	21	13	21	6.3	3.8
26	144	328	98	27	26	43	30	31	14	23	7.7	4.4
27	95	231	71	25	31	34	34	16	14	40	9.9	4.8
28	69	145	56	28	88	36	30	15	14	36	9.3	2.3
29	54	107	50	31	---	35	30	12	15	21	8.4	.81
30	44	83	52	52	---	107	24	8.5	28	86	8.0	1.6
31	39	---	46	49	---	96	---	28	---	78	7.6	---
TOTAL	9671	1648	2712	1717	1396	2622	1789	663.5	788	4828	322.2	147.61
MEAN	312	54.9	87.5	55.4	49.9	84.6	59.6	21.4	26.3	156	10.4	4.92
MAX	2640	328	485	152	113	436	231	66	178	1580	37	9.1
MIN	29	23	28	25	23	33	24	8.5	10	20	5.1	.81
CFSM	3.96	.70	1.11	.70	.63	1.07	.76	.27	.33	1.98	.13	.06
IN.	4.57	.78	1.28	.81	.66	1.24	.84	.31	.37	2.28	.15	.07

CAL YR 1986 TOTAL 39629.43 MEAN 109 MAX 2640 MIN .96 CFSM 1.38 IN. 18.71
WTR YR 1987 TOTAL 28304.31 MEAN 77.5 MAX 2640 MIN .81 CFSM .98 IN. 13.36

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: Jan. 22-28. Records good.

AVERAGE DISCHARGE.--45 years, 106 ft^3/s, 13.45 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)
July 6	2200	*1,200	*6.43

Minimum daily discharge, 1.9 ft^3/s Sept. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	138	19	68	41	41	468	64	37	18	222	41	3.9
2	229	17	413	43	52	326	61	37	19	564	30	3.8
3	78	17	262	40	62	196	49	38	574	183	25	3.7
4	300	17	153	37	54	129	44	37	205	94	20	3.3
5	248	19	106	37	48	105	41	32	98	73	18	2.8
6	108	19	84	38	47	85	38	31	60	734	17	3.1
7	65	18	70	39	52	71	37	30	44	743	13	2.8
8	49	16	63	34	54	64	35	29	35	301	11	3.0
9	38	15	77	34	40	62	33	27	29	200	10	3.1
10	30	14	114	39	40	49	31	24	25	243	9.7	3.1
11	26	16	87	37	38	43	35	21	22	137	8.9	3.2
12	23	18	70	33	37	40	253	24	27	97	8.7	4.2
13	26	18	50	34	34	37	205	25	26	110	8.3	3.7
14	30	16	44	45	33	37	372	20	20	215	7.9	3.5
15	29	14	43	83	32	38	709	19	19	127	7.3	3.6
16	24	15	40	90	27	47	422	16	17	89	6.8	4.0
17	21	15	38	69	30	41	329	15	16	64	8.5	6.7
18	19	14	38	65	28	39	229	16	14	50	7.0	4.7
19	16	14	35	135	28	61	165	56	13	42	6.2	3.9
20	15	15	33	204	27	72	126	48	32	35	5.6	3.8
21	15	15	30	121	27	57	103	44	31	30	5.2	3.2
22	14	14	29	80	28	49	89	33	35	26	5.0	3.5
23	15	13	28	60	29	44	78	32	27	23	5.2	3.4
24	14	13	47	45	28	43	65	22	18	21	4.3	2.3
25	20	13	89	35	26	41	55	24	14	19	4.0	1.9
26	40	197	73	32	25	37	49	91	16	17	4.9	3.0
27	45	189	60	32	28	34	50	43	17	18	4.7	2.5
28	35	106	52	33	73	33	47	28	12	20	5.1	2.5
29	28	77	47	34	---	31	42	22	12	17	4.6	4.8
30	24	60	48	46	---	67	40	19	25	90	4.6	5.6
31	20	---	42	40	---	85	---	19	---	91	4.1	---
TOTAL	1782	1023	2433	1735	1068	2531	3896	959	1520	4695	321.6	106.6
MEAN	57.5	34.1	78.5	56.0	38.1	81.6	130	30.9	50.7	151	10.4	3.55
MAX	300	197	413	204	73	468	709	91	574	743	41	6.7
MIN	14	13	28	32	25	31	31	15	12	17	4.0	1.9
CFSM	.54	.32	.73	.52	.36	.76	1.21	.29	.47	1.41	.10	.03
IN.	.62	.36	.85	.60	.37	.88	1.35	.33	.53	1.63	.11	.04

CAL YR 1986	TOTAL	33707.6	MEAN	92.3	MAX	1390	MIN	3.3	CFSM	.86	IN.	11.72
WTR YR 1987	TOTAL	22070.2	MEAN	60.5	MAX	743	MIN	1.9	CFSM	.57	IN.	7.67

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: Jan. 23-29. Records good.

AVERAGE DISCHARGE.--45 years, 491 ft^3/s, 14.07 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)
Oct. 6	1900	*6,030	*11.86

Minimum daily discharge, 29 ft^3/s Sept. 27, 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	272	203	396	250	276	1290	398	202	134	237	249	47
2	2460	186	1360	253	352	1550	364	193	131	2490	182	43
3	3260	176	1600	249	463	1010	315	193	1060	2890	149	42
4	2750	172	1020	234	454	681	280	187	746	1310	156	40
5	3950	182	704	227	389	515	257	167	366	729	142	37
6	5610	186	528	227	348	428	243	159	248	1440	135	37
7	3720	188	436	232	343	363	228	150	187	1770	112	36
8	1130	179	388	220	345	332	218	145	154	879	98	36
9	740	176	385	210	311	316	212	141	135	571	91	36
10	552	164	567	224	270	282	202	136	121	553	86	35
11	426	162	541	229	252	250	206	130	111	394	81	34
12	357	164	447	212	243	232	612	130	115	347	77	40
13	340	168	352	203	233	217	734	138	113	606	73	38
14	414	158	290	208	218	212	855	130	109	1170	70	35
15	455	153	278	299	219	216	1840	122	101	897	66	36
16	356	153	260	533	201	232	1460	115	95	593	62	35
17	300	154	246	462	196	239	1190	109	90	402	62	40
18	258	152	245	384	195	217	885	108	85	301	61	39
19	226	146	241	437	187	473	671	183	82	245	56	37
20	211	144	228	937	173	779	530	181	100	206	55	35
21	195	144	216	682	169	495	439	189	129	175	53	33
22	180	142	205	526	171	382	383	178	115	155	52	32
23	169	138	195	370	174	320	353	274	135	140	51	32
24	162	138	215	290	168	291	320	270	102	130	49	32
25	168	138	413	230	163	278	283	193	88	121	47	31
26	289	420	497	210	155	259	260	311	86	113	48	30
27	426	1290	399	210	161	238	248	259	82	111	49	29
28	340	888	335	220	199	222	244	232	72	138	49	29
29	292	628	295	240	---	215	227	173	68	146	50	35
30	254	470	284	256	---	258	218	143	84	161	49	36
31	223	---	267	269	---	471	---	128	---	396	46	---
TOTAL	30485	7762	13833	9733	7028	13263	14675	5369	5244	19816	2606	1077
MEAN	983	259	446	314	251	428	489	173	175	639	84.1	35.9
MAX	5610	1290	1600	937	463	1550	1840	311	1060	2890	249	47
MIN	162	138	195	203	155	212	202	108	68	111	46	29
CFSM	2.07	.55	.94	.66	.53	.90	1.03	.36	.37	1.35	.18	.08
IN.	2.39	.61	1.09	.76	.55	1.04	1.15	.42	.41	1.56	.20	.08

CAL YR 1986 TOTAL 199588 MEAN 547 MAX 5610 MIN 33 CFSM 1.15 IN. 15.66
WTR YR 1987 TOTAL 130891 MEAN 359 MAX 5610 MIN 29 CFSM .76 IN. 10.27

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: Jan. 21-29. Records good.

AVERAGE DISCHARGE.--47 years, 1,155 ft^3/s, 14.80 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)
Oct. 6	2400	*13,700	*14.13

Minimum daily discharge, 128 ft^3/s Sept. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	579	681	1250	644	661	1810	1000	591	661	483	800	184
2	4530	628	2350	640	798	3080	993	569	573	4240	617	175
3	7020	602	3350	633	1010	2240	915	562	1710	6410	572	172
4	8150	591	2540	609	1100	1540	810	545	2030	5710	913	167
5	8220	605	1890	595	945	1180	740	512	1180	2760	753	160
6	11400	610	1510	593	859	1000	696	493	799	2870	580	155
7	11000	607	1290	597	831	888	657	479	617	3510	470	149
8	4080	589	1150	593	829	814	628	471	521	2050	402	146
9	2530	576	1100	578	786	777	603	461	461	1390	365	145
10	1980	557	1450	594	697	719	578	448	420	1220	340	144
11	1650	548	1550	604	661	652	576	434	392	951	322	141
12	1440	547	1330	571	638	613	1070	436	394	860	307	148
13	1310	554	1080	548	618	585	1660	450	386	1070	292	151
14	1360	537	889	546	588	569	1700	434	378	2090	280	145
15	1440	522	815	646	580	570	3350	410	354	2030	271	142
16	1240	522	763	1160	549	593	3810	395	335	1370	258	143
17	1060	519	720	1120	529	591	3230	381	319	975	252	159
18	920	514	703	950	532	556	2450	373	304	766	241	156
19	808	499	688	972	522	870	1840	471	295	639	232	152
20	738	491	647	1660	499	1610	1460	496	313	553	223	146
21	683	488	615	1430	493	1160	1230	522	344	491	215	141
22	639	492	589	1170	491	923	1070	484	341	446	211	139
23	609	483	568	900	494	799	980	650	380	413	209	137
24	591	474	595	730	486	731	923	663	326	387	202	136
25	603	471	908	600	474	709	828	533	293	366	196	134
26	774	815	1150	520	462	679	754	661	281	350	196	131
27	1180	2830	1000	520	467	634	716	732	269	394	203	130
28	1150	2450	860	540	510	601	693	618	253	652	206	128
29	995	1830	764	560	---	577	652	499	244	540	202	136
30	858	1470	731	589	---	642	623	443	270	489	197	139
31	752	---	693	651	---	997	---	441	---	1080	190	---
TOTAL	80289	23102	35538	23063	18109	29709	37235	15657	15443	47555	10717	4431
MEAN	2590	770	1146	744	647	958	1241	505	515	1534	346	148
MAX	11400	2830	3350	1660	1100	3080	3810	732	2030	6410	913	184
MIN	579	471	568	520	462	556	576	373	244	350	190	128
CFSM	2.44	.73	1.08	.70	.61	.90	1.17	.48	.49	1.45	.33	.14
IN.	2.82	.81	1.25	.81	.64	1.04	1.31	.55	.54	1.67	.38	.16

CAL YR 1986	TOTAL	494483	MEAN	1355	MAX	11400	MIN	142	CFSM	1.28	IN.	17.35
WTR YR 1987	TOTAL	340848	MEAN	934	MAX	11400	MIN	128	CFSM	.88	IN.	11.96

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: Jan. 22-29, Feb. 5, and Feb. 17-19. Records good except for estimated daily discharges, which are fair.

AVERAGE DISCHARGE.--57 years, 319 ft^3/s, 14.30 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)
Aug. 3	0900	*7,960	*7.98

Minimum daily discharge, 13 ft^3/s Sept. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	181	114	298	144	139	598	289	195	351	368	275	29
2	1110	110	804	149	170	848	427	195	212	1240	190	27
3	2140	107	1150	148	214	549	360	199	1160	2010	3200	25
4	1290	107	862	140	208	348	281	188	844	1410	895	24
5	1520	112	545	139	180	279	243	172	342	368	404	23
6	2250	113	395	142	157	245	216	163	216	598	248	22
7	1550	112	327	146	153	218	201	161	168	518	186	21
8	516	108	294	147	158	208	185	154	139	298	150	20
9	336	108	293	142	144	203	174	147	121	232	129	24
10	255	108	422	150	133	181	163	140	109	203	116	24
11	211	105	417	150	131	165	167	136	99	308	105	21
12	188	105	333	134	125	157	351	139	102	523	97	21
13	184	108	265	130	121	148	515	137	98	367	90	20
14	182	103	226	127	116	145	467	132	91	424	85	20
15	197	98	213	140	115	149	1540	129	86	338	78	20
16	179	105	201	178	104	155	1620	119	78	225	71	18
17	159	106	191	175	100	145	1320	110	74	177	66	21
18	140	102	184	171	100	143	926	106	68	143	61	19
19	126	98	179	173	100	409	650	110	73	123	56	18
20	119	97	170	172	98	405	491	120	100	109	51	18
21	115	98	158	160	95	290	395	109	110	97	46	18
22	110	102	149	150	97	239	347	172	141	89	44	16
23	105	100	144	135	100	214	319	223	103	85	47	16
24	102	101	157	125	96	204	285	139	81	79	45	16
25	102	102	176	120	95	203	253	126	68	73	39	15
26	110	526	180	120	95	189	231	328	61	73	38	14
27	136	966	173	120	95	177	222	288	55	808	41	14
28	157	715	165	122	117	174	216	172	51	469	40	13
29	142	456	158	125	---	168	206	129	47	225	38	15
30	129	345	159	134	---	216	204	138	60	205	36	17
31	119	---	154	145	---	258	---	245	---	632	33	---
TOTAL	14160	5637	9542	4453	3556	8030	13264	5021	5308	12817	7000	589
MEAN	457	188	308	144	127	259	442	162	177	413	226	19.6
MAX	2250	966	1150	178	214	848	1620	328	1160	2010	3200	29
MIN	102	97	144	120	95	143	163	106	47	73	33	13
CFSM	1.51	.62	1.02	.48	.42	.85	1.46	.53	.58	1.36	.75	.06
IN.	1.74	.69	1.17	.55	.44	.99	1.63	.62	.65	1.57	.86	.07

CAL YR 1986 TOTAL 118381.5 MEAN 324 MAX 3070 MIN 7.0 CFSM 1.07 IN. 14.53
WTR YR 1987 TOTAL 89377 MEAN 245 MAX 3200 MIN 13 CFSM .81 IN. 10.97

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: Jan. 21-27. Records good.

AVERAGE DISCHARGE.--20 years, 590 ft^3/s, 15.00 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)
Aug. 4	0600	*3,840	*9.37

Minimum daily discharge, 44 ft^3/s Sept. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	117	212	504	275	263	474	566	316	557	206	655	78
2	617	201	705	272	264	1060	617	300	522	1290	449	73
3	1490	192	1330	276	323	913	659	297	1370	1760	1120	69
4	1840	187	1230	266	360	656	554	289	1600	2140	2490	67
5	1310	188	876	257	319	531	479	266	957	1060	1060	65
6	2010	190	653	257	305	469	432	251	599	902	655	63
7	2020	187	552	263	287	418	395	242	441	1420	489	61
8	1060	187	496	263	289	387	367	235	357	916	399	59
9	599	182	471	256	286	374	343	225	305	628	342	57
10	474	176	507	259	260	349	322	214	268	527	303	56
11	398	176	612	271	250	313	316	203	240	452	274	58
12	352	172	547	259	245	292	422	201	231	865	248	56
13	330	167	468	242	237	278	781	201	230	861	225	55
14	316	170	395	235	227	266	775	193	214	834	204	54
15	314	168	380	239	218	263	1470	182	196	866	188	53
16	323	163	354	258	208	275	2040	171	179	627	173	53
17	294	166	339	291	195	265	1810	161	164	473	160	54
18	267	167	326	291	200	250	1390	154	151	383	147	52
19	243	162	317	296	198	463	1030	162	142	322	136	53
20	223	158	301	321	189	893	875	187	266	283	127	51
21	209	157	287	290	184	653	740	196	228	249	119	50
22	200	153	271	265	181	515	642	194	241	222	112	50
23	191	157	259	240	181	438	590	487	252	202	103	50
24	184	154	265	220	181	396	540	372	199	184	97	48
25	189	154	305	215	175	384	480	277	161	171	98	47
26	192	260	336	210	167	363	429	426	140	161	95	46
27	211	1070	325	210	168	333	400	645	127	303	92	45
28	249	1050	309	214	181	312	379	427	114	1010	92	44
29	266	759	295	218	---	296	353	309	107	573	91	47
30	246	588	292	226	---	340	333	255	104	437	87	46
31	226	---	289	252	---	524	---	354	---	632	84	---
TOTAL	16960	8073	14596	7907	6541	13743	20529	8392	10662	20959	10914	1660
MEAN	547	269	471	255	234	443	684	271	355	676	352	55.3
MAX	2020	1070	1330	321	360	1060	2040	645	1600	2140	2490	78
MIN	117	153	259	210	167	250	316	154	104	161	84	44
CFSM	1.02	.50	.88	.48	.44	.83	1.28	.51	.66	1.27	.66	.10
IN.	1.18	.56	1.02	.55	.46	.96	1.43	.58	.74	1.46	.76	.12

CAL YR 1986	TOTAL	186062	MEAN	510	MAX	4990	MIN	43	CFSM	.96	IN.	12.96
WTR YR 1987	TOTAL	140936	MEAN	386	MAX	2490	MIN	44	CFSM	.72	IN.	9.82

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: Jan. 25-29. Records good.

AVERAGE DISCHARGE.--40 years, 1,840 ft^3/s, 14.64 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)
Oct. 7	1400	*14,900	*7.77

Minimum daily discharge, 180 ft^3/s Sept. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	626	876	1710	1060	1060	2350	1810	1030	1180	644	1730	275
2	3430	822	2840	1030	1150	4240	1930	983	1200	4030	1250	262
3	6470	783	4670	1030	1410	3460	1810	973	2610	6480	1710	253
4	8760	761	3960	1000	1610	2460	1580	943	3970	7080	3450	245
5	9050	767	2880	969	1440	1940	1400	879	2390	4370	2050	237
6	10700	783	2220	963	1320	1690	1300	828	1590	3390	1460	229
7	14300	777	1890	972	1250	1520	1210	798	1210	5070	1120	220
8	8230	759	1700	973	1250	1400	1140	774	999	3170	926	215
9	3370	742	1640	950	1220	1330	1090	748	869	2150	802	211
10	2420	723	1820	963	1100	1240	1030	719	771	1830	722	206
11	1910	710	2130	993	1030	1120	1010	691	702	1570	661	207
12	1620	704	1910	956	997	1040	1410	688	688	1830	610	207
13	1470	704	1640	907	970	988	2390	693	678	1820	573	214
14	1460	696	1400	892	929	953	2780	690	649	2620	537	207
15	1560	676	1300	938	909	949	4580	644	601	2900	511	207
16	1440	666	1240	1300	871	991	5450	608	559	2150	479	204
17	1270	674	1180	1450	821	989	4950	586	525	1640	453	218
18	1130	665	1150	1340	827	933	3930	569	492	1320	429	223
19	1020	649	1120	1330	814	1270	2950	627	471	1110	400	219
20	940	638	1080	1830	787	2610	2350	751	605	959	379	208
21	887	626	1020	1810	766	2070	2000	779	617	852	361	202
22	840	633	980	1580	760	1670	1760	789	612	765	342	199
23	801	636	940	1320	756	1430	1630	1080	672	700	327	195
24	768	625	971	1080	745	1300	1520	1100	580	651	316	192
25	780	624	1180	930	726	1250	1380	918	497	615	312	190
26	845	994	1500	840	703	1200	1270	1060	450	599	306	186
27	1160	3350	1400	850	709	1120	1220	1360	418	713	308	182
28	1240	3520	1280	860	873	1050	1170	1120	384	1720	319	180
29	1170	2590	1180	900	---	997	1130	917	359	1320	313	199
30	1050	2000	1130	968	---	1180	1070	773	375	1210	300	198
31	950	---	1110	1040	---	1660	---	801	---	1710	288	---
TOTAL	91667	30173	52171	34024	27803	48400	60250	25919	27723	66988	23744	6390
MEAN	2957	1006	1683	1098	993	1561	2008	836	924	2161	766	213
MAX	14300	3520	4670	1830	1610	4240	5450	1360	3970	7080	3450	275
MIN	626	624	940	840	703	933	1010	569	359	599	288	180
CFSM	1.73	.59	.99	.64	.58	.91	1.18	.49	.54	1.27	.45	.12
IN.	2.00	.66	1.14	.74	.61	1.05	1.31	.56	.60	1.46	.52	.14

CAL YR 1986	TOTAL	646004	MEAN	1770	MAX	14300	MIN	186	CFSM	1.04	IN.	14.08
WTR YR 1987	TOTAL	495252	MEAN	1357	MAX	14300	MIN	180	CFSM	.79	IN.	10.79

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: Jan. 22-29. Records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--20 years, 49.1 ft^3/s, 14.04 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)
Apr. 15	0200	*419	*5.43

Minimum daily discharge, 0.64 ft^3/s Sept. 27, 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	14	48	22	14	140	84	23	18	23	9.2	.93
2	34	13	171	22	14	90	86	22	18	25	6.6	.93
3	20	13	115	22	14	56	61	22	102	14	5.8	.93
4	107	12	74	20	14	39	48	20	44	11	5.4	.93
5	61	12	55	20	12	33	41	19	25	11	5.0	.91
6	33	12	46	20	13	28	36	18	18	42	4.6	.86
7	22	12	40	20	13	24	32	18	15	36	4.4	.86
8	17	11	37	19	13	23	29	18	14	20	4.2	.86
9	14	11	41	18	13	22	26	17	13	26	3.6	.86
10	11	11	53	19	12	18	24	16	12	53	3.2	.86
11	11	10	44	19	11	17	25	15	12	22	2.6	.86
12	11	10	37	19	11	17	75	16	15	14	2.5	.79
13	11	10	30	18	11	16	60	16	16	12	2.2	.79
14	17	9.7	29	17	11	15	114	15	12	11	2.0	.79
15	19	9.9	27	17	11	15	259	14	11	12	2.0	.79
16	15	11	25	16	9.4	16	141	14	9.7	11	1.8	.79
17	13	10	25	16	9.7	16	110	13	8.7	9.1	1.6	.79
18	11	11	25	15	9.8	15	80	13	8.0	8.0	1.5	.79
19	11	11	23	19	10	161	62	13	15	7.2	1.4	.79
20	11	11	22	27	9.8	109	52	16	19	6.5	1.3	.79
21	11	11	20	24	9.9	67	45	15	14	5.9	1.3	.79
22	9.8	11	19	21	9.7	48	41	17	13	5.4	1.2	.79
23	10	11	19	18	9.7	38	39	18	10	4.9	1.4	.79
24	10	11	24	16	9.2	33	35	16	9.3	4.5	1.1	.79
25	13	11	33	14	8.9	32	31	22	8.8	4.3	1.3	.79
26	27	204	30	13	8.9	29	28	29	8.3	4.5	1.3	.71
27	35	119	27	13	9.0	25	28	19	8.0	5.2	1.3	.64
28	26	78	25	14	29	23	26	16	7.8	5.2	1.3	.64
29	21	59	23	15	---	22	25	15	7.6	5.4	1.3	.76
30	17	47	23	16	---	67	25	14	7.6	41	1.3	.79
31	15	---	22	14	---	73	---	14	---	17	1.2	---
TOTAL	659.8	786.6	1232	563	330.0	1327	1768	533	499.8	477.1	84.9	24.39
MEAN	21.3	26.2	39.7	18.2	11.8	42.8	58.9	17.2	16.7	15.4	2.74	.81
MAX	107	204	171	27	29	161	259	29	102	53	9.2	.93
MIN	9.8	9.7	19	13	8.9	15	24	13	7.6	4.3	1.1	.64
CFSM	.45	.55	.84	.38	.25	.90	1.24	.36	.35	.32	.06	.02
IN.	.52	.62	.96	.44	.26	1.04	1.38	.42	.39	.37	.07	.02

CAL YR 1986	TOTAL	13674.1	MEAN	37.5	MAX	612	MIN	2.2	CFSM	.79	IN.	10.71
WTR YR 1987	TOTAL	8285.59	MEAN	22.7	MAX	259	MIN	.64	CFSM	.48	IN.	6.49

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: Jan. 24-28 and Feb. 18. Records fair except below 1 ft^3/s, which are poor.

AVERAGE DISCHARGE.--39 years, 96.8 ft^3/s, 14.38 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)
Aug. 3	1700	*4,430	*9.36

Minimum daily discharge, 0.10 ft^3/s Sept. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.3	16	77	22	30	367	127	21	22	217	46	2.6
2	73	15	443	24	36	318	283	19	15	350	26	2.4
3	68	14	395	23	53	201	198	20	616	94	2060	2.0
4	184	16	241	20	42	131	131	18	191	34	650	1.5
5	151	17	127	21	29	105	104	15	56	23	316	1.3
6	67	16	82	22	27	86	83	14	26	56	170	1.0
7	37	16	61	24	27	69	72	13	16	226	87	.79
8	24	17	51	22	31	64	64	13	12	55	49	.58
9	18	16	61	19	24	62	57	12	9.4	186	34	.37
10	15	14	116	25	22	49	50	11	7.9	248	26	.36
11	13	15	89	27	26	40	53	11	6.8	165	19	.33
12	12	16	63	22	23	38	160	11	8.1	491	16	.33
13	14	14	40	20	22	35	176	10	12	186	13	.28
14	17	12	32	20	20	33	190	9.7	9.2	155	11	.22
15	14	13	34	21	20	36	684	8.8	6.8	96	8.7	.23
16	12	13	26	21	15	40	462	8.5	5.5	57	7.3	.22
17	11	12	25	19	17	35	344	7.9	5.0	36	5.9	.21
18	10	14	24	21	17	33	241	7.4	4.2	25	5.2	.20
19	8.6	14	22	33	17	268	174	8.2	4.1	19	4.5	.22
20	7.7	11	20	39	17	224	131	104	48	16	3.7	.24
21	7.0	11	18	28	17	137	104	28	39	12	3.4	.23
22	6.5	11	17	37	17	98	86	315	284	11	3.0	.29
23	6.5	12	16	22	17	75	80	167	71	8.7	2.9	.33
24	7.0	12	23	21	17	66	62	46	22	7.5	2.4	.27
25	6.9	14	34	20	14	64	49	31	13	6.4	2.3	.24
26	7.9	626	31	18	13	56	40	62	10	5.7	2.4	.18
27	8.8	416	28	18	15	47	34	28	7.9	476	2.4	.15
28	14	221	25	20	41	43	33	14	6.4	479	2.7	.11
29	19	124	24	23	---	39	28	9.9	5.4	122	3.2	.10
30	20	77	26	31	---	62	25	23	5.9	129	3.2	.19
31	17	---	23	41	---	90	---	44	---	129	2.8	---
TOTAL	880.2	1815	2294	744	666	3011	4325	1110.4	1545.6	4121.3	3589.0	17.47
MEAN	28.4	60.5	74.0	24.0	23.8	97.1	144	35.8	51.5	133	116	.58
MAX	184	626	443	41	53	367	684	315	616	491	2060	2.6
MIN	3.3	11	16	18	13	33	25	7.4	4.1	5.7	2.3	.10
CFSM	.31	.66	.81	.26	.26	1.06	1.58	.39	.56	1.46	1.27	.01
IN.	.36	.74	.93	.30	.27	1.23	1.76	.45	.63	1.68	1.46	.01

CAL YR 1986	TOTAL	26316.22	MEAN	72.1	MAX	1750	MIN	.15	CFSM	.79	IN.	10.71
WTR YR 1987	TOTAL	24118.97	MEAN	66.1	MAX	2060	MIN	.10	CFSM	.72	IN.	9.82

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: Jan. 23-27. Records good.

AVERAGE DISCHARGE.--60 years, 2,463 ft^3/s, 14.29 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)
Oct. 8	1800	*15,400	*14.78

Minimum daily discharge, 245 ft^3/s Sept. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	638	1140	2540	1430	1300	2900	2650	1370	1180	640	1980	371
2	1230	1070	4370	1380	1300	4740	3260	1310	1440	1530	1600	357
3	4270	1010	6230	1360	1440	4710	3140	1270	1510	4680	1420	344
4	6750	981	5990	1350	1660	3570	2500	1240	3940	6410	5830	336
5	8910	970	4400	1310	1680	2750	2100	1190	3270	6770	3560	328
6	9500	974	3370	1280	1550	2320	1880	1140	2190	3700	2190	317
7	10700	976	2770	1270	1470	2050	1730	1100	1650	4340	1630	307
8	14300	970	2420	1270	1440	1850	1620	1070	1360	4520	1300	300
9	9080	947	2310	1260	1410	1720	1520	1040	1180	3020	1090	304
10	3790	924	2930	1240	1340	1620	1430	1020	1050	2420	955	298
11	2870	910	2890	1270	1260	1490	1380	985	962	2230	869	290
12	2350	897	2710	1290	1230	1370	1460	967	913	2000	800	290
13	2060	884	2310	1230	1190	1300	2520	947	900	2270	750	288
14	1920	878	1940	1190	1160	1240	3180	944	897	2310	705	294
15	1940	865	1750	1180	1110	1210	5780	916	855	2980	663	284
16	1930	847	1650	1270	1080	1240	7720	877	797	2770	620	279
17	1730	840	1560	1550	1050	1280	7470	847	748	2140	586	286
18	1530	839	1500	1560	1020	1230	6160	823	707	1740	557	287
19	1380	820	1450	1520	1010	2200	4550	806	672	1470	528	287
20	1270	813	1400	1800	996	3660	3590	1100	679	1290	501	280
21	1200	798	1330	2120	975	3200	3010	1170	862	1160	481	273
22	1140	786	1270	1910	959	2480	2630	1080	1260	1040	464	270
23	1080	791	1230	1500	953	2050	2380	1480	1250	961	441	268
24	1040	780	1240	1200	951	1800	2200	1520	986	895	423	264
25	1030	787	1440	1200	937	1710	2020	1310	812	836	414	259
26	1060	3640	1750	1200	912	1680	1830	1370	712	793	407	254
27	1250	5990	1790	1200	898	1540	1700	1660	650	780	403	249
28	1470	4880	1670	1150	944	1430	1610	1550	608	1360	401	245
29	1430	3910	1560	1210	---	1350	1540	1280	576	1760	401	257
30	1320	3070	1500	1240	---	1430	1440	1090	561	1500	394	272
31	1220	---	1470	1240	---	2070	---	1020	---	1640	382	---
TOTAL	101388	43987	72740	42180	33225	65190	86000	35492	35177	71955	32745	8738
MEAN	3271	1466	2346	1361	1187	2103	2867	1145	1173	2321	1056	291
MAX	14300	5990	6230	2120	1680	4740	7720	1660	3940	6770	5830	371
MIN	638	780	1230	1150	898	1210	1380	806	561	640	382	245
CFSM	1.40	.63	1.00	.58	.51	.90	1.22	.49	.50	.99	.45	.12
IN.	1.61	.70	1.16	.67	.53	1.04	1.37	.56	.56	1.14	.52	.14

CAL YR 1986	TOTAL	932185	MEAN	2554	MAX	24100	MIN	289	CFSM	1.09	IN.	14.81
WTR YR 1987	TOTAL	628817	MEAN	1723	MAX	14300	MIN	245	CFSM	.74	IN.	9.99

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. 31 to Jan. 6, Jan. 22-31, and Feb. 8, 9. Records fair.

AVERAGE DISCHARGE.--19 years, 13.0 ft^3/s, 19.96 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,540 ft^3/s Apr. 2, 1970, gage height, 7.89 ft; no flow at times many years.

EXTREMES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 700 ft^3/s (revised) and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Nov. 26	0500	*707	*6.13

Minimum daily discharge, no flow Sept. 22-29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.73	.31	27	1.7	2.1	90	50	1.8	2.0	58	.36	.02
2	1.3	.26	73	1.6	5.0	27	78	1.8	5.1	19	.27	.02
3	.81	.21	25	1.5	4.0	14	21	1.7	7.5	7.1	9.1	.02
4	22	.21	11	1.4	2.5	9.0	13	1.7	1.5	4.1	1.3	.02
5	6.0	1.7	6.4	1.3	2.0	7.1	9.5	1.6	.87	3.2	.63	.02
6	1.7	3.3	4.6	1.4	1.8	5.9	7.5	1.6	.65	5.9	.37	.02
7	1.0	1.2	3.8	1.3	1.8	5.0	6.4	1.5	.50	7.6	.21	.02
8	.75	1.8	3.5	1.2	1.6	4.7	5.4	1.3	.41	3.8	.12	.03
9	.58	1.9	30	1.2	1.5	4.3	4.6	1.1	.39	4.1	.09	.13
10	.48	1.2	22	2.1	1.6	3.8	3.9	.98	.39	3.7	.08	.07
11	.41	1.5	8.6	2.4	1.5	3.4	4.0	.98	.34	1.9	.06	.03
12	.38	2.0	5.7	2.2	1.5	3.1	8.5	1.0	.93	6.5	.05	.04
13	.61	1.3	4.2	1.9	1.4	2.8	7.0	.98	.68	50	.04	.06
14	.68	.97	3.5	1.6	1.4	2.7	72	1.1	.40	29	.04	.03
15	.54	1.1	2.6	1.7	1.3	2.8	92	1.5	.55	6.3	.04	.03
16	.42	1.1	2.3	1.5	1.5	7.9	28	1.1	7.8	5.1	.04	.02
17	.34	1.1	2.3	1.3	1.5	5.6	19	.98	7.0	2.0	.41	.02
18	.22	.92	2.2	3.7	1.6	5.1	12	.93	2.4	1.2	.17	.02
19	.16	.95	2.0	13	1.8	110	8.2	2.3	2.0	.89	.04	.02
20	.12	1.1	1.8	9.5	1.9	27	6.4	1.4	6.8	.66	.03	.01
21	.10	1.2	1.7	5.9	2.0	14	5.2	.87	5.3	.55	.03	.00
22	.11	1.3	1.6	3.1	2.1	9.0	4.6	1.0	28	.47	.03	.00
23	.13	1.1	1.6	2.0	2.0	6.9	5.2	.75	9.7	.40	.03	.00
24	.14	1.0	2.0	1.6	1.7	6.3	3.9	.61	5.1	.34	.02	.00
25	1.3	4.1	3.2	1.3	1.5	103	3.0	.99	3.4	.30	.02	.00
26	1.2	237	2.4	1.1	1.4	22	2.6	1.2	2.3	.31	.02	.00
27	.72	19	1.9	1.2	3.4	13	2.3	1.0	1.5	1.4	.02	.00
28	.57	8.4	1.7	1.2	125	9.1	2.2	.69	.99	.60	.02	.00
29	.43	5.5	1.7	1.4	---	7.1	2.1	.54	1.1	.36	.05	.00
30	.39	4.1	1.7	1.5	---	51	1.9	.49	3.3	.35	.02	.11
31	.34	---	1.6	1.6	---	52	---	.46	---	.48	.02	---
TOTAL	44.66	306.83	262.6	75.4	178.4	634.6	489.4	35.95	108.90	225.61	13.73	.76
MEAN	1.44	10.2	8.47	2.43	6.37	20.5	16.3	1.16	3.63	7.28	.44	.02
MAX	22	237	73	13	125	110	92	2.3	28	58	9.1	.13
MIN	.10	.21	1.6	1.1	1.3	2.7	1.9	.46	.34	.30	.02	.00
CFSM	.15	1.10	.91	.26	.68	2.20	1.75	.12	.39	.78	.05	.00
IN.	.18	1.23	1.05	.30	.71	2.54	1.96	.14	.44	.90	.05	.00

CAL YR 1986	TOTAL	2747.76	MEAN	7.53	MAX	237	MIN	.00	CFSM	.81	IN.	10.98
WTR YR 1987	TOTAL	2376.84	MEAN	6.51	MAX	237	MIN	.00	CFSM	.70	IN.	9.50

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: Jan. 22-29. Records fair except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--39 years (water years 1949 to current year), 347 ft^3/s, 16.08 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)
Nov. 26	1700	*4,280	*16.95

Minimum daily discharge, 0.76 ft^3/s Sept. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	21	160	75	70	3000	1120	66	32	284	42	1.2
2	56	20	1500	76	86	1260	2180	62	36	221	30	1.2
3	91	16	1110	77	142	577	1090	58	128	143	43	1.2
4	356	15	519	75	150	356	575	120	203	74	260	1.1
5	729	17	275	73	114	249	408	74	126	50	584	.95
6	205	33	187	72	94	198	304	56	65	301	298	.95
7	96	81	149	70	87	163	245	50	44	605	103	.95
8	54	81	134	67	80	140	206	45	33	138	61	.97
9	38	58	226	64	70	129	171	41	27	87	43	1.1
10	28	54	1030	73	67	114	143	38	22	112	33	1.1
11	23	51	477	82	62	101	133	35	18	62	26	1.1
12	18	49	264	105	61	90	146	34	19	536	21	1.1
13	20	46	184	94	58	82	215	33	25	383	19	1.1
14	19	41	136	83	57	78	555	31	25	1000	17	1.0
15	18	43	119	76	56	76	2690	50	19	352	15	1.1
16	16	38	109	73	53	100	1090	37	16	362	14	1.1
17	14	34	103	68	52	173	672	29	14	128	13	1.2
18	14	30	99	73	52	150	488	29	12	78	10	1.3
19	13	28	93	126	52	1240	329	254	12	56	7.9	1.2
20	12	26	86	349	53	1260	241	365	14	44	6.2	1.1
21	11	25	78	244	54	542	188	110	19	36	5.6	.98
22	10	24	72	134	57	339	155	176	85	30	3.3	.91
23	9.8	24	66	92	58	236	165	135	98	26	1.8	.88
24	9.8	24	71	68	56	184	158	78	42	22	1.4	.82
25	12	26	84	57	53	1190	135	57	26	20	1.1	.80
26	15	2740	114	48	50	932	114	49	19	17	1.1	.76
27	23	1380	119	50	53	476	100	50	15	21	1.4	.80
28	32	420	96	53	405	319	90	49	13	125	1.4	.92
29	37	241	82	61	---	234	81	65	12	75	1.0	1.0
30	28	172	78	63	---	531	74	45	11	143	1.0	1.0
31	23	---	76	67	---	1120	---	36	---	59	1.2	---
TOTAL	2050.6	5858	7896	2788	2302	15639	14261	2357	1230	5590	1666.4	30.89
MEAN	66.1	195	255	89.9	82.2	504	475	76.0	41.0	180	53.8	1.03
MAX	729	2740	1500	349	405	3000	2690	365	203	1000	584	1.3
MIN	9.8	15	66	48	50	76	74	29	11	17	1.0	.76
CFSM	.23	.67	.87	.31	.28	1.72	1.62	.26	.14	.61	.18	.00
IN.	.26	.74	1.00	.35	.29	1.99	1.81	.30	.16	.71	.21	.00

CAL YR 1986	TOTAL	71303.4	MEAN	195	MAX	5110	MIN	1.9	CFSM	.67	IN.	9.05
WTR YR 1987	TOTAL	61668.89	MEAN	169	MAX	3000	MIN	.76	CFSM	.58	IN.	7.83

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: Jan. 21-27, Feb. 28 to Mar. 12, and May 19 to June 3. Records fair except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--32 years, 13.1 ft^3/s, 15.61 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)
Nov. 26	0400	*1,260	*7.78

Minimum daily discharge, no flow on many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	3.3	34	3.1	3.2	80	57	1.5	1.2	21	.20	.00
2	9.6	5.9	87	3.4	7.3	35	75	1.4	1.3	12	.19	.00
3	6.6	6.9	30	2.9	5.5	15	22	1.3	13	1.3	21	.00
4	66	8.0	11	3.0	3.7	10	15	1.2	.98	.65	1.5	.00
5	11	11	6.5	2.7	2.9	8.0	11	1.1	.61	.44	2.0	.00
6	4.7	9.7	5.3	2.6	3.0	6.0	9.4	.98	.44	3.7	.59	.00
7	2.7	5.1	4.8	2.6	2.9	5.0	8.2	.92	.37	5.8	.34	.00
8	1.9	4.5	4.5	2.2	2.9	4.0	7.0	.90	.33	.92	.25	.00
9	1.3	4.2	52	2.2	2.3	3.5	5.8	.84	.30	4.0	.06	.00
10	1.0	3.1	18	6.9	2.2	3.0	5.0	.78	.29	2.8	.00	.00
11	.84	4.2	8.4	4.5	2.3	2.7	5.6	.70	.23	1.1	.00	.00
12	.80	4.9	5.9	3.2	2.6	2.5	17	.74	.46	.73	.00	.00
13	1.8	3.6	3.9e	2.7	2.3	2.4	9.3	.66	.52	2.2	.00	.00
14	1.6	2.8	3.3	2.7	2.2	2.4	100	.59	.38	4.9	.00	.00
15	.97	2.9	3.1	2.7	2.1	2.5	85	.84	.28	.98	.00	.00
16	.70	2.8	3.0	2.6	1.8	8.6	33	.64	.19	.68	.00	.00
17	.51	2.7	3.1	2.3	1.8	4.5	23	.54	.12	.49	.00	.00
18	.35	2.6	3.1	3.7	2.0	11	13	6.5	.06	.37	.00	.00
19	.25	2.5	2.7	32	2.0	98	8.6	10	.00	.26	.00	.00
20	.27	2.7	2.4	10	1.9	20	6.1	7.8	.00	.14	.00	.00
21	.15	3.3	2.2	4.1	2.1	11	4.8	4.5	.00	.23	.00	.00
22	.14	2.8	2.1	2.7	2.1	8.0	4.2	2.8	2.4	.10	.00	.00
23	.13	3.0	1.9	1.9	2.1	6.4	16	3.8	.63	.00	.00	.00
24	.22	3.6	4.6	1.5	1.8	5.8	5.1	1.7	.27	.00	.00	.00
25	2.1	12	7.4	1.4	1.8	81	3.9	1.0	.07	.00	.00	.00
26	2.6	329	4.2	1.2	1.8	17	3.1	5.5	.00	.00	.00	.00
27	1.6	26	2.9	1.1	2.3	11	2.9	1.8	.00	.18	.00	.00
28	1.2	12	2.7	2.0	55	8.2	2.5	1.2	.00	.38	.00	.00
29	1.2	8.2	2.4	2.3	---	6.5	2.0	.82	.00	.24	.00	.00
30	1.5	5.9	2.7	3.1	---	45	1.7	.70	.22	.31	.00	.00
31	2.0	---	2.7	2.6	---	51	---	2.8	---	.31	.00	---
TOTAL	159.73	499.2	327.8	121.9	125.9	575.0	562.2	66.55	24.65	66.21	26.13	.00
MEAN	5.15	16.6	10.6	3.93	4.50	18.5	18.7	2.15	.82	2.14	.84	.00
MAX	66	329	87	32	55	98	100	10	13	21	21	.00
MIN	.13	2.5	1.9	1.1	1.8	2.4	1.7	.54	.00	.00	.00	.00
CFSM	.45	1.46	.93	.34	.39	1.62	1.64	.19	.07	.19	.07	.00
IN.	.52	1.63	1.07	.40	.41	1.88	1.83	.22	.08	.22	.09	.00

CAL YR 1986	TOTAL	4139.60	MEAN	11.3	MAX	329	MIN	.00	CFSM	.99	IN.	13.51
WTR YR 1987	TOTAL	2555.27	MEAN	7.00	MAX	329	MIN	.00	CFSM	.61	IN.	8.34

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: Jan. 23-29. 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.--45 years, 93.7 ft^3/s, 14.81 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)
Nov. 26	0700	4,750	11.89	Aug. 3	1400	*4,860	*12.03

Minimum daily discharge, 0.14 ft^3/s Sept. 3, 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	11	133	31	26	656	300	24	15	37	3.3	25
2	71	10	748	35	40	251	617	22	8.7	171	2.9	.19
3	36	9.4	295	34	44	130	189	22	149	29	1420	.14
4	237	9.3	149	30	34	89	117	19	42	14	111	.23
5	117	12	98	28	27	72	96	16	18	9.7	47	.27
6	55	22	74	28	30	61	81	14	12	11	26	.30
7	33	22	61	28	28	52	71	14	8.4	22	17	.28
8	23	19	55	26	29	47	63	12	6.6	13	12	.32
9	18	17	229	24	25	44	55	11	5.7	8.8	8.5	7.4
10	14	15	203	39	25	37	48	10	4.7	10	6.7	16
11	11	15	103	46	26	31	48	9.3	4.1	9.4	5.1	.36
12	12	16	75	34	26	29	91	9.4	5.5	8.5	4.7	1.2
13	20	16	53	31	25	27	82	8.8	11	7.4	4.2	1.7
14	27	13	43	30	23	26	256	7.7	8.0	24	4.0	1.4
15	20	13	42	30	23	28	992	10	5.3	19	3.6	1.1
16	14	12	39	28	19	59	285	13	4.1	8.9	3.0	.97
17	11	12	37	26	18	49	203	7.9	3.6	6.3	3.1	1.1
18	9.4	11	38	29	19	43	137	7.3	3.1	5.3	2.0	1.3
19	8.2	10	35	111	19	726	104	149	2.8	3.9	1.4	1.4
20	7.3	11	31	115	19	199	83	117	18	3.2	.83	1.2
21	6.7	11	29	61	19	111	69	42	21	2.7	.68	5.6
22	6.5	13	26	55	19	84	59	28	251	2.3	.76	20
23	6.4	13	24	35	19	68	74	37	37	2.1	.52	.20
24	6.6	13	36	27	18	59	57	17	15	1.7	.40	.14
25	12	18	65	21	16	319	47	13	9.1	1.7	.54	.15
26	21	1850	49	16	15	142	41	60	6.5	1.8	.57	.23
27	25	274	39	10	18	95	37	24	4.9	3.5	.58	.27
28	25	145	34	12	202	74	34	14	3.7	3.1	.61	.32
29	18	107	30	18	---	61	30	9.5	4.5	6.0	.55	.55
30	14	83	33	26	---	185	27	7.4	4.9	7.9	.48	.64
31	12	---	31	25	---	258	---	36	---	4.6	26	---
TOTAL	948.1	2802.7	2937	1089	851	4112	4393	791.3	693.2	458.8	1718.02	89.96
MEAN	30.6	93.4	94.7	35.1	30.4	133	146	25.5	23.1	14.8	55.4	3.00
MAX	237	1850	748	115	202	726	992	149	251	171	1420	25
MIN	6.4	9.3	24	10	15	26	27	7.3	2.8	1.7	.40	.14
CFSM	.36	1.09	1.10	.41	.35	1.55	1.70	.30	.27	.17	.64	.03
IN.	.41	1.21	1.27	.47	.37	1.78	1.90	.34	.30	.20	.74	.04

CAL YR 1986	TOTAL	26267.4	MEAN	72.0	MAX	1850	MIN	1.1	CFSM	.84	IN.	11.38
WTR YR 1987	TOTAL	20884.08	MEAN	57.2	MAX	1850	MIN	.14	CFSM	.67	IN.	9.04

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: Jan. 22-28. Records good. Diversion above station for municipal water supply of North Vernon and Vernon. Part of this diversion returned above gage as sewage effluent by North Vernon Sewage Treatment Plant. Some regulation at times at low flow by Old Timbers Lake on Jefferson Proving Grounds.

AVERAGE DISCHARGE.--48 years, 221 ft^3/s, 15.16 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)
Nov. 26	1100	*7,790	*14.86

Minimum daily discharge, 0.39 ft^3/s Sept. 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	98	28	159	68	62	1950	770	49	42	21	15	18
2	296	24	1760	71	90	687	1760	47	27	288	11	27
3	121	22	747	73	119	312	537	47	135	103	1640	4.3
4	726	21	364	69	91	199	297	44	137	39	382	.88
5	339	25	226	64	70	156	225	39	48	23	402	.68
6	127	42	172	62	70	135	186	37	27	22	111	.65
7	74	63	143	62	68	116	162	35	19	34	56	.55
8	52	50	130	60	65	104	143	33	15	41	37	.49
9	39	42	484	55	58	97	125	30	12	24	28	.53
10	31	37	605	66	50	86	111	29	9.8	18	22	.60
11	25	38	247	104	53	73	109	28	7.8	409	17	10
12	23	37	170	84	54	68	154	28	7.4	125	14	4.4
13	35	37	127	71	55	64	213	26	9.5	39	12	1.1
14	54	36	94	67	52	61	381	23	12	79	11	.55
15	47	32	98	67	50	62	2510	36	13	46	9.1	.39
16	36	31	88	65	47	91	701	32	9.6	32	6.8	.40
17	29	29	83	59	42	128	485	32	7.9	20	8.5	.71
18	24	30	83	61	43	93	293	23	6.2	14	9.5	.64
19	20	26	79	149	43	1650	203	111	4.6	11	6.0	.85
20	19	25	71	327	43	567	155	379	4.0	8.0	3.4	.78
21	18	27	64	143	45	273	124	104	9.1	6.4	2.1	.76
22	16	27	60	110	45	195	108	62	252	4.6	1.5	.61
23	15	30	56	72	44	155	118	52	88	3.8	1.7	8.9
24	14	33	68	54	42	135	110	44	38	3.4	.98	5.5
25	20	33	126	43	39	940	92	31	20	3.0	.72	1.5
26	38	3640	124	29	37	401	78	39	13	2.2	1.0	.82
27	62	734	91	23	39	236	70	58	8.9	4.4	.84	.79
28	56	287	76	27	250	178	66	32	6.4	9.9	.88	.65
29	46	191	69	44	---	146	58	22	7.0	14	.84	.79
30	36	145	68	60	---	425	55	17	4.8	18	.69	2.0
31	30	---	70	63	---	670	---	15	---	27	.69	---
TOTAL	2566	5822	6802	2372	1766	10453	10399	1584	1001.0	1492.7	2813.24	95.82
MEAN	82.8	194	219	76.5	63.1	337	347	51.1	33.4	48.2	90.7	3.19
MAX	726	3640	1760	327	250	1950	2510	379	252	409	1640	27
MIN	14	21	56	23	37	61	55	15	4.0	2.2	.69	.39
CFSM	.42	.98	1.11	.39	.32	1.70	1.75	.26	.17	.24	.46	.02
IN.	.48	1.09	1.28	.45	.33	1.96	1.95	.30	.19	.28	.53	.02

CAL YR 1986	TOTAL	60454.5	MEAN	166	MAX	3640	MIN	1.4	CFSM	.84	IN.	11.36
WTR YR 1987	TOTAL	47166.76	MEAN	129	MAX	3640	MIN	.39	CFSM	.65	IN.	8.86

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: Jan. 19 to Feb. 2, Feb. 25 to Mar. 1, and Mar. 17 to Apr. 5. Records good except for Jan. 19 to Feb. 2, which are poor.

AVERAGE DISCHARGE.--34 years (1939-43, 1957 to current year), 3,962 ft^3/s, 13.93 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)
Apr. 19	1100	*10,700	*14.91

Minimum daily discharge, 379 ft^3/s Sept. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1000	1840	7330	2250	1960	5000	4500	2310	1600	1040	2560	547
2	1100	1730	7370	2180	2080	6860	5800	2170	1450	1340	2620	532
3	1050	1630	7500	2110	2030	7950	6900	2060	1640	1920	2470	521
4	3030	1550	8440	2050	1950	8720	7000	2000	1970	3270	2110	506
5	5620	1480	9120	2010	2110	8730	6900	2040	2450	5090	3330	492
6	6970	1440	8910	1960	2280	7450	6760	2000	3640	6240	5370	485
7	7730	1410	7000	1910	2240	5400	5340	1890	3460	7260	4400	477
8	7940	1420	5130	1870	2130	4100	4090	1760	2690	6530	3210	463
9	8270	1430	4270	1840	2050	3520	3550	1660	2160	6720	2380	453
10	8930	1440	4220	1830	1980	3100	3120	1570	1840	5880	1930	480
11	8370	1450	5100	1830	1920	2810	2840	1500	1640	4210	1660	465
12	5140	1420	5570	1830	1840	2590	2650	1440	1500	3530	1470	449
13	3830	1390	4840	1830	1760	2380	2540	1390	1470	3290	1320	454
14	3220	1370	4070	1850	1700	2250	3160	1340	1770	3590	1210	452
15	2820	1350	3550	1820	1670	2070	6690	1300	1530	3960	1110	446
16	2610	1330	3090	1760	1630	1860	8030	1270	1330	4410	1040	441
17	2540	1310	2830	1720	1590	2030	9270	1240	1250	4620	972	446
18	2420	1290	2680	1760	1570	2120	10300	1200	1380	3950	907	442
19	2240	1270	2550	2500	1510	2060	10700	1170	1290	3080	857	449
20	2070	1250	2440	3100	1470	2010	9950	1140	1140	2530	811	424
21	1920	1230	2350	2900	1450	3460	7720	1360	1040	2200	770	410
22	1810	1210	2250	2650	1450	4800	5630	2110	1310	1960	737	403
23	1710	1190	2150	2220	1450	4900	4590	1950	1850	1780	702	399
24	1620	1170	2080	1940	1430	4000	4050	1740	2260	1630	669	395
25	1580	1150	2120	1780	1400	3300	3750	1920	2180	1490	644	391
26	1600	2660	2320	1690	1380	3000	3460	1890	1810	1370	624	386
27	1630	5310	2470	1700	1370	3300	3150	1860	1470	1290	609	382
28	1670	7470	2600	1730	1440	3700	2860	1940	1220	1260	592	379
29	1780	8280	2620	1760	---	3400	2640	2000	1080	1350	579	381
30	1910	8210	2500	1810	---	3200	2460	1900	987	1930	567	382
31	1920	---	2360	1860	---	3500	---	1760	---	2300	557	---
TOTAL	106050	66680	131830	62050	48840	123570	160400	52880	52407	101020	48787	13332
MEAN	3421	2223	4253	2002	1744	3986	5347	1706	1747	3259	1574	444
MAX	8930	8280	9120	3100	2280	8730	10700	2310	3640	7260	5370	547
MIN	1000	1150	2080	1690	1370	1860	2460	1140	987	1040	557	379
CFSM	.89	.58	1.10	.52	.45	1.03	1.38	.44	.45	.84	.41	.11
IN.	1.02	.64	1.27	.60	.47	1.19	1.55	.51	.50	.97	.47	.13

CAL YR 1986	TOTAL	1328044	MEAN	3638	MAX	23000	MIN	448	CFSM	.94	IN.	12.80
WTR YR 1987	TOTAL	967846	MEAN	2652	MAX	10700	MIN	379	CFSM	.69	IN.	9.33

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: Jan. 23-30. Records good except for estimated daily discharges, which are fair.

AVERAGE DISCHARGE.--17 years, 33.6 ft^3/s, 18.93 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, and 1987.

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)
Oct. 4	0400	*1,130	*5.71

Minimum daily discharge, no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	8.3	114	16	17	151	40	6.3	1.4	38	5.3	.05
2	8.5	7.3	141	15	14	71	74	5.6	1.6	16	4.6	.05
3	6.9	6.6	57	13	12	46	44	5.0	11	9.0	1.9	.04
4	197	6.1	39	12	10	36	34	20	4.5	6.2	4.4	.04
5	41	6.5	30	12	9.1	31	29	10	2.2	5.5	4.2	.04
6	18	6.9	26	11	9.1	27	26	7.6	1.4	23	1.8	.03
7	12	5.8	23	10	9.0	23	23	5.8	.99	17	1.3	.03
8	8.6	5.5	21	9.8	9.2	22	21	4.9	.75	8.2	.91	.03
9	6.5	5.3	32	9.6	8.0	20	19	4.1	.63	40	.75	.03
10	5.1	4.7	30	13	7.8	17	17	3.4	.54	29	.62	.03
11	4.3	5.6	26	11	7.9	15	19	2.7	.46	14	.54	.03
12	4.8	6.6	23	9.9	8.3	14	22	4.7	1.4	8.9	.45	.02
13	8.9	5.5	19	9.9	7.3	12	21	3.8	75	17	.40	.00
14	8.4	4.8	18	10	7.3	12	120	2.5	25	14	.35	.00
15	6.7	4.6	15	10	6.9	12	107	2.0	9.5	8.2	.28	.00
16	5.6	4.7	14	9.6	5.6	20	55	1.6	10	6.8	.24	.00
17	4.8	4.5	14	9.0	5.9	16	42	1.3	14	4.9	.20	.05
18	3.9	4.1	13	12	6.5	14	34	1.2	5.9	3.6	.17	.02
19	3.2	3.7	11	22	6.6	15	29	.98	6.1	2.5	.15	.01
20	2.7	3.6	9.8	23	6.8	14	26	.86	4.8	1.8	.12	.00
21	2.3	4.0	9.2	22	8.2	12	23	.95	21	1.4	.11	.00
22	2.1	3.7	8.8	19	9.0	12	21	1.6	171	1.1	.11	.00
23	1.9	3.9	7.8	16	8.5	10	19	1.3	26	.89	.09	.00
24	1.9	4.6	18	13	7.3	11	16	.77	14	.74	.06	.00
25	19	7.1	44	11	7.1	12	14	7.3	9.0	.64	.05	.00
26	29	207	30	10	6.6	10	12	13	6.0	.56	.04	.00
27	24	46	25	9.4	12	9.7	11	4.4	4.0	51	.07	.00
28	17	29	22	9.6	132	9.3	9.4	2.4	2.7	12	.06	.00
29	14	21	20	11	---	8.9	8.3	1.6	2.2	4.2	.06	.05
30	11	17	19	14	---	38	7.2	1.3	1.8	2.7	.05	.01
31	9.5	---	17	18	---	36	---	1.3	---	1.9	.05	---
TOTAL	500.6	454.0	896.6	400.8	365.0	756.9	942.9	130.26	434.87	350.73	29.43	.56
MEAN	16.1	15.1	28.9	12.9	13.0	24.4	31.4	4.20	14.5	11.3	.95	.02
MAX	197	207	141	23	132	151	120	20	171	51	5.3	.05
MIN	1.9	3.6	7.8	9.0	5.6	8.9	7.2	.77	.46	.56	.04	.00
CFSM	.67	.63	1.20	.54	.54	1.01	1.30	.17	.60	.47	.04	.00
IN.	.77	.70	1.38	.62	.56	1.17	1.46	.20	.67	.54	.05	.00

CAL YR 1986	TOTAL	7663.91	MEAN	21.0	MAX	457	MIN	.13	CFSM	.87	IN.	11.83
WTR YR 1987	TOTAL	5262.65	MEAN	14.4	MAX	207	MIN	.00	CFSM	.60	IN.	8.12

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: Jan. 23 to Jan. 31 and Aug. 20 to Sept. 16. Records fair except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--17 years, 14.2 ft^3/s, 17.69 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)
Apr. 14	1830	*460	*7.56

Minimum daily discharge, no flow, Sept. 25-28, 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.1	2.3	21	4.8	5.6	82	19	3.7	1.5	23	.59	.08
2	7.4	2.0	41	4.6	7.2	41	22	3.4	1.5	10	.53	.07
3	5.5	1.8	22	4.1	7.0	24	18	2.9	6.2	3.8	.41	.07
4	28	1.7	15	3.7	6.4	18	14	2.6	2.7	3.3	.34	.07
5	14	1.7	11	3.4	6.0	15	12	2.4	1.7	5.7	.32	.06
6	7.4	1.7	8.4	3.3	5.0	12	10	2.1	1.3	16	.30	.06
7	4.4	1.6	6.9	3.2	5.0	10	8.6	1.8	1.0	13	.28	.05
8	3.1	1.5	6.0	3.2	5.6	9.1	7.1	1.7	.90	5.9	.28	.05
9	2.5	1.5	9.6	3.0	6.4	8.0	6.3	1.5	.84	11	.34	.05
10	2.0	1.4	10	3.2	6.2	6.6	5.5	1.4	.71	10	.36	.05
11	1.6	1.7	8.9	3.2	6.0	6.0	6.4	1.2	.65	5.3	.33	.04
12	1.6	1.9	7.7	3.2	6.1	5.3	24	3.9	2.9	3.0	.30	.04
13	2.2	1.8	6.1	3.0	5.5	4.7	30	2.4	2.9	2.9	.28	.04
14	2.5	1.7	5.4	3.6	5.0	4.4	178	1.8	2.4	2.5	.27	.04
15	2.1	1.7	4.5	4.7	4.8	4.6	95	1.4	1.3	1.6	.21	.04
16	1.9	1.5	4.2	4.6	4.3	6.7	42	1.2	.97	1.2	.18	.04
17	1.7	1.4	4.0	4.5	4.3	5.6	30	1.1	.85	.91	.20	.07
18	1.5	1.3	3.6	4.8	4.1	5.3	23	1.1	.73	.74	.17	.04
19	1.3	1.2	3.3	53	4.3	6.4	19	1.1	.70	.57	.16	.03
20	1.2	1.3	3.1	34	4.3	6.5	16	21	.66	.43	.14	.03
21	1.0	1.3	2.8	23	4.8	6.2	14	8.8	2.0	.36	.14	.02
22	.94	1.3	2.7	17	5.0	5.9	12	4.4	2.4	.31	.13	.02
23	.93	1.3	2.6	12	4.7	5.4	11	2.7	1.2	.28	.12	.02
24	1.0	1.3	4.7	8.6	4.3	5.3	9.7	2.0	.89	.28	.12	.00
25	7.2	1.5	11	6.8	4.1	6.0	8.2	2.1	.76	.28	.11	.00
26	7.8	47	9.1	5.1	3.7	5.2	6.9	2.5	.65	.28	.10	.00
27	5.6	19	8.1	4.4	4.6	4.9	6.5	1.7	.59	.40	.10	.00
28	4.2	13	6.9	4.2	64	4.5	5.7	1.3	.61	.33	.10	.00
29	3.5	9.6	6.2	3.4	---	4.3	4.9	1.1	.58	.35	.09	.02
30	3.0	7.2	6.1	3.1	---	20	4.2	1.0	.55	1.4	.09	.00
31	2.6	---	5.3	8.6	---	20	---	1.1	---	.75	.08	---
TOTAL	137.77	135.2	267.2	251.3	204.3	368.9	669.0	88.4	42.64	125.87	7.17	1.10
MEAN	4.44	4.51	8.62	8.11	7.30	11.9	22.3	2.85	1.42	4.06	.23	.04
MAX	28	47	41	53	64	82	178	21	6.2	23	.59	.08
MIN	.93	1.2	2.6	3.0	3.7	4.3	4.2	1.0	.55	.28	.08	.00
CFSM	.41	.41	.79	.74	.67	1.09	2.05	.26	.13	.37	.02	.00
IN.	.47	.46	.91	.86	.70	1.26	2.28	.30	.15	.43	.02	.00

CAL YR 1986	TOTAL	3595.68	MEAN	9.85	MAX	170	MIN	.07	CFSM	.90	IN.	12.27
WTR YR 1987	TOTAL	2298.85	MEAN	6.30	MAX	178	MIN	.00	CFSM	.58	IN.	7.85

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.--None. 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. 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.--32 years, 491 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, 1,230 ft^3/s Mar. 5; minimum daily, 11 ft^3/s Sept. 18.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	54	54	54	201	54	203	368	321	54	54	54	53
2	54	54	55	201	54	207	553	201	54	54	54	53
3	54	54	55	201	54	406	920	201	54	54	54	53
4	54	54	55	201	54	1020	1060	202	54	54	54	53
5	54	54	55	201	54	1230	1060	202	54	54	54	53
6	54	54	55	200	54	1220	1060	202	54	54	54	53
7	54	54	55	200	54	1220	1050	202	54	54	54	53
8	54	54	55	146	54	1220	819	202	54	79	54	53
9	54	54	55	92	54	1220	559	202	54	244	54	53
10	54	54	55	73	54	1210	558	201	54	368	54	53
11	54	54	55	54	54	843	485	201	54	368	54	53
12	54	54	55	54	54	558	366	201	54	368	54	53
13	54	54	55	54	54	431	366	100	54	367	54	53
14	54	54	55	54	54	201	552	54	54	367	54	53
15	54	54	286	54	54	201	943	54	54	305	54	53
16	54	54	504	127	54	201	1080	54	54	201	54	53
17	54	54	598	200	54	201	1080	54	54	201	54	30
18	54	54	700	200	54	201	1080	54	54	201	54	11
19	54	54	699	200	54	201	1080	54	54	201	53	53
20	54	54	697	201	54	201	1080	54	54	200	53	53
21	54	54	696	201	54	201	1080	54	54	139	53	53
22	54	54	694	201	54	201	1070	54	54	54	53	52
23	54	54	692	201	54	138	1070	54	54	54	53	52
24	54	54	691	201	54	97	1070	54	54	54	53	52
25	54	54	690	201	54	97	1070	54	54	54	53	52
26	54	54	585	201	54	97	1060	54	54	54	53	52
27	54	54	496	200	106	98	1060	54	54	54	53	52
28	54	54	410	200	201	98	1060	54	54	54	53	52
29	54	54	201	200	---	98	880	54	54	54	53	52
30	54	54	201	127	---	255	560	54	54	54	53	52
31	54	---	201	54	---	368	---	54	---	54	53	---
TOTAL	1674	1620	9810	4901	1711	14143	26099	3610	1620	4527	1661	1516
MEAN	54.0	54.0	316	158	61.1	456	870	116	54.0	146	53.6	50.5
MAX	54	54	700	201	201	1230	1080	321	54	368	54	53
MIN	54	54	54	54	54	97	366	54	54	54	53	11

CAL YR 1986	TOTAL	169463	MEAN	464	MAX	2160	MIN	40
WTR YR 1987	TOTAL	72892	MEAN	200	MAX	1230	MIN	11

03373500 EAST FORK WHITE RIVER AT SHOALS, IN

LOCATION.--Lat 38°40'02", long 86°47'31", in SW¼NW¼ sec.30, T.3 N., R.3 W., Martin County, Hydrologic Unit 05120208, at left downstream side of U.S. Highway 50 bridge at Shoals, 340 ft upstream from Baltimore and Ohio Railroad bridge, 0.9 mi upstream from Beaver Creek, 6.6 mi downstream from Indian Creek, and at mile 105.3.

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. See WSP 1725 for history of changes prior to Oct. 26, 1932.

REMARKS.--Estimated daily discharges: Jan. 20, 21, 23-27, Mar. 1-10, and July 7-30. Records fair. Flow partially regulated by upstream reservoirs.

AVERAGE DISCHARGE.--73 years (1903-5, 1909-16, 1923 to current year), 5,448 ft^3/s, 15.01 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)
Apr. 19	1500	*13,500	*9.00

Minimum daily discharge, 466 ft^3/s Sept. 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1060	2170	8440	2970	2460	6020	5660	3440	1990	1190	2650	707
2	1460	2040	9590	2890	2640	7600	7380	3060	1780	1630	2900	677
3	1510	1920	9710	2790	2700	10300	9030	2760	1770	2400	2930	641
4	2740	1830	9170	2690	2520	11400	9700	2720	2150	2530	2610	625
5	6680	1760	9780	2620	2460	11500	9750	2700	2470	4520	2390	605
6	6990	1700	10100	2560	2640	10500	9120	2710	3660	6710	4360	586
7	7690	1670	9090	2480	2730	8440	7920	2540	4010	8880	5180	581
8	8030	1670	6750	2410	2650	6570	6430	2360	3320	5750	4250	580
9	8220	1670	5410	2330	2520	5550	5340	2220	2670	7560	3250	567
10	8680	1660	4940	2250	2420	5190	4610	2120	2220	7630	2550	560
11	9240	1700	5140	2240	2350	4820	4300	2060	1950	6320	2150	576
12	7180	1670	5910	2220	2290	4270	4070	2010	1810	4840	1860	563
13	4770	1610	5840	2210	2210	3700	3890	1990	1900	4390	1730	551
14	3800	1580	5070	2230	2130	3360	4580	1900	2390	4210	1610	545
15	3350	1550	4380	2230	2080	2980	10400	1760	2350	4480	1430	542
16	3040	1520	4060	2170	2030	2870	12300	1700	1820	4840	1290	547
17	2900	1510	3930	2120	1980	2890	12300	1670	1600	4980	1210	579
18	2800	1480	3800	2230	1950	2920	12900	1630	1610	4930	1130	562
19	2650	1450	3720	2720	1910	2950	13400	1540	1680	4170	1050	542
20	2460	1430	3590	3230	1850	2990	13100	1530	1640	3440	972	523
21	2290	1410	3450	3500	1800	4300	11500	2250	1590	2910	935	511
22	2140	1420	3330	3630	1810	6530	8600	2480	2900	2530	877	498
23	2010	1400	3200	3400	1820	6780	6800	2550	3770	2150	824	487
24	1910	1370	3150	2600	1820	5620	6080	2160	3030	1950	787	481
25	1890	1380	3370	2500	1790	4510	5550	2070	2910	1760	761	475
26	2060	2710	3960	2300	1750	4030	5180	2390	2460	1620	738	472
27	2250	6190	3860	2100	1770	4540	4860	2410	2040	1510	724	466
28	2170	7190	3760	2090	2260	5160	4530	2280	1650	1560	697	467
29	2140	8470	3680	2120	---	4770	4260	2280	1340	1790	673	493
30	2230	8860	3360	2250	---	4300	3930	2280	1180	1730	653	503
31	2250	---	3150	2370	---	4750	---	2130	---	2200	644	---
TOTAL	118590	73990	166690	78450	61340	172110	227470	69700	67660	117110	55815	16512
MEAN	3825	2466	5377	2531	2191	5552	7582	2248	2255	3778	1800	550
MAX	9240	8860	10100	3630	2730	11500	13400	3440	4010	8880	5180	707
MIN	1060	1370	3150	2090	1750	2870	3890	1530	1180	1190	644	466
CFSM	.78	.50	1.09	.51	.44	1.13	1.54	.46	.46	.77	.37	.11
IN.	.90	.56	1.26	.59	.46	1.30	1.72	.53	.51	.88	.42	.12

CAL YR 1986	TOTAL	1725601	MEAN	4728	MAX	24100	MIN	547	CFSM	.96	IN.	13.03
WTR YR 1987	TOTAL	1225437	MEAN	3357	MAX	13400	MIN	466	CFSM	.68	IN.	9.25

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. 31 to Nov. 6 and Sept. 4-9, 19-30. Records fair except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--22 years, 368 ft^3/s, 17.41 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 11,100 ft^3/s May 1, 1983, gage height, 26.55 ft; minimum daily, 7.5 ft^3/s Oct. 8, 1966.

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)
Mar. 2	0200	*2,450	*20.88

Minimum daily discharge, 11 ft^3/s Sept. 25-28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	73	76	419	119	85	2180	516	165	181	151	38	15
2	262	70	1010	116	100	2380	798	155	97	388	55	15
3	148	62	964	112	116	1810	769	160	142	232	171	14
4	523	70	683	105	110	1150	581	316	226	139	78	13
5	887	80	535	102	99	725	454	406	146	106	47	13
6	505	90	428	98	92	579	360	252	93	102	38	12
7	284	99	347	98	90	498	296	188	69	571	33	12
8	196	98	299	96	87	431	254	161	58	561	29	12
9	145	96	332	93	83	366	219	143	51	333	27	13
10	113	92	457	95	76	305	190	128	46	278	24	24
11	93	90	421	101	74	258	181	117	48	259	23	27
12	81	97	331	99	76	227	178	110	47	181	22	21
13	81	98	270	94	75	200	170	105	166	154	20	21
14	80	90	224	92	73	183	463	97	372	142	18	20
15	71	87	202	92	73	178	1530	89	207	132	18	18
16	60	88	184	89	71	229	1270	85	114	108	17	17
17	53	88	169	85	70	229	843	80	78	109	18	17
18	49	86	157	87	72	194	642	71	61	99	16	18
19	44	81	142	131	73	176	525	67	57	75	16	15
20	42	78	127	210	71	156	448	65	101	64	16	15
21	39	78	118	194	74	139	389	65	105	56	15	13
22	38	77	111	153	106	128	352	61	206	51	15	13
23	36	75	106	134	136	121	339	79	449	48	15	12
24	36	73	106	112	131	116	304	68	256	45	14	12
25	53	79	153	103	115	117	270	57	142	42	13	11
26	117	902	212	97	106	121	244	57	102	40	13	11
27	149	1240	169	89	161	119	225	55	80	38	13	11
28	139	790	140	87	744	109	208	49	63	57	14	11
29	114	548	127	87	---	103	192	45	55	72	14	12
30	102	440	125	89	---	212	179	45	52	46	14	15
31	87	---	124	88	---	456	---	107	---	40	15	---
TOTAL	4700	6018	9192	3347	3239	14195	13389	3648	3870	4719	879	453
MEAN	152	201	297	108	116	458	446	118	129	152	28.4	15.1
MAX	887	1240	1010	210	744	2380	1530	406	449	571	171	27
MIN	36	62	106	85	70	103	170	45	46	38	13	11
CFSM	.53	.70	1.03	.38	.40	1.60	1.55	.41	.45	.53	.10	.05
IN.	.61	.78	1.19	.43	.42	1.84	1.74	.47	.50	.61	.11	.06

CAL YR 1986	TOTAL	84987	MEAN	233	MAX	2180	MIN	18	CFSM	.81	IN.	11.02
WTR YR 1987	TOTAL	67649	MEAN	185	MAX	2380	MIN	11	CFSM	.64	IN.	8.77

03373980 WHITE RIVER ABOVE PETERSBURG, IN

LOCATION (Revised).--Lat 38°31'46", long 87°15'13", in NE¼SW¼ sec.12, T.1 N., R.8 W., Pike County, Hydrologic Unit 05120202, on left bank 200 ft upstream from intake structure of Indianapolis Power and Light Company's generating plant, 1.4 mi downstream from East Fork White River, 2.3 mi upstream from State Highway 61, 2.8 mi northeast of Petersburg, and at mile 48.1.

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 1500 ft^3/s only published. For a complete record of White River in this vicinity use records of White River at Petersburg, IN (sta. 03374000), 2.3 mi downstream.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1												---
2												---
3												---
4												---
5												1500
6												1450
7												1420
8												1390
9												1360
10												1310
11												1290
12												1330
13												1320
14												1270
15												1250
16												1270
17												1320
18												1300
19												1280
20												1290
21												1270
22												1260
23												1210
24												1180
25												1140
26												1130
27												1120
28												1080
29												1130
30												1150
31												---
TOTAL												---
MEAN												---
MAX												---
MIN												---
CFSM												---
IN.												---

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.--60 years, 11,848 ft^3/s, 14.47 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, 26,900 ft^3/s July 9, gage height, 15.38 ft; minimum daily, 1,310 ft^3/s Sept. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3230	5890	15600	7200	5970	15500	9140	7820	4870	3810	6020	1950
2	3410	5580	19400	6810	6080	20500	10800	7110	4430	5100	6430	1900
3	3940	5240	20500	6480	6170	22300	12600	6580	4380	8540	6600	1860
4	10100	4930	20200	6230	6490	21600	13700	6610	4540	12000	6880	1820
5	15400	4720	18400	6000	6700	20800	13700	6440	5010	14100	6540	1770
6	17100	4530	17400	5820	7180	19900	13200	6230	6950	17800	6100	1730
7	18200	4420	16800	5650	7490	18100	12400	5950	8180	21900	7190	1690
8	20000	4410	15100	5460	7500	15500	11200	5510	9070	25800	7940	1650
9	21400	4380	12800	5310	7090	12800	9730	5120	8540	26700	6940	1620
10	21200	4320	11700	5270	6690	10900	8420	4810	6900	26300	5690	1570
11	17800	4330	11100	5250	6390	9800	7600	4560	5640	26300	4830	1540
12	16100	4390	11000	5190	6170	8990	7170	4440	5120	22300	4250	1590
13	14000	4300	11300	5180	5940	8230	7270	4320	6280	15000	3860	1580
14	11500	4160	11000	5240	5680	7430	10100	4140	5780	12000	3580	1520
15	10200	4170	9890	5360	5440	6860	16300	4080	6520	12000	3370	1500
16	9380	4130	8810	5650	5230	6780	22900	4260	6490	12600	3170	1510
17	8780	4050	8130	6470	5040	6580	25700	3960	5330	12500	3010	1570
18	8080	4000	7770	7070	4860	6480	25700	3700	4530	12400	2910	1560
19	7280	3910	7490	8130	4710	6490	24000	3560	4120	11600	2780	1540
20	6600	3880	7260	9870	4560	6350	22500	3540	4060	10300	2610	1540
21	6120	3810	6970	10800	4480	6180	21100	3790	3980	9050	2490	1520
22	5690	3720	6720	10400	4690	7100	18700	4400	4280	8120	2420	1500
23	5290	3710	6480	9650	4940	9160	15900	5060	6100	7480	2340	1450
24	4970	3690	6470	8890	4870	9500	14000	5030	7330	6920	2240	1420
25	4990	3660	6790	7750	4550	8510	12800	4600	6550	6430	2180	1380
26	5370	5230	7560	6360	4390	7420	11400	4390	5830	6030	2120	1360
27	6030	8300	8470	5190	4520	7070	10400	4840	5100	5490	2100	1340
28	6620	12800	8420	4670	6130	7290	9630	5050	4310	5040	2060	1310
29	6790	14700	8230	5240	---	7740	8930	4870	3860	5540	2020	1360
30	6590	15200	8170	5430	---	7820	8360	4840	3470	5870	1970	1390
31	6240	---	7720	5520	---	8020	---	5000	---	5530	1960	---
TOTAL	308400	164560	343650	203540	159950	337700	415350	154610	167550	380550	124600	47040
MEAN	9948	5485	11090	6566	5713	10890	13850	4987	5585	12280	4019	1568
MAX	21400	15200	20500	10800	7500	22300	25700	7820	9070	26700	7940	1950
MIN	3230	3660	6470	4670	4390	6180	7170	3540	3470	3810	1960	1310
CFSM	.89	.49	1.00	.59	.51	.98	1.24	.45	.50	1.10	.36	.14
IN.	1.03	.55	1.15	.68	.53	1.13	1.39	.52	.56	1.27	.42	.16

CAL YR 1986 TOTAL 4285890 MEAN 11740 MAX 48800 MIN 1600 CFSM 1.06 IN. 14.33
WTR YR 1987 TOTAL 2807500 MEAN 7692 MAX 26700 MIN 1310 CFSM .69 IN. 9.39

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: Jan. 13 to Feb. 23. Records good except for estimated daily discharges and discharges below 0.4 ft^3/s, which are poor.

AVERAGE DISCHARGE.--19 years, 24.9 ft^3/s, 26.42 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, and 1987.

EXTREMES FOR CURRENT YEAR.--Peak discharge above base of 800 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Feb. 28	1645	*967	*6.22

Minimum daily discharge, no flow, Aug. 21 to Sept. 7, and Sept. 26-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.67	.67	32	4.3	4.1	213	65	4.6	2.7	3.5	2.5	.00
2	.73	.64	88	4.3	4.0	85	158	4.3	1.8	2.5	21	.00
3	.73	.63	36	3.8	3.2	46	60	4.7	1.9	1.4	2.8	.00
4	3.7	.75	19	3.4	2.6	30	38	7.0	1.7	1.1	1.5	.00
5	2.9	.97	13	3.2	2.4	24	28	5.1	1.2	1.0	1.1	.00
6	1.1	1.6	9.5	3.3	2.3	18	21	4.2	.98	1.9	.78	.00
7	.78	1.5	7.8	3.2	2.4	15	18	3.7	.82	4.6	.61	.00
8	.56	1.5	7.0	3.0	2.4	14	15	3.3	.82	3.2	.54	.06
9	.46	2.0	14	2.8	2.3	12	12	3.0	.82	2.4	.46	.07
10	.37	2.0	31	3.6	2.3	9.2	11	2.7	.74	3.8	.37	.10
11	.35	1.9	18	4.0	2.3	7.9	11	2.6	.73	2.5	.37	.11
12	.49	1.9	13	3.8	2.3	7.0	12	2.7	1.2	1.7	.32	.22
13	.71	1.6	8.8	3.8	2.2	6.3	11	2.5	1.7	1.8	.29	.15
14	.74	1.4	7.0	3.4	2.1	6.1	164	2.2	1.8	2.6	.26	.09
15	.68	1.4	5.9	3.0	2.0	6.3	135	2.0	1.2	1.6	.23	.04
16	.45	1.3	5.3	2.6	1.9	14	58	1.8	.94	1.3	.21	.05
17	.47	1.1	5.2	2.5	2.1	13	40	1.7	.91	1.0	.19	.12
18	.43	1.1	4.7	3.7	2.3	11	29	1.7	.78	.77	.15	.12
19	.38	1.3	4.2	5.3	2.2	9.9	22	1.5	2.2	.68	.08	.10
20	.62	1.1	3.6	5.6	2.2	8.6	18	1.7	4.9	.56	.03	.07
21	.40	.95	3.1	5.3	3.0	7.7	15	1.5	2.4	.51	.02	.05
22	.55	.95	2.9	5.0	5.0	6.9	13	2.1	1.8	.46	.01	.02
23	.36	.90	2.8	3.8	20	6.1	11	1.6	2.3	.45	.00	.02
24	.48	.88	3.8	3.2	15	6.5	10	1.4	1.7	.38	.00	.04
25	1.7	2.3	9.7	2.8	12	19	8.9	2.1	1.3	.34	.00	.03
26	3.9	150	9.3	2.5	9.8	15	7.8	1.7	1.0	.30	.00	.00
27	2.1	30	7.2	2.4	38	12	7.2	1.5	.79	1.7	.00	.00
28	1.2	15	6.0	2.4	324	10	6.3	1.3	.71	2.1	.00	.00
29	.94	10	5.4	2.7	---	8.9	5.8	1.2	.76	1.0	.00	.00
30	.82	7.5	5.0	3.3	---	44	5.2	1.3	.59	.66	.00	.00
31	.73	---	4.5	3.9	---	48	---	4.8	---	.59	.00	---
TOTAL	30.50	244.84	392.7	109.9	476.4	740.4	1016.2	83.5	43.19	48.40	33.82	1.46
MEAN	.98	8.16	12.7	3.55	17.0	23.9	33.9	2.69	1.44	1.56	1.09	.05
MAX	3.9	150	88	5.6	324	213	164	7.0	4.9	4.6	21	.22
MIN	.35	.63	2.8	2.4	1.9	6.1	5.2	1.2	.59	.30	.00	.00
CFSM	.08	.64	.99	.28	1.33	1.87	2.65	.21	.11	.12	.09	.00
IN.	.09	.71	1.14	.32	1.38	2.15	2.95	.24	.13	.14	.10	.00

CAL YR 1986	TOTAL	4843.46	MEAN	13.3	MAX	243	MIN	.09	CFSM	1.04	IN.	14.08
WTR YR 1987	TOTAL	3221.31	MEAN	8.83	MAX	324	MIN	.00	CFSM	.69	IN.	9.36

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. 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.--26 years, 223 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, 399 ft^3/s Mar. 6-9; minimum daily, 19 ft^3/s June 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	96	51	197	127	51	267	135	35	32	32	31
2	45	96	51	197	127	52	210	103	35	32	32	31
3	45	113	106	197	127	107	210	102	35	32	32	31
4	45	128	198	197	127	258	210	102	35	32	32	31
5	45	128	198	197	127	369	210	77	35	32	32	31
6	45	128	198	147	111	399	210	51	35	32	32	31
7	45	128	198	197	101	399	210	51	35	32	32	31
8	45	128	149	197	101	399	210	51	35	32	32	31
9	45	128	99	197	101	399	210	51	35	32	32	31
10	45	128	99	197	101	398	210	51	35	32	32	31
11	45	128	144	197	83	398	210	42	85	32	32	31
12	45	151	199	197	50	398	210	35	35	32	32	31
13	45	169	198	196	50	397	210	35	35	32	32	31
14	45	169	198	196	50	397	210	35	35	32	32	31
15	45	169	198	196	50	397	211	35	35	32	32	31
16	45	169	198	196	50	397	211	35	35	32	32	31
17	45	169	198	196	50	397	211	35	35	32	32	31
18	45	169	198	196	50	396	211	35	35	32	32	31
19	45	169	198	196	50	396	211	35	35	32	32	31
20	45	169	198	196	50	396	211	35	35	32	31	31
21	45	168	198	196	50	395	211	35	35	32	31	31
22	56	168	198	196	50	395	211	35	35	32	31	31
23	64	168	198	196	50	395	211	35	25	32	31	31
24	64	168	198	196	50	302	211	35	19	32	31	31
25	64	168	198	196	50	267	211	35	28	32	31	31
26	64	108	198	196	50	302	211	35	32	32	31	31
27	80	51	198	196	50	302	211	35	32	32	31	31
28	96	51	198	168	51	302	211	35	32	32	31	31
29	96	51	198	127	---	301	211	35	32	32	31	31
30	96	51	172	127	---	301	211	35	32	32	31	31
31	96	---	197	127	---	302	---	35	---	32	31	---
TOTAL	1721	3984	5425	5803	2084	10364	6373	1516	1052	992	980	930
MEAN	55.5	133	175	187	74.4	334	212	48.9	35.1	32.0	31.6	31.0
MAX	96	169	199	197	127	399	267	135	85	32	32	31
MIN	45	51	51	127	50	51	210	35	19	32	31	31

CAL YR 1986	TOTAL	61563	MEAN	169	MAX	802	MIN	19
WTR YR 1987	TOTAL	41224	MEAN	113	MAX	399	MIN	19

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.--Estimated daily discharges: Jan. 22 to Feb. 1. Records good. Flow regulated by Beaver Creek Reservoir beginning Oct. 11, 1955, and by Patoka Lake beginning Feb. 13, 1978.

AVERAGE DISCHARGE.--39 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, 1,490 ft^3/s Mar. 2, gage height, 13.40 ft; minimum daily, 30 ft^3/s Sept. 1, 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	107	129	229	238	140	1370	588	268	46	144	32	30
2	120	129	706	238	213	1400	663	188	44	176	40	30
3	135	129	398	238	215	672	540	158	85	85	39	31
4	591	142	289	237	189	372	414	151	67	63	38	31
5	542	160	306	237	175	455	367	148	47	64	38	31
6	188	167	281	229	173	529	342	123	41	85	38	31
7	131	165	273	175	156	526	337	92	41	174	37	31
8	112	165	273	210	146	520	328	92	38	113	37	31
9	100	165	331	211	137	513	324	92	36	70	37	31
10	92	165	380	227	136	499	323	90	35	60	38	31
11	87	167	257	230	136	497	336	89	35	58	38	31
12	88	167	272	230	126	497	342	84	40	55	38	31
13	97	187	276	229	93	497	337	58	67	57	38	31
14	96	194	268	227	93	497	579	44	83	51	38	31
15	91	194	268	226	100	493	870	43	69	48	38	31
16	89	196	268	225	97	530	617	43	51	46	38	31
17	88	196	267	223	97	521	493	43	61	45	40	32
18	82	196	267	233	98	503	423	41	56	42	40	31
19	78	194	263	337	105	503	381	41	87	41	40	31
20	78	196	258	374	107	503	348	41	96	37	38	31
21	78	196	249	294	117	502	327	40	81	34	34	31
22	78	196	240	250	165	500	317	40	203	34	34	31
23	83	196	240	230	168	500	332	40	176	34	33	31
24	89	196	248	220	142	489	323	39	86	33	32	31
25	124	204	268	210	125	374	303	39	54	33	34	31
26	150	657	262	208	117	348	293	40	46	33	35	31
27	126	525	256	205	170	370	291	39	46	32	34	31
28	130	223	255	200	689	370	288	38	46	32	34	31
29	136	162	251	150	---	370	282	37	47	32	34	33
30	132	138	246	140	---	472	274	69	47	32	32	33
31	129	---	218	140	---	559	---	60	---	32	31	---
TOTAL	4247	6096	8863	7021	4425	16751	11982	2410	1957	1875	1127	933
MEAN	137	203	286	226	158	540	399	77.7	65.2	60.5	36.4	31.1
MAX	591	657	706	374	689	1400	870	268	203	176	40	33
MIN	78	129	218	140	93	348	274	37	35	32	31	30
CFSM	.52	.77	1.09	.86	.60	2.06	1.52	.30	.25	.23	.14	.12
IN.	.60	.87	1.26	1.00	.63	2.38	1.70	.34	.28	.27	.16	.13

CAL YR 1986	TOTAL	106773	MEAN	293	MAX	1360	MIN	25	CFSM	1.12	IN.	15.16
WTR YR 1987	TOTAL	67687	MEAN	185	MAX	1400	MIN	30	CFSM	.71	IN.	9.61

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. 11, 12, 15-24, Oct. 31 to Nov. 4, Nov. 13-25, Dec. 20-24, Dec. 29 to Jan. 10, Jan. 15-18, Jan. 22 to Feb. 1, Feb. 9-14, Mar. 5-15, 18-30, Apr. 5-9, Apr. 30 to June 2, June 5-12, 24-30, July 3-5, and July 8 to Sept. 30. Records fair above 10 ft^3/s and poor below.

AVERAGE DISCHARGE.--17 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)
Oct. 4	0800	1,290	10.76	Feb. 28	1800	*1,780	*11.28

Minimum daily discharge, no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	8.2	209	9.2	24	333	35	6.4	3.8	94	.36	.00
2	18	7.8	126	9.0	42	80	97	6.0	2.6	18	.50	.00
3	19	7.5	46	8.7	23	40	34	5.9	9.9	8.0	1.5	.00
4	443	7.3	29	8.4	16	26	23	8.0	6.4	6.0	.60	.00
5	80	18	23	8.2	14	21	14	5.6	2.0	13	.40	.00
6	27	16	20	8.0	12	18	12	4.8	.70	15	.31	.00
7	16	11	19	7.8	12	16	12	4.3	.50	16	.27	.00
8	11	14	19	7.6	11	14	11	3.9	.40	6.0	.24	.07
9	9.5	13	115	7.5	9.0	13	11	3.7	.37	3.5	.21	.00
10	8.9	10	43	13	8.5	12	9.5	3.5	.35	5.4	.20	.00
11	7.4	12	29	12	8.1	11	14	3.3	.33	3.0	.17	.10
12	8.4	11	23	11	7.9	10	12	3.5	8.0	12	.16	.20
13	9.9	8.3	17	10	7.8	9.8	14	3.0	29	3.5	.14	.07
14	10	7.6	16	9.9	13	9.8	175	2.7	21	2.0	.13	.02
15	8.0	7.1	15	9.1	13	12	94	2.4	6.1	1.4	.12	.00
16	7.3	6.7	14	8.4	11	49	53	2.2	25	.96	.10	.06
17	6.8	6.5	14	7.7	10	21	37	2.1	13	.77	.09	.02
18	6.5	6.3	13	14	10	17	26	1.9	11	.66	.08	.00
19	6.3	6.1	12	47	13	15	20	1.8	19	.58	.07	.00
20	7.8	6.0	11	22	13	13	16	1.7	12	.55	.06	.00
21	6.2	5.8	10	17	47	12	14	1.6	6.7	.52	.05	.00
22	7.7	5.6	9.8	14	53	11	21	3.0	102	.47	.04	.00
23	6.0	5.5	9.9	12	34	10	19	1.9	20	.42	.04	.00
24	7.7	5.5	14	10	23	12	16	1.3	8.0	.39	.03	.00
25	38	41	18	8.5	19	17	13	2.9	4.0	.37	.03	.00
26	24	266	15	7.8	16	14	12	1.7	3.3	.36	.02	.00
27	16	46	13	7.7	83	13	10	1.2	2.9	.35	.02	.00
28	11	28	12	7.7	659	12	8.4	1.0	2.7	.50	.01	.10
29	10	21	11	7.9	---	11	8.1	.86	2.5	.64	.01	.03
30	9.6	17	10	8.4	---	25	6.9	1.0	2.3	.41	.00	.00
31	8.8	---	9.7	9.0	---	35	---	5.0	---	.36	.00	---
TOTAL	871.8	631.8	945.4	348.5	1212.3	912.6	847.9	98.16	325.85	215.11	5.96	.67
MEAN	28.1	21.1	30.5	11.2	43.3	29.4	28.3	3.17	10.9	6.94	.19	.02
MAX	443	266	209	47	659	333	175	8.0	102	94	1.5	.20
MIN	6.0	5.5	9.7	7.5	7.8	9.8	6.9	.86	.33	.35	.00	.00
CFSM	1.29	.97	1.40	.51	1.99	1.35	1.30	.15	.50	.32	.01	.00
IN.	1.49	1.08	1.61	.59	2.07	1.56	1.45	.17	.56	.37	.01	.00

CAL YR 1986	TOTAL	10034.59	MEAN	27.5	MAX	901	MIN	.05	CFSM 1.26	IN. 17.12
WTR YR 1987	TOTAL	6416.05	MEAN	17.6	MAX	659	MIN	.00	CFSM .81	IN. 10.95

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 curent 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.--No estimated daily discharges. Records good. An average 0.13 ft^3/s is diverted for municipal water supply 100 ft above gage.

AVERAGE DISCHARGE.--12 years, 659 ft^3/s, 14.84 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, 2,400 ft^3/s Mar. 1, gage height, 21.15 ft; minimum daily, 24 ft^3/s Aug. 24, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	156	215	764	381	341	2360	1100	291	156	215	119	33
2	234	206	1640	375	500	2220	1300	276	116	1090	135	32
3	313	199	1680	385	775	2180	1370	249	213	965	122	30
4	806	195	1650	377	678	2190	1280	245	517	523	79	30
5	1400	221	1490	369	520	2240	1050	235	281	288	86	29
6	1460	299	1200	367	426	2210	808	193	140	291	64	29
7	1310	383	893	365	384	2080	645	164	92	425	47	29
8	844	352	695	333	359	1820	558	139	70	520	41	30
9	445	327	756	304	318	1500	509	104	58	378	39	30
10	272	343	1150	340	273	1190	454	89	56	245	39	31
11	206	328	1170	386	252	959	466	86	54	172	38	33
12	187	325	929	391	252	810	503	107	77	143	39	34
13	216	328	675	375	250	710	480	133	517	131	39	33
14	278	296	542	369	239	633	965	120	943	153	37	35
15	268	299	485	363	265	613	1770	88	762	153	36	37
16	228	311	465	352	313	1310	1750	67	374	184	38	34
17	193	321	456	337	291	1420	1730	50	575	268	37	39
18	171	317	452	342	284	1240	1640	46	866	163	34	42
19	154	302	438	530	309	1030	1420	42	589	101	34	59
20	138	297	412	918	361	878	1110	61	299	79	36	40
21	129	298	390	860	412	757	853	49	235	64	38	30
22	123	307	367	663	729	673	666	71	752	57	33	26
23	120	307	355	525	893	621	556	52	1940	53	30	25
24	122	301	392	510	720	595	522	41	1660	48	28	24
25	230	303	518	536	527	627	472	39	1250	45	29	24
26	479	755	552	566	412	577	417	42	751	43	31	25
27	492	1340	496	533	568	468	375	55	382	41	33	26
28	372	1400	442	526	1440	458	345	58	191	43	33	25
29	285	1240	413	514	---	447	317	42	124	42	38	30
30	250	875	404	493	---	647	298	73	100	48	37	31
31	233	---	401	412	---	967	---	131	---	65	35	---
TOTAL	12114	12990	22672	14097	13091	36430	25729	3438	14140	7036	1504	955
MEAN	391	433	731	455	468	1175	858	111	471	227	48.5	31.8
MAX	1460	1400	1680	918	1440	2360	1770	291	1940	1090	135	59
MIN	120	195	355	304	239	447	298	39	54	41	28	24
CFSM	.65	.72	1.21	.75	.78	1.95	1.42	.18	.78	.38	.08	.05
IN.	.75	.80	1.40	.87	.81	2.25	1.59	.21	.87	.43	.09	.06

WTR YR 1987 TOTAL 164196 MEAN 450 MAX 2360 MIN 24 CFSM .75 IN. 10.13

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: Jan. 23 to Feb. 1. Records good except for estimated daily discharges, which are poor. Flow regulated by Patoka Lake.

AVERAGE DISCHARGE.--53 years, 1,029 ft^3/s, 17.00 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, 2,520 ft^3/s Mar. 8, gage height, 14.40 ft; minimum daily, 36 ft^3/s Sept. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	183	244	1260	456	380	2190	1190	391	278	265	237	43
2	250	231	1650	431	541	2150	1330	377	245	877	179	40
3	329	225	1660	430	824	2280	1430	384	277	1210	163	40
4	693	220	1690	431	902	2380	1470	571	541	994	109	39
5	882	243	1710	419	749	2440	1440	436	507	624	88	38
6	924	284	1690	416	592	2490	1260	348	268	552	86	40
7	936	369	1580	411	511	2510	999	282	158	723	70	39
8	894	401	1340	396	473	2510	775	244	116	691	61	39
9	679	362	1160	352	429	2480	670	193	95	596	58	37
10	404	353	1180	365	370	2380	599	168	134	407	55	37
11	276	383	1260	410	330	2190	615	170	107	273	51	36
12	261	377	1240	441	318	1880	653	155	143	205	51	44
13	284	367	1070	433	316	1480	641	204	999	191	51	42
14	298	337	783	417	320	1110	1100	202	1130	169	50	40
15	303	317	615	413	350	915	1580	192	1150	184	49	43
16	271	325	552	402	385	1570	1750	142	828	186	48	44
17	240	335	537	386	398	1590	1900	115	585	286	62	49
18	218	337	526	388	382	1600	1970	104	899	273	61	61
19	197	328	509	562	403	1540	1980	97	903	162	49	54
20	170	316	480	939	455	1380	1910	270	571	113	47	67
21	154	316	451	1070	521	1180	1720	223	345	94	47	55
22	144	320	426	948	740	962	1370	155	791	84	47	47
23	149	326	405	680	1000	818	1010	132	1470	79	44	43
24	133	325	463	540	980	746	779	103	1700	73	43	41
25	202	340	599	450	788	769	676	95	1700	70	40	40
26	421	832	654	390	597	763	587	95	1590	69	40	40
27	555	1190	617	360	756	650	522	95	1160	66	41	40
28	472	1350	546	350	1600	572	478	106	633	64	42	39
29	357	1400	493	355	---	557	437	96	291	67	44	44
30	279	1310	474	360	---	711	407	193	185	83	47	56
31	263	---	466	365	---	1030	---	519	---	105	47	---
TOTAL	11821	14063	28086	14766	16410	47823	33248	6857	19799	9835	2107	1317
MEAN	381	469	906	476	586	1543	1108	221	660	317	68.0	43.9
MAX	936	1400	1710	1070	1600	2510	1980	571	1700	1210	237	67
MIN	133	220	405	350	316	557	407	95	95	64	40	36
CFSM	.43	.53	1.03	.54	.66	1.75	1.26	.25	.75	.36	.08	.05
IN.	.50	.59	1.18	.62	.69	2.02	1.40	.29	.84	.41	.09	.06

CAL YR 1986	TOTAL	296798	MEAN	813	MAX	3120	MIN	48	CFSM	.92	IN.	12.52
WTR YR 1987	TOTAL	206132	MEAN	565	MAX	2510	MIN	36	CFSM	.64	IN.	8.69

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.--No estimated daily discharges. Records good. Flow partially regulated by upstream reservoirs.

AVERAGE DISCHARGE.--60 years, 27,628 ft^3/s, 13.10 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, 51,000 ft^3/s July 9, gage height, 14.54 ft; minimum daily, 4,360 ft^3/s Sept. 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9100	15300	28300	16700	13900	24000	16200	17500	14300	9510	10700	10900
2	9620	15200	35800	16200	15500	33100	17100	16500	13400	13300	11200	9890
3	12900	14900	40900	15500	16800	37700	18600	15400	12700	22900	12200	8470
4	17600	14200	41500	14900	18800	38000	20200	14800	14500	27500	13600	7430
5	29300	13600	38700	14500	20500	38700	20900	15100	21600	26400	13400	6640
6	37000	13100	35800	14300	22000	40000	20800	14400	22900	28000	12900	6110
7	38800	12800	34400	13900	24000	39000	20100	13500	22800	35400	12100	5690
8	38200	12600	33400	13600	26700	35300	18900	12800	22500	46800	12500	5370
9	37400	12200	30900	13300	28100	30700	17600	12100	22500	50500	12400	5100
10	37600	11700	28400	13200	27800	27100	16000	11400	21500	46800	10800	4900
11	36300	11700	26100	13300	26600	25100	15000	10900	18500	42900	9350	4780
12	32400	11800	24700	13100	25300	23400	14300	10400	15800	39700	8420	4660
13	29600	11600	24400	13000	23600	21500	14100	10100	15500	32700	7800	4660
14	26000	11400	25100	13200	21700	19500	16900	9850	17000	27600	7530	4640
15	22400	11100	24600	13700	21000	17900	26800	9750	16900	24100	7300	4500
16	20100	11000	22800	16200	21600	17900	36300	9750	17000	22100	6990	4440
17	18300	11000	20900	18200	21600	17500	43200	9700	15700	21700	6610	4640
18	17100	10800	19600	19100	20400	17000	46400	9290	13700	21100	6240	4480
19	16400	10600	18700	19800	18500	16800	46900	8890	12600	20300	6040	4410
20	15600	10500	17900	22800	16800	16300	46000	8650	11400	19200	5810	4380
21	14700	10300	17300	25200	15800	15600	43200	9710	10400	17700	5630	4400
22	14000	9900	16600	24400	15500	15200	39000	11800	10900	16000	5450	4490
23	13300	9920	15900	21800	15900	15900	33900	17000	13700	14400	5180	4550
24	12500	9940	15600	19400	15900	17400	29200	19400	15300	13100	4960	4520
25	12500	9970	16000	17500	15400	17600	26500	18600	16800	11900	4870	4380
26	13600	12400	16500	16700	14600	16700	24700	17100	15500	10900	4920	4360
27	14700	16400	17400	15300	14200	15700	23100	16300	13800	10200	4900	4400
28	15400	20400	17900	13500	15400	15100	21400	15700	12400	9460	4810	4510
29	15600	23800	17500	12500	---	15100	19900	14600	11000	9220	4720	4630
30	15400	25900	17200	12700	---	15400	18600	13700	9640	9700	5610	4590
31	15200	---	17100	12900	---	15800	---	14000	---	9680	9620	---
TOTAL	658620	396030	757900	500400	553900	712000	771800	408690	472240	710770	254560	160920
MEAN	21250	13200	24450	16140	19780	22970	25730	13180	15740	22930	8212	5364
MAX	38800	25900	41500	25200	28100	40000	46900	19400	22900	50500	13600	10900
MIN	9100	9900	15600	12500	13900	15100	14100	8650	9640	9220	4720	4360
CFSM	.74	.46	.85	.56	.69	.80	.90	.46	.55	.80	.29	.19
IN.	.86	.51	.98	.65	.72	.92	1.00	.53	.61	.92	.33	.21

CAL YR 1986	TOTAL	9849930	MEAN	26990	MAX	84200	MIN	4690	CFSM	.94	IN.	12.80
WTR YR 1987	TOTAL	6357830	MEAN	17420	MAX	50500	MIN	4360	CFSM	.61	IN.	8.26

03378000 BONPAS CREEK AT BROWNS, IL

LOCATION.--Lat 38°23'11", long 87°58'32", in NW¼SE¼ sec.33, T.1 S., R.14 W., Wabash County, Hydrologic Unit 05120113, on right bank at downstream side of bridge on State Highway 15, 0.5 mi north of Browns, 0.7 mi upstream from Southern Railway bridge, and at mile 14.6.

DRAINAGE AREA.--228 mi^2.

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

GAGE.--Water-stage recorder. Datum of gage is 372.92 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 11, 1968, water-stage recorder and concrete dam at site 0.4 mi downstream at datum 2.0 ft higher. Dec. 11, 1968, to Aug. 13, 1969, nonrecording gage at site 0.5 mi downstream at datum 1.0 ft lower. Prior to Oct. 1, 1982, auxiliary nonrecording gage near mouth on Wabash River at Grayville read twice daily.

REMARKS.--Estimated daily discharges: Sept. 4-21. Records fair except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--47 years, 228 ft^3/s, 13.58 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,500 ft^3/s May 9, 1961, gage height, 24.04 ft, site and datum then in use; no flow at times in most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,230 ft^3/s July 7, gage height, 13.32 ft; no flow for many days.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.77	195	16	18	1060	63	15	71	210	25	.00
2	.01	.67	729	15	52	882	51	14	10	309	7.5	.00
3	.01	.73	441	14	78	565	45	169	9.2	135	3.0	.00
4	219	.79	133	12	50	136	33	275	66	17	1.2	.00
5	365	1.0	54	11	41	91	26	61	14	306	.77	.00
6	82	1.3	31	11	33	72	23	36	3.2	392	.24	.00
7	14	1.7	24	11	29	54	22	24	.96	1160	.02	.00
8	4.2	2.0	22	8.6	27	45	20	17	.13	1100	.01	.00
9	1.8	1.8	223	7.8	19	39	18	13	.02	1010	.01	.00
10	.71	1.4	301	10	13	29	15	11	.00	723	.00	.00
11	.11	1.6	107	14	11	23	28	8.4	.00	177	.00	.00
12	.07	1.4	48	16	12	20	49	12	27	54	.00	.00
13	.37	1.3	27	22	12	17	62	7.9	504	152	.00	.00
14	1.1	1.2	20	88	12	17	794	5.6	649	455	.00	.00
15	1.4	1.4	16	168	16	43	1000	5.4	682	196	.00	.00
16	.91	1.7	15	155	16	559	1090	4.2	423	37	.00	.00
17	.70	1.7	18	60	15	282	1090	2.8	76	17	.00	.00
18	.43	1.5	18	43	14	114	897	16	20	8.8	.00	.00
19	.20	1.2	15	112	18	215	349	13	9.1	5.2	.00	.00
20	.03	1.4	12	161	34	121	108	4.4	16	3.0	.00	.00
21	.03	1.3	9.4	63	40	72	72	2.2	8.6	3.2	.00	.00
22	.03	1.3	7.9	44	86	51	53	1.1	21	2.7	.00	.00
23	.02	1.3	7.4	37	69	41	44	.72	275	1.9	.00	.00
24	.05	1.1	31	26	44	49	45	.41	140	1.2	.00	.00
25	47	4.2	116	13	31	207	42	9.5	67	.91	.00	.00
26	85	183	71	7.8	25	119	33	17	42	.84	.00	.00
27	24	205	38	6.0	197	62	28	8.0	6.2	.77	.00	.00
28	7.7	81	26	5.7	679	46	25	4.6	1.9	.66	.00	.00
29	2.7	32	20	6.7	---	38	21	1.1	.84	.92	.00	.00
30	1.0	17	19	11	---	132	18	.67	.21	71	.00	.00
31	.93	---	18	15	---	127	---	26	---	130	.00	---
TOTAL	860.52	553.76	2812.7	1190.6	1691	5328	6164	786.00	3143.36	6681.10	37.75	.00
MEAN	27.8	18.5	90.7	38.4	60.4	172	205	25.4	105	216	1.22	.00
MAX	365	205	729	168	679	1060	1090	275	682	1160	25	.00
MIN	.01	.67	7.4	5.7	11	17	15	.41	.00	.66	.00	.00
CFSM	.12	.08	.40	.17	.26	.75	.90	.11	.46	.95	.01	.00
IN.	.14	.09	.46	.19	.28	.87	1.01	.13	.51	1.09	.01	.00

CAL YR 1986	TOTAL	47550.78	MEAN	130	MAX	3160	MIN	.00	CFSM	.57	IN.	7.76
WTR YR 1987	TOTAL	29248.79	MEAN	80.1	MAX	1160	MIN	.00	CFSM	.35	IN.	4.77

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: Jan. 21-28, Aug. 20-24, and Sept. 20-24, 29, 30. Records good.

AVERAGE DISCHARGE.--22 years, 115 ft^3/s, 15.02 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)
Feb. 28	1845	*3,170	*17.34

Minimum daily discharge, no flow Aug. 25 to Sept. 11 and Sept. 25-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	2.7	222	18	16	1420	35	12	13	428	3.7	.00
2	19	2.6	404	18	71	299	54	12	21	57	1.8	.00
3	22	2.4	95	15	39	158	36	12	37	13	.92	.00
4	72	2.8	57	13	28	110	29	20	10	7.8	.75	.00
5	37	14	41	13	24	94	26	11	4.5	235	.70	.00
6	5.8	15	35	14	24	75	24	9.7	3.3	184	.58	.00
7	2.0	8.3	31	13	24	62	23	9.2	2.5	354	.45	.00
8	1.4	7.4	33	11	23	59	21	8.2	2.1	44	.37	.00
9	1.1	6.6	129	11	13	51	19	7.4	1.7	21	.35	.00
10	.98	4.9	86	18	14	37	18	7.1	1.4	14	.28	.00
11	.95	8.6	54	14	15	33	35	7.0	1.3	10	.14	.00
12	51	10	41	11	16	30	23	9.3	62	13	.09	30
13	40	6.3	28	12	12	29	20	8.7	786	44	.09	4.6
14	11	4.5	26	12	23	30	262	6.7	222	41	.24	1.0
15	5.4	5.2	24	12	28	145	157	5.6	20	10	.29	.56
16	3.1	5.4	23	9.5	23	215	127	5.0	12	5.9	.37	.39
17	2.3	5.1	23	8.9	23	74	103	4.9	68	4.1	.31	.59
18	1.8	4.5	22	15	22	59	70	4.7	13	3.0	.24	1.0
19	1.6	3.6	18	45	31	54	52	15	13	2.2	.13	.70
20	1.4	4.3	17	37	45	43	42	22	6.7	1.8	.08	.28
21	1.3	4.6	15	20	65	39	36	18	19	1.4	.05	.00
22	1.3	4.3	13	16	118	34	31	4.4	37	1.1	.03	.00
23	1.3	4.2	14	12	71	32	28	3.0	303	.99	.02	.00
24	1.6	4.4	30	11	53	31	24	2.6	70	.94	.01	.00
25	140	26	38	8.8	45	30	21	20	18	.93	.00	.00
26	38	287	27	8.0	40	23	19	9.1	23	1.3	.00	.00
27	14	83	24	7.0	225	23	18	4.6	8.1	.96	.00	.00
28	8.1	42	22	7.2	1220	21	16	3.4	5.2	.80	.00	.00
29	5.1	32	21	11	---	20	15	2.9	4.1	.72	.00	.00
30	3.6	25	21	15	---	68	14	11	3.2	46	.00	.00
31	3.0	---	17	9.8	---	42	---	13	---	13	.00	---
TOTAL	500.13	636.7	1651	446.2	2351	3440	1398	289.5	1791.1	1560.94	11.99	39.12
MEAN	16.1	21.2	53.3	14.4	84.0	111	46.6	9.34	59.7	50.4	.39	1.30
MAX	140	287	404	45	1220	1420	262	22	786	428	3.7	30
MIN	.95	2.4	13	7.0	12	20	14	2.6	1.3	.72	.00	.00
CFSM	.15	.20	.51	.14	.81	1.07	.45	.09	.57	.48	.00	.01
IN.	.18	.23	.59	.16	.84	1.23	.50	.10	.64	.56	.00	.01

CAL YR 1986	TOTAL 36049.23	MEAN 98.8	MAX 5370	MIN .10	CFSM .95	IN. 12.89
WTR YR 1987	TOTAL 14115.68	MEAN 38.7	MAX 1420	MIN .00	CFSM .37	IN. 5.05

03381500 LITTLE WABASH RIVER AT CARMI, IL

LOCATION.--Lat 38°03'40", long 88°09'35", in NW¼SE¼ sec.25, T.5 S., R.9 E., White County, Hydrologic Unit 05120114, on right bank at upstream side of Possum Bridge, 2.3 mi south of Main Street Bridge in Carmi, 7.8 mi downstream from Skillet Fork, and at mile 30.5.

DRAINAGE AREA.--3,102 mi^2.

PERIOD OF RECORD.--October 1908 to December 1912 (gage heights only), October 1939 to current year.

REVISED RECORDS.--WDR IL-75-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 339.91 ft above National Geodetic Vertical Datum of 1929. Prior to December 1912, nonrecording gage at site 3.1 mi upstream at datum 0.4 ft higher. Oct. 1 to Nov. 9, 1939, nonrecording gage at present site and datum. Since Nov. 14, 1939, auxiliary water-stage recorder 3.1 mi upstream.

REMARKS.--No estimated daily discharges. Records good. U.S. Army Corps of Engineers satellite telemeter and rain gage at station. There was no diversion through McHenry Slough during the year.

AVERAGE DISCHARGE.--48 years, 2,604 ft^3/s, 11.40 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 46,900 ft^3/s May 12, 1961; maximum gage height, 36.70 ft May 13, 1961; no flow Sept. 16-17, 1952, result of temporary dam upstream; minimum unregulated discharge, 0.6 ft^3/s Sept. 9, 1953, July 31, 1954.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 7,590 ft^3/s Apr. 18, gage height, 19.88 ft; minimum daily, 24 ft^3/s Sept. 14, 15.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	152	708	2190	649	478	6280	884	385	376	401	1220	32
2	443	533	3640	544	666	6810	716	350	372	933	1150	29
3	1060	416	3600	478	853	6780	642	315	520	1120	1080	28
4	1290	346	3300	435	985	6570	556	659	630	2640	876	28
5	2250	353	3300	408	1490	5940	480	1550	586	3600	783	29
6	2630	381	3140	388	2140	4860	439	805	432	4110	567	31
7	2730	333	2980	372	2500	3710	409	468	306	4770	464	34
8	2610	285	2500	350	2550	2470	382	438	300	6060	302	32
9	2560	262	2400	339	1980	1480	359	465	260	6450	247	30
10	2540	245	2260	348	1340	929	338	405	246	5930	544	30
11	2190	255	1750	374	1010	691	419	320	230	4550	303	30
12	1390	280	1480	384	834	593	492	274	238	2940	168	27
13	726	230	1350	403	716	539	562	257	1820	2120	120	26
14	472	208	1110	518	655	495	2540	257	1100	2640	98	24
15	339	175	890	873	634	588	5150	285	430	3380	84	24
16	280	149	693	1630	607	1360	6890	248	407	3770	72	25
17	253	144	562	2450	600	1450	7520	216	869	3720	67	67
18	244	139	473	3040	584	1210	7490	195	698	3380	64	72
19	233	129	407	3210	594	1350	6840	256	309	3320	63	56
20	252	126	381	3440	843	1500	5940	280	276	3290	58	44
21	236	118	362	3160	1110	1380	5160	264	224	2720	52	41
22	214	112	353	2510	1670	1250	4680	236	222	1460	55	42
23	196	110	342	1870	1470	1280	3990	220	401	607	55	39
24	187	108	426	1260	1070	1970	2570	204	418	313	46	35
25	624	129	878	929	954	2550	1350	234	453	232	39	32
26	1100	859	959	800	873	1740	852	302	479	214	37	31
27	565	1320	1020	701	1370	1160	638	256	421	187	54	30
28	381	1610	1270	617	3330	901	553	210	305	198	60	29
29	694	1920	1330	580	---	744	485	164	284	569	39	36
30	992	2020	1130	556	---	996	435	187	246	844	36	36
31	919	---	837	508	---	1200	---	341	---	885	34	---
TOTAL	30752	14003	47313	34124	33906	70776	69761	11046	13858	77353	8837	1049
MEAN	992	467	1526	1101	1211	2283	2325	356	462	2495	285	35.0
MAX	2730	2020	3640	3440	3330	6810	7520	1550	1820	6450	1220	72
MIN	152	108	342	339	478	495	338	164	222	187	34	24
CFSM	.32	.15	.49	.35	.39	.74	.75	.11	.15	.80	.09	.01
IN.	.37	.17	.57	.41	.41	.85	.84	.13	.17	.93	.11	.01

CAL YR 1986	TOTAL	671129	MEAN	1839	MAX	14800	MIN	40	CFSM	.59	IN.	8.05
WTR YR 1987	TOTAL	412778	MEAN	1131	MAX	7520	MIN	24	CFSM	.36	IN.	4.95

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: June 20 to Sept. 30. Records good except for estimated daily discharges, which are fair.

AVERAGE DISCHARGE.--40 years, 109 ft^3/s, 11.94 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)
Oct. 4	2300	718	8.55	May 19	2400	1,090	9.99
Nov. 27	1900	957	9.50	June 1	2000	*1,360	*10.88

Minimum daily discharge, 13 ft^3/s Aug. 8, 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	121	35	238	48	68	93	43	64	1060	53	20	50
2	87	34	214	49	83	144	38	66	1270	46	19	40
3	254	32	222	50	133	126	38	78	963	35	17	35
4	650	29	197	48	172	102	35	99	667	27	16	34
5	616	30	142	46	164	86	35	89	407	25	14	34
6	363	30	112	46	141	81	36	73	247	25	14	28
7	205	28	116	46	126	75	35	62	177	40	14	25
8	133	34	178	48	130	69	33	57	135	53	13	25
9	90	35	278	47	133	61	33	52	111	37	15	23
10	75	29	276	51	113	61	33	46	99	32	14	23
11	64	29	191	52	100	57	44	44	87	35	14	21
12	57	29	142	49	92	53	62	39	113	32	13	20
13	52	23	104	47	87	51	62	39	132	24	14	20
14	50	21	87	48	82	52	84	39	100	24	30	20
15	44	21	84	66	78	52	308	40	76	28	42	19
16	41	22	78	113	71	51	470	38	64	34	32	24
17	37	23	74	118	65	48	437	37	55	31	140	40
18	35	35	74	105	62	46	316	119	49	23	155	40
19	32	49	72	90	58	50	202	732	44	20	74	34
20	31	55	68	78	55	50	144	1010	40	18	40	25
21	29	71	64	60	52	48	123	727	54	21	34	22
22	27	93	61	65	52	45	115	417	54	20	37	66
23	26	111	59	57	52	44	166	232	45	19	34	100
24	26	134	58	46	51	44	189	159	38	18	25	60
25	35	113	57	44	49	51	152	126	36	16	24	42
26	59	299	55	41	47	49	119	340	36	18	150	32
27	65	893	52	39	47	45	100	457	30	20	400	28
28	56	807	50	38	49	43	88	304	27	21	240	25
29	46	509	49	41	---	43	78	171	27	21	130	25
30	41	327	49	52	---	40	70	129	36	18	82	24
31	38	---	50	65	---	41	---	171	---	20	62	---
TOTAL	3485	3980	3551	1795	2412	1901	3688	6056	6279	854	1928	1004
MEAN	112	133	115	57.9	86.1	61.3	123	195	209	27.5	62.2	33.5
MAX	650	893	278	118	172	144	470	1010	1270	53	400	100
MIN	26	21	49	38	47	40	33	37	27	16	13	19
CFSM	.90	1.07	.93	.47	.69	.49	.99	1.57	1.69	.22	.50	.27
IN.	1.05	1.19	1.07	.54	.72	.57	1.11	1.82	1.88	.26	.58	.30

CAL YR 1986	TOTAL	31970.4	MEAN	87.6	MAX	893	MIN	3.9	CFSM	.71	IN.	9.59
WTR YR 1987	TOTAL	36933	MEAN	101	MAX	1270	MIN	13	CFSM	.81	IN.	11.08

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, 11.59 ft, Nov. 21, 1985; minimum gage height, 5.74 ft, Sept. 10, 15-19, 1986. Minimum gage height not reported 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, 9.83 ft, June 3; minimum gage height, 5.86 ft, Aug. 13.

PROVISIONAL DATA

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.12	---	8.72	6.57	6.90	7.46	6.54	6.97	9.48	6.87	6.33	8.45
2	6.93	---	8.54	6.59	7.12	7.45	6.52	7.00	9.81	6.81	6.31	8.16
3	8.47	---	8.36	6.59	7.31	7.39	6.45	7.17	9.78	6.65	6.26	7.83
4	8.52	---	8.18	6.57	7.55	7.28	6.43	7.18	9.67	6.47	6.21	7.52
5	8.59	---	7.90	6.89	7.55	7.14	6.44	7.10	9.54	6.41	6.14	7.22
6	8.58	---	7.70	6.64	7.47	7.09	6.42	6.99	9.28	6.81	6.07	6.98
7	8.50	---	7.76	6.65	7.41	6.99	6.42	6.89	8.95	7.09	6.03	6.84
8	8.25	---	8.01	6.61	6.85	6.90	6.43	6.72	8.58	7.35	6.04	6.78
9	7.93	---	8.06	6.28	7.39	6.78	6.53	6.62	8.18	7.30	6.13	6.69
10	---	---	8.07	6.44	7.25	7.38	6.66	6.57	7.77	7.11	6.03	6.58
11	---	---	7.92	6.31	7.17	6.94	7.47	6.56	7.92	7.12	5.99	6.52
12	---	---	7.69	6.59	7.10	6.72	7.73	6.59	7.91	7.00	5.90	6.76
13	---	---	7.45	6.62	7.04	6.74	7.75	6.49	7.62	6.75	7.07	6.69
14	---	---	7.24	6.83	6.98	6.88	8.76	6.51	7.30	6.63	7.34	6.59
15	---	---	7.61	7.06	6.80	6.73	9.29	6.46	7.01	6.94	7.17	6.46
16	---	---	7.29	7.07	6.74	6.77	9.06	6.40	6.79	6.72	7.71	6.90
17	---	---	7.12	7.02	6.72	6.59	9.05	6.93	6.63	6.45	8.38	7.30
18	---	---	7.10	7.06	6.71	6.55	8.87	8.68	6.55	6.33	8.38	7.35
19	---	6.91	6.93	7.07	6.68	6.81	8.57	9.26	6.48	6.28	8.32	7.19
20	---	7.02	6.84	7.00	6.59	7.13	8.25	9.44	6.95	6.75	8.05	7.03
21	---	7.08	6.78	6.91	6.59	6.94	8.00	9.49	7.05	6.26	7.92	7.00
22	---	7.47	6.73	6.58	6.58	6.97	8.05	9.42	6.95	6.17	7.93	7.79
23	---	7.37	6.73	6.58	6.72	6.76	8.17	9.20	6.83	6.15	7.86	7.81
24	---	7.32	6.71	6.39	6.59	6.77	8.16	8.93	6.62	6.13	7.59	7.65
25	---	7.24	6.71	6.29	6.53	6.94	8.10	8.89	7.25	6.11	7.57	7.44
26	---	8.42	6.67	6.28	6.55	6.85	7.91	8.77	7.04	6.23	8.47	7.12
27	---	8.56	6.63	6.27	6.56	6.78	7.74	8.50	6.73	6.41	8.79	6.90
28	---	8.75	6.60	6.26	7.28	6.73	7.49	8.07	6.50	6.27	9.01	6.77
29	---	8.87	6.64	6.41	---	6.58	7.28	7.72	6.70	6.23	9.07	7.05
30	---	8.81	6.60	6.52	---	6.55	7.09	8.24	7.03	6.20	8.94	6.96
31	---	---	6.60	6.64	---	6.53	---	8.59	---	6.45	8.72	---
MEAN	---	---	7.35	6.63	6.95	6.91	7.59	7.69	7.70	6.60	7.35	7.14
MAX	---	---	8.72	7.07	7.55	7.46	9.29	9.49	9.81	7.35	9.07	8.45
MIN	---	---	6.60	6.26	6.53	6.53	6.42	6.40	6.48	6.11	5.90	6.46

WTR YR 1987 MEAN 7.24 HIGH 9.81 JUN 2 LOW 5.90 AUG 12

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.--Records 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.--28 years (1943-50, 1955-73, 1977, 1978, 1982), 140 ft^3/s, 11.88 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, 1,510 ft^3/s June 2, gage height, 11.44 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---				---	---	1210		---	---
2	---	---	---				---	---	1470		---	---
3	---	---	---				---	---	1370		---	---
4	754	---	---				---	---	1050		---	---
5	789	---	---				---	---	741		---	---
6	643	---	---				---	---	507		---	---
7	---	---	---				---	---	375		---	---
8	---	---	---				---	---	---		---	---
9	---	---	466				---	---	---		---	---
10	---	---	426				---	---	---		---	---
11	---	---	---				---	---	---		---	---
12	---	---	---				---	---	---		---	---
13	---	---	---				---	---	---		---	---
14	---	---	---				---	---	---		---	---
15	---	---	---				---	---	---		---	---
16	---	---	---				495	---	---		---	---
17	---	---	---				517	---	---		---	---
18	---	---	---				452	---	---		---	---
19	---	---	---				---	757	---		---	---
20	---	---	---				---	1120	---		---	---
21	---	---	---				---	1000	---		---	---
22	---	---	---				---	717	---		---	238
23	---	---	---				---	475	---		---	---
24	---	---	---				---	359	---		---	---
25	---	---	---				---	316	---		---	---
26	---	---	---				---	479	---		---	---
27	---	850	---				---	579	---		461	---
28	---	951	---				---	477	---		391	---
29	---	757	---				---	305	---		276	---
30	---	592	---				---	---	---		---	---
31	---	---	---				---	---	---		---	---
TOTAL	---	---	---				---	---	---		---	---
MEAN	---	---	---				---	---	---		---	---
MAX	---	---	---				---	---	---		---	---
MIN	---	---	---				---	---	---		---	---
CFSM	---	---	---				---	---	---		---	---
IN.	---	---	---				---	---	---		---	---

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: Dec. 12-14, Jan. 18-28, and Feb. 13-18. Records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--42 years, 74.2 ft^3/s, 15.22 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,110 ft^3/s Oct. 10, 1954, gage height, 11.66 ft; 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)
Oct. 4	0700	*900	*8.08	Nov. 27	0800	820	7.93

Minimum daily discharge, 29 ft^3/s July 24 and Aug. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	174	46	112	55	63	105	40	42	204	43	77	48
2	107	46	123	55	77	123	41	51	146	40	100	42
3	255	46	122	57	108	94	40	63	112	37	46	38
4	734	46	98	58	115	73	39	64	77	34	44	36
5	327	46	81	58	95	66	38	52	61	36	36	34
6	160	45	73	57	76	63	38	47	53	45	33	33
7	103	44	80	57	78	59	38	44	47	46	31	33
8	76	47	167	57	97	56	37	41	43	40	30	46
9	61	49	191	55	78	53	36	39	40	36	31	43
10	52	44	151	56	67	48	36	37	38	35	30	40
11	47	45	97	56	65	46	46	36	38	38	30	37
12	44	47	70	55	65	45	57	37	44	38	29	35
13	42	44	60	54	62	44	48	35	40	42	30	34
14	41	42	58	55	58	46	69	35	38	46	69	32
15	39	43	61	89	52	51	205	35	36	42	53	33
16	38	45	61	119	48	50	164	33	34	46	41	43
17	37	46	65	87	45	46	114	33	33	38	251	58
18	36	48	70	70	43	44	88	96	32	34	221	78
19	35	56	68	60	45	44	74	324	31	32	95	68
20	35	57	65	54	45	44	65	461	36	31	63	52
21	36	98	61	50	45	42	58	218	67	41	51	48
22	36	100	58	45	46	42	57	122	106	35	51	141
23	36	87	57	41	48	41	78	89	61	32	42	108
24	38	90	57	38	48	40	70	73	44	29	38	74
25	45	71	57	37	47	40	59	67	49	30	38	58
26	58	209	56	36	47	41	54	88	57	33	187	50
27	54	706	55	36	46	41	50	71	42	34	386	45
28	51	362	54	37	48	41	47	58	37	33	215	42
29	49	197	54	51	---	40	46	51	36	31	118	51
30	47	141	54	63	---	41	43	47	41	31	80	56
31	46	---	55	62	---	41	---	53	---	32	60	---
TOTAL	2939	2993	2491	1760	1757	1650	1875	2542	1723	1140	2606	1536
MEAN	94.8	99.8	80.4	56.8	62.8	53.2	62.5	82.0	57.4	36.8	84.1	51.2
MAX	734	706	191	119	115	123	205	461	204	46	386	141
MIN	35	42	54	36	43	40	36	33	31	29	29	32
CFSM	1.43	1.51	1.21	.86	.95	.80	.94	1.24	.87	.56	1.27	.77
IN.	1.65	1.68	1.40	.99	.99	.93	1.05	1.43	.97	.64	1.46	.86

CAL YR 1986	TOTAL	26802	MEAN	73.4	MAX	734	MIN	26	CFSM	1.11	IN.	15.06
WTR YR 1987	TOTAL	25012	MEAN	68.5	MAX	734	MIN	29	CFSM	1.03	IN.	14.06

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 1.5 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. 12-14, Jan. 18-28, Feb. 13-18, June 12 to Aug. 13, Aug. 15, 16, 19-25, and Aug. 29 to Sept. 30. Records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--42 years, 75.5 ft^3/s, 13.74 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,180 ft^3/s Oct. 11, 1954, gage height, 14.12 ft; minimum daily, 14 ft^3/s Sept. 8, 1964.

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)
Oct. 4	1100	610	4.71	Nov. 27	1000	*681	*5.16

Minimum daily discharge, 27 ft^3/s, Aug. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	143	43	105	53	71	138	33	43	443	45	50	45
2	100	42	129	54	97	135	36	52	236	40	94	42
3	323	42	123	56	119	95	34	70	158	35	45	36
4	587	43	104	55	115	72	32	66	115	32	40	34
5	436	42	87	53	101	63	31	53	84	37	34	32
6	163	42	75	53	84	58	30	48	65	39	31	31
7	107	44	89	55	89	54	31	45	53	43	29	31
8	80	46	151	55	104	52	31	42	45	38	28	43
9	64	46	163	52	87	49	32	41	43	30	30	40
10	55	40	128	55	71	43	32	38	39	31	28	37
11	49	42	96	59	68	40	44	38	40	35	29	35
12	49	43	70	55	70	39	61	50	72	36	27	33
13	48	40	60	54	64	39	52	41	57	40	30	32
14	45	38	58	58	60	43	82	38	42	43	80	30
15	43	38	60	97	56	45	286	41	34	40	50	31
16	42	41	61	111	52	42	165	35	33	41	40	45
17	40	42	65	89	48	40	114	36	36	35	237	60
18	37	53	68	74	45	39	99	100	32	33	122	74
19	36	69	65	62	47	40	80	338	33	30	90	64
20	35	72	61	56	46	39	68	489	37	30	60	50
21	37	109	57	50	47	36	60	349	60	38	50	45
22	37	109	54	45	50	36	59	131	100	33	45	130
23	35	116	53	37	51	35	95	88	59	30	40	100
24	36	118	53	36	48	34	78	72	45	28	36	70
25	49	97	54	36	47	38	62	70	49	28	36	54
26	84	302	50	35	47	36	53	141	50	33	261	46
27	68	623	50	35	47	36	50	99	40	40	315	42
28	54	437	49	35	53	35	47	69	35	52	134	40
29	49	172	48	48	---	35	45	54	35	35	100	48
30	46	122	50	71	---	36	43	48	50	30	80	52
31	44	---	52	71	---	34	---	68	---	30	60	---
TOTAL	3021	3113	2388	1755	1884	1556	1965	2893	2220	1110	2331	1452
MEAN	97.5	104	77.0	56.6	67.3	50.2	65.5	93.3	74.0	35.8	75.2	48.4
MAX	587	623	163	111	119	138	286	489	443	52	315	130
MIN	35	38	48	35	45	34	30	35	32	28	27	30
CFSM	1.31	1.39	1.03	.76	.90	.67	.88	1.25	.99	.48	1.01	.65
IN.	1.51	1.55	1.19	.88	.94	.78	.98	1.44	1.11	.55	1.16	.72

CAL YR 1986	TOTAL	27724	MEAN	76.0	MAX	623	MIN	19	CFSM	1.02	IN.	13.82
WTR YR 1987	TOTAL	25688	MEAN	70.4	MAX	623	MIN	27	CFSM	.94	IN.	12.81

04095300 TRAIL CREEK AT MICHIGAN CITY, IN

LOCATION.--Lat 41°43'00", long 86°51'34", 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: Oct. 3 to Nov. 13, Jan. 19 to Feb. 4, and Feb. 17, 18. Records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--18 years, 73.1 ft^3/s, 18.35 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)
Oct. 3	----	*1,100 [a]	----	Nov. 27	0200	779	8.90

Minimum daily discharge, 34 ft^3/s Aug. 7, 11, 12.

[a] Estimated.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	95	57	84	58	60	123	52	51	66	47	56	42
2	77	58	114	58	75	107	57	78	53	45	47	41
3	670	53	98	60	95	78	52	114	54	42	41	39
4	520	52	81	58	85	66	51	81	46	41	39	38
5	180	50	72	56	78	65	51	67	45	46	37	36
6	110	50	68	56	68	63	51	61	43	50	35	36
7	90	50	107	56	75	61	51	58	42	44	34	37
8	83	49	202	56	86	60	50	54	41	41	35	38
9	78	47	159	54	67	57	50	53	41	40	36	40
10	75	47	111	56	63	54	50	50	40	41	35	38
11	69	52	78	56	62	52	81	50	43	42	34	38
12	62	52	70	56	64	52	75	50	59	41	34	36
13	63	49	63	57	62	52	62	48	49	42	35	36
14	64	47	63	62	65	56	110	47	43	42	81	36
15	59	48	62	99	63	66	173	47	41	62	49	38
16	55	51	63	91	54	60	106	45	39	59	39	54
17	51	51	67	70	51	56	79	44	38	45	132	52
18	50	56	72	66	51	55	70	145	37	41	55	57
19	50	59	67	60	51	55	64	231	35	38	49	47
20	50	71	64	56	51	54	61	129	74	42	43	43
21	50	121	62	53	51	52	59	77	123	55	41	47
22	50	92	60	51	53	50	63	63	70	40	41	84
23	50	91	59	50	56	50	84	57	58	37	39	54
24	50	88	59	50	54	50	68	54	50	36	39	47
25	57	81	59	50	53	51	60	52	72	36	42	45
26	67	435	58	50	53	51	56	56	79	41	250	43
27	62	494	57	50	53	51	55	51	52	39	161	44
28	59	190	56	50	57	51	54	48	46	39	74	45
29	58	119	56	50	---	51	53	45	42	39	58	54
30	56	94	57	51	---	55	52	44	46	46	50	50
31	56	---	58	55	---	52	---	47	---	62	44	---
TOTAL	3166	2854	2406	1801	1756	1856	2000	2097	1567	1361	1785	1335
MEAN	102	95.1	77.6	58.1	62.7	59.9	66.7	67.6	52.2	43.9	57.6	44.5
MAX	670	494	202	99	95	123	173	231	123	62	250	84
MIN	50	47	56	50	51	50	50	44	35	36	34	36
CFSM	1.89	1.76	1.43	1.07	1.16	1.11	1.23	1.25	.96	.81	1.06	.82
IN.	2.18	1.96	1.65	1.24	1.21	1.28	1.38	1.44	1.08	.94	1.23	.92

CAL YR 1986	TOTAL	29814	MEAN	81.7	MAX	1100	MIN	34	CFSM	1.51	IN.	20.50
WTR YR 1987	TOTAL	23984	MEAN	65.7	MAX	670	MIN	34	CFSM	1.21	IN.	16.49

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: Jan. 19 to Feb. 2, Feb. 15-17, May 16, 17, 29, 30, June 15-19, July 19, 23-29, Aug. 5-13, 23, 24, and Sept. 4-7, 12-14, 26-30. Records good except for estimated daily discharges, which are fair for Feb. 15-17, May 16, 17, 29, 30, June 15-19, July 19, 23-29, Aug. 5-13, 23, 24, Sept. 4-7, 12-14, and poor for Jan. 19 to Feb. 2.

AVERAGE DISCHARGE.--18 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)
Oct. 3	1400	*515	*6.70	June 21	0100	272	5.79
Nov. 26	2200	222	5.37	June 22	0200	174	4.75
May 19	0100	111	3.69	Aug. 26	2400	100	3.54

Minimum daily discharge, 12 ft^3/s Aug. 11, 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	19	28	20	20	39	18	17	19	21	19	16
2	30	20	35	19	23	34	20	29	18	19	17	15
3	244	18	32	19	28	26	18	42	20	18	15	14
4	176	18	27	19	28	23	17	30	17	17	16	13
5	66	17	25	18	25	24	16	24	16	18	14	13
6	39	17	23	18	23	23	16	21	16	21	13	13
7	31	17	35	19	26	24	16	20	17	17	13	13
8	28	17	58	18	28	22	16	21	17	16	13	14
9	27	16	46	18	23	20	16	19	17	15	13	14
10	25	16	34	20	22	19	16	18	16	15	13	14
11	24	18	26	19	22	19	24	17	16	15	12	14
12	21	18	23	19	23	19	24	18	22	15	12	13
13	21	16	22	19	22	19	20	17	17	15	13	13
14	22	16	21	20	25	21	30	17	16	15	43	13
15	20	17	21	28	21	24	53	17	15	19	29	14
16	19	17	22	27	18	21	39	16	15	23	18	16
17	18	19	23	22	17	19	30	16	14	16	30	18
18	17	20	25	22	17	19	26	60	14	15	22	19
19	17	22	23	20	17	18	24	95	14	14	19	17
20	17	24	22	18	17	18	22	46	53	15	16	15
21	17	43	22	17	18	17	20	30	150	17	15	17
22	17	30	20	17	18	17	22	24	100	15	15	20
23	17	29	21	16	19	17	26	21	37	14	14	18
24	17	26	21	16	19	16	22	20	26	13	14	17
25	19	23	21	16	18	17	21	19	43	13	15	16
26	23	110	20	16	18	17	19	20	48	15	57	16
27	21	128	20	16	18	17	19	18	25	14	65	16
28	20	51	20	16	20	17	18	17	21	14	32	17
29	20	37	19	17	---	19	18	16	19	14	25	20
30	19	31	19	17	---	20	17	16	21	16	20	21
31	19	---	20	16	---	18	---	17	---	15	17	---
TOTAL	1108	870	794	584	593	643	663	778	859	499	649	469
MEAN	35.7	29.0	25.6	18.8	21.2	20.7	22.1	25.1	28.6	16.1	20.9	15.6
MAX	244	128	58	28	28	39	53	95	150	23	65	21
MIN	17	16	19	16	17	16	16	16	14	13	12	13
CFSM	2.08	1.69	1.49	1.09	1.23	1.20	1.28	1.46	1.66	.94	1.22	.91
IN.	2.40	1.88	1.72	1.26	1.28	1.39	1.43	1.68	1.86	1.08	1.40	1.01

CAL YR 1986	TOTAL	9333	MEAN	25.6	MAX	244	MIN	10	CFSM	1.49	IN.	20.19
WTR YR 1987	TOTAL	8509	MEAN	23.3	MAX	244	MIN	12	CFSM	1.35	IN.	18.40

04099000 ST. JOSEPH RIVER AT MOTTVILLE, MI

LOCATION.--41°48'03", long 85°45'22", in SW¼ sec.6, T.8 S., R.12 W., Michigan Meridian, St. Joseph County, Hydrologic Unit 04050001, on right bank 500 ft upstream from bridge on U.S. Highway 12 at Mottville, 0.4 mi downstream from Michigan Power Co. hydroelectric plant, 4 mi upstream from Pigeon River, and at mile 96.

DRAINAGE AREA.--1,866 mi^2.

PERIOD OF RECORD.--October 1923 to current year. Monthly discharge only for some periods, published in WSP 1307.

REVISED RECORDS.--WSP 1387: 1930, 1932, 1938, 1940-42, 1945. WSP 1911: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 755.3 ft, Michigan Power Co. datum. Prior to Oct. 1, 1951, at site 0.4 mi upstream at datum 4.2 ft higher.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by powerplants upstream from station. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--64 years, 1,602 ft^3/s, 11.66 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,700 ft^3/s Apr. 27, 1950, gage height, 10.76 ft, present datum; minimum daily, 39 ft^3/s Oct. 19, 1963.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,430 ft^3/s Oct. 5, gage height, 6.99 ft; minimum daily, 369 ft^3/s July 26.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2780	2160	2420	1820	1760	1850	1680	1440	1400	736	935	1210
2	3140	2230	2560	1840	1760	2270	1710	1500	1380	741	562	1120
3	3680	1990	2420	1810	1700	2410	1850	1570	1130	673	591	821
4	4750	1930	2480	1810	1770	2750	1750	1780	1300	676	780	938
5	5280	2060	2560	1790	1800	2680	1930	1770	1280	624	658	980
6	5400	2100	2700	1810	1770	2540	1770	1670	1060	579	676	692
7	5240	1970	2580	1730	1740	2450	1740	1540	1070	713	613	602
8	5080	1620	2570	1780	1740	2540	1670	1600	1120	793	582	566
9	4730	1900	2700	1720	1650	2420	1660	1590	1110	740	613	752
10	4410	1990	2720	1700	1680	2240	1620	1370	886	701	1010	941
11	3930	1970	2680	1740	1670	2110	1540	1220	797	551	749	764
12	4000	1780	2680	1830	1680	2070	1580	1260	952	533	507	1060
13	3590	1760	2610	1810	1730	1890	1750	1090	715	529	509	1090
14	2900	1720	2030	1750	1700	1820	1560	1180	1010	718	514	914
15	3560	1700	2500	1740	1700	1920	2430	1370	1040	718	553	836
16	2900	1630	2510	1790	1370	1990	2280	1420	936	559	554	1080
17	3140	1640	2330	1860	1570	1940	2530	1530	817	785	548	1190
18	3020	1700	2250	1860	1520	1930	2820	1380	733	576	673	1150
19	2910	1730	2330	1820	1560	1950	2650	1630	608	580	485	1360
20	2810	1740	2130	1680	1530	1940	2550	1750	527	676	481	1030
21	2580	1770	2280	1650	1520	1850	2260	1710	557	571	482	660
22	2100	1750	2230	1770	1350	1870	2370	1810	1360	686	482	1290
23	2250	1780	2080	1850	1580	1960	2160	1710	1110	658	486	850
24	2380	1850	2100	1600	1490	1900	1950	1560	849	502	634	649
25	2290	1860	1970	1060	1550	1780	1870	1420	789	428	632	777
26	2100	1930	1870	1900	1480	1860	1860	1360	756	369	641	1000
27	2140	2260	1900	1810	1550	1880	1770	1320	640	456	1410	822
28	2290	2290	2030	1640	1620	1820	1690	1350	762	712	1480	1000
29	2310	2510	2020	1630	---	1840	1580	1310	963	682	1270	1270
30	2220	2520	1900	1720	---	1790	1490	1110	785	943	935	1100
31	2090	---	1870	1730	---	1730	---	860	---	1020	837	---
TOTAL	102000	57840	72010	54050	45540	63990	58070	45180	28442	20228	21882	28514
MEAN	3290	1928	2323	1744	1626	2064	1936	1457	948	653	706	950
MAX	5400	2520	2720	1900	1800	2750	2820	1810	1400	1020	1480	1360
MIN	2090	1620	1870	1060	1350	1730	1490	860	527	369	481	566
CFSM	1.76	1.03	1.24	.93	.87	1.11	1.04	.78	.51	.35	.38	.51
IN.	2.03	1.15	1.44	1.08	.91	1.28	1.16	.90	.57	.40	.44	.57

CAL YR 1986	TOTAL	799729	MEAN	2191	MAX	5400	MIN	596	CFSM	1.17	IN.	15.94
WTR YR 1987	TOTAL	597746	MEAN	1638	MAX	5400	MIN	369	CFSM	.88	IN.	11.92

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.--42 years, 80.3 ft^3/s, 10.29 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, 264 ft^3/s Oct. 6; gage height, 9.03 ft; minimum daily discharge, 14 ft^3/s Aug. 21-25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59	65	112	65	53	85	60	58	46	40	19	28
2	65	64	106	63	53	122	59	62	50	45	18	26
3	91	63	105	63	53	161	59	70	51	50	18	25
4	167	62	105	62	53	183	58	83	50	52	18	23
5	228	60	108	61	54	188	58	91	50	51	17	22
6	259	59	105	61	54	181	58	91	49	49	17	21
7	259	58	102	60	55	171	58	88	46	46	17	20
8	241	56	102	60	55	161	57	83	43	42	18	19
9	219	54	109	60	59	150	55	77	40	39	19	19
10	197	54	126	63	61	139	54	72	37	36	19	18
11	175	52	143	61	62	127	54	67	35	33	20	18
12	157	51	146	59	63	117	56	64	34	32	19	18
13	143	50	141	58	63	108	58	60	33	31	19	18
14	136	49	128	58	65	103	59	58	33	30	19	17
15	131	47	117	58	66	100	69	58	31	30	18	18
16	126	47	108	64	64	95	103	56	29	30	17	20
17	119	47	100	69	62	90	135	54	28	28	17	21
18	111	47	94	74	59	88	143	55	27	28	16	22
19	104	49	93	76	56	84	136	58	26	27	15	22
20	98	50	90	75	54	81	125	59	25	26	15	22
21	92	51	87	74	53	79	117	59	27	25	14	22
22	89	52	83	71	51	77	107	58	34	24	14	22
23	87	54	79	69	51	74	100	55	36	23	14	21
24	82	56	77	66	53	72	92	53	39	22	14	20
25	79	62	75	62	56	69	85	51	41	21	14	19
26	77	71	74	59	59	68	79	48	40	21	17	18
27	75	89	73	57	62	66	73	46	38	20	21	17
28	73	105	70	54	67	65	68	44	35	20	25	17
29	71	115	69	54	---	63	64	42	34	20	27	19
30	69	116	68	54	---	62	60	40	36	19	29	20
31	67	---	67	53	---	60	---	43	---	19	29	---
TOTAL	3946	1855	3062	1943	1616	3289	2359	1903	1123	979	573	612
MEAN	127	61.8	98.8	62.7	57.7	106	78.6	61.4	37.4	31.6	18.5	20.4
MAX	259	116	146	76	67	188	143	91	51	52	29	28
MIN	59	47	67	53	51	60	54	40	25	19	14	17
CFSM	1.20	.58	.93	.59	.54	1.00	.74	.58	.35	.30	.17	.19
IN.	1.38	.65	1.07	.68	.57	1.15	.83	.67	.39	.34	.20	.21

CAL YR 1986	TOTAL	36604	MEAN	100	MAX	323	MIN	18	CFSM	.94	IN.	12.85
WTR YR 1987	TOTAL	23260	MEAN	63.7	MAX	259	MIN	14	CFSM	.60	IN.	8.16

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: Jan. 23 to Feb. 5, and Feb. 16, 17. Records good except for estimated daily discharges, which are fair.

AVERAGE DISCHARGE.--19 years, 369 ft^3/s, 13.88 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, 1,090 ft^3/s Oct. 5, gage height, 5.40 ft; minimum daily, 101 ft^3/s Aug. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	432	308	437	297	260	415	276	288	218	310	124	123
2	474	308	453	295	270	521	301	337	224	255	122	120
3	591	284	480	291	270	536	298	427	282	226	113	117
4	944	291	459	286	265	554	283	468	247	218	113	116
5	1050	291	429	282	255	593	274	431	220	219	114	118
6	941	283	412	278	265	630	274	413	211	221	107	121
7	900	278	423	277	265	613	271	397	204	215	104	123
8	892	275	488	276	275	598	265	376	196	216	136	133
9	891	267	521	273	281	571	260	353	188	208	160	133
10	856	258	522	286	280	526	254	331	180	183	136	141
11	783	249	473	284	279	492	241	316	178	171	126	189
12	717	240	480	277	283	464	310	311	192	171	118	172
13	673	244	471	273	285	439	315	292	186	163	115	155
14	653	242	497	273	287	430	306	282	176	168	114	151
15	609	239	469	299	284	435	546	319	167	168	110	154
16	560	241	448	315	280	415	709	293	156	218	106	171
17	524	241	436	302	280	391	705	270	148	192	110	175
18	492	246	439	307	269	370	657	303	138	176	108	169
19	463	253	417	321	254	355	629	355	133	172	108	159
20	433	256	392	367	247	339	602	337	139	154	108	143
21	410	272	368	361	245	329	570	320	296	142	108	138
22	390	280	351	323	246	322	523	305	295	126	113	136
23	371	290	339	305	251	317	509	288	229	124	108	132
24	359	302	333	290	256	309	473	275	195	111	101	127
25	348	303	332	275	257	305	422	267	191	116	104	125
26	363	397	326	265	260	304	389	262	183	144	165	122
27	357	500	317	255	262	301	364	252	173	146	254	121
28	358	466	310	250	278	295	341	239	165	128	207	122
29	340	479	309	250	---	291	320	229	164	125	167	165
30	327	451	304	250	---	288	300	220	217	133	143	187
31	316	---	301	250	---	281	---	218	---	127	131	---
TOTAL	17817	9034	12736	8933	7489	13029	11987	9774	5891	5446	3953	4258
MEAN	575	301	411	288	267	420	400	315	196	176	128	142
MAX	1050	500	522	367	287	630	709	468	296	310	254	189
MIN	316	239	301	250	245	281	241	218	133	111	101	116
CFSM	1.59	.83	1.14	.80	.74	1.16	1.11	.87	.54	.49	.35	.39
IN.	1.84	.93	1.31	.92	.77	1.34	1.24	1.01	.61	.56	.41	.44

CAL YR 1986	TOTAL	154101	MEAN	422	MAX	1070	MIN	133	CFSM	1.17	IN.	15.88
WTR YR 1987	TOTAL	110347	MEAN	302	MAX	1050	MIN	101	CFSM	.84	IN.	11.37

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: Jan. 23 to Feb. 5. Records good.

AVERAGE DISCHARGE.--8 years, 104 ft^3/s, 14.47 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,470 ft^3/s, Feb. 24, 1985, gage height, 10.52 ft; minimum daily, 32 ft^3/s Aug. 30, 31, 1984.

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)
Oct. 3	2200	*730	*7.78

Minimum daily discharge, 33 ft^3/s Aug. 19-24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	156	90	108	84	71	261	76	81	63	62	47	40
2	155	90	128	84	73	211	81	123	63	55	45	39
3	376	89	155	82	75	161	77	178	66	52	43	39
4	537	87	128	81	78	136	75	162	62	54	43	37
5	316	85	114	80	80	152	73	129	60	53	41	37
6	228	84	107	80	82	150	72	115	59	53	39	36
7	182	82	117	79	83	132	70	105	57	51	37	36
8	160	82	173	79	103	123	69	98	56	50	39	37
9	182	81	184	78	102	113	68	92	55	49	40	38
10	155	79	163	81	95	104	67	88	55	47	39	37
11	139	79	126	78	93	101	69	84	55	46	37	44
12	130	77	116	76	104	98	79	84	59	46	37	41
13	129	76	106	75	107	95	74	80	56	48	36	39
14	141	76	102	76	103	98	83	81	54	49	36	38
15	126	76	100	104	99	100	351	79	53	51	34	42
16	117	76	99	107	89	98	244	76	51	53	34	44
17	111	75	101	93	86	93	180	73	48	49	35	46
18	106	77	104	91	83	91	149	89	45	47	34	47
19	102	78	101	99	80	90	130	91	46	46	33	45
20	99	81	99	89	79	87	118	87	51	44	33	43
21	97	89	97	82	81	85	110	81	57	42	33	43
22	94	98	93	81	82	83	104	80	58	40	33	42
23	92	102	93	76	86	82	111	77	57	37	33	41
24	91	99	93	72	88	80	100	74	53	37	33	41
25	95	94	93	70	88	82	94	73	51	38	34	39
26	103	192	90	68	88	82	90	72	50	41	61	38
27	107	206	89	69	85	80	88	69	49	41	63	38
28	104	149	87	69	95	78	86	67	47	40	52	37
29	99	128	86	69	---	77	84	65	49	53	47	49
30	94	116	86	70	---	77	81	64	60	69	44	47
31	92	---	84	70	---	75	---	64	---	51	42	---
TOTAL	4715	2893	3422	2492	2458	3375	3153	2781	1645	1494	1237	1220
MEAN	152	96.4	110	80.4	87.8	109	105	89.7	54.8	48.2	39.9	40.7
MAX	537	206	184	107	107	261	351	178	66	69	63	49
MIN	91	75	84	68	71	75	67	64	45	37	33	36
CFSM	1.56	.99	1.13	.82	.90	1.12	1.08	.92	.56	.49	.41	.42
IN.	1.80	1.10	1.30	.95	.94	1.29	1.20	1.06	.63	.57	.47	.46

CAL YR 1986	TOTAL	39118	MEAN	107	MAX	588	MIN	52	CFSM	1.10	IN.	14.91
WTR YR 1987	TOTAL	30885	MEAN	84.6	MAX	537	MIN	33	CFSM	.87	IN.	11.77

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.--Estimated daily discharges: All discharges below 21 ft^3/s; Oct. 1 to Apr. 20. Records poor.

AVERAGE DISCHARGE.--8 years, 19.7 ft^3/s, 8.63 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.

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)
Oct. 4	0100	*105	*4.38

Minimum daily discharge, 6.0 ft^3/s Aug. 20, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	16	21	14	13	53	13	15	11	8.7	12	7.5
2	27	16	25	14	13	41	13	29	12	8.3	10	7.3
3	59	15	28	14	13	29	13	30	11	8.1	9.2	7.1
4	86	15	23	14	14	24	12	25	10	7.7	9.4	6.9
5	45	15	21	14	14	27	12	19	10	7.7	8.7	6.7
6	32	15	21	14	14	25	12	17	9.6	8.1	8.3	6.9
7	27	14	24	13	16	23	12	16	9.2	7.5	8.1	6.5
8	25	14	33	13	19	22	11	15	8.5	7.3	8.7	7.1
9	28	14	32	13	21	20	11	15	8.7	6.4	8.3	6.9
10	24	14	28	14	18	19	11	14	9.4	6.9	8.7	6.5
11	22	14	23	13	17	18	12	14	8.9	6.5	8.3	11
12	22	14	21	13	19	17	13	14	9.6	6.5	7.9	7.7
13	21	13	19	13	18	17	13	13	8.5	7.5	7.7	7.3
14	22	13	18	14	17	18	14	13	8.3	7.1	7.7	6.9
15	21	13	17	18	16	17	50	13	8.3	8.7	7.5	7.7
16	20	13	17	17	15	16	33	13	7.7	8.1	7.5	7.9
17	19	13	18	16	15	16	25	12	7.7	8.7	6.9	8.0
18	19	13	18	15	14	15	22	16	7.7	8.3	6.5	8.2
19	18	14	17	17	13	15	20	16	8.1	7.3	6.2	7.8
20	18	14	17	20	14	15	19	15	8.3	7.1	6.0	7.4
21	17	16	16	19	14	14	18	14	8.7	6.5	6.2	7.3
22	17	17	16	17	14	14	17	13	8.1	6.9	6.4	7.2
23	17	17	17	16	16	14	20	13	7.7	6.4	6.0	6.9
24	16	16	16	15	15	13	19	13	7.7	6.4	6.4	6.8
25	17	16	16	14	15	14	17	12	6.9	6.9	6.5	6.6
26	19	43	15	13	15	14	16	12	6.9	8.7	15	6.6
27	18	44	15	13	15	13	15	11	7.7	7.1	15	6.5
28	18	30	15	12	24	13	15	11	7.3	7.3	11	6.4
29	17	25	15	12	---	13	14	11	8.1	7.3	9.2	8.3
30	17	23	15	12	---	13	13	11	9.6	34	8.3	8.8
31	16	---	14	13	---	12	---	10	---	14	7.9	---
TOTAL	764	529	611	449	441	594	505	465	261.2	264.0	261.5	220.7
MEAN	24.6	17.6	19.7	14.5	15.8	19.2	16.8	15.0	8.71	8.52	8.44	7.36
MAX	86	44	33	20	24	53	50	30	12	34	15	11
MIN	16	13	14	12	13	12	11	10	6.9	6.4	6.0	6.4
CFSM	.79	.57	.64	.47	.51	.62	.54	.48	.28	.27	.27	.24
IN.	.92	.63	.73	.54	.53	.71	.61	.56	.31	.32	.31	.26

CAL YR 1986	TOTAL	7212.7	MEAN	19.8	MAX	109	MIN	8.7	CFSM	.64	IN.	8.66
WTR YR 1987	TOTAL	5365.4	MEAN	14.7	MAX	86	MIN	6.0	CFSM	.47	IN.	6.44

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: Jan. 16, 18, 19, 21-28. Records fair. Flow regulated at times by dam at Waldron Lake.

AVERAGE DISCHARGE.--16 years, 141 ft^3/s, 13.48 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 919 ft^3/s Mar. 23, 1982, gage height, 8.12 ft; minimum daily, 2.4 ft^3/s Nov. 21, 1971.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 449 ft^3/s Oct. 6, gage height, 5.95 ft; minimum daily, 4.1 ft^3/s Sept. 25 (regulation).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	148	135	154	124	108	153	97	98	66	80	37	36
2	157	132	159	122	109	186	98	111	68	85	36	33
3	262	128	166	120	109	197	100	144	67	83	36	31
4	382	125	169	119	111	197	98	167	61	93	34	29
5	433	121	166	117	113	202	97	169	56	90	30	25
6	447	117	161	115	114	209	93	164	52	84	27	22
7	443	114	161	112	115	209	91	158	47	78	24	20
8	429	110	172	112	119	205	88	149	43	70	29	21
9	424	106	184	112	124	201	85	139	40	64	22	28
10	406	104	193	114	124	190	83	131	36	57	20	31
11	385	101	193	112	124	179	82	122	33	52	21	38
12	364	97	185	112	126	171	90	119	39	49	20	38
13	346	93	176	111	129	164	93	112	53	51	19	35
14	332	92	168	111	132	160	101	105	44	51	18	34
15	315	90	163	118	131	159	174	101	23	50	17	52
16	297	89	158	122	129	154	213	94	44	52	15	80
17	279	88	155	125	122	148	221	65	41	49	17	69
18	261	92	154	123	118	144	217	56	37	45	17	62
19	242	96	152	120	113	138	209	109	37	42	14	56
20	223	99	150	121	109	132	197	122	9.2	38	11	52
21	206	104	146	123	107	127	187	118	12	35	9.6	49
22	192	112	141	118	106	122	178	107	46	32	9.4	40
23	181	118	138	112	107	119	172	98	68	30	9.1	7.1
24	173	122	136	108	109	115	164	91	65	27	8.5	4.2
25	168	125	135	106	110	112	153	87	58	25	8.9	4.1
26	165	138	135	105	111	109	142	81	51	31	27	4.6
27	162	152	133	108	111	108	131	77	45	40	46	8.3
28	158	157	130	110	115	106	121	73	39	39	51	11
29	153	157	128	111	---	104	112	68	39	38	51	23
30	147	156	127	110	---	101	105	63	53	39	46	30
31	141	---	125	107	---	98	---	64	---	38	41	---
TOTAL	8421	3470	4813	3560	3255	4719	3992	3362	1372.2	1637	771.5	973.3
MEAN	272	116	155	115	116	152	133	108	45.7	52.8	24.9	32.4
MAX	447	157	193	125	132	209	221	169	68	93	51	80
MIN	141	88	125	105	106	98	82	56	9.2	25	8.5	4.1
CFSM	1.92	.82	1.09	.81	.82	1.07	.94	.76	.32	.37	.18	.23
IN.	2.21	.91	1.26	.93	.85	1.24	1.05	.88	.36	.43	.20	.25

CAL YR 1986	TOTAL	56907.9	MEAN	156	MAX	447	MIN	7.3	CFSM	1.10	IN.	14.91
WTR YR 1987	TOTAL	40346.0	MEAN	111	MAX	447	MIN	4.1	CFSM	.78	IN.	10.57

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.--No estimated daily discharges. Records fair. Occasional regulation at Miller Lake Outlet.

AVERAGE DISCHARGE.--18 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, 181 ft^3/s Oct. 4, gage height, 5.37 ft; minimum daily, 0.44 ft^3/s Sept. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.3	13	25	8.9	9.8	31	10	7.6	4.6	2.5	1.5	1.6
2	11	13	25	8.6	10	49	10	7.7	4.1	3.3	1.7	1.6
3	75	13	28	8.1	11	52	10	17	4.0	3.4	2.4	1.4
4	162	13	30	7.6	13	46	9.6	32	3.8	3.3	2.4	1.3
5	163	12	29	7.5	15	45	9.5	38	3.5	3.3	2.2	1.2
6	121	11	26	7.4	16	50	9.3	34	3.4	3.4	2.0	1.0
7	89	11	24	7.3	17	50	9.1	26	3.3	3.3	1.8	.94
8	66	10	25	7.1	22	45	9.1	19	3.2	3.0	1.7	.97
9	52	10	31	7.1	27	40	8.9	15	3.0	2.9	1.7	1.0
10	40	11	39	7.8	30	33	8.2	13	2.8	2.6	1.7	1.0
11	31	9.9	40	7.6	29	27	8.1	11	2.5	2.3	1.5	1.0
12	25	8.6	33	7.9	29	23	8.6	10	2.6	2.1	1.5	.99
13	19	7.6	27	7.9	29	20	8.7	9.3	2.4	2.1	1.3	.96
14	19	7.2	23	7.4	30	19	11	8.6	2.4	2.4	1.1	.89
15	17	6.7	21	8.4	30	19	34	7.4	2.3	2.2	1.1	.86
16	15	6.3	19	12	27	17	49	6.4	2.2	2.2	.93	.91
17	13	5.8	17	14	23	16	50	5.7	2.0	2.0	.93	.98
18	11	7.0	17	17	21	15	43	7.8	1.9	1.9	.89	.94
19	9.4	8.5	16	19	17	15	34	12	1.7	1.8	.83	.91
20	8.3	9.2	16	19	15	14	20	16	1.6	1.7	.82	.85
21	8.0	11	15	17	14	13	17	17	1.7	1.6	.68	.76
22	8.9	12	14	16	14	13	15	16	2.2	1.4	.65	.69
23	8.3	14	13	15	14	13	14	14	2.3	1.3	.61	.67
24	8.6	16	13	13	14	13	14	11	2.2	1.2	.61	.63
25	11	17	13	11	14	12	12	7.2	2.1	1.1	.64	.57
26	12	21	12	10	14	11	13	8.0	1.9	1.3	.96	.50
27	13	27	12	9.4	14	11	15	9.6	1.7	1.4	1.8	.50
28	13	30	11	9.4	15	11	12	8.3	1.5	1.3	2.2	.44
29	13	29	10	9.5	---	11	10	6.6	1.5	1.3	2.2	.69
30	13	27	9.6	10	---	11	9.3	5.3	1.9	1.6	1.7	.76
31	13	---	9.3	9.9	---	11	---	4.9	---	1.6	1.7	---
TOTAL	1073.8	397.8	642.9	327.8	535.8	756	491.4	411.4	76.3	66.8	43.75	27.51
MEAN	34.6	13.3	20.7	10.6	19.1	24.4	16.4	13.3	2.54	2.15	1.41	.92
MAX	163	30	40	19	30	52	50	38	4.6	3.4	2.4	1.6
MIN	5.3	5.8	9.3	7.1	9.8	11	8.1	4.9	1.5	1.1	.61	.44
CFSM	1.80	.69	1.08	.55	.99	1.27	.85	.69	.13	.11	.07	.05
IN.	2.08	.77	1.25	.64	1.03	1.46	.95	.80	.15	.13	.08	.05

CAL YR 1986	TOTAL	8504.4	MEAN	23.3	MAX	207	MIN	1.2	CFSM	1.21	IN.	16.48
WTR YR 1987	TOTAL	4849.26	MEAN	13.3	MAX	163	MIN	.44	CFSM	.69	IN.	9.40

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: Jan. 19-31, Feb. 9, 15-19, and Aug. 28 to Sept. 7. Records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--7 years, 11.6 ft^3/s, 14.72 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 discharge greater than base discharge of 100 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 3	1030	*313	*10.46

Minimum daily, 0.19 ft^3/s Aug. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46	5.4	8.8	6.0	6.7	67	4.4	3.1	2.1	8.0	.39	.32
2	25	5.9	27	6.0	8.1	40	5.0	5.2	1.9	3.0	.43	.30
3	198	5.6	26	5.7	9.8	25	4.4	25	1.8	1.9	.63	.28
4	131	5.3	15	6.0	11	17	4.2	18	1.5	2.3	.44	.27
5	64	5.0	10	6.0	11	34	4.2	11	1.4	2.5	.32	.26
6	40	4.6	8.5	5.9	9.7	29	4.2	8.3	1.3	2.2	.28	.25
7	29	4.5	10	6.4	11	20	4.0	6.6	1.3	1.4	.24	.25
8	21	4.5	26	6.1	21	15	3.8	5.5	1.3	1.1	.25	.25
9	17	4.2	44	5.5	15	12	3.6	4.7	1.3	.94	.32	.32
10	13	3.9	28	5.7	10	9.3	3.5	4.1	1.2	.79	.30	.30
11	10	4.0	15	5.1	10	8.2	4.0	3.6	1.1	.73	.29	.34
12	9.5	3.7	10	5.1	15	7.6	6.7	3.7	1.2	.72	.27	.32
13	10	3.5	7.8	5.7	15	7.4	5.3	3.1	1.2	.76	.28	.30
14	17	3.3	7.0	5.4	14	7.9	10	3.1	.95	.94	.29	.23
15	10	3.5	6.4	20	11	7.8	55	3.0	.91	.75	.29	.33
16	8.2	3.7	6.3	15	9.0	7.0	29	2.6	.85	.74	.30	.46
17	7.1	3.6	7.0	9.8	7.0	6.5	19	2.4	.82	.62	.39	.59
18	6.1	4.3	9.1	8.2	6.0	6.4	13	9.9	.79	.57	.32	.47
19	5.6	4.7	7.9	7.0	5.4	6.5	10	9.9	.76	.54	.26	.32
20	5.2	6.4	7.2	6.0	5.4	6.0	8.8	8.0	.75	.51	.21	.31
21	5.0	13	6.5	5.0	5.6	6.1	7.6	6.1	1.0	.48	.22	.29
22	4.8	14	6.1	4.8	7.4	6.5	6.4	4.8	3.0	.47	.25	.27
23	4.7	15	5.9	4.6	9.5	5.6	6.7	3.9	2.0	.45	.23	.25
24	4.8	13	6.3	4.3	9.7	5.1	5.7	3.4	1.3	.45	.19	.25
25	6.1	9.8	7.6	4.2	10	5.1	4.9	3.0	1.1	.45	.22	.24
26	8.9	40	6.8	4.0	9.2	5.1	4.5	2.8	.91	.65	.71	.25
27	8.3	25	6.4	4.0	8.5	4.9	4.2	2.4	.83	.55	.73	.26
28	7.7	16	6.1	4.0	17	4.7	3.7	2.1	.78	.47	.52	.25
29	6.9	12	5.9	4.8	---	4.7	3.6	1.9	1.3	.47	.43	1.4
30	6.1	10	5.8	5.2	---	5.4	3.2	1.7	7.8	.50	.39	1.3
31	5.7	---	5.7	5.8	---	4.7	---	1.8	---	.42	.35	---
TOTAL	741.7	257.4	356.1	197.3	288.0	397.5	252.6	174.7	44.45	36.37	10.74	11.23
MEAN	23.9	8.58	11.5	6.36	10.3	12.8	8.42	5.64	1.48	1.17	.35	.37
MAX	198	40	44	20	21	67	55	25	7.8	8.0	.73	1.4
MIN	4.7	3.3	5.7	4.0	5.4	4.7	3.2	1.7	.75	.42	.19	.23
CFSM	2.23	.80	1.07	.59	.96	1.20	.79	.53	.14	.11	.03	.03
IN.	2.58	.89	1.24	.69	1.00	1.38	.88	.61	.15	.13	.04	.04

CAL YR 1986	TOTAL	4972.96	MEAN	13.6	MAX	349	MIN	.96	CFSM	1.27	IN.	17.29
WTR YR 1987	TOTAL	2768.09	MEAN	7.58	MAX	198	MIN	.19	CFSM	.71	IN.	9.62

04100465 TURKEY CREEK AT SYRACUSE, IN

LOCATION.--Lat 41°25'35", long 85°45'16", in NE¼SE¼ sec.6, T.34 N., R.7 E., Kosciusko County, Hydrologic Unit 04050001, on right bank 75 ft upstream from Main Street bridge in Syracuse and 1,500 ft downstream from dam at outlet of Syracuse Lake.

DRAINAGE AREA.--43.8 mi^2.

PERIOD OF RECORD.--October 1969 to September 1987. (Discontinued)

GAGE.--Water-stage recorder. Datum of gage is 848.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records fair. Flow regulated by dam on Syracuse Lake.

AVERAGE DISCHARGE.--18 years, 38.2 ft^3/s, 11.84 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 243 ft^3/s Mar. 31, 1985, gage height, 5.52 ft; minimum daily, 0.82 ft^3/s Oct. 8, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 208 ft^3/s Oct. 3, gage height, 5.16 ft; minimum daily, 1.2 ft^3/s Aug. 29.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65	85	45	26	43	69	33	6.8	72	3.0	3.9	1.9
2	84	85	58	26	44	78	33	9.1	71	2.5	3.9	2.0
3	179	85	85	26	44	72	17	15	70	2.6	4.2	2.0
4	199	85	83	26	44	69	7.2	14	67	2.4	3.7	2.4
5	160	83	81	26	44	75	7.4	11	32	2.5	3.5	2.4
6	137	83	79	36	44	76	8.0	9.8	7.6	2.5	3.2	3.0
7	143	82	80	64	44	71	8.4	9.5	6.5	2.4	2.8	3.8
8	138	81	82	64	45	69	8.9	8.9	5.9	2.8	2.6	5.9
9	139	80	84	63	46	65	8.5	8.9	5.4	3.0	2.5	4.9
10	132	62	84	49	46	63	8.5	9.4	5.0	3.1	2.8	6.3
11	128	17	81	26	46	62	10	10	4.6	4.0	3.2	2.8
12	127	17	79	26	46	61	10	11	6.3	4.9	3.0	2.4
13	126	16	77	26	47	61	9.6	11	5.4	3.4	2.8	2.5
14	125	16	77	37	46	61	15	11	5.1	2.3	2.9	2.9
15	117	15	76	77	46	61	29	11	5.0	2.8	2.7	4.2
16	113	16	75	78	45	60	21	10	4.7	2.5	2.9	5.3
17	110	16	74	75	44	59	22	10	4.3	2.2	4.5	5.2
18	107	17	62	56	44	59	48	22	3.7	2.2	4.2	5.4
19	104	17	28	43	44	59	47	27	3.5	2.4	4.7	5.1
20	102	18	27	43	44	51	47	31	3.2	3.2	5.0	5.2
21	101	27	26	43	58	32	46	30	2.8	3.6	5.3	5.7
22	100	46	26	43	68	32	47	29	4.0	3.3	5.5	5.5
23	98	44	26	43	71	32	47	53	3.5	3.3	6.1	5.6
24	93	43	27	42	71	32	46	69	3.1	3.6	6.8	5.8
25	92	43	27	42	61	33	46	71	3.7	4.0	7.7	5.9
26	92	48	27	42	42	33	45	72	3.3	3.8	7.7	5.3
27	94	47	26	42	41	33	46	71	3.7	2.7	1.6	4.8
28	92	45	26	42	43	32	34	71	5.1	2.8	1.3	5.1
29	90	44	26	42	---	32	7.2	71	5.2	11	1.2	7.4
30	88	44	27	43	---	32	6.9	71	5.5	8.5	1.4	4.6
31	87	---	27	43	---	33	---	71	---	4.5	1.9	---
TOTAL	3562	1407	1708	1360	1351	1657	769.6	935.4	428.1	107.8	115.5	131.3
MEAN	115	46.9	55.1	43.9	48.3	53.5	25.7	30.2	14.3	3.48	3.73	4.38
MAX	199	85	85	78	71	78	48	72	72	11	7.7	7.4
MIN	65	15	26	26	41	32	6.9	6.8	2.8	2.2	1.2	1.9
CFSM	2.63	1.07	1.26	1.00	1.10	1.22	.59	.69	.33	.08	.09	.10
IN.	3.03	1.19	1.45	1.16	1.15	1.41	.65	.79	.36	.09	.10	.11

CAL YR 1986 TOTAL 18133.9 MEAN 49.7 MAX 199 MIN 4.9 CFSM 1.13 IN. 15.40
WTR YR 1987 TOTAL 13532.7 MEAN 37.1 MAX 199 MIN 1.2 CFSM .85 IN. 11.49

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: Jan. 19-27 and Feb. 15-18. Records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--56 years, 524 ft^3/s, 11.98 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)
Oct. 4	2100	*2,580	*6.65

Minimum daily discharge, 115 ft^3/s Aug. 24, 25, Sept. 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	774	643	741	518	538	1050	453	480	388	295	269	179
2	835	628	774	517	563	1410	471	542	384	316	254	179
3	1120	622	903	510	600	1200	455	695	402	321	228	164
4	2160	600	927	503	621	998	436	842	379	322	217	157
5	2320	588	837	500	627	971	421	740	357	329	209	149
6	2020	576	784	498	610	1110	416	681	331	325	198	141
7	1870	563	788	500	604	1070	406	653	296	302	187	135
8	1740	550	872	514	644	1000	397	628	277	283	180	137
9	1680	535	1000	515	678	957	381	605	262	261	183	149
10	1630	520	1040	526	672	917	372	583	248	235	178	149
11	1540	506	944	504	648	879	380	556	236	219	166	171
12	1450	467	854	481	676	849	419	545	251	204	156	164
13	1370	440	808	467	740	817	428	511	239	220	148	153
14	1320	424	758	477	752	793	465	487	237	239	139	150
15	1260	415	777	534	700	776	935	461	230	267	135	165
16	1170	414	761	705	620	744	1250	430	200	282	128	170
17	1080	407	752	661	600	710	1070	409	186	252	132	213
18	1010	416	748	631	600	680	932	435	186	234	135	223
19	954	425	724	550	591	663	912	522	179	217	128	194
20	904	436	668	460	572	634	893	650	203	206	129	196
21	856	528	637	510	563	600	865	608	203	183	125	189
22	807	649	605	560	563	559	834	667	200	170	122	183
23	765	652	586	540	618	535	844	606	254	157	116	186
24	738	629	574	510	674	518	791	542	253	151	115	163
25	719	604	579	490	683	518	740	525	235	145	115	136
26	728	767	563	500	678	512	694	521	229	159	187	126
27	759	1050	549	510	628	495	652	496	214	175	248	120
28	759	986	539	525	658	482	613	465	195	175	222	115
29	720	831	531	531	---	472	570	437	189	199	214	160
30	683	765	530	534	---	469	515	416	223	405	203	176
31	660	---	523	538	---	454	---	396	---	328	190	---
TOTAL	36401	17636	22676	16319	17721	23842	19010	17134	7666	7576	5356	4892
MEAN	1174	588	731	526	633	769	634	553	256	244	173	163
MAX	2320	1050	1040	705	752	1410	1250	842	402	405	269	223
MIN	660	407	523	460	538	454	372	396	179	145	115	115
CFSM	1.98	.99	1.23	.89	1.07	1.29	1.07	.93	.43	.41	.29	.27
IN.	2.28	1.10	1.42	1.02	1.11	1.49	1.19	1.07	.48	.47	.34	.31

CAL YR 1986	TOTAL	258720	MEAN	709	MAX	2320	MIN	186	CFSM	1.19	IN.	16.20
WTR YR 1987	TOTAL	196229	MEAN	538	MAX	2320	MIN	115	CFSM	.91	IN.	12.29

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.--40 years, 3,216 ft^3/s, 12.96 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, 10,200 ft^3/s Oct. 6, gage height, 23.53 ft; minimum daily, 1,140 ft^3/s Aug. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4460	3670	4310	3300	3260	3980	2890	2660	2110	1790	1810	1880
2	4990	3780	4360	3310	3290	4980	2920	2890	2690	1830	1630	2020
3	6070	3640	4880	3270	3170	5180	3070	3200	2280	1760	1480	1720
4	8240	3360	4520	3250	3130	4750	2940	3650	2370	1720	1660	1620
5	9360	3450	4400	3230	3150	5220	3030	3510	2390	1700	1490	1750
6	9340	3620	4610	3220	3140	5060	3070	3290	2070	1660	1470	1510
7	9240	3600	4950	3200	3060	4840	2870	3060	2010	1730	1410	1360
8	8510	2980	4580	3140	3130	4760	2820	2970	2050	1760	1400	1330
9	8470	3240	5370	3190	3090	4200	2720	2960	1960	1680	1470	1460
10	7930	3300	5000	3140	3060	4130	2780	2740	1870	1610	1710	1700
11	7390	3130	5030	3150	3060	4010	2680	2470	1680	1430	1720	1610
12	7190	3280	4810	3240	3060	3790	2790	2450	1800	1300	1280	1690
13	6370	2830	4620	3200	3190	3770	3020	2350	1650	1390	1280	1900
14	5740	3030	4290	3170	3250	3500	3110	2210	1740	1580	1260	1770
15	5350	2910	3820	3240	3250	3560	4560	2490	1950	1670	1250	1610
16	5490	2970	4580	3450	2700	3630	5520	2420	1690	1640	1250	1770
17	4470	2550	4240	3530	2920	3500	5320	2580	1590	1770	1250	2050
18	5350	3020	3940	3530	2810	3460	5450	2630	1440	1520	1370	1970
19	5200	2990	4450	3410	2810	3430	5260	2740	1300	1470	1190	2150
20	4940	2980	3830	3120	2740	3370	4860	3220	1270	1520	1160	2040
21	4700	3180	4080	3050	2720	3230	4540	3040	1420	1400	1160	1640
22	4280	3330	3670	3370	2650	3190	4270	3100	2170	1450	1150	1770
23	3780	3500	4020	3180	2710	3260	4260	2980	2370	1410	1140	1960
24	4250	3410	3650	3030	2980	3170	3820	2710	1910	1220	1260	1480
25	3920	3260	3660	2780	2820	3060	3570	2610	1770	1190	1250	1360
26	3890	3830	3440	2960	2980	3160	3440	2500	1710	1180	1660	1720
27	3720	4680	3430	3500	2770	3130	3310	2340	1530	1240	1980	1690
28	3870	4730	3470	3320	2980	3080	3140	2310	1600	1430	2700	1520
29	3940	4510	3530	3150	---	3070	2980	2200	1860	1600	2190	2170
30	4060	4810	3490	3180	---	3080	2680	2030	1760	2270	1990	2080
31	3800	---	3380	3270	---	2940	---	1860	---	2070	1630	---
TOTAL	178310	103570	130410	100080	83880	117490	107690	84170	56010	48990	46650	52300
MEAN	5752	3452	4207	3228	2996	3790	3590	2715	1867	1580	1505	1743
MAX	9360	4810	5370	3530	3290	5220	5520	3650	2690	2270	2700	2170
MIN	3720	2550	3380	2780	2650	2940	2680	1860	1270	1180	1140	1330
CFSM	1.71	1.02	1.25	.96	.89	1.12	1.07	.81	.55	.47	.45	.52
IN.	1.97	1.14	1.44	1.10	.93	1.30	1.19	.93	.62	.54	.51	.58

CAL YR 1986 TOTAL 1453790 MEAN 3983 MAX 9360 MIN 1540 CFSM 1.18 IN. 16.05
WTR YR 1987 TOTAL 1109550 MEAN 3040 MAX 9360 MIN 1140 CFSM .90 IN. 12.25

04101500 ST. JOSEPH RIVER AT NILES, MI

LOCATION.--Lat 41°49'45", long 86°15'35", in SW¼ sec.26, T.7 S., R.17 W., Berrien County, Hydrologic Unit 04050001, on right bank 100 ft upstream from Main Street bridge in Niles, 0.6 mi downstream from dam at French Paper Co., 1 mi upstream from Dowagiac River, and at mile 44.

DRAINAGE AREA.--3,666 mi^2.

PERIOD OF RECORD.--October 1930 to current year. Monthly discharge only for some periods, published in WSP 1307.

REVISED RECORDS.--WSP 1387: 1931, 1933-36, 1940-43, 1945-46(M). WSP 1911: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 633.02 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1968, at datum 2.00 ft higher. Oct. 1, 1930, to Feb. 11, 1931, nonrecording gage on Main Street bridge, and Feb. 12 to June 30, 1931, nonrecording gage 50 ft upstream from present site (gage heights referred to NGVD). Since Apr. 13, 1970, auxiliary water-stage recorder at sewage-treatment plant, 1.1 mi downstream from base gage at same datum. Oct. 1, 1943, to Apr. 12, 1970, auxiliary gage was headwater gage at hydroelectric plant at Buchanan Dam, 8 mi downstream from base gage at different datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by powerplants upstream from station.

AVERAGE DISCHARGE.--57 years, 3,307 ft^3/s, 12.25 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 20,200 ft^3/s Apr. 5, 1950, gage height, 15.10 ft, present datum; minimum daily, 420 ft^3/s Aug. 30, 1931.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 10,700 ft^3/s Oct. 5, gage height, 10.38 ft; minimum daily, 1,150 ft^3/s Aug. 22.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4730	3860	4640	3600	3670	4640	3290	3140	2530	1990	2120	1560
2	4940	4010	4960	3530	3780	5780	3330	3510	2820	1920	1950	2110
3	6890	3940	5110	3520	3880	5960	3450	3640	2970	1940	1420	1950
4	8660	3760	5010	3510	3590	5440	3450	4090	2540	1840	1650	1530
5	10100	3610	4890	3450	3730	5420	3290	4280	2670	1800	1690	1810
6	9800	3760	4770	3370	3680	5650	3490	3890	2650	1760	1570	1820
7	9660	3800	5070	3430	3660	5400	3230	3740	2300	1730	1500	1500
8	9010	3520	5270	3440	3600	5240	3200	3420	2220	1780	1480	1510
9	8880	3190	5490	3480	3790	4970	3100	3540	2290	1820	1480	1390
10	8770	3690	5810	3470	3630	4370	3080	3380	2210	1740	1530	1660
11	8400	3570	5530	3370	3690	4600	3070	3060	1900	1650	1880	1860
12	7580	3410	5220	3350	3560	4330	3010	3020	2060	1520	1560	1730
13	7150	3150	4980	3490	3620	4240	3110	2890	1840	1450	1380	1890
14	6630	3120	4760	3470	3760	4130	3390	2530	1800	1510	1330	1910
15	6020	3120	3980	3480	3790	4060	4120	2840	2330	1920	1340	1790
16	6470	3120	4910	3720	3710	4030	5980	2830	1980	1800	1310	1910
17	5530	3090	4630	3850	3270	4050	5490	2990	1780	1700	1340	1910
18	6080	3010	4390	3870	3380	3920	5470	3610	1730	1790	1340	2180
19	5460	3210	4490	3830	3410	3960	5490	3050	1640	1540	1410	2070
20	5100	3240	4350	3440	3320	3880	4960	3610	1510	1470	1290	2180
21	4490	3300	4320	3140	3220	3840	4970	3850	1710	1600	1240	1960
22	4600	3520	4060	3570	3250	3680	4600	3510	1860	1420	1150	1690
23	4250	3630	4000	3300	3150	3640	4730	3830	3000	1490	1210	2010
24	4260	3930	4170	2890	3550	3700	4270	3370	2010	1430	1170	1850
25	4470	3630	3840	3050	3440	3620	4090	2980	1890	1260	1420	1540
26	4150	4280	3790	2880	3620	3430	3900	3010	1880	1350	2040	1490
27	4060	5190	3660	3610	3510	3600	3700	2980	1790	1310	2050	1730
28	4000	5360	3650	3380	3500	3580	3620	2910	1520	1340	2540	1620
29	4200	5110	3780	3480	---	3470	3530	2790	1670	1590	2730	1970
30	4320	5020	3790	3470	---	3510	3240	2580	2010	2020	2250	2270
31	4070	---	3570	3650	---	3370	---	2560	---	2500	1760	---
TOTAL	192730	112150	140890	107090	99760	133510	117650	101430	63110	51980	50130	54400
MEAN	6217	3738	4545	3455	3563	4307	3922	3272	2104	1677	1617	1813
MAX	10100	5360	5810	3870	3880	5960	5980	4280	3000	2500	2730	2270
MIN	4000	3010	3570	2880	3150	3370	3010	2530	1510	1260	1150	1390
CFSM	1.70	1.02	1.24	.94	.97	1.17	1.07	.89	.57	.46	.44	.49
IN.	1.96	1.14	1.43	1.09	1.01	1.35	1.19	1.03	.64	.53	.51	.55

CAL YR 1986 TOTAL 1608000 MEAN 4405 MAX 10100 MIN 1800 CFSM 1.20 IN. 16.32
WTR YR 1987 TOTAL 1224830 MEAN 3356 MAX 10100 MIN 1150 CFSM .92 IN. 12.43

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 775 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: Jan. 17-31, Feb. 1-5, 10-28, Mar. 1-31, and Apr. 1-7. Records poor.

AVERAGE DISCHARGE.--18 years, 32.9 ft^3/s, 11.91 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 140 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 4	0500	*372	*9.14

Minimum daily discharge, 0.96 ft^3/s Sept. 5.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	17	44	20	17	53	16	10	4.8	3.3	3.8	1.7
2	66	18	51	20	18	110	17	28	4.1	2.3	3.4	1.4
3	231	17	60	20	20	81	16	56	4.1	2.3	3.0	1.2
4	360	17	52	20	23	58	17	65	2.8	2.3	2.8	1.1
5	277	15	43	19	26	50	16	55	1.9	2.1	2.7	.96
6	181	15	35	19	29	62	15	48	1.6	2.5	2.6	1.1
7	121	14	35	20	33	50	15	39	1.6	4.6	2.5	1.8
8	86	16	52	20	47	37	15	32	1.5	3.7	4.0	2.7
9	77	15	86	20	46	33	15	26	1.5	2.8	4.3	3.2
10	63	12	98	31	41	30	14	21	1.5	2.5	3.5	2.9
11	53	12	71	29	36	27	15	18	1.6	2.4	3.0	3.3
12	49	12	56	26	43	26	22	19	4.1	2.3	2.5	3.9
13	51	11	44	24	42	25	21	14	4.0	2.3	2.3	3.8
14	59	9.7	34	24	35	23	22	13	3.2	2.3	2.2	3.5
15	49	9.8	29	46	32	22	42	14	2.6	2.0	2.1	4.6
16	41	10	26	58	27	21	70	11	2.3	2.2	2.0	5.5
17	35	11	26	48	22	20	67	10	2.0	2.1	1.9	5.6
18	29	14	28	41	19	19	55	22	1.8	2.2	1.4	5.3
19	26	17	26	36	17	19	47	25	1.7	2.0	1.3	4.7
20	25	19	25	33	16	18	39	26	2.0	1.9	1.3	4.4
21	24	22	24	27	17	18	34	23	3.7	1.8	1.4	4.1
22	22	23	23	24	19	17	28	21	2.6	1.7	1.7	3.7
23	21	27	22	21	21	17	29	16	1.9	1.6	1.6	3.5
24	20	36	22	19	24	17	25	12	1.4	1.6	1.5	3.1
25	20	33	22	18	27	17	19	9.9	1.3	1.6	1.5	2.9
26	22	89	21	17	32	18	18	9.4	1.2	1.8	4.7	2.9
27	22	104	20	17	38	18	17	9.0	1.1	1.7	19	2.3
28	20	81	20	16	44	17	16	8.2	1.1	1.6	10	1.5
29	19	64	20	16	---	18	14	6.9	1.4	1.6	4.7	2.2
30	18	53	21	16	---	18	12	6.7	3.5	1.8	3.1	2.5
31	17	---	20	16	---	17	---	7.5	---	2.2	2.3	---
TOTAL	2154	813.5	1156	781	811	976	768	681.6	69.9	69.1	104.1	91.36
MEAN	69.5	27.1	37.3	25.2	29.0	31.5	25.6	22.0	2.33	2.23	3.36	3.05
MAX	360	104	98	58	47	110	70	65	4.8	4.6	19	5.6
MIN	17	9.7	20	16	16	17	12	6.7	1.1	1.6	1.3	.96
CFSM	1.85	.72	.99	.67	.77	.84	.68	.59	.06	.06	.09	.08
IN.	2.14	.81	1.15	.77	.80	.97	.76	.68	.07	.07	.10	.09

CAL YR 1986	TOTAL	15418.1	MEAN	42.2	MAX	360	MIN	3.6	CFSM	1.13	IN.	15.29
WTR YR 1987	TOTAL	8475.56	MEAN	23.2	MAX	360	MIN	.96	CFSM	.62	IN.	8.41

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: Jan. 16-31 and Feb. 1-20. Records good, except for estimated daily discharges and daily discharges below 75 ft^3/s, which are poor.

AVERAGE DISCHARGE.--41 years, 530 ft^3/s, 11.80 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, 3,620 ft^3/s Oct. 5, gage height, 13.39 ft; minimum daily, 15 ft^3/s Aug. 22, 24, 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	695	243	944	248	240	973	353	195	179	249	38	83
2	994	236	883	246	260	1520	328	243	141	496	39	64
3	1990	237	1050	245	280	1710	321	798	139	363	36	52
4	3410	237	1070	242	300	1750	339	1190	163	236	32	44
5	3600	250	1000	238	310	1710	322	849	241	172	29	39
6	3480	250	857	235	320	1660	311	554	194	200	27	35
7	3160	238	682	232	350	1450	314	401	152	284	26	31
8	2680	224	707	229	460	1110	332	326	127	277	24	30
9	2160	209	1130	227	410	843	320	279	113	193	28	30
10	1570	201	1540	227	380	678	292	245	102	132	38	28
11	961	195	1530	222	400	512	271	222	94	106	36	32
12	711	185	1360	219	400	436	278	205	90	94	35	37
13	622	178	1180	228	410	413	304	189	85	85	33	46
14	699	172	915	218	360	385	351	176	87	78	29	41
15	749	165	700	318	320	349	393	192	85	71	27	49
16	695	158	574	500	280	307	668	171	76	67	26	62
17	584	159	465	590	250	320	714	167	70	63	25	62
18	480	163	429	470	230	350	617	225	66	62	22	59
19	407	172	422	390	220	376	521	402	62	59	19	56
20	357	188	406	320	220	397	440	388	59	55	17	55
21	327	255	375	260	212	411	382	319	76	52	16	59
22	312	297	348	240	205	400	342	262	93	48	15	51
23	289	397	325	230	222	379	335	225	207	46	16	47
24	256	573	299	220	257	375	326	196	238	44	15	44
25	245	704	287	210	296	335	312	173	152	42	15	42
26	242	912	280	200	346	304	281	160	106	40	30	42
27	251	1330	272	200	364	272	255	151	85	38	56	39
28	268	1380	269	190	385	247	239	145	72	39	82	34
29	290	1290	265	180	---	256	225	135	67	40	145	39
30	300	1120	259	190	---	281	207	130	109	39	129	43
31	273	---	251	210	---	328	---	206	---	39	109	---
TOTAL	33057	12318	21074	8174	8687	20837	10693	9519	3530	3809	1214	1371
MEAN	1066	411	680	264	310	672	356	307	118	123	39.2	45.7
MAX	3600	1380	1540	590	460	1750	714	1190	241	496	145	83
MIN	242	158	251	180	205	247	207	130	59	38	15	28
CFSM	1.75	.67	1.11	.43	.51	1.10	.58	.50	.19	.20	.06	.07
IN.	2.02	.75	1.29	.50	.53	1.27	.65	.58	.22	.23	.07	.08

CAL YR 1986	TOTAL	240204	MEAN	658	MAX	3880	MIN	45	CFSM	1.08	IN.	14.65
WTR YR 1987	TOTAL	134283	MEAN	368	MAX	3600	MIN	15	CFSM	.60	IN.	8.19

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: Jan. 10-14, Jan. 20 to Feb. 9, and Feb. 15-20. Records good.

AVERAGE DISCHARGE.--41 years, 247 ft^3/s, 12.42 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)
Oct. 4	1400	*3,810	*10.25

Minimum daily discharge, 27 ft^3/s Aug. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	639	128	248	138	140	987	121	110	208	299	41	48
2	814	125	388	141	160	1150	127	142	160	160	40	42
3	1350	121	611	140	190	677	121	702	235	113	44	40
4	3570	121	417	138	230	457	115	1090	157	109	43	37
5	2630	118	289	141	250	450	110	555	123	91	39	37
6	1480	116	234	143	230	769	111	354	107	89	39	36
7	940	112	215	143	250	504	113	264	96	122	37	34
8	635	110	360	140	400	384	110	212	87	123	36	35
9	496	106	811	137	340	320	109	178	82	88	36	47
10	409	100	1020	130	295	258	107	157	76	74	36	40
11	340	100	531	125	244	220	109	142	74	66	36	43
12	295	99	362	122	333	200	147	141	78	61	35	47
13	277	96	272	122	380	183	146	127	75	59	35	74
14	455	92	229	123	360	180	138	121	67	100	34	48
15	376	92	206	288	250	178	459	141	63	71	34	48
16	288	91	190	493	200	168	724	117	61	104	31	71
17	244	93	182	298	170	160	602	108	58	71	29	88
18	210	98	200	232	155	154	382	268	55	60	32	70
19	185	106	193	187	140	152	283	678	54	53	31	57
20	171	116	175	150	138	146	232	450	53	49	30	48
21	160	245	161	130	147	140	201	288	126	48	30	46
22	147	297	153	120	141	135	178	276	156	46	31	46
23	140	322	151	115	178	132	174	217	143	46	28	44
24	133	326	145	110	197	132	160	170	101	44	27	41
25	130	270	152	105	208	131	143	149	78	43	30	39
26	180	591	151	102	215	129	134	142	68	53	71	38
27	201	1020	148	100	194	126	128	130	59	60	169	36
28	174	563	142	100	222	123	124	119	54	48	103	35
29	157	387	139	103	---	120	119	110	55	46	71	54
30	143	298	141	110	---	131	115	104	149	45	54	64
31	135	---	138	120	---	126	---	351	---	44	54	---
TOTAL	17504	6459	8754	4746	6357	9122	5842	8113	2958	2485	1386	1433
MEAN	565	215	282	153	227	294	195	262	98.6	80.2	44.7	47.8
MAX	3570	1020	1020	493	400	1150	724	1090	235	299	169	88
MIN	130	91	138	100	138	120	107	104	53	43	27	34
CFSM	2.09	.80	1.04	.57	.84	1.09	.72	.97	.37	.30	.17	.18
IN.	2.41	.89	1.21	.65	.88	1.26	.80	1.12	.41	.34	.19	.20

CAL YR 1986	TOTAL	124539	MEAN	341	MAX	3570	MIN	36	CFSM	1.26	IN.	17.16
WTR YR 1987	TOTAL	75159	MEAN	206	MAX	3570	MIN	27	CFSM	.76	IN.	10.36

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: Jan. 19-31. Records good except for estimated daily discharges, which are poor. Flow regulated by Cedarville Reservoir and some flow diverted into storage of Hurshtown Reservoir.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 13,200 ft^3/s Feb. 26, 1985, gage height, 17.79 ft; minimum daily, 64 ft^3/s Aug. 21, 24, 1987.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 8,290 ft^3/s Oct. 5, gage height, 13.36 ft; minimum daily, 64 ft^3/s Aug. 21, 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1820	442	1420	466	554	1840	580	347	680	776	145	258
2	2700	393	1550	466	569	3030	671	373	382	770	154	194
3	3690	339	2080	457	634	2570	483	1530	462	756	158	195
4	7800	397	1560	445	810	2460	477	3010	423	610	154	199
5	7450	369	1620	441	880	2320	530	1880	353	343	145	198
6	5590	336	1280	441	803	2760	547	1290	403	475	132	173
7	4730	372	1160	437	826	2490	454	878	388	905	119	158
8	4120	377	1150	435	1290	1990	506	650	316	662	106	143
9	3430	317	2310	397	1290	1480	502	664	264	519	125	171
10	2770	280	2910	416	1020	1150	495	459	250	317	130	168
11	1910	315	2370	433	854	1090	444	413	235	260	127	173
12	1360	314	1920	369	868	923	495	429	227	316	123	176
13	1140	304	1540	422	1070	567	514	352	231	241	106	207
14	1500	272	1380	406	1030	933	556	343	221	241	102	194
15	1350	238	1140	692	892	651	1050	359	212	231	98	189
16	1140	257	982	1550	708	564	1740	338	213	390	92	236
17	1170	283	821	1200	480	592	1870	301	191	288	88	265
18	882	284	810	936	553	516	1150	438	174	188	84	258
19	770	297	796	640	577	697	945	2150	160	195	81	205
20	685	338	704	530	439	626	913	1200	176	192	74	188
21	524	749	676	450	344	622	700	1030	327	185	64	131
22	587	854	630	420	468	693	592	689	553	186	67	132
23	542	935	589	390	451	631	665	784	335	166	68	128
24	498	988	493	370	456	572	561	460	340	144	64	112
25	440	1020	539	360	580	607	460	346	451	143	150	102
26	424	1610	534	350	623	536	478	391	299	179	220	102
27	550	2580	514	350	674	485	454	379	196	202	325	105
28	534	2200	477	350	708	492	424	342	187	150	285	114
29	495	1860	426	350	---	373	350	304	197	126	241	140
30	443	1660	509	380	---	404	323	299	262	133	247	197
31	468	---	424	450	---	468	---	671	---	142	308	---
TOTAL	61512	20980	35314	15799	20451	35132	19929	23099	9108	10431	4382	5211
MEAN	1984	699	1139	510	730	1133	664	745	304	336	141	174
MAX	7800	2580	2910	1550	1290	3030	1870	3010	680	905	325	265
MIN	424	238	424	350	344	373	323	299	160	126	64	102
CFSM	1.87	.66	1.07	.48	.69	1.07	.63	.70	.29	.32	.13	.16
IN.	2.16	.74	1.24	.55	.72	1.23	.70	.81	.32	.37	.15	.18

CAL YR 1986	TOTAL	449828	MEAN	1232	MAX	7800	MIN	151	CFSM	1.16	IN.	15.79
WTR YR 1987	TOTAL	261348	MEAN	716	MAX	7800	MIN	64	CFSM	.68	IN.	9.17

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: Dec. 13 and Jan. 20-31. 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.--41 years, 493 ft^3/s, 10.78 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)
Oct. 2	0200	*1,970	*12.91

Minimum daily discharge, 25 ft^3/s Aug. 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	996	201	1310	180	274	557	411	120	410	213	59	158
2	1680	164	1640	176	566	802	394	117	409	1330	49	102
3	1140	138	1730	164	1370	615	387	116	632	1130	52	75
4	1510	124	1200	147	1600	536	355	107	696	757	69	59
5	1510	114	1080	140	1430	547	363	97	724	786	61	49
6	1240	106	1180	136	1210	755	353	92	799	1050	114	43
7	1240	99	1160	139	1340	570	346	90	756	1330	109	39
8	1180	92	979	128	1360	408	408	85	571	1270	81	36
9	965	89	1070	119	874	345	488	80	656	872	84	35
10	643	86	1620	122	662	274	529	76	308	441	55	34
11	368	86	925	132	508	219	470	73	176	732	48	34
12	228	87	705	105	406	201	372	82	194	820	44	33
13	255	85	600	100	337	176	268	77	259	442	43	32
14	556	81	597	130	285	157	215	70	230	1130	43	30
15	579	79	459	486	236	151	1040	65	249	781	39	30
16	467	80	294	596	180	141	1500	61	210	494	35	35
17	408	80	233	340	216	128	1000	60	152	477	34	43
18	328	83	222	318	216	122	680	105	114	490	34	38
19	239	93	228	281	171	123	611	549	98	540	31	32
20	181	188	210	230	148	119	585	1150	114	572	30	29
21	148	790	201	190	141	112	489	582	280	430	30	27
22	127	684	199	160	135	108	357	488	524	221	29	30
23	113	597	196	150	131	107	380	426	220	128	25	29
24	101	612	195	130	120	106	340	289	148	94	26	28
25	101	593	231	120	110	107	239	205	188	77	29	27
26	272	1010	249	110	105	107	196	350	154	75	92	27
27	351	1760	242	100	101	103	175	376	109	71	347	27
28	291	1200	263	105	111	98	160	309	83	61	525	27
29	317	1100	252	115	---	96	140	225	71	57	453	27
30	307	1320	226	150	---	180	130	172	96	72	382	28
31	250	---	198	200	---	507	---	518	---	70	270	---
TOTAL	18091	11821	19894	5699	14343	8577	13381	7212	9630	17013	3322	1243
MEAN	584	394	642	184	512	277	446	233	321	549	107	41.4
MAX	1680	1760	1730	596	1600	802	1500	1150	799	1330	525	158
MIN	101	79	195	100	101	96	130	60	71	57	25	27
CFSM	.94	.63	1.03	.30	.82	.45	.72	.38	.52	.88	.17	.07
IN.	1.08	.71	1.19	.34	.86	.51	.80	.43	.58	1.02	.20	.07

CAL YR 1986	TOTAL	224272	MEAN	614	MAX	3450	MIN	39	CFSM	.99	IN.	13.43
WTR YR 1987	TOTAL	130226	MEAN	357	MAX	1760	MIN	25	CFSM	.57	IN.	7.80

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. 13-15 and Jan. 20-31. 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.--57 years, 580 ft^3/s, 10.34 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)
Feb. 4	1600	*2,850	*8.55

Minimum daily discharge, 26 ft^3/s Sept. 26-28 and 30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1170	292	1530	235	416	595	520	134	570	120	61	241
2	2370	226	1890	222	648	1090	439	125	503	727	58	134
3	2210	181	2220	212	1730	818	432	120	894	1220	50	86
4	2210	154	1620	188	2500	639	397	114	785	827	52	64
5	2030	138	1280	172	1870	688	391	102	751	691	60	52
6	1580	126	1320	165	1410	952	394	96	816	799	61	45
7	1460	115	1370	164	1530	745	375	90	830	1140	104	40
8	1430	108	1300	158	1670	534	405	87	711	1180	91	38
9	1250	101	1370	144	1190	435	480	80	668	927	84	36
10	921	96	2020	142	799	355	548	77	555	572	75	35
11	577	93	1360	146	643	279	536	76	273	389	51	35
12	361	93	911	151	529	239	540	77	263	906	45	36
13	293	94	710	152	450	208	393	77	279	517	41	35
14	545	92	600	137	380	180	307	73	301	719	40	35
15	765	88	520	550	325	170	1310	67	263	886	40	34
16	621	87	431	964	215	157	2010	63	263	530	38	34
17	530	88	329	568	306	141	1400	62	198	442	36	37
18	447	90	296	423	314	132	902	136	142	443	35	42
19	355	95	299	405	245	130	718	421	106	470	35	40
20	270	124	280	340	200	128	662	1150	94	516	34	35
21	200	809	252	300	165	120	598	866	202	477	33	32
22	164	1070	244	260	149	114	464	552	568	317	34	31
23	140	799	242	230	139	110	403	510	422	172	33	31
24	124	742	243	200	131	110	430	398	202	105	31	30
25	113	728	313	180	117	111	332	279	160	77	31	28
26	230	1000	354	160	106	112	244	316	186	68	53	26
27	517	2000	331	140	100	107	202	416	142	67	341	26
28	438	1700	331	130	108	101	182	391	102	61	606	26
29	382	1280	337	140	---	97	164	304	80	54	522	27
30	391	1420	314	165	---	173	145	219	93	52	447	26
31	357	---	271	210	---	517	---	314	---	62	369	---
TOTAL	24451	14029	24888	7753	18385	10287	16323	7792	11422	15533	3591	1417
MEAN	789	468	803	250	657	332	544	251	381	501	116	47.2
MAX	2370	2000	2220	964	2500	1090	2010	1150	894	1220	606	241
MIN	113	87	242	130	100	97	145	62	80	52	31	26
CFSM	1.04	.61	1.05	.33	.86	.44	.71	.33	.50	.66	.15	.06
IN.	1.19	.68	1.22	.38	.90	.50	.80	.38	.56	.76	.18	.07

CAL YR 1986	TOTAL	294200	MEAN	806	MAX	4710	MIN	43	CFSM	1.06	IN.	14.36
WTR YR 1987	TOTAL	155871	MEAN	427	MAX	2500	MIN	26	CFSM	.56	IN.	7.61

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. 14, 15, Jan. 7, 11, 19-25, 30, 31, and Feb. 1-3, 14-19. Records fair.

AVERAGE DISCHARGE.--23 years, 18.4 ft^3/s, 11.41 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,010 ft^3/s (correction) July 16, 1986; maximum gage height, 12.25 ft Mar. 14, 1982; minimum daily discharge, 0.06 ft^3/s Oct. 27, 1974.

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)
Oct. 1	1515	*416	*7.76	June 2	2315	315	6.81
Oct. 3	2000	291	6.59	July 8	0100	335	7.00
Apr. 15	0645	273	6.42	Aug. 27	0115	278	6.47

Minimum daily discharge, 0.07 ft^3/s Aug. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	211	6.8	12	4.6	11	93	6.1	3.9	5.0	25	3.4	1.8
2	98	5.6	75	5.3	16	67	6.2	8.5	54	32	3.0	1.4
3	231	5.1	47	5.0	36	28	3.7	4.6	144	20	2.3	.96
4	148	4.9	23	4.7	64	17	3.1	2.7	27	12	.97	.91
5	57	3.7	13	4.7	59	44	4.1	2.5	8.4	8.3	.31	.92
6	27	3.5	9.8	5.2	46	39	4.7	2.4	3.5	5.3	.14	.57
7	17	2.7	11	4.5	65	23	4.4	2.6	1.9	9.8	.09	.43
8	11	2.4	25	4.1	81	18	4.4	2.7	1.9	64	.09	2.0
9	7.4	2.5	79	3.7	28	13	4.7	2.7	5.5	4.8	23	1.1
10	5.1	1.7	56	5.2	19	6.9	4.5	3.4	2.5	2.3	2.2	.62
11	4.4	1.5	22	4.0	17	5.9	6.3	4.0	1.3	4.2	1.4	1.0
12	6.9	1.6	14	3.4	20	5.1	19	9.7	24	1.7	.86	.86
13	14	1.5	6.9	3.7	19	4.4	11	2.2	3.7	1.4	.46	.51
14	26	1.1	5.2	7.3	12	4.6	19	2.4	1.5	1.4	.35	.32
15	15	1.0	4.7	82	7.8	4.6	210	3.2	1.2	2.0	.26	.41
16	9.3	1.2	4.5	41	5.7	3.7	103	1.6	1.9	2.3	.16	3.8
17	7.1	1.3	4.9	21	4.6	3.3	44	1.4	1.9	1.0	1.1	1.5
18	4.8	2.8	7.3	17	3.9	3.2	24	31	1.6	1.0	.35	1.1
19	3.8	3.7	5.5	9.1	3.5	3.8	15	58	1.6	1.2	.18	.70
20	3.2	32	4.6	6.2	3.2	3.6	11	30	14	.70	.19	.45
21	3.3	81	3.9	4.8	3.5	3.5	8.8	18	45	.56	.14	1.2
22	3.5	38	3.8	4.0	3.6	3.3	7.7	9.4	15	.43	.11	3.3
23	3.5	22	3.8	3.6	3.8	2.8	9.3	5.5	7.6	.42	.09	.84
24	4.0	15	6.1	3.4	3.6	3.0	5.6	3.9	3.7	.32	.07	.49
25	14	10	8.9	3.3	3.5	3.9	4.4	4.3	2.7	.17	1.5	.48
26	30	79	8.9	3.2	3.2	4.1	3.7	4.7	2.1	3.1	34	.47
27	60	51	7.1	3.5	2.8	3.6	3.5	2.8	2.0	.97	84	.32
28	25	26	6.0	4.1	13	4.0	3.9	2.2	1.7	.42	18	.19
29	16	17	5.2	6.6	---	4.0	4.0	2.0	5.6	.43	4.8	5.8
30	11	12	5.2	13	---	15	4.4	3.0	31	1.6	1.9	1.5
31	8.0	---	4.6	10	---	10	---	5.9	---	.62	8.6	---
TOTAL	1085.3	437.6	493.9	301.2	558.7	448.3	563.5	241.2	422.8	209.44	194.02	35.95
MEAN	35.0	14.6	15.9	9.72	20.0	14.5	18.8	7.78	14.1	6.76	6.26	1.20
MAX	231	81	79	82	81	93	210	58	144	64	84	5.8
MIN	3.2	1.0	3.8	3.2	2.8	2.8	3.1	1.4	1.2	.17	.07	.19
CFSM	1.60	.67	.73	.44	.91	.66	.86	.36	.64	.31	.29	.05
IN.	1.84	.74	.84	.51	.95	.76	.96	.41	.72	.36	.33	.06

CAL YR 1986	TOTAL	9662.69	MEAN	26.5	MAX	660	MIN	.14	CFSM	1.21	IN.	16.41
WTR YR 1987	TOTAL	4991.91	MEAN	13.7	MAX	231	MIN	.07	CFSM	.63	IN.	8.48

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 above mouth.

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.--No estimated daily discharges. Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,270 ft^3/s July 16, 1986, gage height, 10.32 ft; minimum daily, 1.5 ft^3/s Aug. 13, 15, 21, 23, 1987.

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)
May 19	0315	*754	*8.25

Minimum daily discharge, 1.5 ft^3/s Aug. 13, 15, 21, 23.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	75	4.8	7.8	4.3	26	73	5.6	3.5	4.2	18	1.7	6.1
2	29	4.9	62	4.2	42	25	7.2	9.8	11	16	2.0	3.9
3	111	4.9	28	3.8	49	12	5.4	26	11	7.4	2.4	3.3
4	49	4.9	12	3.6	47	7.8	5.0	8.9	3.5	4.8	1.8	3.0
5	16	5.1	7.4	3.9	36	57	5.0	5.1	3.0	13	1.7	2.9
6	9.5	5.0	5.8	4.1	26	28	5.6	4.0	2.6	6.4	1.6	2.8
7	6.9	4.6	13	4.3	40	13	5.1	3.6	2.4	8.0	1.7	3.0
8	5.6	4.6	32	4.3	54	9.3	5.0	3.2	3.8	23	1.7	6.9
9	5.3	4.5	64	4.3	19	7.6	5.0	2.9	6.7	4.8	9.6	5.4
10	4.9	4.4	27	4.7	10	6.0	4.8	2.7	3.1	3.8	2.4	3.5
11	4.4	4.8	9.6	5.6	11	5.5	9.2	4.8	2.7	4.6	1.9	8.2
12	6.2	4.9	6.8	5.2	22	5.3	19	9.4	32	3.1	1.7	3.7
13	17	4.9	4.9	5.5	17	5.1	6.9	3.5	6.0	3.0	1.5	3.1
14	20	4.6	4.4	14	9.5	5.2	17	3.1	3.6	2.9	1.6	3.1
15	7.2	4.7	4.4	72	5.2	4.7	158	3.2	3.1	12	1.5	5.9
16	5.4	4.2	4.6	25	3.7	4.4	55	2.8	2.8	30	1.6	29
17	4.7	4.7	5.9	9.9	3.2	5.2	18	2.6	2.7	4.6	2.3	10
18	4.2	9.0	11	8.0	3.1	5.3	11	79	2.6	3.4	1.9	4.8
19	3.9	12	7.5	6.3	3.0	6.7	7.6	265	2.7	2.9	1.8	4.0
20	3.8	40	6.0	6.6	3.1	5.4	6.2	27	3.1	2.7	1.7	3.3
21	3.8	45	5.1	5.7	3.2	4.9	5.4	14	36	2.7	1.5	3.0
22	3.8	20	4.9	5.7	3.3	4.6	5.8	8.9	6.2	2.7	1.6	4.5
23	3.9	10	4.9	5.6	3.8	4.8	8.4	5.8	4.1	2.7	1.5	2.8
24	4.1	7.9	5.6	5.0	3.6	3.6	5.0	4.7	3.3	2.5	1.7	2.2
25	13	6.3	8.5	5.1	3.4	3.5	4.1	5.7	3.0	2.6	3.1	2.1
26	33	79	5.4	4.9	3.3	3.8	3.8	7.9	2.8	15	28	1.8
27	25	25	4.5	4.5	3.2	4.0	3.9	4.2	2.6	3.8	170	1.8
28	10	11	4.3	4.4	15	4.2	3.8	3.6	2.5	2.1	21	1.8
29	7.1	6.9	3.7	5.2	---	4.3	3.5	3.3	13	1.9	8.9	4.4
30	5.9	5.4	4.1	16	---	18	3.5	3.3	57	2.5	5.3	2.6
31	5.2	---	4.7	17	---	6.7	---	3.6	---	1.9	28	---
TOTAL	503.8	358.0	379.8	278.7	468.6	353.9	408.8	535.1	243.1	214.8	314.7	142.9
MEAN	16.3	11.9	12.3	8.99	16.7	11.4	13.6	17.3	8.10	6.93	10.2	4.76
MAX	111	79	64	72	54	73	158	265	57	30	170	29
MIN	3.8	4.2	3.7	3.6	3.0	3.5	3.5	2.6	2.4	1.9	1.5	1.8
CFSM	1.16	.85	.88	.64	1.19	.81	.97	1.24	.58	.49	.73	.34
IN.	1.34	.95	1.01	.74	1.25	.94	1.09	1.42	.65	.57	.84	.38

CAL YR 1986	TOTAL	6983.8	MEAN	19.1	MAX	595	MIN	2.3	CFSM	1.36	IN.	18.56
WTR YR 1987	TOTAL	4202.2	MEAN	11.5	MAX	265	MIN	1.5	CFSM	.82	IN.	11.17

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: Jan. 19-31. Records good. Flow regulated by hydro-powerplant on the St. Joseph River 10.3 mi upstream from station. Flow slightly regulated by upstream reservoirs.

AVERAGE DISCHARGE.--31 years (1956 to current year), 1,691 ft^3/s, 11.67 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)
Oct. 5	0800	*10,500	*15.61

Minimum daily discharge, 99 ft^3/s Nov. 15, regulation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2470	908	3280	825	922	2460	1260	564	1350	931	179	619
2	5820	800	3910	829	1240	4770	1270	670	1080	1530	191	335
3	5880	679	4830	812	1940	3990	1080	1290	2060	2150	210	344
4	9730	656	3920	776	3090	3520	999	3510	1390	1690	183	235
5	10300	650	3280	748	3440	3400	1030	2260	1210	1290	170	212
6	8620	587	2760	739	2770	4420	1110	1630	1270	1290	162	207
7	6950	581	2790	727	2700	3900	1020	1140	1300	1960	176	150
8	6200	616	2750	716	3460	3020	1010	925	1150	2700	208	142
9	5430	543	3940	677	3070	2160	1090	787	1050	1590	345	168
10	4460	460	5530	697	2110	1860	1170	694	980	1080	214	164
11	3120	495	4560	716	1750	1520	1200	564	580	722	167	179
12	1990	485	3250	623	1550	1310	1310	703	1060	1170	143	158
13	1810	473	2600	632	1680	1100	1160	536	641	968	144	154
14	1950	405	2130	693	1600	1090	1050	488	550	763	136	172
15	2340	99	2000	1340	1440	1110	2820	492	485	1260	127	175
16	2000	186	1630	2670	963	838	4390	475	456	1480	126	329
17	1840	401	1350	2200	764	922	4090	426	413	875	135	346
18	1590	460	1280	1560	790	774	2550	903	303	596	148	296
19	1310	503	1230	1100	929	908	1890	3570	252	639	158	232
20	1170	662	1150	760	816	914	1700	2830	225	680	124	227
21	917	1710	1080	670	654	842	1500	2330	1100	702	119	491
22	881	2200	1010	640	721	912	1270	1350	1130	535	117	127
23	830	1900	977	610	725	888	1250	1440	1020	317	113	118
24	782	1830	938	600	719	804	1190	1020	560	213	109	116
25	791	1840	969	580	791	828	998	765	641	163	108	113
26	909	2840	1030	570	876	800	849	762	584	274	371	111
27	1330	4940	994	560	908	713	795	873	354	306	2000	113
28	1250	4610	951	570	965	717	740	863	274	249	1220	115
29	1060	3540	906	580	---	645	659	678	291	177	926	154
30	1020	3420	952	650	---	755	575	580	737	188	777	159
31	960	---	894	750	---	995	---	827	---	170	952	---
TOTAL	95710	39479	68871	26620	43383	52885	43025	35945	24496	28658	10258	6461
MEAN	3087	1316	2222	859	1549	1706	1434	1160	817	924	331	215
MAX	10300	4940	5530	2670	3460	4770	4390	3570	2060	2700	2000	619
MIN	782	99	894	560	654	645	575	426	225	163	108	111
CFSM	1.57	.67	1.13	.44	.79	.87	.73	.59	.42	.47	.17	.11
IN.	1.81	.75	1.30	.50	.82	1.00	.81	.68	.46	.54	.19	.12

CAL YR 1986	TOTAL	850673	MEAN	2331	MAX	12900	MIN	99	CFSM	1.19	IN.	16.09
WTR YR 1987	TOTAL	475791	MEAN	1304	MAX	10300	MIN	99	CFSM	.66	IN.	9.00

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: Oct. 4, 5, Nov. 27, 28, and Jan. 22-30. Records good except for periods of variable backwater from downstream tributaries, Oct. 4, 5, and Nov. 27, 28, which are fair.

AVERAGE DISCHARGE.--36 years, 152 ft^3/s, 11.86 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, 46 ft^3/s Sept. 9, 10, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 400 ft^3/s Oct. 4, (backwater); maximum gage height, 5.92 ft Oct. 4; minimum daily discharge, 69 ft^3/s Aug. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	173	130	212	137	125	165	108	105	162	118	104	109
2	180	128	219	136	128	196	108	112	158	115	103	106
3	290	127	226	134	130	185	106	117	146	113	96	103
4	400	126	210	133	132	171	104	119	138	111	91	99
5	340	124	194	133	134	165	103	116	132	113	87	96
6	287	122	186	133	136	160	105	114	126	117	84	94
7	237	120	183	132	136	154	104	115	123	113	80	92
8	211	121	226	130	145	151	102	109	120	109	80	106
9	203	118	252	130	159	147	98	107	112	101	83	105
10	185	117	242	133	156	140	97	105	107	100	76	101
11	175	117	216	128	154	138	107	106	113	97	73	103
12	168	117	197	126	162	135	107	107	115	96	76	99
13	165	115	183	125	166	132	102	107	114	102	75	96
14	162	115	178	125	167	133	106	107	109	102	84	93
15	157	116	174	132	170	131	134	105	108	103	76	93
16	152	115	170	145	162	132	141	103	102	109	69	98
17	147	115	167	144	155	128	140	101	100	103	86	115
18	143	117	168	141	149	126	131	134	98	95	81	115
19	140	116	166	136	143	126	125	197	98	92	80	114
20	138	120	162	133	140	123	120	226	101	87	75	110
21	136	150	156	128	137	123	114	184	186	85	77	108
22	135	174	153	120	134	122	115	165	196	84	82	106
23	133	169	151	113	133	120	118	154	165	82	75	103
24	133	165	149	104	131	117	114	146	144	84	74	100
25	137	158	147	101	130	117	111	142	127	86	82	97
26	139	227	144	100	128	116	110	138	121	88	139	95
27	138	330	142	105	128	113	108	133	116	90	180	92
28	137	290	141	110	131	113	102	126	115	84	151	91
29	136	263	140	105	---	112	103	119	115	83	134	101
30	133	231	140	119	---	112	104	121	116	103	124	108
31	132	---	137	123	---	111	---	176	---	97	116	---
TOTAL	5542	4553	5531	3894	4001	4214	3347	4016	3783	3062	2893	3048
MEAN	179	152	178	126	143	136	112	130	126	98.8	93.3	102
MAX	400	330	252	145	170	196	141	226	196	118	180	115
MIN	132	115	137	100	125	111	97	101	98	82	69	91
CFSM	1.03	.87	1.02	.72	.82	.78	.64	.75	.72	.57	.54	.59
IN.	1.18	.97	1.18	.83	.86	.90	.72	.86	.81	.65	.62	.65

CAL YR 1986	TOTAL	61197	MEAN	168	MAX	400	MIN	74	CFSM	.97	IN.	13.08
WTR YR 1987	TOTAL	47884	MEAN	131	MAX	400	MIN	69	CFSM	.75	IN.	10.24

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: Jan. 21-31. Records good.

AVERAGE DISCHARGE.--63 years, (1924 to current year), 506 ft^3/s, 12.80 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, 1,160 ft^3/s Oct. 4; gage height, 11.37 ft; minimum daily, 233 ft^3/s Aug. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	557	428	692	491	472	518	415	364	516	359	363	339
2	604	416	691	491	481	605	418	386	531	345	407	324
3	744	407	719	487	490	596	413	430	525	329	355	313
4	1130	402	695	482	496	556	411	447	500	320	322	304
5	1110	392	654	478	500	537	404	434	458	314	302	295
6	989	386	620	477	499	532	405	414	435	330	287	290
7	865	382	614	478	503	529	397	402	414	337	276	292
8	767	383	669	475	540	519	391	388	400	323	266	322
9	718	380	743	470	576	509	385	373	390	309	268	341
10	676	374	754	478	573	492	384	367	371	296	262	328
11	624	377	710	473	560	489	402	359	366	293	250	327
12	594	376	662	466	578	486	418	373	382	289	243	316
13	573	369	614	462	596	482	409	364	374	303	241	307
14	561	364	587	458	602	488	419	361	358	332	240	297
15	543	367	576	474	600	499	488	363	348	327	246	294
16	524	368	567	516	570	485	521	348	329	354	233	308
17	511	370	565	517	552	477	506	345	314	343	281	358
18	495	380	563	519	528	473	482	492	306	318	306	375
19	481	393	557	507	508	468	459	794	297	299	278	356
20	474	402	550	494	497	459	441	940	299	283	265	344
21	468	466	537	470	495	450	424	816	336	273	257	338
22	468	542	526	450	488	445	413	693	417	266	270	349
23	465	573	521	420	486	441	437	607	414	254	261	343
24	459	562	522	400	482	438	432	550	380	249	251	332
25	470	544	517	380	484	434	411	514	350	249	257	319
26	486	625	508	390	477	433	401	497	336	251	352	314
27	484	894	501	410	472	430	392	481	318	272	523	308
28	473	886	495	430	474	426	383	456	307	269	485	301
29	468	810	494	450	---	420	376	433	304	264	425	327
30	440	744	495	460	---	427	368	421	339	285	387	359
31	436	---	492	465	---	421	---	451	---	310	361	---
TOTAL	18657	14362	18410	14418	14579	14964	12605	14663	11414	9345	9520	9720
MEAN	602	479	594	465	521	483	420	473	380	301	307	324
MAX	1130	894	754	519	602	605	521	940	531	359	523	375
MIN	436	364	492	380	472	420	368	345	297	249	233	290
CFSM	1.12	.89	1.11	.87	.97	.90	.78	.88	.71	.56	.57	.60
IN.	1.29	.99	1.28	1.00	1.01	1.04	.87	1.02	.79	.65	.66	.67

CAL YR 1986	TOTAL	206409	MEAN	566	MAX	1150	MIN	290	CFSM	1.05	IN.	14.30
WTR YR 1987	TOTAL	162657	MEAN	446	MAX	1130	MIN	233	CFSM	.83	IN.	11.27

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 41.3.

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: Jan. 1-12, 21, 22, and 24-28. Records fair.

AVERAGE DISCHARGE.--39 years, 261 ft^3/s, 12.06 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, 1,700 ft^3/s Oct. 6, gage height, 11.29 ft; minimum daily, 34 ft^3/s Aug. 16, Sept. 6, 7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	392	151	317	148	209	645	138	112	146	130	93	41
2	412	144	357	150	235	1000	145	133	182	101	71	39
3	731	138	537	152	261	1110	141	184	278	80	56	36
4	1250	135	517	150	273	875	134	327	227	73	48	35
5	1600	130	350	148	276	557	134	245	148	73	44	35
6	1640	128	276	146	258	547	131	197	123	68	42	34
7	1310	124	260	144	247	467	130	174	107	73	40	34
8	894	122	390	142	313	387	130	155	94	64	36	35
9	577	120	587	140	375	337	125	141	88	63	39	40
10	470	113	630	140	402	279	123	132	80	59	39	41
11	354	109	461	139	304	247	134	130	76	59	36	44
12	294	107	313	138	330	227	151	139	85	56	36	47
13	262	102	245	137	427	212	151	123	88	63	35	45
14	250	96	213	137	459	209	158	120	82	61	36	39
15	235	98	204	196	527	210	372	122	72	58	36	40
16	209	103	192	365	408	201	509	110	66	57	34	73
17	192	103	188	294	302	188	393	102	61	61	71	75
18	176	105	197	237	243	181	290	141	59	55	47	74
19	165	112	196	188	211	183	238	416	57	50	40	62
20	153	128	188	171	197	177	208	693	58	48	37	55
21	145	270	179	164	202	169	190	517	85	45	36	50
22	140	408	170	160	215	165	176	362	90	45	38	48
23	133	347	166	154	272	160	176	290	84	43	42	47
24	138	273	164	132	321	158	167	216	72	41	41	44
25	147	232	168	120	331	158	148	181	62	41	45	42
26	198	367	162	120	327	156	140	161	58	49	91	42
27	235	720	155	128	293	150	135	144	56	56	94	40
28	222	802	151	134	301	144	132	128	54	50	77	39
29	216	584	149	139	---	142	125	116	53	58	59	62
30	198	389	152	168	---	142	121	110	87	87	50	63
31	163	---	152	206	---	140	---	127	---	127	44	---
TOTAL	13501	6760	8386	5087	8519	9923	5445	6248	2878	1994	1533	1401
MEAN	436	225	271	164	304	320	182	202	95.9	64.3	49.5	46.7
MAX	1640	802	630	365	527	1110	509	693	278	130	94	75
MIN	133	96	149	120	197	140	121	102	53	41	34	34
CFSM	1.48	.77	.92	.56	1.03	1.09	.62	.69	.33	.22	.17	.16
IN.	1.71	.86	1.06	.64	1.08	1.26	.69	.79	.36	.25	.19	.18

CAL YR 1986	TOTAL	119029	MEAN	326	MAX	2070	MIN	52	CFSM	1.11	IN.	15.06
WTR YR 1987	TOTAL	71675	MEAN	196	MAX	1640	MIN	34	CFSM	.67	IN.	9.07

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: Jan. 20-28. Records good.

AVERAGE DISCHARGE.--44 years (water years 1944 to current year), 399 ft^3/s, 12.46 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, 1,980 ft^3/s Oct. 7, gage height, 8.50 ft; minimum daily, 108 ft^3/s Aug. 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	569	359	657	309	402	611	268	241	282	241	248	132
2	768	345	605	311	417	946	268	244	318	253	259	126
3	987	337	680	316	439	1150	267	281	413	221	211	121
4	1680	326	804	313	461	1300	260	354	490	195	182	117
5	1890	329	754	309	471	1210	263	456	405	184	162	114
6	1890	312	583	311	467	899	259	373	322	182	150	114
7	1960	304	514	313	451	808	248	325	288	182	141	111
8	1800	301	535	312	457	698	240	298	263	178	137	110
9	1460	293	694	306	545	608	239	274	248	167	135	110
10	1030	288	859	309	586	538	232	256	236	159	129	112
11	835	282	869	306	581	473	240	244	228	158	126	109
12	690	277	695	305	521	437	261	263	239	164	125	110
13	614	273	531	288	577	409	266	267	248	167	121	110
14	573	265	451	283	647	388	269	242	242	177	120	109
15	539	263	412	298	691	381	349	236	224	183	115	112
16	504	262	395	406	728	372	582	227	209	189	110	124
17	466	264	379	542	605	353	676	221	193	180	133	160
18	436	275	382	481	490	337	565	278	182	172	169	166
19	414	284	386	414	424	332	457	428	176	161	133	156
20	393	295	377	378	383	328	396	751	176	149	120	143
21	373	358	362	362	365	317	355	901	185	141	114	132
22	357	531	349	348	373	308	335	755	209	136	114	130
23	351	638	337	332	397	301	335	585	207	132	110	124
24	338	585	331	290	462	300	327	480	197	131	108	120
25	345	507	333	262	506	301	309	402	179	129	110	116
26	378	517	330	264	514	300	286	359	170	132	139	113
27	444	776	321	280	507	291	275	322	170	139	220	110
28	467	962	312	292	476	282	265	292	168	145	215	110
29	446	1030	310	298	---	276	258	267	162	143	182	125
30	430	877	309	323	---	274	250	254	183	172	155	157
31	400	---	309	359	---	273	---	243	---	195	139	---
TOTAL	23827	12715	15165	10220	13943	15801	9600	11119	7212	5257	4632	3703
MEAN	769	424	489	330	498	510	320	359	240	170	149	123
MAX	1960	1030	869	542	728	1300	676	901	490	253	259	166
MIN	338	262	309	262	365	273	232	221	162	129	108	109
CFSM	1.77	.97	1.12	.76	1.14	1.17	.74	.83	.55	.39	.34	.28
IN.	2.04	1.09	1.30	.87	1.19	1.35	.82	.95	.62	.45	.40	.32

CAL YR 1986	TOTAL	188915	MEAN	518	MAX	2040	MIN	135	CFSM	1.19	IN.	16.16
WTR YR 1987	TOTAL	133194	MEAN	365	MAX	1960	MIN	108	CFSM	.84	IN.	11.39

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: Jan. 20 to Feb. 6 and Feb. 16-19. Records good.

AVERAGE DISCHARGE.--39 years, 1,337 ft^3/s, 13.43 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, 3,530 ft^3/s Oct. 7; gage height, 10.50 ft; minimum daily, 530 ft^3/s Aug. 16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1250	1230	2180	1260	1270	1410	1040	950	1280	875	837	715
2	1520	1180	2060	1250	1280	1620	1050	968	1460	905	949	675
3	2000	1160	2030	1250	1300	1840	1030	1020	1720	874	936	645
4	2770	1140	2030	1230	1310	1970	1030	1080	1710	823	833	626
5	3200	1120	2010	1220	1330	2050	1020	1140	1600	789	758	605
6	3430	1120	1910	1210	1360	2000	1030	1120	1420	801	701	588
7	3500	1110	1840	1210	1400	1840	1020	1060	1290	850	662	582
8	3460	1110	1830	1200	1460	1750	992	1020	1220	827	627	603
9	3430	1120	1910	1190	1520	1660	980	981	1160	788	622	559
10	3270	1100	2020	1200	1590	1540	965	946	1110	754	611	565
11	2970	1080	2060	1200	1610	1440	981	927	1060	730	585	564
12	2620	1070	2010	1170	1590	1380	1010	941	1080	710	564	562
13	2340	1040	1860	1160	1600	1340	1010	954	1100	713	545	549
14	2120	1010	1720	1160	1650	1310	1020	948	1070	758	535	540
15	1940	1040	1640	1170	1680	1290	1100	951	1020	799	532	542
16	1800	1060	1610	1240	1600	1260	1280	929	959	841	530	579
17	1660	1060	1570	1340	1500	1240	1420	896	889	856	538	639
18	1550	1040	1540	1390	1450	1210	1420	1010	844	810	637	694
19	1470	1050	1520	1340	1400	1200	1340	1640	797	752	622	695
20	1410	1070	1490	1230	1360	1180	1250	2290	780	707	568	668
21	1360	1130	1480	1180	1340	1150	1190	2420	817	658	545	651
22	1330	1280	1450	1110	1310	1130	1140	2380	906	633	551	659
23	1310	1420	1410	1040	1290	1120	1160	2160	952	605	553	669
24	1280	1480	1380	980	1310	1120	1160	1890	917	572	533	657
25	1260	1450	1370	960	1330	1110	1130	1680	857	555	532	641
26	1310	1510	1350	970	1350	1090	1080	1540	809	556	615	621
27	1360	1850	1330	1020	1340	1090	1050	1450	763	579	850	609
28	1380	2100	1310	1120	1340	1080	1020	1350	738	602	974	598
29	1350	2250	1300	1190	---	1060	1010	1270	720	595	914	635
30	1300	2290	1280	1230	---	1060	982	1220	762	664	834	703
31	1250	---	1270	1250	---	1060	---	1210	---	752	771	---
TOTAL	62200	38670	51770	36670	39870	42600	32910	40341	31810	22733	20864	18638
MEAN	2006	1289	1670	1183	1424	1374	1097	1301	1060	733	673	621
MAX	3500	2290	2180	1390	1680	2050	1420	2420	1720	905	974	715
MIN	1250	1010	1270	960	1270	1060	965	896	720	555	530	540
CFSM	1.48	.95	1.24	.87	1.05	1.02	.81	.96	.78	.54	.50	.46
IN.	1.71	1.06	1.42	1.01	1.10	1.17	.91	1.11	.88	.63	.57	.51

CAL YR 1986	TOTAL	555309	MEAN	1521	MAX	3500	MIN	553	CFSM	1.12	IN.	15.28
WTR YR 1987	TOTAL	439076	MEAN	1203	MAX	3500	MIN	530	CFSM	.89	IN.	12.08

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: Oct. 3-22, Jan. 20 to Feb. 6, and Feb. 16-19. Records fair.

AVERAGE DISCHARGE.--13 years, 1,490 ft^3/s, 14.70 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 6,420 ft^3/s Mar. 24, 1982, gage height, 14.52 ft; minimum daily, 335 ft^3/s Sept. 12, 1978.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 3,750 ft^3/s Oct. 7; minimum daily, 469 ft^3/s Aug. 25.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1140	1310	2270	1340	1330	1440	1090	956	1360	920	826	691
2	1410	1280	2120	1330	1340	1610	1100	1050	1530	934	955	645
3	2100	1260	2070	1320	1360	1800	1060	1090	1820	893	906	616
4	2900	1240	2050	1310	1370	1940	1050	1140	1800	814	772	598
5	3400	1220	2030	1280	1390	2060	1060	1170	1700	800	688	588
6	3700	1210	1930	1270	1430	2070	1060	1190	1510	869	652	570
7	3750	1180	1850	1270	1480	1900	1050	1130	1390	870	609	532
8	3720	1170	1840	1270	1530	1830	1020	1070	1370	796	571	578
9	3650	1190	1900	1270	1580	1760	997	1010	1300	809	551	540
10	3600	1170	2010	1280	1650	1620	1010	939	1230	797	578	531
11	3250	1150	2080	1270	1670	1470	1020	928	1170	737	518	537
12	2800	1150	2030	1230	1650	1440	1050	970	1180	682	538	521
13	2600	1110	1880	1240	1650	1400	1070	981	1170	676	553	517
14	2300	1090	1750	1250	1700	1380	1080	932	1130	711	536	507
15	2100	1070	1680	1260	1720	1350	1180	912	1060	785	521	496
16	2000	1130	1650	1310	1670	1310	1350	891	980	871	482	519
17	1800	1150	1620	1400	1600	1290	1460	868	877	889	495	603
18	1650	1120	1610	1440	1530	1270	1480	1030	809	844	582	655
19	1570	1130	1580	1410	1490	1260	1420	1800	826	786	581	658
20	1510	1120	1550	1300	1450	1230	1330	2580	840	746	511	662
21	1470	1220	1540	1240	1410	1190	1240	2610	940	685	497	648
22	1430	1360	1510	1180	1380	1170	1180	2500	1010	637	495	648
23	1430	1480	1460	1130	1350	1190	1220	2230	1010	554	488	664
24	1390	1520	1440	1070	1380	1200	1230	1960	1010	514	483	640
25	1340	1490	1450	1010	1400	1190	1190	1760	884	497	469	625
26	1350	1570	1460	1030	1410	1180	1110	1660	795	496	570	617
27	1420	1930	1440	1050	1410	1150	1110	1560	760	514	836	587
28	1440	2110	1420	1160	1390	1100	1080	1460	722	534	1010	572
29	1430	2260	1390	1240	---	1100	1040	1350	724	579	889	615
30	1370	2330	1340	1280	---	1110	986	1330	806	651	816	666
31	1310	---	1310	1310	---	1110	---	1320	---	737	775	---
TOTAL	66330	40720	53260	38750	41720	44120	34323	42377	33713	22627	19753	17846
MEAN	2140	1357	1718	1250	1490	1423	1144	1367	1124	730	637	595
MAX	3750	2330	2270	1440	1720	2070	1480	2610	1820	934	1010	691
MIN	1140	1070	1310	1010	1330	1100	986	868	722	496	469	496
CFSM	1.56	.99	1.25	.91	1.08	1.03	.83	.99	.82	.53	.46	.43
IN.	1.79	1.10	1.44	1.05	1.13	1.19	.93	1.15	.91	.61	.53	.48

CAL YR 1986	TOTAL	571130	MEAN	1565	MAX	3750	MIN	514	CFSM	1.14	IN.	15.44
WTR YR 1987	TOTAL	455539	MEAN	1248	MAX	3750	MIN	469	CFSM	.91	IN.	12.32

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: Nov. 8-17, Jan. 20 to Feb. 3, Feb. 16, and Mar. 20 to Apr. 6. Records good except for Jan. 20 to Feb. 3, which are poor.

AVERAGE DISCHARGE.--19 years, 33.4 ft^3/s, 14.97 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,070 ft^3/s Nov. 19, 1985; 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)
Oct. 3	1800	336	11.06	May 19	1500	*661	*13.94
Nov. 26	2200	397	11.66				

Minimum daily discharge, 12 ft^3/s Aug. 13, 14, 24, 25, Sept. 7, 8, 11-15, 22-30.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	18	44	19	17	54	16	18	134	22	16	15
2	26	18	51	18	19	46	16	19	133	20	15	14
3	180	18	44	18	22	33	16	20	111	18	13	13
4	134	18	36	18	25	26	16	20	56	17	13	13
5	74	17	30	18	26	25	16	19	42	18	13	13
6	57	17	26	18	25	23	16	19	35	18	13	13
7	46	17	28	18	25	22	16	18	28	18	13	12
8	38	16	54	18	47	22	15	18	26	17	13	12
9	34	16	63	18	35	21	15	18	24	17	13	13
10	28	16	44	19	27	20	15	17	23	17	13	13
11	25	16	34	18	26	20	16	16	22	16	13	12
12	23	16	28	18	26	19	17	16	70	16	13	12
13	22	16	26	18	26	19	16	16	32	16	12	12
14	21	16	24	18	25	19	25	15	26	16	12	12
15	21	16	23	19	24	19	81	15	23	17	15	12
16	20	16	22	24	23	19	58	15	22	17	14	14
17	20	16	22	23	21	19	39	16	21	16	32	14
18	20	18	22	21	20	18	31	71	20	16	16	13
19	20	18	22	20	20	18	25	425	20	15	14	13
20	19	19	21	19	20	17	23	195	25	15	14	13
21	19	20	21	18	20	17	21	89	26	14	13	13
22	18	22	20	17	20	17	21	63	21	15	13	12
23	18	25	20	16	19	17	25	47	20	15	13	12
24	18	26	20	15	19	17	22	38	19	14	12	12
25	20	23	20	15	19	17	20	36	19	14	12	12
26	21	181	20	15	19	17	20	56	18	14	37	12
27	20	178	20	15	19	16	20	43	18	15	32	12
28	20	83	19	16	20	16	20	35	18	16	20	12
29	19	64	19	17	---	16	20	28	18	16	18	12
30	19	53	19	17	---	16	19	26	22	16	17	12
31	19	---	19	17	---	16	---	26	---	15	16	---
TOTAL	1067	1013	881	558	654	661	696	1473	1092	506	493	379
MEAN	34.4	33.8	28.4	18.0	23.4	21.3	23.2	47.5	36.4	16.3	15.9	12.6
MAX	180	181	63	24	47	54	81	425	134	22	37	15
MIN	18	16	19	15	17	16	15	15	18	14	12	12
CFSM	1.14	1.12	.94	.59	.77	.70	.77	1.57	1.20	.54	.52	.42
IN.	1.31	1.24	1.08	.69	.80	.81	.85	1.81	1.34	.62	.61	.47

CAL YR 1986	TOTAL	10385	MEAN	28.5	MAX	207	MIN	13	CFSM	.94	IN.	12.75
WTR YR 1987	TOTAL	9473	MEAN	26.0	MAX	425	MIN	12	CFSM	.86	IN.	11.63

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: Jan. 22 to Feb. 9. Records good.

AVERAGE DISCHARGE.--65 years, 1,630 ft^3/s, 12.45 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, 4,450 ft^3/s Oct. 7; gage height, 10.33 ft; minimum daily, 647 ft^3/s July 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1540	1570	2820	1540	1600	1690	1310	1230	1680	1150	903	877
2	1710	1540	2760	1540	1620	1810	1300	1250	1920	1140	991	825
3	2290	1510	2700	1530	1650	1940	1290	1300	2660	1080	1020	790
4	3730	1490	2610	1510	1690	2050	1260	1310	2640	1000	942	774
5	4210	1460	2540	1500	1720	2160	1260	1310	2400	1010	856	757
6	4370	1450	2430	1470	1730	2230	1250	1330	2130	1040	817	746
7	4430	1420	2310	1460	1760	2160	1250	1310	1890	1030	775	720
8	4430	1400	2310	1450	1800	2070	1240	1260	1740	974	745	728
9	4400	1400	2380	1450	1850	2010	1220	1220	1690	982	721	731
10	4330	1390	2430	1470	1890	1910	1200	1160	1580	965	719	680
11	4110	1380	2450	1470	1900	1790	1220	1110	1500	964	702	682
12	3760	1360	2430	1430	1970	1700	1250	1130	1520	964	667	683
13	3380	1320	2330	1410	1990	1660	1250	1140	1500	916	679	652
14	3010	1280	2190	1420	1970	1620	1280	1130	1400	877	698	650
15	2680	1300	2080	1430	1990	1590	1470	1130	1340	883	696	652
16	2460	1320	2020	1490	1960	1550	1660	1120	1260	928	658	685
17	2260	1340	1980	1570	1960	1520	1770	1110	1150	1010	654	762
18	2090	1340	1940	1650	1910	1500	1800	1230	1050	1040	709	811
19	1950	1320	1910	1680	1840	1500	1760	2140	1010	1010	736	818
20	1880	1340	1870	1670	1760	1470	1660	3460	1020	954	682	807
21	1810	1370	1830	1620	1700	1430	1560	3560	1220	907	667	788
22	1750	1500	1810	1540	1670	1400	1500	3390	1270	854	662	784
23	1730	1640	1770	1490	1620	1380	1490	3100	1260	797	659	788
24	1690	1720	1720	1380	1610	1380	1510	2710	1230	738	649	778
25	1670	1730	1690	1340	1620	1390	1480	2390	1170	688	667	745
26	1690	1910	1680	1400	1630	1370	1410	2250	1070	659	798	741
27	1740	2640	1690	1550	1630	1360	1370	2080	1010	647	981	729
28	1760	2790	1690	1600	1620	1330	1350	1910	963	674	1120	709
29	1730	2810	1680	1620	---	1310	1320	1740	957	684	1120	740
30	1680	2840	1640	1610	---	1320	1270	1640	1060	733	1010	768
31	1600	---	1550	1600	---	1320	---	1620	---	795	953	---
TOTAL	81870	48880	65240	46890	49660	50920	41960	53770	44290	28093	24656	22400
MEAN	2641	1629	2105	1513	1774	1643	1399	1735	1476	906	795	747
MAX	4430	2840	2820	1680	1990	2230	1800	3560	2660	1150	1120	877
MIN	1540	1280	1550	1340	1600	1310	1200	1110	957	647	649	650
CFSM	1.48	.92	1.18	.85	1.00	.92	.79	.98	.83	.51	.45	.42
IN.	1.71	1.02	1.36	.98	1.04	1.06	.88	1.12	.93	.59	.52	.47

CAL YR 1986	TOTAL	678786	MEAN	1860	MAX	4430	MIN	654	CFSM	1.05	IN.	14.19
WTR YR 1987	TOTAL	558629	MEAN	1530	MAX	4430	MIN	647	CFSM	.86	IN.	11.68

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: Jan. 16-19, Jan. 22 to Feb. 4, Feb. 16, 17, and June 25 to Aug. 11. Records good except for estimated daily discharges, which are poor.

AVERAGE DISCHARGE.--39 years, 109 ft^3/s, 12.03 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)
Oct. 3	2300	1,210	8.11	May 19	1700	*1,300	*8.48
Nov. 27	0200	858	6.54	June 3	0300	993	7.17

Minimum daily discharge, 22 ft^3/s Aug. 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	148	82	223	74	68	112	55	94	178	67	54	69
2	126	98	282	74	72	142	55	80	371	60	46	61
3	557	91	275	74	95	118	54	76	877	56	39	56
4	1030	85	223	73	115	104	53	71	581	56	33	52
5	684	79	183	72	127	98	52	68	358	60	29	50
6	426	75	163	71	117	93	51	64	255	66	26	47
7	296	71	158	71	131	90	50	62	193	57	24	45
8	223	70	234	70	173	87	48	57	165	53	23	44
9	190	68	312	70	142	84	48	56	155	60	23	43
10	162	64	264	70	120	79	47	56	129	70	23	42
11	143	63	200	70	110	76	53	55	107	58	22	40
12	129	61	171	69	108	73	62	55	147	52	23	38
13	120	59	145	68	104	71	63	48	144	48	23	38
14	114	58	136	68	101	71	78	49	118	46	44	36
15	106	58	125	71	96	71	305	48	104	66	48	36
16	99	57	118	95	85	68	433	42	91	54	38	37
17	94	56	113	115	82	65	326	41	81	47	44	40
18	88	58	110	100	80	65	245	159	74	43	50	40
19	85	61	106	86	75	70	198	868	67	40	42	39
20	82	62	102	81	72	67	174	905	68	39	36	37
21	81	76	96	75	70	65	144	543	87	36	41	36
22	72	83	93	68	69	63	134	369	82	34	90	38
23	68	86	92	62	68	61	147	262	72	33	68	42
24	66	91	90	60	65	61	133	189	67	32	55	39
25	72	87	89	58	63	62	116	170	62	31	50	38
26	104	351	86	58	61	62	107	602	59	31	143	36
27	114	743	81	61	61	61	99	419	56	42	200	35
28	105	481	79	64	63	59	94	287	55	35	147	36
29	97	338	78	66	---	57	101	217	62	45	112	40
30	90	264	77	67	---	58	98	155	70	40	90	39
31	84	---	75	68	---	57	---	145	---	70	78	---
TOTAL	5855	3976	4579	2249	2593	2370	3623	6312	4935	1527	1764	1269
MEAN	189	133	148	72.5	92.6	76.5	121	204	165	49.3	56.9	42.3
MAX	1030	743	312	115	173	142	433	905	877	70	200	69
MIN	66	56	75	58	61	57	47	41	55	31	22	35
CFSM	1.54	1.08	1.20	.59	.75	.62	.98	1.66	1.34	.40	.46	.34
IN.	1.77	1.20	1.38	.68	.78	.72	1.10	1.91	1.49	.46	.53	.38

CAL YR 1986	TOTAL	35029.5	MEAN	96.0	MAX	1030	MIN	8.7	CFSM	.78	IN.	10.59
WTR YR 1987	TOTAL	41052	MEAN	112	MAX	1030	MIN	22	CFSM	.91	IN.	12.42

05520500 KANKAKEE RIVER AT MOMENCE, IL

LOCATION.--Lat 41°09'36", long 87°40'07", in SW¼NE¼ sec.24, T.31 N., R.13 E., Kankakee County, Hydrologic Unit 07120001, on right bank at Hill Street in Momence, 0.2 mi downstream from bridge on State Highways 1 and 17, 1.2 mi upstream from Tower Creek, and at mile 47.9.

DRAINAGE AREA.--2,294 mi^2, of which 201 mi^2 probably is noncontributing.

PERIOD OF RECORD.--February to December 1905, February to July 1906, December 1914 to current year.

REVISED RECORDS.--WSP 1238: 1916, 1930. WSP 1308: 1915(M), 1917(M), 1919(M), 1922(M), 1926(M), 1934-35(M), 1938(M). WDR IL-75-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 609.18 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 1, 1938, nonrecording gage at site 0.2 mi upstream at datum 1.00 ft higher. Aug. 1, 1938, to Aug. 8, 1969, water-stage recorder at present site at datum 1.00 ft higher.

REMARKS.--Estimated daily discharges: Dec. 27 to Jan. 7 and Jan. 18 to Feb. 5. Records good except for estimated daily discharges, which are poor. U.S. Army Corps of Engineers satellite telemeter at station.

AVERAGE DISCHARGE.--72 years (water years 1916-87), 1,986 ft^3/s, 11.76 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,000 ft^3/s, Mar. 6, 1979, gage height, 10.51 ft, ice jam; minimum observed, 306 ft^3/s, Sept. 1, 6, 17, 1919.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,780 ft^3/s Oct. 4, gage height, 4.26 ft; maximum gage height, 4.28 ft, Jan. 28, ice jam; minimum discharge, 648 ft^3/s July 27, 28.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1810	2140	3840	2150	2600	2470	1590	1570	2430	1400	883	1090
2	1960	2070	3690	2100	2650	2680	1570	1520	3070	1420	949	994
3	3400	2010	3870	2100	2700	2710	1550	1530	4480	1400	1040	926
4	5580	1940	3870	2050	2800	2750	1520	1540	4170	1330	1030	883
5	5340	1890	3690	2000	2900	2810	1480	1530	3910	1220	944	859
6	5380	1850	3530	1950	2960	2850	1470	1530	3580	1180	865	881
7	5320	1810	3460	1910	2950	2810	1480	1530	3190	1180	821	841
8	5190	1780	3570	1880	2940	2790	1480	1490	2790	1230	793	812
9	5160	1730	3310	1870	3010	2680	1470	1430	2510	1150	809	815
10	5040	1700	3760	1890	2980	2580	1450	1380	2320	1120	759	784
11	4900	1670	3700	1900	2980	2480	1550	1320	2150	1080	740	748
12	4750	1630	3570	1870	2970	2360	1620	1300	2030	1040	706	743
13	4520	1570	3640	1840	2950	2250	1630	1290	2010	983	701	737
14	4240	1520	3630	1830	2930	2160	1850	1280	1910	973	790	710
15	3910	1490	3160	1860	2920	2130	2830	1290	1770	997	802	704
16	3600	1520	2990	1930	2820	2080	2910	1260	1610	1050	764	721
17	3300	1530	2900	1980	2800	2020	2920	1250	1480	1090	736	771
18	3050	1580	2790	1900	2800	1980	2750	1520	1320	1100	752	858
19	2820	1630	2710	1900	2720	2000	2690	3820	1210	1070	773	880
20	2630	1640	2560	1900	2630	1970	2560	4780	1190	1010	762	876
21	2470	1680	2570	1850	2540	1940	2380	4560	1430	947	733	862
22	2360	1760	2430	1800	2460	1890	2240	4620	1700	885	814	852
23	2250	1910	2450	1700	2400	1850	2360	4430	1730	823	792	852
24	2220	2060	2390	1700	2330	1840	2270	4110	1620	757	758	852
25	2220	2140	2220	1650	2290	1810	2130	3800	1550	700	765	836
26	2330	2920	2290	2050	2280	1770	2010	4380	1450	669	961	808
27	2390	4210	2250	2300	2290	1730	1880	4220	1300	654	1310	802
28	2400	4230	2200	2400	2330	1710	1790	3600	1210	651	1390	785
29	2380	4110	2200	2600	---	1670	1730	3070	1150	674	1400	798
30	2320	4040	2200	2600	---	1630	1660	2670	1210	696	1280	814
31	2240	---	2150	2500	---	1630	---	2460	---	746	1190	---
TOTAL	107480	63760	93590	61960	75930	68030	58820	76080	63480	31225	27812	24894
MEAN	3467	2125	3019	1999	2712	2195	1961	2454	2116	1007	897	830
MAX	5580	4230	3870	2600	3010	2850	2920	4780	4480	1420	1400	1090
MIN	1810	1490	2150	1650	2280	1630	1450	1250	1150	651	701	704
CFSM	1.51	.93	1.32	.87	1.18	.96	.85	1.07	.92	.44	.39	.36
IN.	1.74	1.03	1.52	1.00	1.23	1.10	.95	1.23	1.03	.51	.45	.40

CAL YR 1986	TOTAL	850054	MEAN	2329	MAX	5580	MIN	628	CFSM	1.02	IN.	13.78
WTR YR 1987	TOTAL	753061	MEAN	2063	MAX	5580	MIN	651	CFSM	.90	IN.	12.21

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: Jan. 10, 12, Jan. 19 to Feb. 3, and Feb. 16-18. Records good except for Jan. 19 to Feb. 3, which are poor.

AVERAGE DISCHARGE.--39 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)
Oct. 3	1500	476	6.52	June 1	0300	188	3.72
May 19	1800	*504	*6.76	June 3	0300	168	3.49
May 26	0700	160	3.38				

Minimum daily discharge, 4.0 ft^3/s Aug. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	29	46	24	31	39	14	20	168	26	22	6.4
2	26	28	71	24	37	36	15	19	121	20	13	5.8
3	358	27	62	22	45	31	14	18	142	16	9.8	5.6
4	336	26	47	22	53	28	13	17	87	13	7.9	5.2
5	185	25	39	23	52	26	13	16	64	12	6.9	4.9
6	117	24	36	23	45	24	13	15	52	12	6.3	4.7
7	87	23	41	22	65	23	13	15	44	17	5.8	5.6
8	71	25	66	21	83	23	13	15	37	12	5.8	9.9
9	63	23	66	19	51	22	13	14	34	11	9.9	6.9
10	55	22	54	24	43	21	13	13	30	11	7.6	5.9
11	48	21	42	20	40	20	20	14	28	20	6.2	5.7
12	43	20	36	21	41	19	20	14	26	14	5.5	5.4
13	43	19	33	20	38	19	18	13	23	15	5.1	4.9
14	40	18	30	23	33	20	39	15	20	18	5.3	4.7
15	33	19	29	38	29	19	77	16	19	18	4.8	5.9
16	33	19	29	38	26	17	62	14	17	20	4.5	7.1
17	33	19	29	32	24	16	47	13	15	14	4.3	7.4
18	29	21	30	30	23	18	39	44	15	11	4.1	6.7
19	28	22	29	23	22	20	33	368	14	10	4.1	6.1
20	27	24	29	20	21	18	30	326	13	9.2	4.0	5.8
21	26	26	27	18	22	18	30	179	43	9.1	5.5	5.5
22	25	25	27	17	22	17	29	122	25	8.9	5.0	6.2
23	25	25	27	16	22	17	31	90	19	8.4	4.1	5.9
24	25	22	28	16	20	17	28	70	16	7.8	4.1	5.7
25	39	21	27	16	20	17	26	59	15	7.3	5.8	5.3
26	62	88	25	16	20	16	24	131	13	7.1	15	5.1
27	51	110	25	16	20	15	24	79	12	6.9	20	5.0
28	43	75	24	17	22	14	22	55	11	6.6	12	5.2
29	38	58	24	19	---	15	21	47	16	6.3	9.4	7.7
30	33	50	24	23	---	16	20	42	33	6.0	7.9	7.6
31	30	---	23	27	---	14	---	60	---	23	7.4	---
TOTAL	2085	954	1125	690	970	635	774	1933	1172	396.6	239.1	179.8
MEAN	67.3	31.8	36.3	22.3	34.6	20.5	25.8	62.4	39.1	12.8	7.71	5.99
MAX	358	110	71	38	83	39	77	368	168	26	22	9.9
MIN	25	18	23	16	20	14	13	13	11	6.0	4.0	4.7
CFSM	1.89	.89	1.02	.63	.97	.58	.72	1.75	1.10	.36	.22	.17
IN.	2.18	1.00	1.18	.72	1.01	.66	.81	2.02	1.22	.41	.25	.19

CAL YR 1986	TOTAL	12223.5	MEAN	33.5	MAX	358	MIN	2.8	CFSM	.94	IN.	12.77
WTR YR 1987	TOTAL	11153.5	MEAN	30.6	MAX	368	MIN	4.0	CFSM	.86	IN.	11.65

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. 4-10, Jan. 20 to Feb. 2, 17-19, May 19-24, and Aug. 29 to Sept. 30. 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.--38 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, 1,080 ft^3/s May 20, gage height, 11.42 ft (backwater); minimum daily, 13 ft^3/s Aug. 18, 19, 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	85	144	266	114	170	175	66	78	347	83	62	24
2	121	133	312	115	200	225	70	76	453	66	46	21
3	305	123	401	109	241	198	67	73	459	53	32	20
4	800	121	368	107	263	159	68	66	456	45	26	20
5	950	115	282	108	274	142	61	64	325	42	24	18
6	850	111	224	115	247	135	61	61	214	44	22	17
7	660	104	200	111	273	123	60	60	163	44	19	17
8	520	105	273	104	428	118	57	58	134	37	18	25
9	400	103	364	102	460	113	61	54	118	34	28	23
10	340	96	390	93	356	98	57	50	105	56	25	21
11	291	91	314	127	274	99	69	48	98	98	20	19
12	242	91	234	91	278	94	81	53	96	77	17	18
13	220	78	179	105	286	92	72	49	85	107	18	18
14	211	104	194	106	244	94	94	47	76	99	20	16
15	191	82	162	146	210	96	245	56	69	119	17	15
16	169	83	142	208	154	89	291	48	62	119	15	23
17	160	82	137	196	130	82	273	45	56	73	17	30
18	141	89	146	168	122	81	213	104	51	54	13	26
19	128	103	142	123	118	94	166	600	40	45	13	23
20	122	107	142	104	115	93	140	1000	41	38	18	21
21	119	129	133	107	112	85	127	930	112	33	17	20
22	111	134	128	105	117	82	118	700	97	31	19	24
23	106	135	128	101	112	79	138	480	72	29	16	22
24	103	123	129	92	108	81	143	350	57	28	13	20
25	124	112	130	98	105	79	124	299	50	26	18	19
26	238	223	123	104	102	78	110	385	45	25	37	19
27	277	487	117	109	100	76	103	435	40	24	70	18
28	244	499	114	110	107	73	95	285	36	23	52	19
29	211	417	111	112	---	70	90	182	77	22	35	31
30	177	327	112	120	---	73	81	147	104	22	30	36
31	162	---	109	140	---	68	---	136	---	45	27	---
TOTAL	8778	4651	6206	3650	5706	3244	3401	7019	4138	1641	804	643
MEAN	283	155	200	118	204	105	113	226	138	52.9	25.9	21.4
MAX	950	499	401	208	460	225	291	1000	459	119	70	36
MIN	85	78	109	91	100	68	57	45	36	22	13	15
CFSM	1.97	1.08	1.39	.82	1.42	.73	.78	1.57	.96	.37	.18	.15
IN.	2.27	1.20	1.60	.94	1.47	.84	.88	1.81	1.07	.42	.21	.17

CAL YR 1986	TOTAL	57407	MEAN	157	MAX	950	MIN	10	CFSM	1.09	IN.	14.83
WTR YR 1987	TOTAL	49881	MEAN	137	MAX	1000	MIN	13	CFSM	.95	IN.	12.89

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: Jan. 20-22, 24-28, 30, 31, and Feb. 1, 2. Records good except for estimated daily discharges, which are poor. Streamflow affected by irrigation.

AVERAGE DISCHARGE.--39 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, 1,590 ft^3/s May 20, gage height, 13.27 ft; minimum daily, 19 ft^3/s Aug. 19, 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	124	159	278	130	195	222	76	91	399	127	92	38
2	144	149	354	131	225	269	80	88	488	97	68	34
3	504	140	436	124	260	234	75	84	504	74	43	30
4	1080	137	379	122	290	190	75	73	474	58	32	30
5	1200	129	286	124	304	174	69	71	335	50	32	28
6	1130	123	235	132	281	164	69	68	236	50	27	26
7	950	116	220	127	330	149	68	67	188	55	24	26
8	744	119	311	118	552	144	64	65	159	48	25	36
9	551	116	401	116	534	137	69	61	141	43	59	34
10	392	105	414	107	397	117	66	58	126	40	48	32
11	292	103	319	137	326	116	82	56	117	153	34	29
12	249	101	241	99	353	110	94	63	116	113	29	27
13	228	83	178	109	346	107	82	58	98	123	27	28
14	219	94	192	121	295	113	115	56	85	159	28	24
15	200	92	172	191	253	110	285	63	76	124	24	24
16	179	93	159	245	187	100	333	55	66	200	22	35
17	170	92	156	220	188	93	306	53	59	119	22	43
18	152	94	166	192	170	94	247	157	54	79	20	38
19	139	114	161	143	153	109	197	1150	45	59	19	34
20	133	119	159	118	137	105	169	1540	51	50	22	31
21	131	140	149	121	136	97	155	1310	130	45	23	29
22	124	147	146	130	142	93	146	1040	112	40	28	36
23	118	150	147	118	134	89	173	757	79	35	23	33
24	115	137	149	106	127	92	176	507	62	33	19	31
25	146	127	149	98	130	91	154	328	55	31	23	29
26	273	246	138	96	124	90	136	500	53	29	50	28
27	293	551	132	103	123	88	128	486	46	29	133	26
28	257	548	129	112	134	84	117	319	42	30	98	29
29	225	438	128	125	---	83	111	221	42	28	63	44
30	191	336	128	140	---	85	96	185	113	29	52	53
31	177	---	123	170	---	78	---	173	---	62	45	---
TOTAL	10830	5098	6735	4125	6826	3827	4013	9803	4551	2212	1254	965
MEAN	349	170	217	133	244	123	134	316	152	71.4	40.5	32.2
MAX	1200	551	436	245	552	269	333	1540	504	200	133	53
MIN	115	83	123	96	123	78	64	53	42	28	19	24
CFSM	1.72	.84	1.07	.66	1.20	.61	.66	1.56	.75	.35	.20	.16
IN.	1.98	.93	1.23	.76	1.25	.70	.74	1.80	.83	.41	.23	.18

CAL YR 1986	TOTAL	74307	MEAN	204	MAX	1200	MIN	14	CFSM	1.00	IN.	13.62
WTR YR 1987	TOTAL	60239	MEAN	165	MAX	1540	MIN	19	CFSM	.81	IN.	11.04

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.--Estimated daily discharges: Jan. 22-25, 30, 31, and Feb. 1-6. Records poor.

AVERAGE DISCHARGE.--38 years (water years 1950 to current year), 17.6 ft^3/s, 10.69 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)
May 19	1600	*324	*7.44

Minimum daily discharge, 0.59 ft^3/s Aug. 19, 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	7.7	17	7.8	12	26	5.0	8.9	17	3.3	2.6	1.3
2	17	6.8	45	7.5	17	27	5.1	8.9	20	3.0	1.6	1.0
3	27	6.5	37	7.2	25	19	4.6	8.1	48	2.4	1.2	.92
4	36	6.1	23	6.9	27	15	4.4	6.9	25	2.0	1.2	.84
5	17	5.6	16	6.7	25	15	4.5	6.7	16	1.8	1.0	.79
6	10	5.3	14	6.9	23	12	4.5	7.0	13	2.1	.80	.76
7	6.9	4.8	15	8.6	56	12	4.5	6.9	11	6.4	.75	.76
8	5.1	5.1	28	7.2	87	12	4.4	6.4	9.5	2.9	.79	.80
9	5.9	5.4	35	6.7	49	10	4.4	6.2	12	2.2	1.1	.79
10	7.0	4.3	30	9.3	36	7.8	4.5	6.1	10	1.8	.84	.79
11	4.9	4.5	20	6.3	34	7.6	14	6.0	9.0	1.6	.72	.95
12	4.5	4.2	14	6.8	39	7.1	26	7.1	8.6	2.7	.70	.88
13	4.3	3.6	9.5	6.6	32	7.1	18	6.5	7.9	14	.70	.70
14	5.1	3.6	9.7	11	29	7.8	42	6.4	7.1	11	.70	.67
15	4.2	4.1	8.4	41	22	7.3	83	6.0	6.5	4.7	.67	.69
16	3.5	4.1	8.2	35	18	6.4	68	5.5	5.5	3.9	.65	1.1
17	3.2	4.0	8.9	23	14	6.0	47	5.8	5.0	2.6	.61	1.4
18	2.7	3.8	11	19	12	6.6	33	15	4.8	2.0	.62	1.1
19	2.6	3.5	11	16	9.8	8.2	25	167	4.7	1.6	.59	.93
20	2.7	4.1	10	21	9.1	7.5	20	89	4.7	1.4	.59	.87
21	2.6	4.1	9.4	14	9.9	7.3	17	50	4.4	1.3	.67	.84
22	2.4	4.0	9.9	10	11	6.7	17	52	4.2	1.2	.74	1.0
23	2.5	3.9	11	8.6	11	6.3	27	35	3.8	1.1	.68	1.1
24	2.6	3.3	11	7.6	9.7	6.4	21	24	3.5	.89	.64	1.0
25	10	2.8	12	6.8	9.7	6.5	16	20	3.5	.83	.86	.92
26	36	36	9.8	8.4	9.3	5.9	14	18	4.2	.97	2.2	.86
27	24	49	8.8	8.1	9.6	5.7	14	14	3.0	1.1	20	.80
28	17	31	8.6	7.8	11	5.7	11	12	2.6	.95	6.2	.79
29	13	23	8.9	8.1	---	5.8	11	11	2.4	.86	2.4	2.1
30	10	18	8.7	8.4	---	5.6	9.5	10	2.7	.81	1.6	3.4
31	8.7	---	8.3	9.7	---	5.1	---	13	---	1.7	1.5	---
TOTAL	319.4	272.2	477.1	358.0	657.1	294.4	579.4	645.4	279.6	85.11	55.92	30.85
MEAN	10.3	9.07	15.4	11.5	23.5	9.50	19.3	20.8	9.32	2.75	1.80	1.03
MAX	36	49	45	41	87	27	83	167	48	14	20	3.4
MIN	2.4	2.8	8.2	6.3	9.1	5.1	4.4	5.5	2.4	.81	.59	.67
CFSM	.47	.42	.71	.53	1.08	.44	.89	.95	.43	.13	.08	.05
IN.	.55	.46	.81	.61	1.12	.50	.99	1.10	.48	.15	.10	.05

CAL YR 1986 TOTAL 8213.12 MEAN 22.5 MAX 478 MIN .44 CFSM 1.03 IN. 14.02
WTR YR 1987 TOTAL 4054.48 MEAN 11.1 MAX 167 MIN .59 CFSM .51 IN. 6.92

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. 14, 15 and Jan. 11, 21-31. Records fair.

AVERAGE DISCHARGE.--38 years (water years 1950 to current year), 386 ft^3/s, 11.67 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, 3,120 ft^3/s May 21, gage height, 17.72 ft; minimum daily, 23 ft^3/s Aug. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	362	359	711	262	478	422	155	234	880	201	248	71
2	393	327	754	272	571	564	159	228	1140	188	189	59
3	752	303	888	263	698	547	150	217	1240	151	117	50
4	1280	292	869	253	758	464	142	192	1190	118	89	44
5	1440	279	735	252	796	413	135	174	1020	97	70	42
6	1480	264	593	266	766	382	133	172	770	90	59	38
7	1450	244	513	270	815	345	133	170	542	170	47	39
8	1350	241	606	247	1060	330	126	160	407	150	41	49
9	1190	241	756	237	1190	314	128	151	353	110	84	58
10	967	223	825	233	1130	272	125	144	307	88	95	49
11	705	212	764	225	992	250	193	136	272	126	66	48
12	514	207	631	217	903	240	333	135	258	194	49	46
13	425	186	466	215	857	231	317	138	231	187	40	42
14	392	178	405	243	782	236	339	130	199	266	40	38
15	364	194	370	398	677	239	769	149	174	216	38	35
16	328	188	351	617	519	220	950	143	152	265	32	44
17	304	189	333	604	465	201	949	133	136	241	28	64
18	274	189	342	529	420	197	821	338	124	159	27	67
19	252	215	341	445	370	227	650	1360	111	114	24	61
20	236	236	334	379	323	227	511	2490	103	91	23	51
21	233	263	318	320	308	213	428	3060	169	74	29	47
22	223	283	306	275	314	203	387	2840	242	64	34	48
23	218	288	311	240	311	193	441	2440	182	57	35	57
24	217	276	316	255	289	191	483	2020	142	50	28	49
25	261	253	322	260	282	195	429	1630	118	46	28	45
26	546	468	304	255	275	190	374	1340	115	44	66	41
27	652	950	282	250	270	181	339	1160	101	44	175	39
28	611	1050	273	252	283	175	308	960	85	41	226	36
29	538	996	270	268	---	170	286	696	80	38	144	56
30	463	864	272	315	---	172	264	513	141	39	103	82
31	397	---	260	390	---	164	---	520	---	91	86	---
TOTAL	18817	10458	14821	9507	16902	8368	10957	24173	10984	3810	2360	1495
MEAN	607	349	478	307	604	270	365	780	366	123	76.1	49.8
MAX	1480	1050	888	617	1190	564	950	3060	1240	266	248	82
MIN	217	178	260	215	270	164	125	130	80	38	23	35
CFSM	1.35	.78	1.06	.68	1.35	.60	.81	1.74	.82	.27	.17	.11
IN.	1.56	.87	1.23	.79	1.40	.69	.91	2.00	.91	.32	.20	.12

CAL YR 1986	TOTAL	163965	MEAN	449	MAX	2150	MIN	19	CFSM	1.00	IN.	13.58
WTR YR 1987	TOTAL	132652	MEAN	363	MAX	3060	MIN	23	CFSM	.81	IN.	10.99

05525000 IROQUOIS RIVER AT IROQUOIS, IL

LOCATION.--Lat 40°49'25", long 87°34'55", in SE¼ sec.15, T.27 N., R.11 W., Iroquois County, Hydrologic Unit 07120002, on left bank at upstream side of bridge on U.S. Highway 52 in Iroquois, 500 ft upstream from Penn Central bridge, 4.5 mi downstream from Indiana-Illinois State line, and at mile 50.4.

DRAINAGE AREA.--686 mi^2.

PERIOD OF RECORD.--October 1944 to current year.

GAGE.--Water-stage recorder. Datum of gage is 614.34 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 5, 1945, nonrecording gage at same site and datum.

REMARKS.--Estimated daily discharges: Jan. 9 to Feb. 22. Records good except for estimated daily discharges, which are poor. National Weather Service gage-height telemeter at station.

AVERAGE DISCHARGE.--43 years, 560 ft^3/s, 11.09 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 10,400 ft^3/s June 13, 1958, gage height, 26.31 ft; minimum, 5.2 ft^3/s Sept. 13, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,320 ft^3/s May 22, gage height, 17.38 ft; minimum, 34 ft^3/s Aug. 20.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	347	493	1150	339	600	476	218	375	1020	171	168	93
2	486	436	1090	336	700	672	213	348	1580	230	235	82
3	715	402	1180	327	800	748	207	327	1740	221	194	71
4	1700	377	1210	319	1000	686	196	298	1710	185	136	62
5	1800	355	1120	324	1200	608	190	268	1530	153	100	54
6	1920	338	973	323	1500	554	187	254	1240	128	80	51
7	1920	316	822	314	1700	507	186	247	905	123	69	49
8	1860	300	772	320	2000	473	184	238	650	177	62	72
9	1730	288	867	300	1900	452	179	225	530	175	64	73
10	1480	277	1020	300	1500	412	178	212	461	142	77	69
11	1160	261	1100	295	1300	369	225	202	407	114	93	62
12	836	250	1080	290	1200	344	428	195	370	143	78	58
13	696	236	935	330	1150	326	502	189	344	202	62	54
14	583	214	766	430	1100	322	532	190	311	234	52	50
15	512	200	645	550	1000	327	1020	185	275	284	48	47
16	460	217	579	700	800	314	1330	189	240	268	46	46
17	413	220	525	630	700	288	1400	183	213	297	43	49
18	378	219	471	600	600	275	1300	265	193	263	39	63
19	361	223	446	500	500	292	1090	1010	177	192	37	70
20	282	243	440	450	440	305	866	2180	163	143	35	68
21	261	267	436	400	440	301	707	2930	197	111	35	61
22	257	291	425	350	430	288	621	3280	291	92	37	56
23	250	314	407	340	428	274	616	3270	306	80	39	53
24	244	321	393	350	409	266	671	3030	251	64	42	58
25	259	306	391	350	387	268	652	2630	201	59	43	58
26	507	491	396	340	376	265	583	2220	170	54	53	54
27	803	1150	402	340	367	252	524	1790	157	50	83	50
28	844	1400	396	350	377	242	483	1440	139	50	177	47
29	772	1410	384	400	---	234	446	1110	121	52	208	47
30	671	1300	367	450	---	230	416	816	117	54	157	54
31	569	---	347	500	---	227	---	812	---	81	114	---
TOTAL	25076	13115	21535	12147	24904	11597	16350	30908	16009	4592	2706	1781
MEAN	809	437	695	392	889	374	545	997	534	148	87.3	59.4
MAX	1920	1410	1210	700	2000	748	1400	3280	1740	297	235	93
MIN	244	200	347	290	367	227	178	183	117	50	35	46
CFSM	1.18	.64	1.01	.57	1.30	.55	.79	1.45	.78	.22	.13	.09
IN.	1.36	.71	1.17	.66	1.35	.63	.89	1.68	.87	.25	.15	.10

CAL YR 1986	TOTAL	262986	MEAN	721	MAX	3670	MIN	28	CFSM	1.05	IN.	14.26
WTR YR 1987	TOTAL	180720	MEAN	495	MAX	3280	MIN	35	CFSM	.72	IN.	9.80

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: Oct. 4, Nov. 27, Dec. 11-14, and Jan. 19 to Feb. 21. Records good except for estimated daily discharges, which are fair. High flow occasionally in backwater from Little Calumet River.

AVERAGE DISCHARGE.--45 years, 62.5 ft^3/s, 12.00 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,670 ft^3/s Apr. 28, 1959; maximum gage height, 8.04 ft June 14, 1981; 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)
Oct. 3	1300	1,330	4.67	June 1	0100	1,340	4.69
Nov. 26	1900	1,160	4.22	Aug. 17	0100	*1,640	*5.46
May 18	1600	1,170	4.25	Aug. 26	1000	1,290	4.56

Minimum daily discharge, 8.8 ft^3/s Aug. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	18	91	19	35	109	22	30	727	56	41	49
2	22	17	113	20	50	116	20	43	406	35	22	40
3	645	17	114	20	70	73	19	68	536	26	16	34
4	460	16	76	19	76	55	17	50	245	20	13	30
5	214	17	51	18	66	47	17	37	130	18	11	25
6	114	16	43	18	56	42	17	32	83	30	10	22
7	73	16	70	20	60	38	17	29	61	197	9.6	25
8	52	16	169	20	60	36	16	26	53	77	10	21
9	38	14	207	18	50	32	17	23	43	52	15	19
10	30	14	133	19	43	28	16	21	34	55	9.8	18
11	26	14	50	22	40	25	59	24	54	71	9.2	17
12	26	13	36	22	37	24	60	24	74	38	8.8	32
13	24	12	30	22	35	24	39	20	41	27	49	19
14	20	12	29	31	32	25	253	23	32	25	83	17
15	17	11	29	53	27	26	583	21	27	40	40	19
16	15	11	29	60	25	25	350	18	23	23	85	40
17	13	12	31	49	23	23	189	44	21	18	528	62
18	13	34	32	40	22	28	119	255	20	15	94	47
19	12	31	30	30	21	34	87	576	18	13	48	34
20	12	36	27	26	20	31	69	450	29	13	32	25
21	11	44	25	22	20	27	56	169	46	14	135	23
22	11	47	23	20	20	24	113	129	36	14	159	84
23	10	71	23	18	22	23	293	82	27	12	66	42
24	14	74	22	17	22	24	146	64	22	12	42	31
25	44	52	22	16	19	28	85	58	53	12	58	24
26	43	694	20	15	19	24	63	87	31	13	936	20
27	40	710	20	14	18	24	51	70	23	30	594	17
28	32	317	19	14	44	21	44	49	18	12	235	16
29	26	177	19	15	---	21	39	38	47	12	142	40
30	22	111	21	20	---	21	34	106	52	13	93	19
31	20	---	20	25	---	20	---	152	---	41	68	---
TOTAL	2135	2644	1624	742	1032	1098	2910	2818	3012	1034	3662.4	911
MEAN	68.9	88.1	52.4	23.9	36.9	35.4	97.0	90.9	100	33.4	118	30.4
MAX	645	710	207	60	76	116	583	576	727	197	936	84
MIN	10	11	19	14	18	20	16	18	18	12	8.8	16
CFSM	.97	1.25	.74	.34	.52	.50	1.37	1.29	1.41	.47	1.67	.43
IN.	1.12	1.39	.85	.39	.54	.58	1.53	1.48	1.58	.54	1.93	.48

CAL YR 1986	TOTAL	20057.6	MEAN	55.0	MAX	710	MIN	4.3	CFSM	.78	IN.	10.55
WTR YR 1987	TOTAL	23622.4	MEAN	64.7	MAX	936	MIN	8.8	CFSM	.92	IN.	12.43

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. 14-24, Nov. 1-17, Dec. 10-14, Jan. 19-31, Feb. 9, Feb. 15-18, and Apr. 16-19. Records good except 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.--29 years, 74.1 ft^3/s, 11.18 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, 680 ft^3/s Aug. 17, gage height, 12.24 ft; minimum daily, 11 ft^3/s July 24-26, Aug. 6, 7, 11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	23	141	26	45	98	22	33	451	45	36	78
2	26	22	141	27	56	100	24	39	357	34	23	57
3	415	22	126	27	77	75	20	49	369	28	18	44
4	496	22	102	26	80	60	20	48	300	23	14	35
5	256	21	76	26	73	50	19	40	224	20	12	30
6	143	21	62	26	62	44	19	34	166	21	11	27
7	96	21	76	26	59	40	19	30	125	122	11	26
8	68	20	137	26	72	36	19	28	90	61	12	25
9	52	19	165	25	60	35	18	25	72	47	17	23
10	40	18	120	34	56	30	18	24	50	54	12	22
11	31	18	70	28	46	28	51	24	55	59	11	20
12	29	17	45	27	44	26	73	35	107	37	12	29
13	29	16	40	27	41	26	45	23	50	27	17	24
14	25	16	39	34	41	26	163	22	38	25	90	20
15	22	15	38	50	36	29	374	25	31	35	41	20
16	19	15	38	62	32	27	260	22	27	25	78	37
17	17	15	37	54	31	25	200	23	24	19	457	48
18	17	43	38	43	30	26	150	220	22	17	182	44
19	16	39	37	35	29	38	115	486	21	14	99	36
20	16	34	34	32	28	33	100	502	23	13	67	30
21	15	43	33	28	29	27	77	295	55	14	102	27
22	14	44	30	26	26	25	103	217	34	12	153	67
23	13	59	31	24	26	25	214	153	29	12	83	51
24	19	65	30	23	28	25	151	115	26	11	56	39
25	51	50	29	22	25	30	111	93	56	11	62	32
26	54	355	28	21	24	27	82	105	37	11	441	26
27	44	554	28	20	24	25	62	88	28	26	546	22
28	39	355	26	19	42	23	50	66	22	16	323	16
29	33	236	26	25	---	22	42	48	37	14	198	38
30	29	174	28	32	---	22	37	92	39	13	143	25
31	26	---	27	39	---	21	---	136	---	37	108	---
TOTAL	2195	2372	1878	940	1222	1124	2658	3140	2965	903	3435	1018
MEAN	70.8	79.1	60.6	30.3	43.6	36.3	88.6	101	98.8	29.1	111	33.9
MAX	496	554	165	62	80	100	374	502	451	122	546	78
MIN	13	15	26	19	24	21	18	22	21	11	11	16
CFSM	.79	.88	.67	.34	.48	.40	.98	1.12	1.10	.32	1.23	.38
IN.	.91	.98	.78	.39	.51	.46	1.10	1.30	1.23	.37	1.42	.42

CAL YR 1986	TOTAL	18318.3	MEAN	50.2	MAX	554	MIN	6.5	CFSM	.56	IN.	7.57
WTR YR 1987	TOTAL	23850	MEAN	65.3	MAX	554	MIN	11	CFSM	.73	IN.	9.86

05536275 THORN CREEK AT THORNTON, IL

LOCATION.--Lat 41°34'05", long 87°36'30", near center of N½ sec.34, T.36 N., R.14 E., Cook County, Hydrologic Unit 07120003, on right bank at downstream side of bridge on Margaret Street in Thornton, 1.0 mi downstream from North Creek, and at mile 4.2.

DRAINAGE AREA.--104 mi^2.

PERIOD OF RECORD.--May 1948 to current year. Prior to October 1974, records published with those for streams in the St. Lawrence River basin (WSP 1307, 1727, 1911, 2111, WDR IL 1971-74).

REVISED RECORDS.--WSP 1707: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 586.43 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 18, 1948, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records good. Some diurnal fluctuation caused by pumping operations above station. Figures of discharge include about 16 ft^3/s pumped from ground-water sources for municipal supply and an undetermined amount of ground-water pumpage for industrial use.

AVERAGE DISCHARGE.--39 years, 101 ft^3/s, 13.19 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,700 ft^3/s July 13, 1957, gage height, 16.00 ft; maximum gage height, 17.06 ft June 14, 1981; minimum daily discharge, 4.4 ft^3/s Sept. 11, 1949.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Apr. 5, 1947, reached a stage of 14.34 ft, from floodmark, discharge, 4,200 ft^3/s.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 3	2245	1,100	10.01	June 1	1015	1,100	9.99
Nov. 27	0230	1,200	10.50	Aug. 27	0015	*1,350	*11.19
May 19	1845	1,300	10.94				

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	153	46	153	43	85	269	33	43	914	77	118	67
2	79	48	221	42	128	188	35	81	523	52	54	65
3	641	41	197	43	200	117	32	95	688	40	41	50
4	845	39	140	41	177	85	31	93	353	37	37	43
5	298	37	105	41	141	71	30	66	146	35	34	43
6	137	36	89	42	112	56	31	53	95	39	31	40
7	83	36	152	37	113	51	30	47	76	431	32	41
8	64	43	330	35	138	47	29	39	64	153	35	36
9	57	42	327	34	102	43	28	41	61	100	42	40
10	48	36	198	39	87	41	29	39	46	266	32	31
11	46	36	112	44	76	43	110	40	47	365	30	29
12	47	37	84	44	74	42	104	144	172	169	31	44
13	45	33	60	46	69	41	66	51	68	90	29	37
14	41	30	56	60	68	44	329	43	49	73	93	31
15	39	30	56	100	62	41	720	50	40	108	50	28
16	37	34	58	108	52	37	458	43	40	74	81	71
17	37	33	55	88	50	38	248	41	41	53	592	86
18	37	79	62	72	46	44	165	239	44	45	218	67
19	38	112	57	64	45	74	127	956	40	41	77	52
20	35	90	55	57	47	50	93	871	78	36	52	41
21	34	116	50	51	48	45	80	382	269	44	329	33
22	33	107	45	50	47	40	140	202	99	34	374	36
23	32	150	47	47	49	35	342	146	59	31	128	36
24	41	143	49	43	47	36	216	106	45	32	66	31
25	134	108	47	40	45	44	109	90	122	34	94	30
26	153	676	46	38	45	39	78	182	99	32	834	29
27	94	1020	45	37	45	37	65	104	49	52	1050	27
28	63	505	44	37	68	35	57	73	39	38	438	27
29	52	251	44	51	---	31	52	58	86	36	227	35
30	47	183	45	87	---	34	47	139	97	47	146	28
31	41	---	42	70	---	34	---	227	---	220	99	---
TOTAL	3531	4177	3071	1631	2266	1832	3914	4784	4549	2884	5494	1254
MEAN	114	139	99.1	52.6	80.9	59.1	130	154	152	93.0	177	41.8
MAX	845	1020	330	108	200	269	720	956	914	431	1050	86
MIN	32	30	42	34	45	31	28	39	39	31	29	27
CFSM	1.10	1.34	.95	.51	.78	.57	1.25	1.48	1.46	.89	1.70	.40
IN.	1.26	1.49	1.10	.58	.81	.66	1.40	1.71	1.63	1.03	1.97	.45

CAL YR 1986	TOTAL	30735	MEAN	84.2	MAX	1020	MIN	20	CFSM	.81	IN.	10.99
WTR YR 1987	TOTAL	39387	MEAN	108	MAX	1050	MIN	27	CFSM	1.04	IN.	14.09

05536290 LITTLE CALUMET RIVER AT SOUTH HOLLAND, IL

LOCATION.--Lat 41°36'25", long 87°35'52", in NE¼SE¼ sec.15, T.36 N., R.14 E., Cook County, Hydrologic Unit 07120003, on left bank at downstream side of bridge on Cottage Grove Avenue in South Holland, 2.0 mi downstream from Thorn Creek, and at mile 23.0.

DRAINAGE AREA.--208 mi^2.

PERIOD OF RECORD.--October 1947 to current year. Prior to October 1974, records published with those for streams in the St. Lawrence River basin (WSP 1307, 1727, 1911, 2111, WDR IL 1971-74).

REVISED RECORDS.--WSP 1507: 1950, 1953. WDR IL-81-2: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 575.00 ft above National Geodetic Vertical Datum of 1929 (Illinois Department of Transportation bench mark). Prior to Oct. 27, 1947, nonrecording gage and Oct. 27, 1947, to Mar. 31, 1981, water-stage recorder at site 1.4 mi upstream at same datum. Apr. 1 to Nov. 8, 1981, nonrecording gage at same site and datum. Nov. 17, 1947, to Nov. 19, 1970, auxiliary water-stage recorder at Dixmoor, 4.7 mi downstream; prior to Nov. 17, 1947, nonrecording gage at the Dixmoor site read twice daily.

REMARKS.--Estimated daily discharges: Oct. 7 to Nov. 16 and Dec. 11-16. Records good except for estimated daily discharges, which are poor. Flow from upper Little Calumet River is diverted to Lake Michigan by Burns ditch. Calumet Sag Channel, 6.6 mi below station, diverts the entire flow to the Mississippi River basin.

AVERAGE DISCHARGE.--40 years, 185 ft^3/s, 12.08 in/yr.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,440 ft^3/s July 14, 1957, gage height, 20.11 ft, site then in use; maximum gage height, 20.20 ft June 14, 1981; minimum daily discharge, 7.9 ft^3/s Oct. 6, 1950.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Apr. 6, 1947, reached a stage of 19.24 ft, from floodmarks, discharge, 4,760 ft^3/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,950 ft^3/s May 19, gage height, 14.45 ft; minimum daily, 32 ft^3/s July 24.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	265	94	281	69	121	342	57	82	1240	140	257	178
2	140	100	328	70	168	294	62	106	1010	91	93	137
3	1120	87	306	69	235	204	54	141	1040	64	63	108
4	1540	81	237	70	229	157	50	159	726	52	50	87
5	719	75	152	69	195	131	48	115	401	45	41	77
6	332	70	124	66	159	113	47	95	268	52	39	74
7	206	71	167	66	147	100	48	82	204	564	38	71
8	144	88	376	56	174	92	46	74	153	310	43	73
9	120	86	485	57	147	84	44	67	134	163	62	71
10	100	73	351	61	129	77	45	67	95	400	47	62
11	93	75	170	73	110	76	170	92	106	559	40	58
12	97	77	130	72	104	73	246	247	347	259	41	79
13	93	70	110	74	99	70	128	97	119	118	41	90
14	88	64	102	91	96	73	457	76	79	85	265	65
15	84	63	100	148	90	76	1130	85	61	128	156	61
16	76	70	98	168	73	69	798	76	55	104	198	111
17	77	68	101	147	74	65	503	77	54	58	1270	173
18	78	109	101	119	66	71	357	552	57	45	612	165
19	80	122	100	112	62	116	273	1660	63	38	257	118
20	74	100	104	100	62	91	209	1730	155	33	156	96
21	71	117	98	85	65	79	170	892	422	48	418	82
22	70	110	86	84	63	72	224	475	195	35	705	116
23	67	148	81	78	62	65	517	323	103	34	282	129
24	81	173	62	76	64	63	409	234	76	32	154	102
25	205	144	61	66	59	77	243	192	190	36	155	89
26	230	897	63	61	57	72	177	294	221	37	1230	81
27	180	1620	73	61	57	68	139	206	80	82	1810	75
28	130	1010	68	64	90	64	117	146	56	79	995	66
29	108	503	71	73	---	57	103	107	84	41	484	98
30	97	344	70	160	---	57	94	178	140	62	335	88
31	86	---	71	126	---	58	---	448	---	308	246	---
TOTAL	6851	6709	4727	2691	3057	3106	6965	9175	7934	4102	10583	2880
MEAN	221	224	152	86.8	109	100	232	296	264	132	341	96.0
MAX	1540	1620	485	168	235	342	1130	1730	1240	564	1810	178
MIN	67	63	61	56	57	57	44	67	54	32	38	58
CFSM	1.06	1.08	.73	.42	.52	.48	1.12	1.42	1.27	.63	1.64	.46
IN.	1.23	1.20	.85	.48	.55	.56	1.25	1.64	1.42	.73	1.89	.52

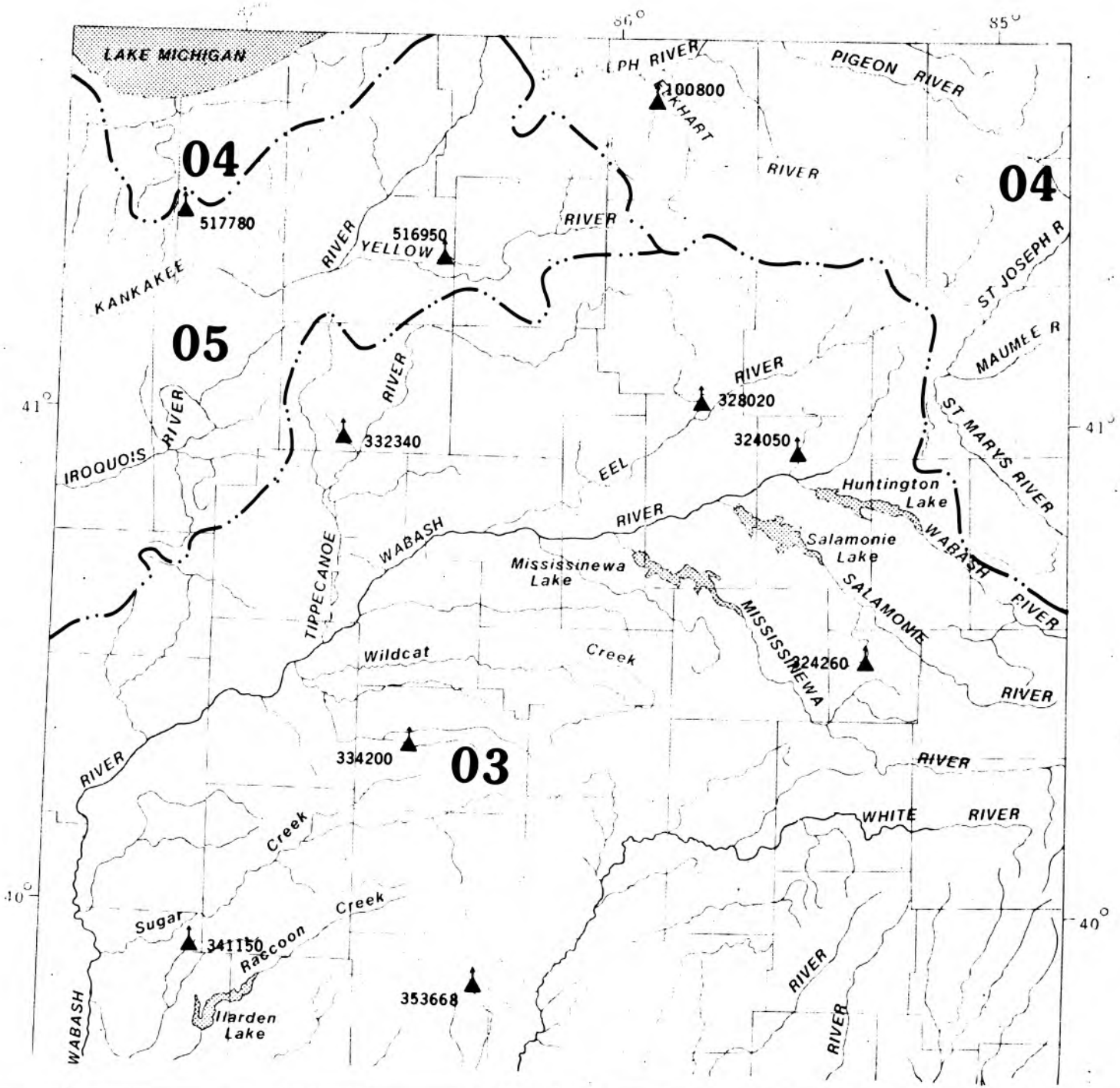
CAL YR 1986	TOTAL	53923	MEAN	148	MAX	1620	MIN	32	CFSM	.71	IN.	9.64
WTR YR 1987	TOTAL	68780	MEAN	188	MAX	1810	MIN	32	CFSM	.90	IN.	12.30

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
03323000	Wabash River at Bluffton	Wells	532	1931-71[b]
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
03334000	Wildcat Creek at Owasco	Carroll	396	1944-73[a]
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]
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
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
03357000	White River at Spencer	Owen	2,988	1925-71[d]
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
	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 Ft. 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 discontinuing of station for stream-gaging records.


LAKE MICHIGAN
04
517780
516950
YELLOW RIVER
KANKAKEE RIVER
05
IROQUOIS RIVER
332340
TIPPECANOE RIVER
WABASH RIVER
Mississinewa Lake
Wildcat Creek
334200
03
Sugar Creek
341150
Raccoon Creek
Harden Lake
353668
WABASH RIVER
LPH RIVER
100800
ELKHART RIVER
PIGEON RIVER
04
ST JOSEPH R
MAUMEE R
328020
324050
EEL RIVER
Huntington Lake
ST MARYS RIVER
Salamonie Lake
WABASH RIVER
SALAMONIE RIVER
MISSISSINEWA
324260
WHITE RIVER
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85°
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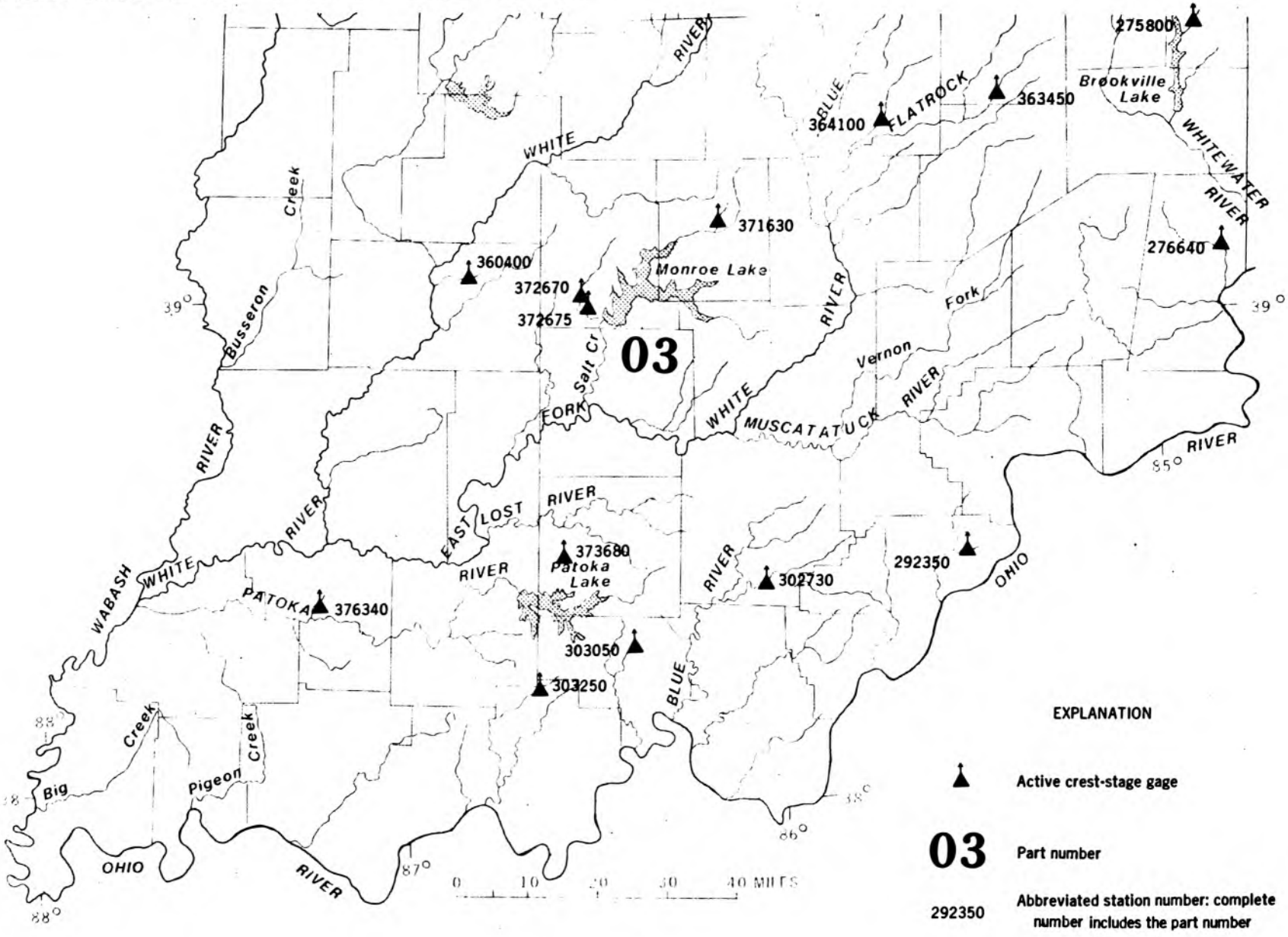


Figure 7.– Locations of crest-stage partial-record stations in Indiana.

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or flood-flow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Crest-stage partial-record stations

The following table contains annual maximum discharges for crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower floods may have been obtained but is not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

Station number	Station name	Location	Drainage area (mi^2)	Period of record	Annual maximum		
					Date	Gage height (ft)	Discharge (ft^3/s)
		OHIO RIVER BASIN					
		Great Miami River basin					
03275800	West Run near Liberty, IN	Lat 39°38'24", long 84°57'18", in SE¼SE¼SW¼ sec.2, T.14 N., R.2 W., Union County, at culvert on State Highway 44, 4.8 miles east of Fayette-Union County Line, 1.1 miles west of Liberty.	0.26	1973-	11-26-86	5.47	34
		Tanners Creek basin					
03276640	Tanners Creek tributary near Lawrenceburg, IN	Lat 39°09'18", long 84°52'20", in NW¼SW¼NE¼ sec.27, T.6 N., R.1 W., Dearborn County, at culvert on State Highway 1, 0.25 mile east of Salt Fork Road.	.19	1973-	11-26-86	11.74	80
		Fourteenmile Creek basin					
03292350	Flag Run tributary near New Washington, IN	Lat 38°31'08", long 85°32'29", in NW¼NW¼NE¼ sec.20, T.1 N., R.9 E., Clark County, at culvert on State Highway 62, 3.0 miles south of New Washington.	.16	1973-	07-01-87	5.72	12
		Blue River basin					
03302730	South Fork Blue River near Palmyra, IN	Lat 38°28'07", long 86°04'55", in NE¼NW¼ sec.4, T. 15 N., R.4 E., Washington County, at bridge on Old Palmyra Road, 0.2 mile north of State Highway 135 and 4.7 miles north of the intersection of U.S. Highway 150 and State Highway 135 in Palmyra.	64.3	1974-	03-01-87	15.24	1,500
		Little Blue River basin					
03303050	Bird Hollow Creek at English, IN	Lat 38°21'02", long 86°28'01", in SE¼NE¼NW¼ sec.13, T.2 S., R.1 W., Crawford County, at bridge on State Highway 37, 0.7 mile north of State Highway 64.	9.31	1974-	07-13-87	13.89	2,220
		Anderson River basin					
03303250	Sigler Creek tributary at Uniontown, IN	Lat 38°13'21", long 86°41'50", in NW¼SW¼SW¼ sec.25, T.3 S., R.3 W., Perry County, at culvert on State Highway 145, 0.1 mile south of State Highway 62 and U.S. Highway 460.	.15	1973-	07-13-87	8.11	96
		Wabash River basin					
03324050	Clear Creek near Huntington, IN	Lat 40°54'57", long 85°32'42", in SE¼NE¼NW¼ sec.5, T.28 N., R.9 E., Huntington County, at bridge on State Highway 16, 0.8 mile west of State Highway 5, and 3.4 miles northwest of Huntington.	49[a]	1974-	No marks all year		<800

Crest-stage partial-record stations--Continued

Station number	Station name	Location	Drainage area (mi^2)	Period of record	Annual maximum Date	Gage height (ft)	Discharge (ft^3/s)
		OHIO RIVER BASIN--Continued					
		Wabash River basin--Continued					
03324260	Salamonie River tributary near Montpelier, IN	Lat 40°33'06", long 85°19'25", in NW¼NW¼NE¼ sec.7, T.24 N., R.11 E., Blackford County, at culvert on State Highway 18, 2.5 miles east of State Highway 3.	0.86	1973-	No marks all year		<15
03328020	Otter Creek tributary near North Manchester, IN	Lat 40°59'59", long 85°49'37", in SW¼SE¼SW¼ sec.35, T.30 N., R.6 E., Wabash County, at culvert on State Highway 114, 1.7 miles west of State Highway 13.	.92	1973-	08-26-87	5.75	70
03332340	Weltzin ditch tributary near Francesville, IN	Lat 40°48'00", long 86°46'33", in SW¼NW¼NW¼ sec.16, T.29 N., R.3 W., Pulaski County, at culvert on State Highway 39, 6.1 miles south of State Highway 14.	.50	1973-	05-19-87	5.86	18
03334200	Prairie Creek tributary near Frankfort, IN	Lat 40°15'14", long 86°30'36", in NW¼SE¼NE¼ sec.22, T.21 N., R.1W., Clinton County, at culvert on State Highways 38 and 39, 1.8 miles south of State Highway 28 in Frankfort.	2.61	1973-	05-19-87	7.23	70
03341150	Demeree Creek tributary near Byron, IN	Lat 39°52'39", long 87°05'56", in NW¼SW¼NE¼ sec.33, T.17 N., R.6 W., Parke County, at culvert on State Highway 47, 0.5 mile west of Montgomery County Line.	.15	1973-	06-03-87	6.34	25
03353668	White Lick Creek tributary near Brownsburg, IN	Lat 39°53'54", long 86°23'34", in SE¼NE¼SE¼ sec.22, T.17 N., R.1 E., Hendricks County, at culvert on State Highway 267, 4.0 miles north of U.S. Highway 136 in Brownsburg.	.31	1973-	07-01-87	6.13	74
03360400	Doans Creek tributary near Doans, IN	Lat 38°55'12", long 86°50'54", in SW¼SW¼SW¼ sec.27, T.6 N., R.4 W., Greene County, at culvert on State Highway 58 at Doans.	.20	1973-	07-04-87	6.11	43
03363450	Little Flatrock River at Milroy, IN	Lat 39°29'49", long 85°28'24", in NE¼NW¼ sec.13, T.12 N., R.9 E., Rush County, at bridge on State Highway 244, 800 ft east of State Highway 3, and at west edge of Milroy.	34.8	1974-	08-03-87	10.10	660
03364100	Tough Creek near Norristown, IN	Lat 39°22'19", long 85°45'38", in SW¼SW¼NW¼ sec.28, T.11 N., R.7 E., Shelby County, at culvert on county road, 0.5 mile north of Norristown.	1.46	1973-	06-03-87	5.68	33
03371630	North Fork Salt Creek tributary near Nashville, IN	Lat 39°11'38", long 86°12'11", in NE¼NE¼NW¼ sec.28, T.9 N., R.3 E., Brown County, at culvert on State Highway 46, 2.6 miles east of State Highway 135 in Nashville.	.22	1973-	04-14-87	6.49	20
03372670	Jackson Creek near Bloomington, IN	Lat 39°07'17", long 86°30'50", in SW¼SW¼ sec.15, T.8 N., R.1 W., Monroe County, at bridge on Rhorer Road 0.95 mile east of State Highway 37 on the south side of Bloomington.	4.66	1974-	03-01-87	5.30	1,450
03373680	French Lick Creek tributary near French Lick, IN	Lat 38°30'08", long 86°36'20", in SW¼NW¼SW¼ sec.23, T.1 N., R.2 W., Orange County, at culvert on State Highway 145, 4.3 miles south of intersection of State Highways 145 and 56 in French Lick.	.29	1973-	No marks all year		<30

Crest-stage partial-record stations--Continued

Station number	Station name	Location	Drainage area (mi^2)	Period of record	Annual maximum Date	Gage height (ft)	Discharge (ft^3/s)
		OHIO RIVER BASIN--Continued					
		Wabash River basin--Continued					
03376340	Patoka River tributary near Glezen, IN	Lat 38°23'41", long 87°19'05", in NE¼SE¼SE¼ sec.29, T.1 S., R.8 W., Pike County, at culvert on State Highway 57, 7.9 miles south of intersection of State Highways 61, 56, and 57 in Petersburg.	0.84	1973-	03-01-87	7.09	110
		STREAMS TRIBUTARY TO LAKE MICHIGAN					
		St. Joseph River basin					
04100800	Yellow Creek at Dunlap, IN	Lat 41°38'44", long 85°56'00", in NE¼NE¼ sec.27, T.37 N., R.5 E., Elkhart County, at bridge on U.S. Highway 33, at northwest edge of Dunlap.	33[a]	1974	10-03-86	11.55	435
		UPPER MISSISSIPPI RIVER BASIN					
		Illinois River basin					
05516950	Eagle Creek near Grovertown, IN	Lat 41°18'44", long 86°31'27", in NE¼SE¼NE¼ sec.16, T.33 N., R.1 W., Starke County, at bridge on State Highway 23, 0.3 mile south of County Road 100 north, and 5.2 miles south of U.S. Highway 30 in Grovertown.	32[a]	1973-	11-29-86	9.00	134
05517780	Cobb ditch near Valparaiso, IN	Lat 41°24'41", long 87°08'08", in NE¼NE¼SW¼ sec.8, T.34 N., R.6 W., Porter County, at culvert on State Highway 2, 5.7 miles southwest of Valparaiso.	.39	1973-	05-19-87	10.03	92

[a]About.

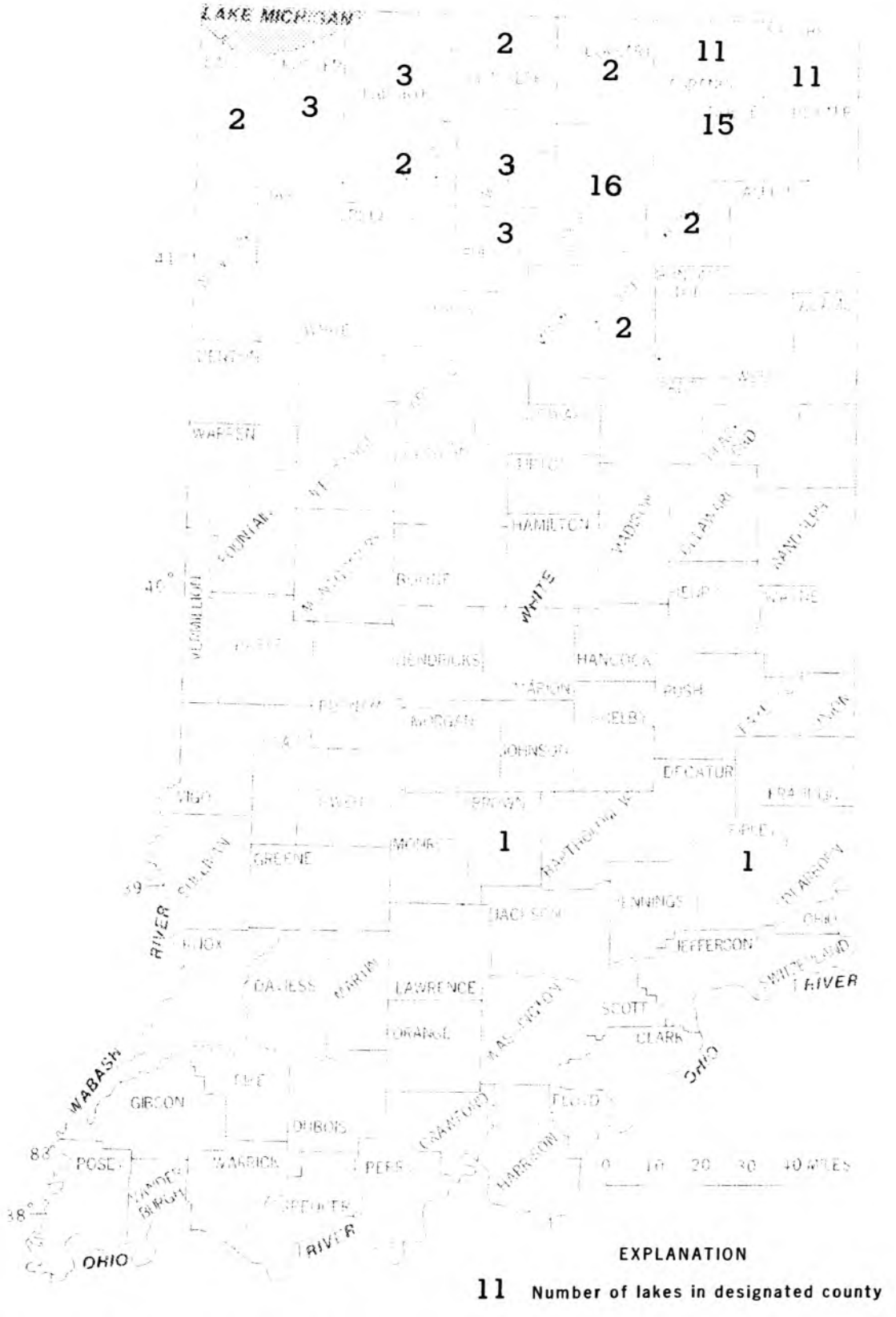


Figure 8.-- Number of lakes by county having 1987 water-level records.

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.

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.--3.69 ft gage datum or 953.59 ft above National Geodetic Vertical Datum of 1929 as decreed on Dec. 17, 1949, by the Lagrange County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete dam with a fixed crest "V" notch weir.

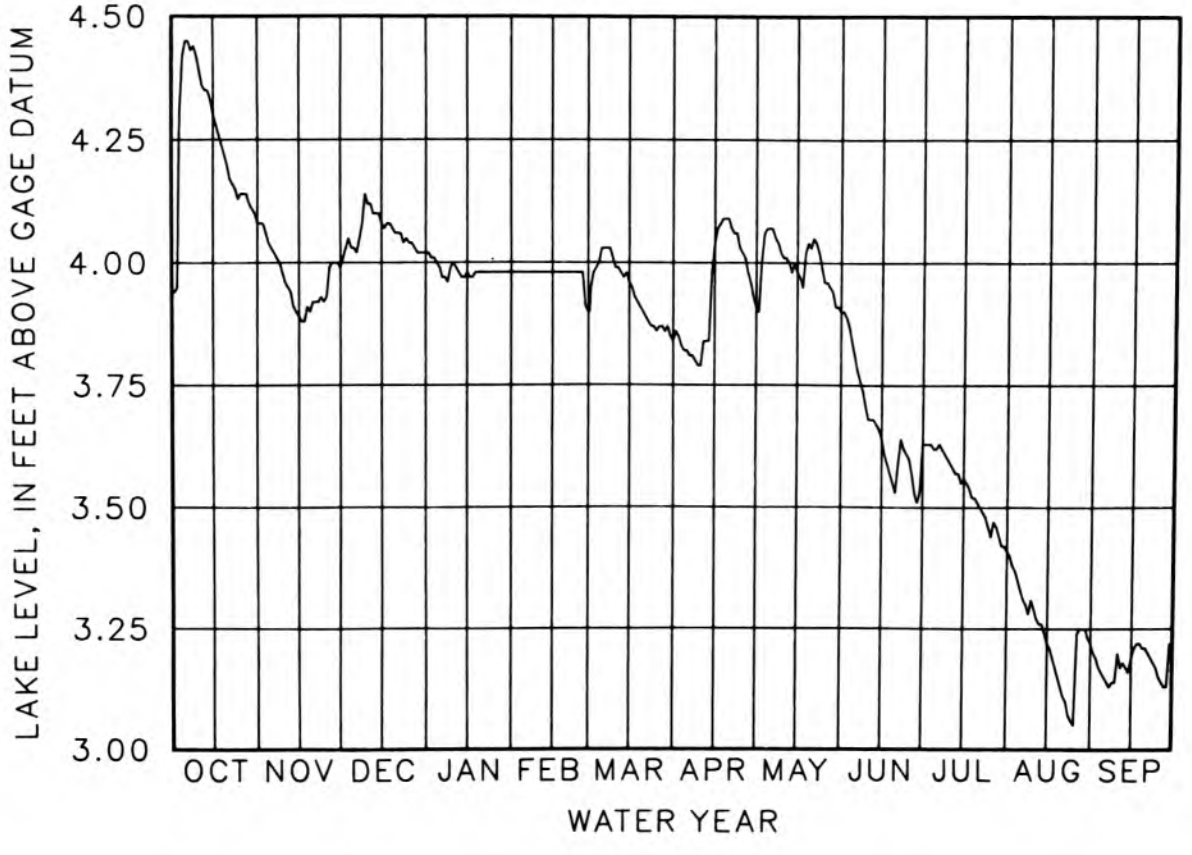
INLET AND OUTLET.--One inlet enters on the east side from Blackman Lake 2.3 mi upstream. The other inlet enters on the northeastern shore from Eve Lake. The outlet flows from the lake on the southern shore and into Little Elkhart Creek 1.7 mi downstream.

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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.45	4.03	4.03	3.99	3.98	4.03	3.82	4.07	3.81	3.62	3.33	3.15
10	4.39	3.96	4.12	4.00	3.98	3.99	3.79	4.01	3.68	3.59	3.29	3.20
15	4.30	3.89	4.08	3.98	3.98	3.96	4.04	3.98	3.64	3.56	3.22	3.19
20	4.20	3.92	4.06	3.98	3.98	3.90	4.09	4.03	3.53	3.51	3.13	3.21
25	4.14	3.93	4.04	3.98	3.98	3.86	4.02	3.96	3.60	3.44	3.05	3.15
EOM	4.08	3.99	4.02	3.98	3.90	3.84	3.91	3.90	3.63	3.41	3.22	3.21

WTR YR 1987 MEAN 3.81 HIGH 4.45 OCT 5 AND OTHERS LOW 3.05 AUG 25



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.

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.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete sill with movable boards.

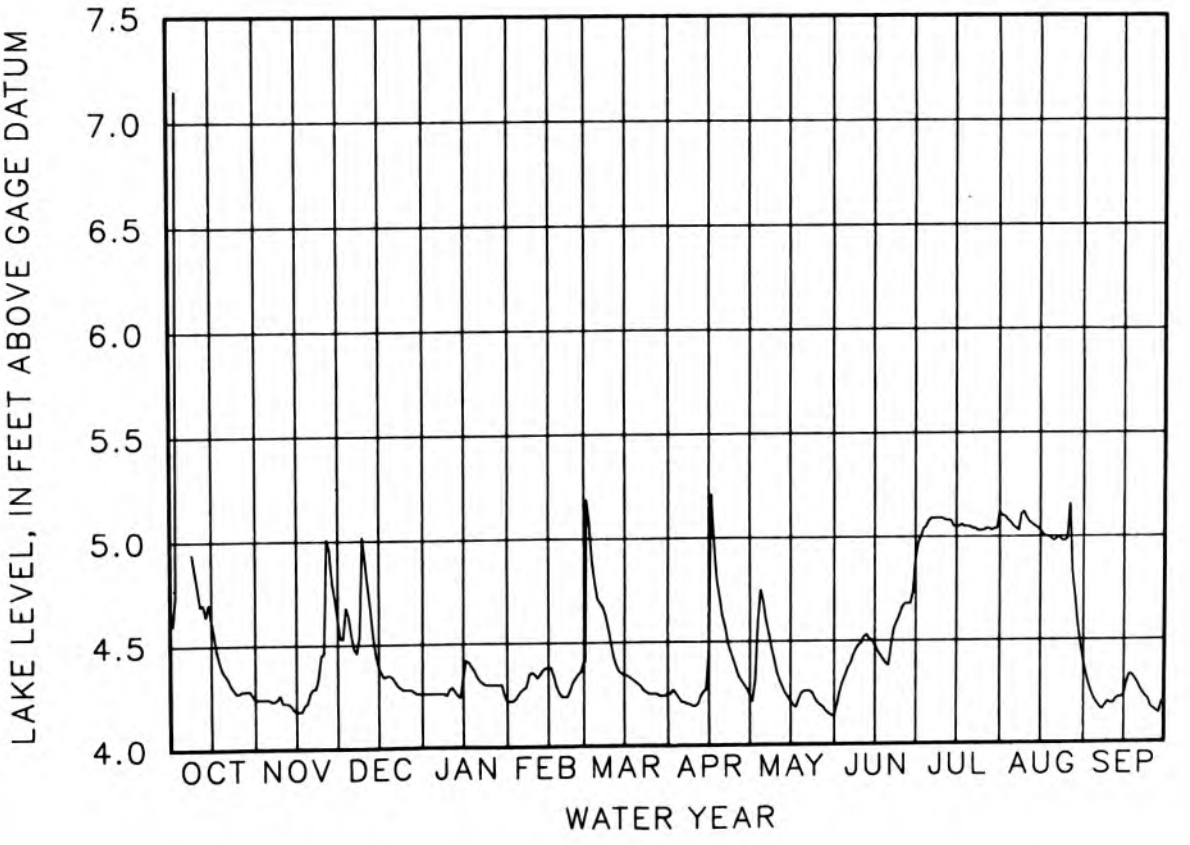
INLET AND OUTLET.--Fish Creek flows through the lake, entering at the western end and leaving at the northeastern end. Fish Creek empties into the St. Joseph River.

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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	4.24	4.55	4.26	4.27	4.71	4.21	4.69	4.37	5.08	5.05	4.19
10	4.78	4.22	4.90	4.28	4.35	4.50	4.19	4.35	4.49	5.09	5.09	4.19
15	4.62	4.18	4.39	4.34	4.38	4.34	4.46	4.21	4.48	5.05	5.03	4.23
20	4.36	4.27	4.34	4.34	4.24	4.30	4.62	4.26	4.38	5.05	4.98	4.29
25	4.27	4.46	4.28	4.30	4.33	4.25	4.37	4.20	4.66	5.03	4.99	4.17
EOM	4.24	4.62	4.26	4.22	4.41	4.25	4.24	4.14	4.89	5.12	4.39	4.21

WTR YR 1987 MEAN 4.49 HIGH 7.15 OCT 3 LOW 4.14 MAY 30 AND OTHERS



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.--700.00 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 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 Aug. 10, 1948, by the Starke County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a steel sheet piling dam.

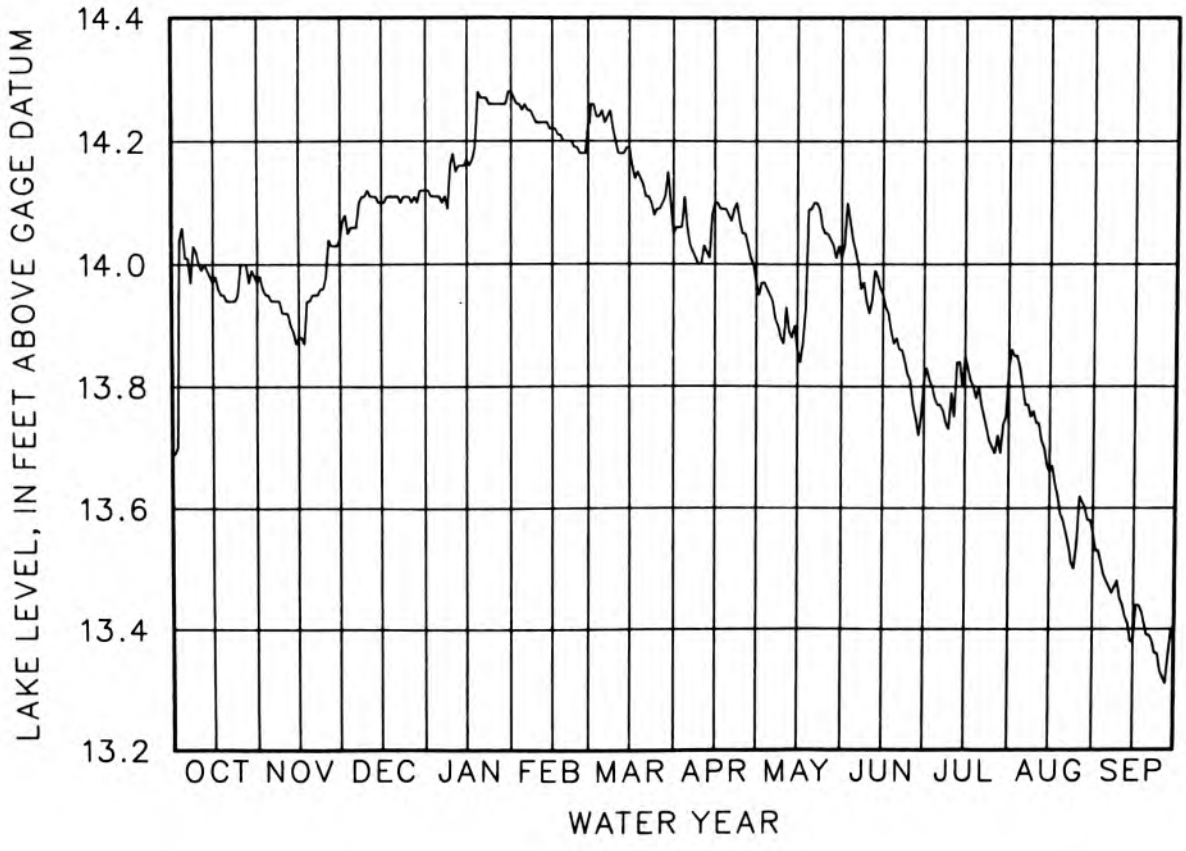
INLET AND OUTLET.--Several small unnamed ditches enter the lake at various locations. The outlet flows from the western shore, into Cedar Lake ditch, and eventually into the Kankakee River.

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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	14.01	13.94	14.06	14.11	14.26	14.25	14.06	13.95	14.02	13.77	13.80	13.48
10	14.00	13.92	14.12	14.18	14.23	14.20	14.00	13.87	13.92	13.79	13.74	13.45
15	13.97	13.88	14.10	14.17	14.22	14.19	14.10	13.86	13.95	13.85	13.66	13.38
20	13.94	13.95	14.11	14.27	14.20	14.13	14.08	14.09	13.88	13.80	13.58	13.39
25	14.00	13.98	14.11	14.26	14.18	14.09	14.05	14.05	13.81	13.70	13.54	13.33
EOM	13.97	14.04	14.12	14.28	14.23	14.05	13.97	14.01	13.81	13.83	13.56	13.38

WTR YR 1987 MEAN 13.95 HIGH 14.28 JAN 19 AND OTHERS LOW 13.31 SEP 27



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.

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.--4.70 ft gage datum or 894.60 ft above National Geodetic Vertical Datum of 1929.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a steel sheet piling dam.

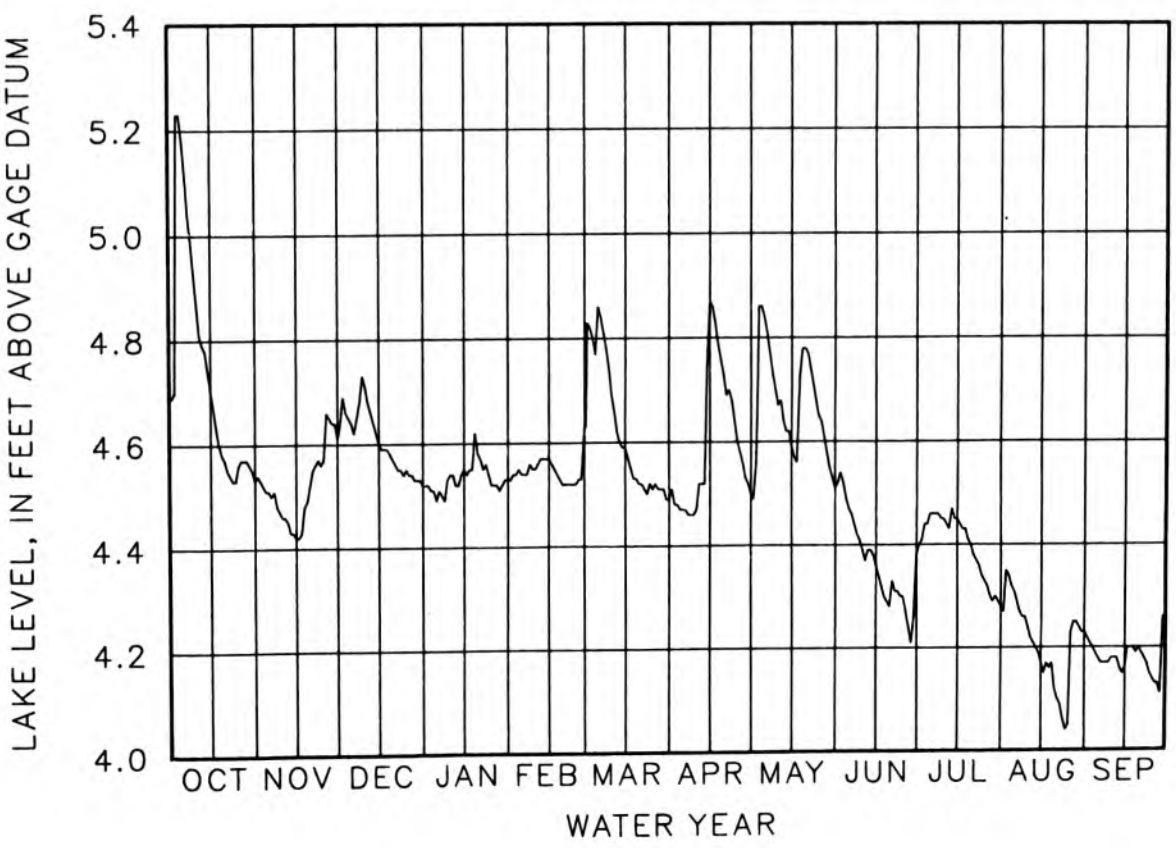
INLET AND OUTLET.--There are two inlets to the lake, one enters on the southwest shore from High Lake, 0.6 mi upstream, and the other enters from the northeast. The outlet, Carrol Creek, leaves the lake on the southeast tip, flows into Muncie Lake, 3.1 mi downstream, and eventually into the Elkhart River.

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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.18	4.51	4.64	4.49	4.54	4.86	4.47	4.84	4.47	4.46	4.31	4.18
10	4.87	4.46	4.71	4.54	4.55	4.69	4.47	4.67	4.39	4.45	4.24	4.18
15	4.70	4.42	4.60	4.55	4.57	4.59	4.87	4.59	4.36	4.45	4.17	4.16
20	4.57	4.52	4.57	4.58	4.52	4.52	4.73	4.78	4.28	4.40	4.12	4.20
25	4.56	4.57	4.55	4.52	4.52	4.51	4.60	4.65	4.30	4.33	4.05	4.14
EOM	4.53	4.61	4.52	4.53	4.63	4.49	4.50	4.51	4.38	4.28	4.23	4.25

WTR YR 1987 MEAN 4.50 HIGH 5.23 OCT 3 AND OTHERS LOW 4.04 AUG 24



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 Oct. 18, 1949, by the Kosciusko County Circuit Court. Little Chapman 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 concrete dam with a fixed crest at the outlet channel downstream from Little Chapman Lake.

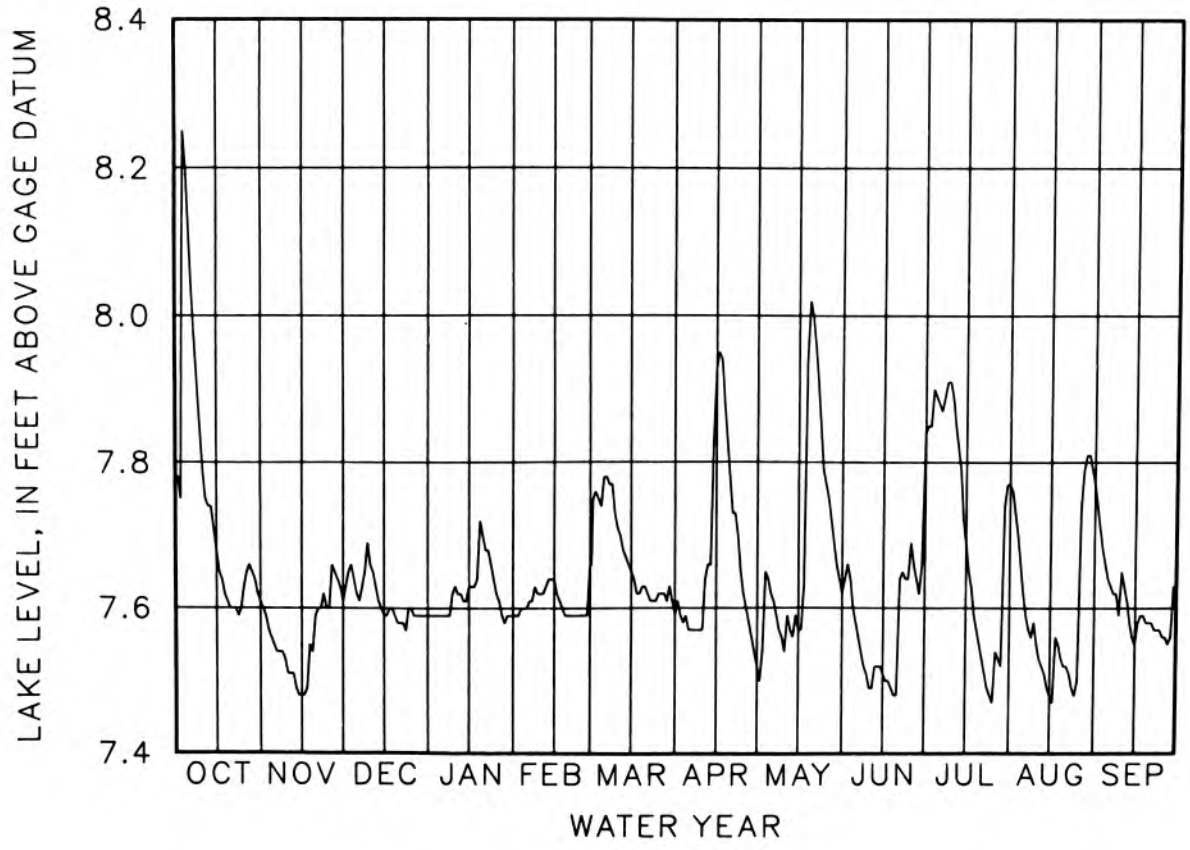
INLET AND OUTLET.--Several small ditches enter the lake at various points. The outlet flows into Little Chapman Lake to the south, then into Deeds Creek, and eventually into the Tippecanoe River.

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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.12	7.55	7.62	7.59	7.60	7.78	7.57	7.62	7.58	7.88	7.62	7.64
10	7.79	7.51	7.66	7.63	7.62	7.71	7.57	7.54	7.49	7.89	7.55	7.65
15	7.68	7.48	7.59	7.63	7.64	7.65	7.93	7.57	7.51	7.69	7.48	7.55
20	7.60	7.59	7.58	7.70	7.59	7.63	7.78	8.00	7.48	7.55	7.52	7.58
25	7.63	7.60	7.60	7.62	7.59	7.62	7.62	7.77	7.69	7.47	7.50	7.56
EOM	7.61	7.61	7.59	7.59	7.66	7.59	7.52	7.62	7.84	7.77	7.77	7.63

WTR YR 1987 MEAN 7.64 HIGH 8.25 OCT 3 LOW 7.47 JUL 25 AND OTHERS



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.

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.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a steel sheet piling dam with a fixed crest.

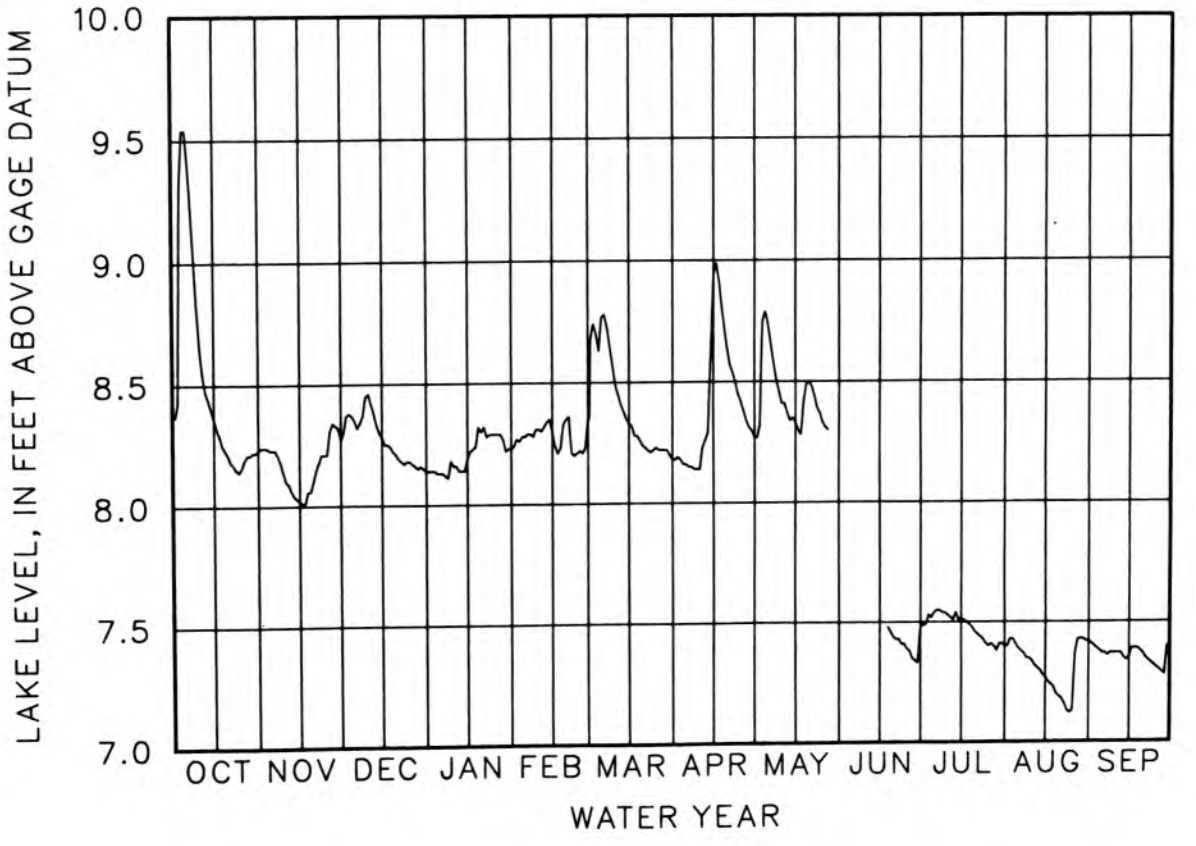
INLET AND OUTLET.--The main inlet enters from Crooked Lake to the east. Three other inlets flow from Crane Lake to the east, Green Lake to the north, and Sell Brook to the south. The outlet leaves the lake at the extreme west end and forms the headwaters of the Tippecanoe River.

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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.54	8.23	8.35	8.13	8.28	8.77	8.16	8.74	---	7.54	7.39	7.37
10	8.65	8.10	8.46	8.16	8.31	8.49	8.14	8.41	---	7.53	7.34	7.37
15	8.36	8.02	8.28	8.19	8.30	8.33	8.94	8.33	---	7.51	7.27	7.35
20	8.21	8.10	8.21	8.30	8.35	8.24	8.64	8.50	7.44	7.46	7.19	7.37
25	8.16	8.21	8.18	8.29	8.22	8.23	8.42	8.33	7.39	7.40	7.13	7.31
EOM	8.23	8.27	8.14	8.23	8.35	8.18	8.27	---	7.48	7.40	7.42	7.40

WTR YR 1987 MEAN 8.05 HIGH 9.54 OCT 4 AND OTHERS LOW 7.12 AUG 24



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.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete dam with a fixed sill and removable boards.

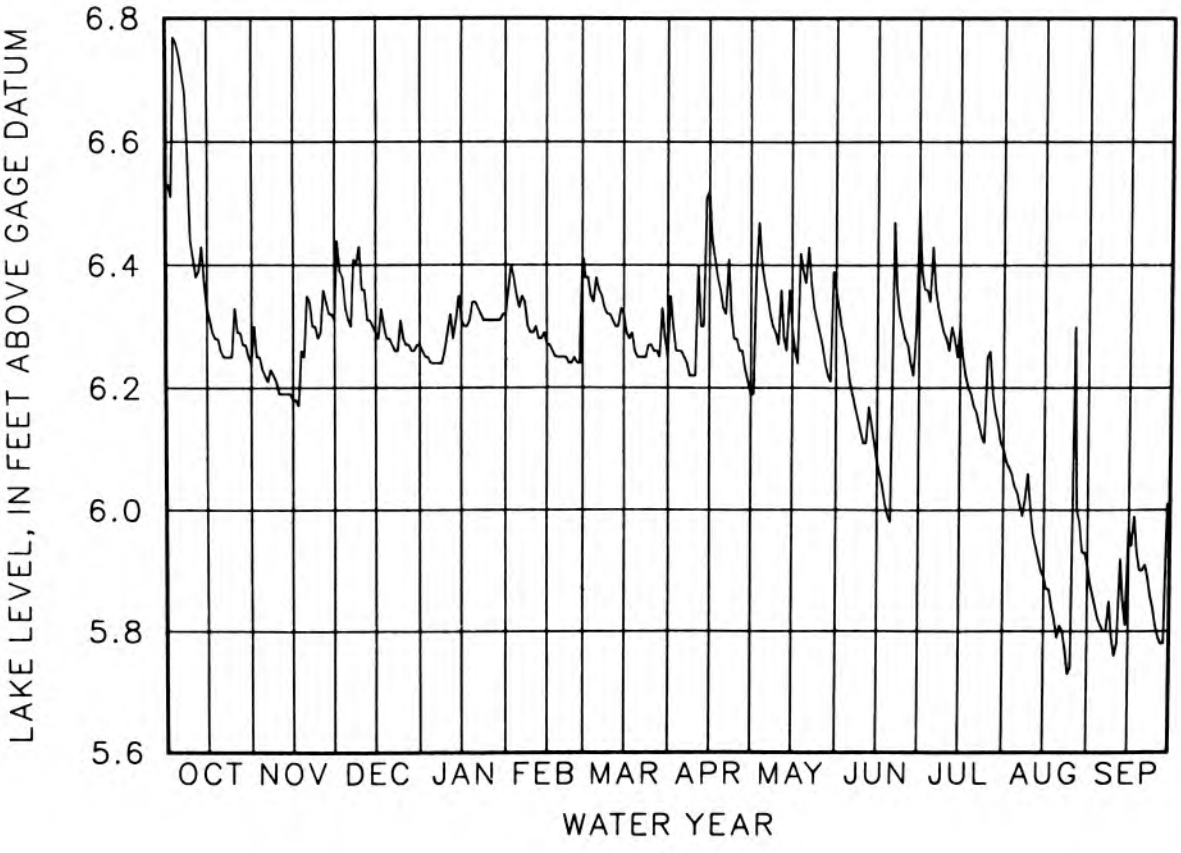
INLET AND OUTLET.--The one inlet is a small ditch that enters at the extreme western tip. The outlet flows from the extreme northern tip, northeastward to Mud and Little Turkey Lakes, thence to Turkey Creek.

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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.74	6.22	6.31	6.24	6.33	6.38	6.26	6.37	6.21	6.43	6.03	5.81
10	6.41	6.19	6.36	6.29	6.29	6.32	6.22	6.27	6.11	6.28	6.00	5.76
15	6.33	6.18	6.29	6.31	6.27	6.32	6.52	6.30	6.08	6.30	5.89	5.97
20	6.26	6.35	6.28	6.34	6.25	6.25	6.33	6.37	5.98	6.17	5.79	5.90
25	6.33	6.29	6.28	6.31	6.25	6.27	6.28	6.29	6.28	6.25	5.74	5.81
EOM	6.24	6.31	6.27	6.32	6.41	6.25	6.19	6.36	6.49	6.10	5.91	5.95

WTR YR 1987 MEAN 6.23 HIGH 6.77 OCT 3 LOW 5.73 AUG 24



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.

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.--3.55 ft gage datum or 963.65 ft above National Geodetic Vertical Datum of 1929 as decreed on Apr. 25, 1952, by the Noble County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a fixed deep-notch concrete dam with two flood gates.

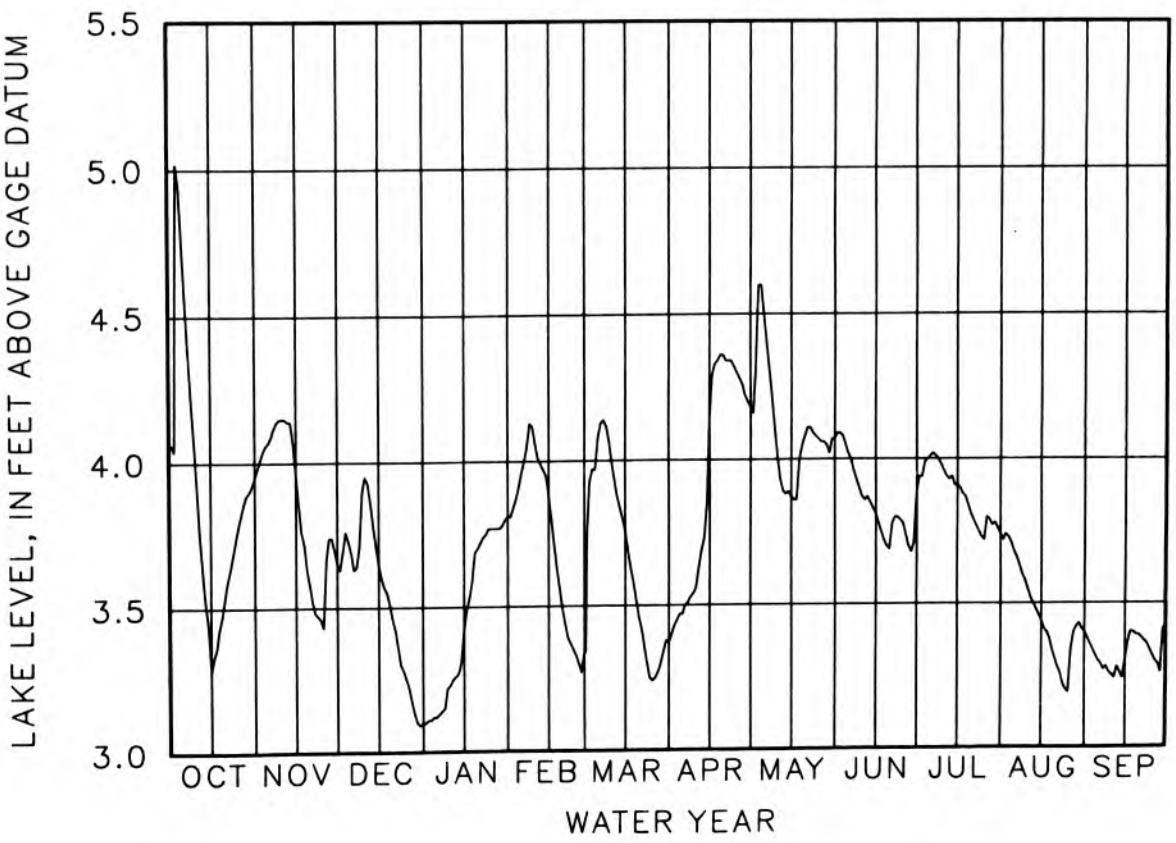
INLET AND OUTLET.--Riddle ditch enters the lake from the north, Sherman ditch from the from the east, Shaffer ditch from the southeast, and an unnamed ditch from the southwest. The outlet leaves at the southwest corner and flows into Henderson Lake 1.9 mi downstream.

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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.76	4.07	3.69	3.12	3.96	4.08	3.47	4.50	4.02	4.01	3.68	3.30
10	3.93	4.15	3.95	3.23	4.06	4.00	3.56	4.00	3.87	3.96	3.55	3.25
15	3.28	3.96	3.65	3.42	3.88	3.76	4.14	3.87	3.81	3.91	3.44	3.30
20	3.53	3.58	3.46	3.70	3.49	3.46	4.36	4.08	3.69	3.81	3.31	3.39
25	3.78	3.43	3.25	3.77	3.33	3.24	4.30	4.07	3.78	3.72	3.19	3.32
EOM	3.95	3.65	3.10	3.81	3.34	3.37	4.18	4.07	3.89	3.74	3.40	3.42

WTR YR 1987 MEAN 3.73 HIGH 5.02 OCT 3 LOW 3.09 DEC 30



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 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 feet downstream from the lake.

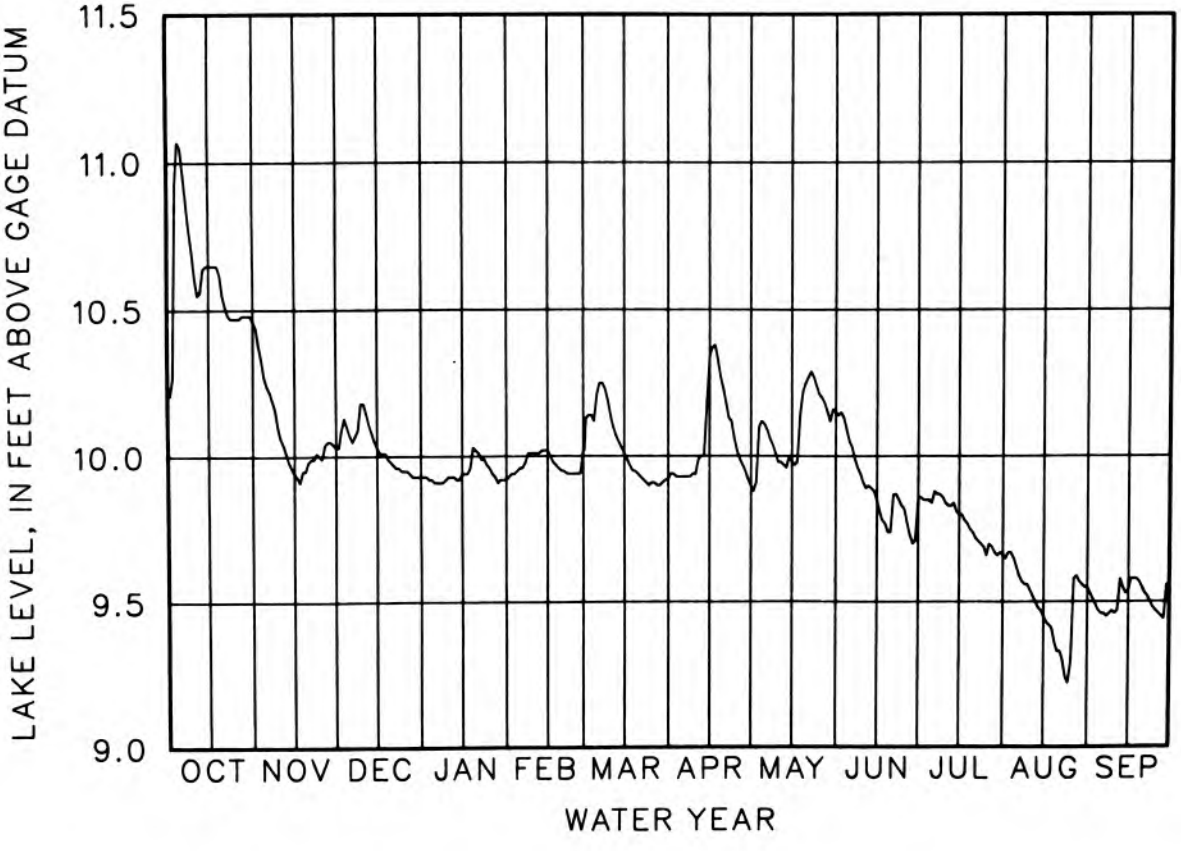
INLET AND OUTLET.--Maloney ditch enters at the eastern tip of the lake. The outlet flows from the lake at the northwest end and joins Carter Creek (Blue River) 0.2 mi downstream. Carter Creek eventually flows into Eel River.

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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	11.05	10.24	10.07	9.91	9.96	10.21	9.93	10.11	10.05	9.84	9.62	9.46
10	10.61	10.06	10.18	9.93	10.01	10.14	9.94	9.98	9.91	9.84	9.54	9.46
15	10.65	9.94	10.03	9.94	10.02	10.01	10.34	9.98	9.85	9.80	9.45	9.54
20	10.55	9.98	9.98	10.02	9.95	9.94	10.23	10.25	9.74	9.74	9.33	9.55
25	10.47	9.99	9.95	9.96	9.94	9.91	10.02	10.21	9.82	9.66	9.29	9.47
EOM	10.46	10.03	9.93	9.92	10.02	9.92	9.90	10.15	9.86	9.66	9.55	9.53

WTR YR 1987 MEAN 9.96 HIGH 11.07 OCT 4 LOW 9.22 AUG 24



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 Oct. 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.

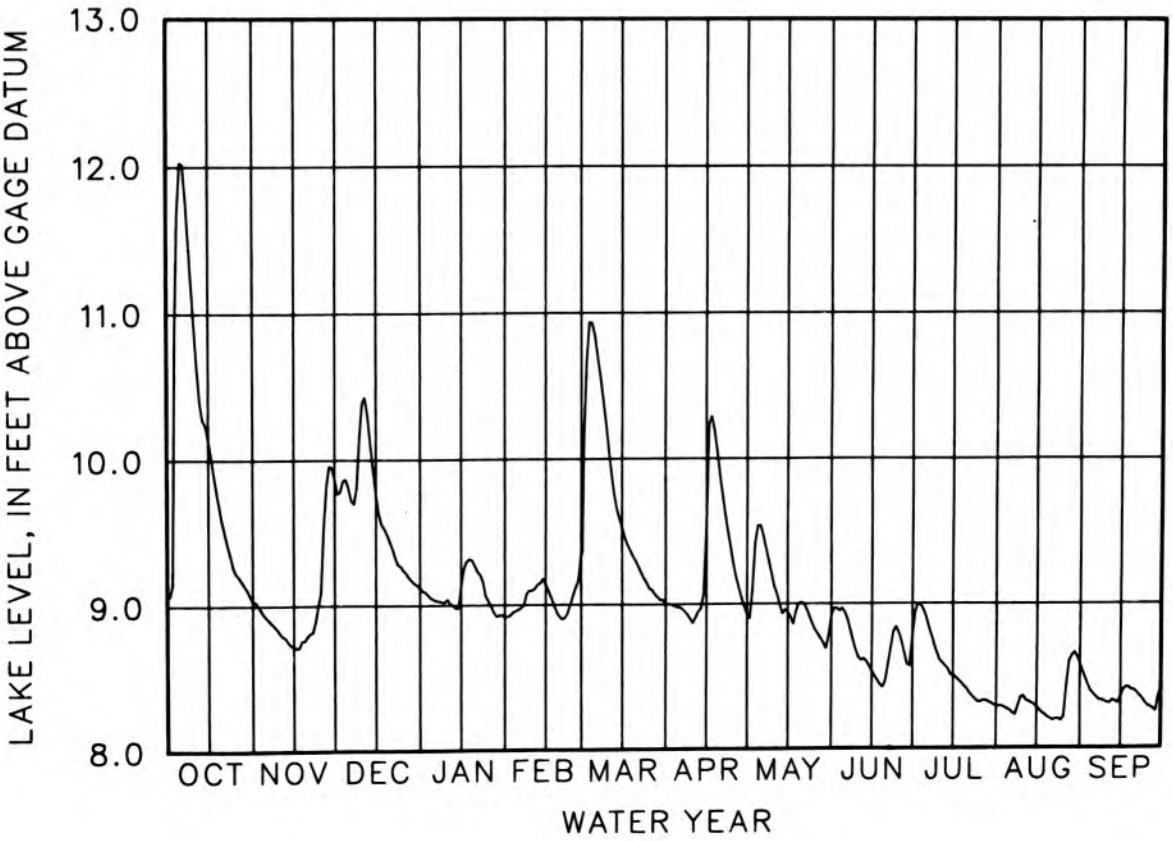
INLET AND OUTLET.--Pigeon Creek flows through the lake, entering at the southern shore and leaving at the western end to flow into Golden Lake and eventually into the St. Joseph River.

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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	12.03	8.92	9.81	9.04	8.97	10.84	8.98	9.54	8.94	8.91	8.26	8.37
10	10.90	8.81	10.39	9.04	9.10	10.08	8.87	9.12	8.63	8.61	8.36	8.31
15	10.14	8.72	9.76	9.13	9.14	9.53	9.56	8.94	8.53	8.50	8.28	8.35
20	9.57	8.79	9.44	9.27	8.92	9.30	9.88	9.01	8.46	8.41	8.20	8.40
25	9.22	9.09	9.24	9.03	9.06	9.11	9.27	8.82	8.80	8.32	8.21	8.29
EOM	9.03	9.87	9.12	8.92	9.35	9.00	8.93	8.92	8.77	8.29	8.58	8.40

WTR YR 1987 MEAN 9.07 HIGH 12.03 OCT 5 LOW 8.19 AUG 21 AND OTHERS



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.

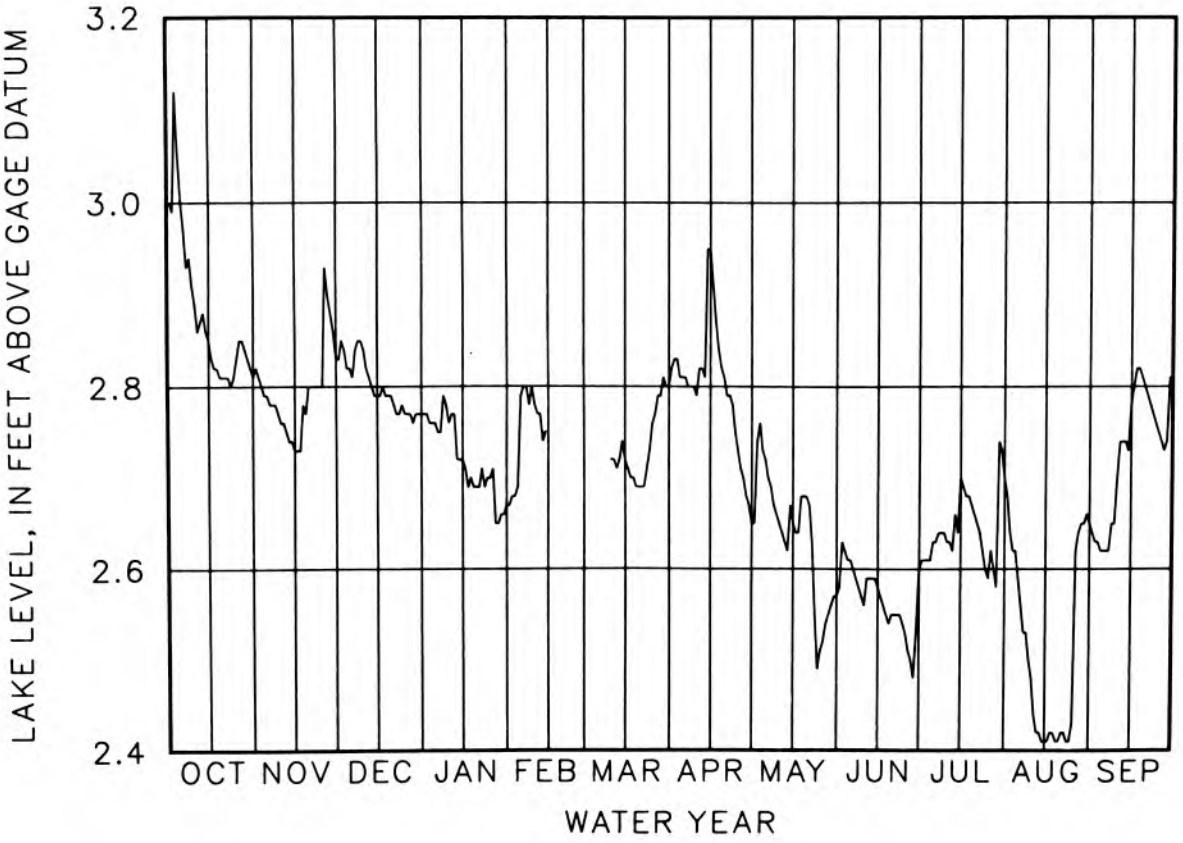
INLET AND OUTLET.--A small unnamed ditch enters on the northwestern shore. The outlet leaves the lake at the southwest and flows into Mather ditch 1.0 mi downstream. Mather ditch eventually empties into the Little Elkhart River.

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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	3.00	2.79	2.82	2.76	2.79	---	2.81	2.72	2.61	2.63	2.59	2.62
10	2.89	2.76	2.84	2.76	2.78	2.72	2.79	2.65	2.56	2.63	2.48	2.70
15	2.85	2.73	2.79	2.72	---	2.72	2.95	2.65	2.58	2.70	2.41	2.78
20	2.81	2.80	2.79	2.69	---	2.69	2.81	2.68	2.55	2.66	2.41	2.80
25	2.83	2.80	2.77	2.70	---	2.76	2.73	2.51	2.53	2.59	2.43	2.75
EOM	2.81	2.83	2.77	2.67	---	2.80	2.65	2.57	2.60	2.70	2.65	2.79

WTR YR 1987 MEAN 2.71 HIGH 3.12 OCT 3 LOW 2.41 AUG 14 AND OTHERS



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.--2.85 ft gage datum or 692.85 ft above National Geodetic Vertical Datum of 1929.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a fixed-crest concrete dam.

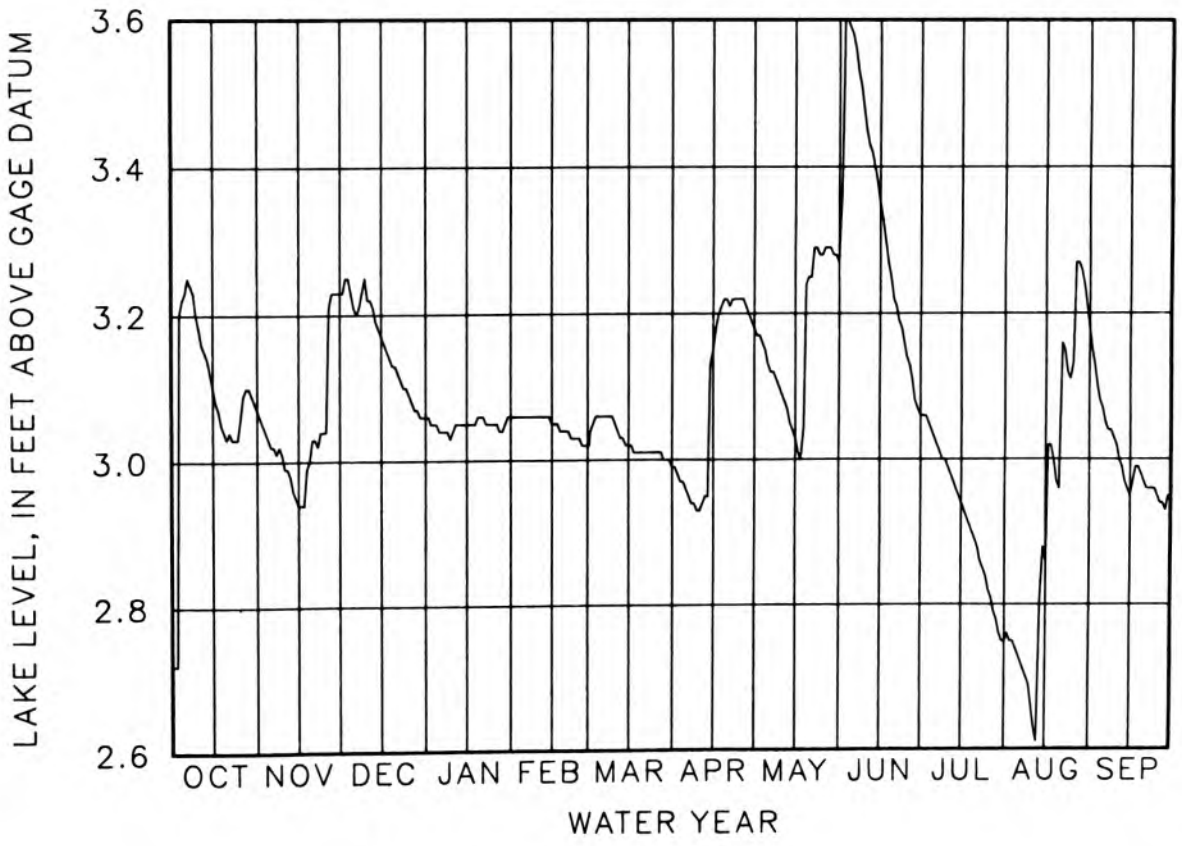
INLET AND OUTLET.--Several small ditches enter the lake at various points. The outlet, Cedar Creek, flows from the lake on the eastern shore of the center lobe, into Dalecarlia Lake, 1.5 mi downstream, and eventually into the Kankakee River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 4.30 ft May 15, 1970; minimum stage, 1.66 ft Dec. 21-23, 1964.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	3.23	3.02	3.21	3.04	3.06	3.06	2.96	3.13	3.58	3.03	2.73	3.07
10	3.18	2.99	3.22	3.04	3.06	3.05	2.93	3.09	3.45	2.99	2.66	3.02
15	3.10	2.94	3.17	3.05	3.05	3.02	3.15	3.03	3.35	2.94	2.86	2.95
20	3.03	3.03	3.13	3.06	3.04	3.01	3.22	3.25	3.22	2.89	2.96	2.97
25	3.06	3.04	3.09	3.05	3.03	3.01	3.22	3.28	3.14	2.82	3.13	2.95
EOM	3.07	3.23	3.06	3.06	3.02	2.99	3.18	3.27	3.06	2.75	3.18	2.94

WTR YR 1987 MEAN 3.07 HIGH 3.60 JUN 2 AND OTHERS LOW 2.61 AUG 12



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.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete dam at the western end of the lake.

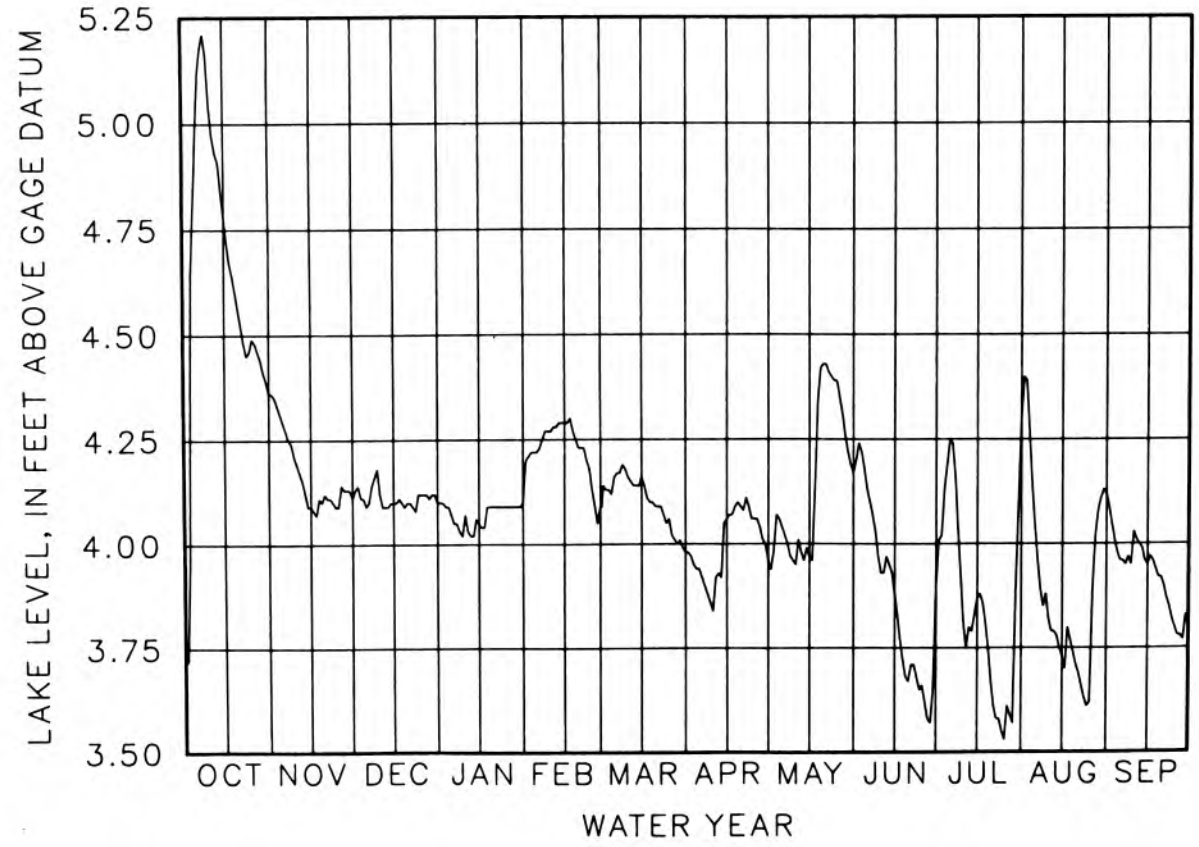
INLET AND OUTLET.--The one inlet flows through a 24-inch diameter tile from Pike Lake and enters the lake on the southeastern side. The outlet flows from the western shore and joins Walnut Creek 0.65 mi downstream, which in turn flows into the Tippecanoe River.

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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.99	4.29	4.09	4.07	4.22	4.16	3.94	4.04	4.13	4.25	4.04	3.96
10	5.04	4.19	4.12	4.07	4.27	4.16	3.84	3.95	3.93	3.81	3.82	4.03
15	4.78	4.09	4.10	4.05	4.29	4.16	4.06	3.97	3.88	3.87	3.73	3.95
20	4.56	4.12	4.10	4.09	4.23	4.09	4.09	4.43	3.67	3.67	3.71	3.92
25	4.49	4.09	4.12	4.09	4.13	4.06	4.06	4.39	3.66	3.53	3.62	3.80
EOM	4.36	4.11	4.10	4.10	4.09	3.98	3.96	4.17	3.90	4.30	4.12	3.82

WTR YR 1987 MEAN 4.09 HIGH 5.21 OCT 8 LOW 3.53 JUL 25



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.

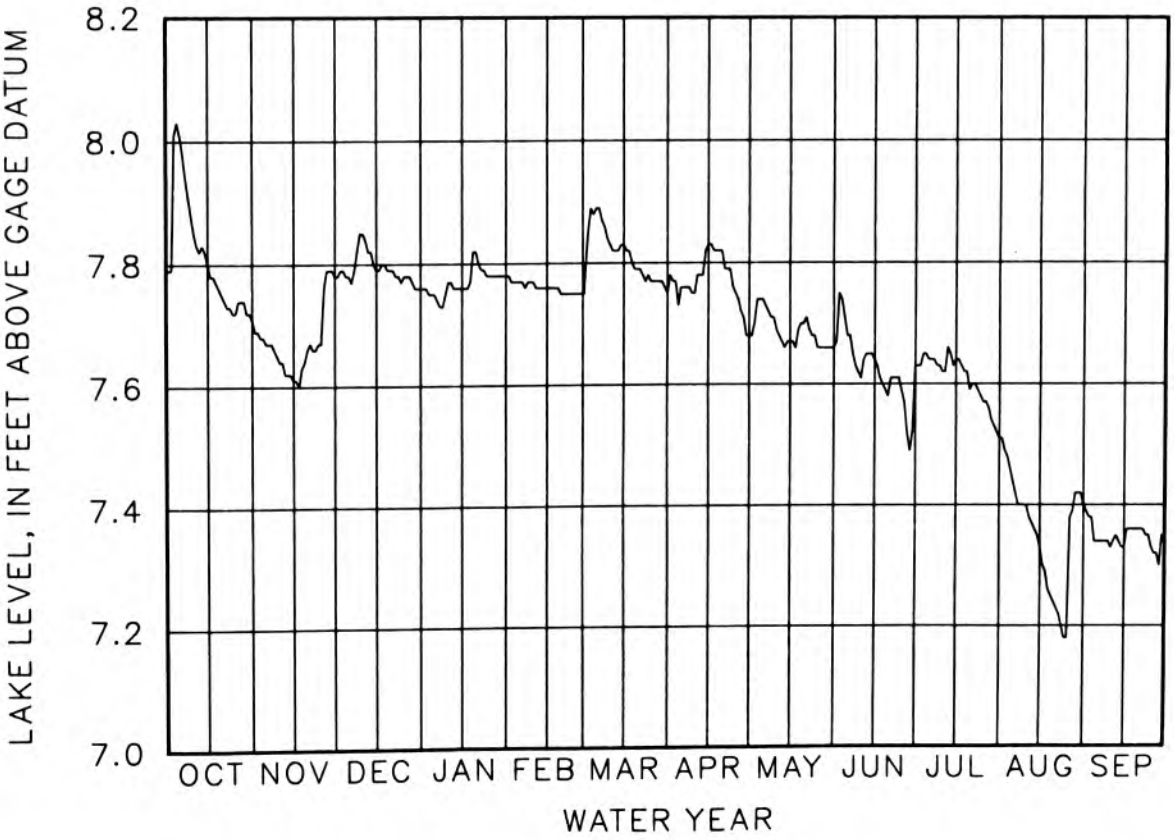
INLET AND OUTLET.--Two unnamed ditches enter the lake on the southern shore. The outlet is a short channel connecting Clear and Round Lakes. The outlet of Round Lake flows from the northeast end and eventually into the West Branch of the St. Joseph River.

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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.01	7.67	7.78	7.75	7.77	7.89	7.76	7.74	7.68	7.64	7.44	7.34
10	7.85	7.64	7.85	7.77	7.77	7.83	7.75	7.69	7.61	7.62	7.40	7.33
15	7.80	7.61	7.79	7.76	7.76	7.83	7.83	7.67	7.64	7.64	7.33	7.33
20	7.75	7.66	7.79	7.82	7.75	7.79	7.82	7.70	7.58	7.59	7.24	7.36
25	7.72	7.67	7.78	7.78	7.75	7.77	7.75	7.66	7.59	7.57	7.18	7.33
EOM	7.71	7.78	7.76	7.78	7.75	7.75	7.68	7.66	7.63	7.51	7.40	7.35

WTR YR 1987 MEAN 7.67 HIGH 8.03 OCT 4 LOW 7.18 AUG 24 AND OTHERS



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 Aug. 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.

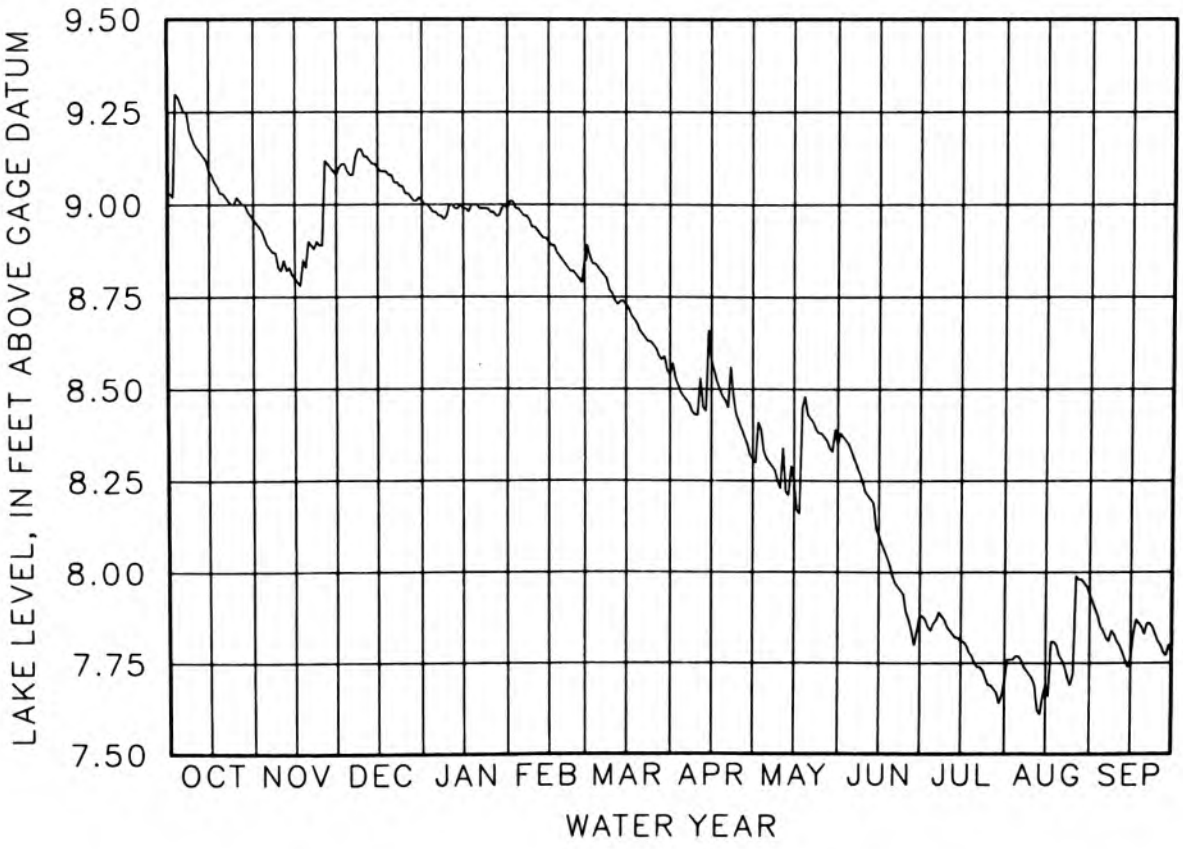
INLET AND OUTLET.--A small ditch enters on the west shore. There is no outlet during periods of low and medium water levels. When water levels are high, water may flow from the lake into the city sewer system.

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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.27	8.89	9.08	8.98	8.98	8.83	8.48	8.31	8.33	7.86	7.77	7.84
10	9.16	8.82	9.13	9.00	8.94	8.76	8.43	8.23	8.22	7.85	7.71	7.81
15	9.09	8.80	9.10	8.99	8.90	8.73	8.58	8.25	8.10	7.81	7.69	7.76
20	9.03	8.90	9.08	9.00	8.85	8.66	8.47	8.43	7.99	7.75	7.77	7.83
25	9.02	8.89	9.03	8.98	8.81	8.62	8.41	8.38	7.89	7.69	7.72	7.81
EOM	8.96	9.08	9.01	8.99	8.85	8.54	8.31	8.35	7.88	7.70	7.94	7.78

WTR YR 1987 MEAN 8.49 HIGH 9.30 OCT 3 LOW 7.61 AUG 13



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 mi².

PERIOD OF RECORD.--1946-70, 1972 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. 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.

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.

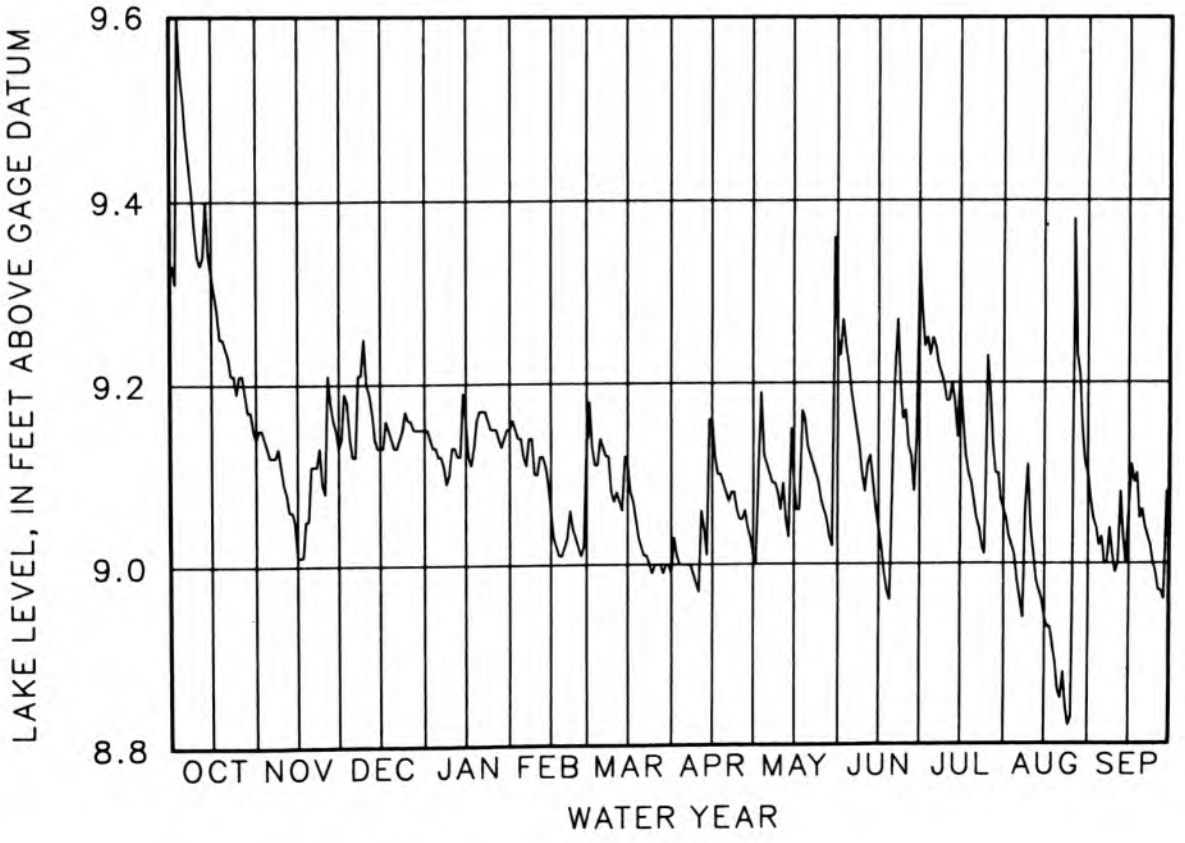
INLET AND OUTLET.--The principal inlets enter the lake from the south, from Loon and Buck Lakes, and the southeast, from Center Lake. Another ditch enters from the east. The outlet flows from the western end of the Third Basin into Lake Gage 1.4 mi downstream and eventually into the St. Joseph River.

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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.51	9.12	9.12	9.12	9.12	9.14	9.00	9.11	9.19	9.25	8.98	9.03
10	9.34	9.09	9.20	9.13	9.10	9.07	8.97	9.06	9.08	9.18	9.04	8.99
15	9.32	9.01	9.13	9.16	9.06	9.11	9.16	9.09	9.04	9.21	8.94	9.06
20	9.24	9.11	9.13	9.17	9.02	9.02	9.08	9.13	9.09	9.07	8.86	9.06
25	9.21	9.08	9.16	9.15	9.02	9.00	9.05	9.07	9.17	9.23	8.83	8.99
EOM	9.14	9.13	9.15	9.15	9.14	8.99	9.01	9.25	9.34	9.06	9.10	9.05

WTR YR 1987 MEAN 9.11 HIGH 9.60 OCT 3 LOW 8.82 AUG 24



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.--859.90 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.

ESTABLISHED LEGAL LEVEL.--7.80 ft gage datum or 867.70 ft above National Geodetic Vertical Datum of 1929 as decreed on Oct. 18, 1949, by the Kosciusko County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a steel sheet piling dam.

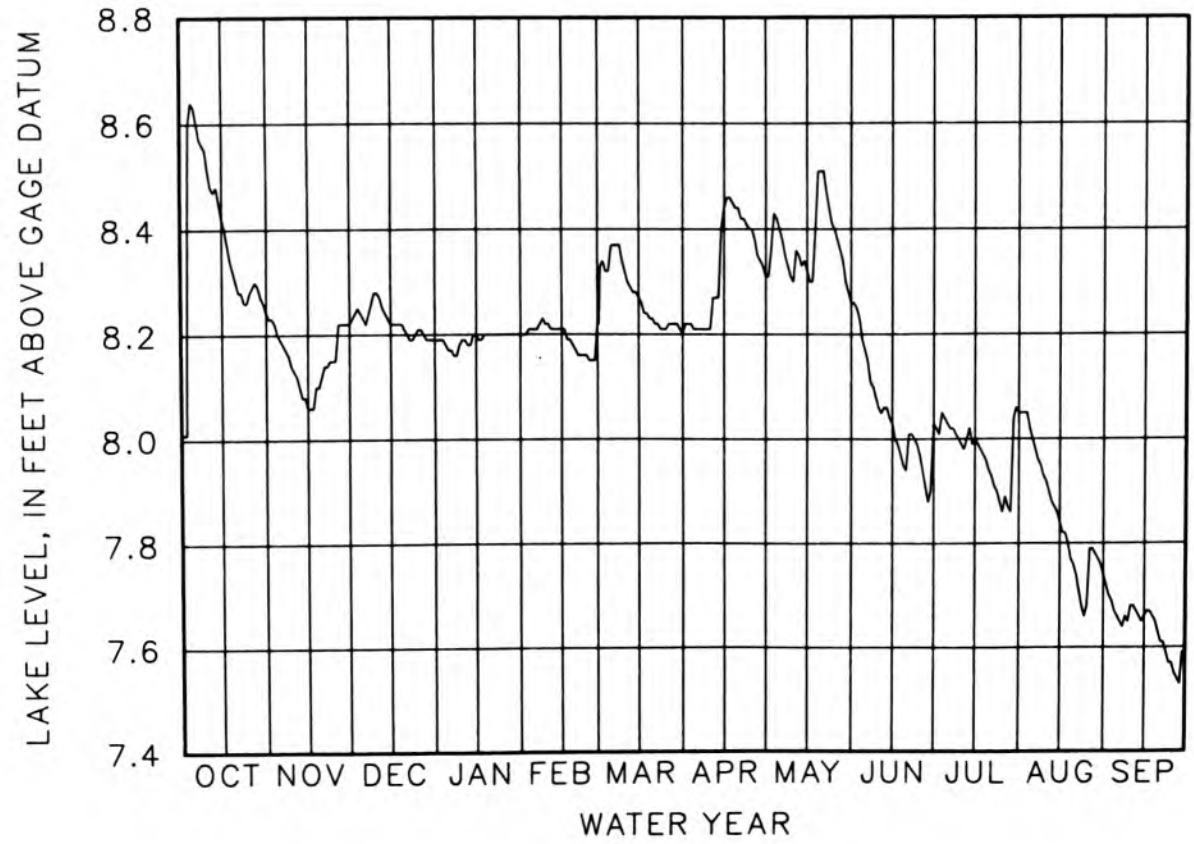
INLET AND OUTLET.--Cable Run enters the lake on the southeastern tip, and an unnamed ditch enters on the eastern shore. The outlet, Hammond ditch, flows from the lake on the northwestern shore and into Wabee Lake 2.3 mi downstream.

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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.63	8.19	8.23	8.17	8.21	8.37	8.21	8.40	8.17	8.03	8.00	7.66
10	8.51	8.13	8.28	8.19	8.22	8.32	8.21	8.30	8.06	7.99	7.92	7.68
15	8.42	8.06	8.22	8.20	8.21	8.27	8.44	8.32	8.03	8.00	7.84	7.66
20	8.30	8.12	8.21	8.20	8.17	8.23	8.44	8.51	7.94	7.94	7.76	7.63
25	8.28	8.15	8.21	8.20	8.15	8.21	8.40	8.40	7.97	7.86	7.68	7.57
EOM	8.24	8.22	8.19	8.20	8.22	8.20	8.31	8.26	8.03	8.05	7.74	7.57

WTR YR 1987 MEAN 8.13 HIGH 8.64 OCT 4 LOW 7.53 SEP 28



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.

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.

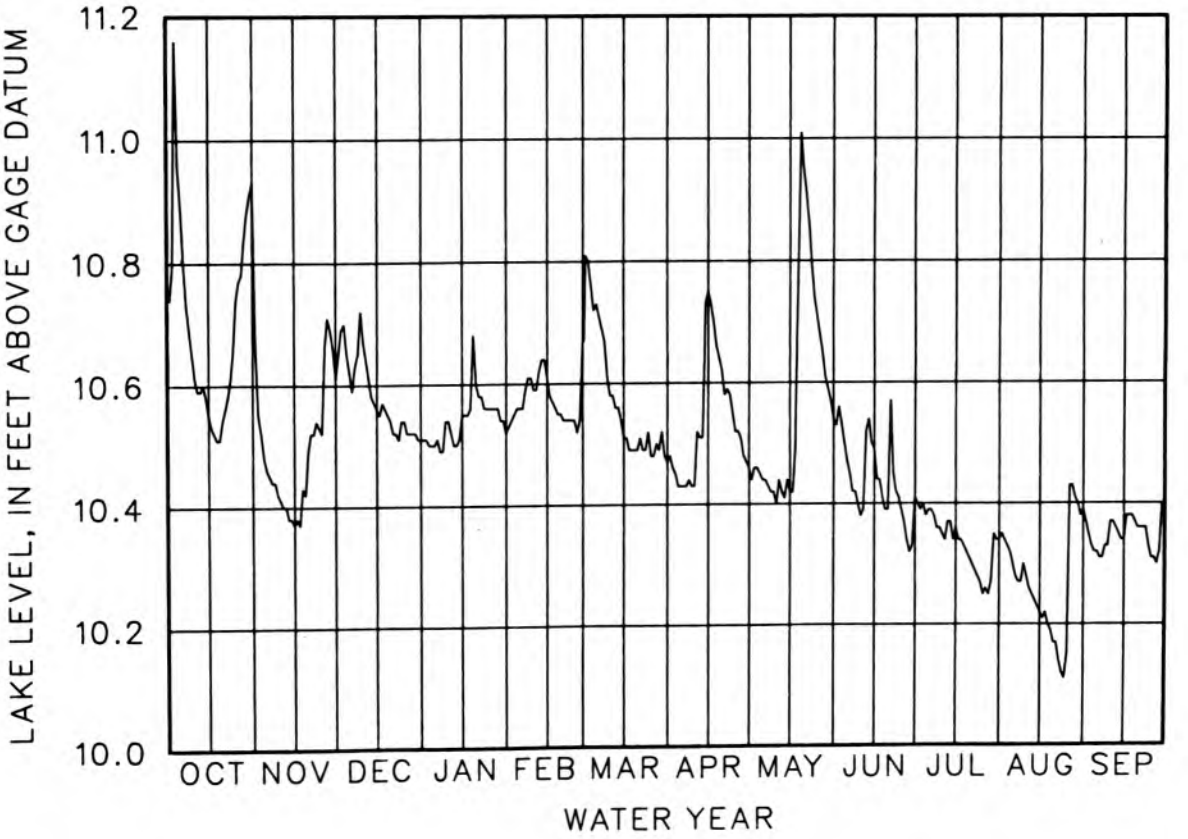
INLET AND OUTLET.--There are two inlets. One enters from the north and east from Hill Lake, one enters from the southeast. The one outlet flows from the western shore and into Yellow Creek Lake, 0.3 mi downstream. Yellow Creek Lake flows into Yellow Creek, which eventually discharges into the Tippecanoe River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 13.47 July 9, 1964; minimum stage, 9.87 ft June 3, 4, 7, 1977; Sept. 18, Oct. 11, 1983.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.89	10.46	10.62	10.50	10.56	10.73	10.43	10.44	10.47	10.39	10.30	10.32
10	10.61	10.41	10.67	10.54	10.59	10.58	10.43	10.40	10.38	10.35	10.28	10.37
15	10.55	10.37	10.56	10.55	10.61	10.51	10.75	10.42	10.49	10.36	10.22	10.34
20	10.54	10.49	10.54	10.60	10.55	10.49	10.62	10.95	10.39	10.31	10.17	10.36
25	10.74	10.52	10.54	10.56	10.54	10.48	10.52	10.71	10.39	10.25	10.15	10.31
EOM	10.93	10.61	10.51	10.52	10.67	10.47	10.46	10.54	10.41	10.34	10.39	10.39

WTR YR 1987 MEAN 10.50 HIGH 11.16 OCT 3 LOW 10.11 AUG 24



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.

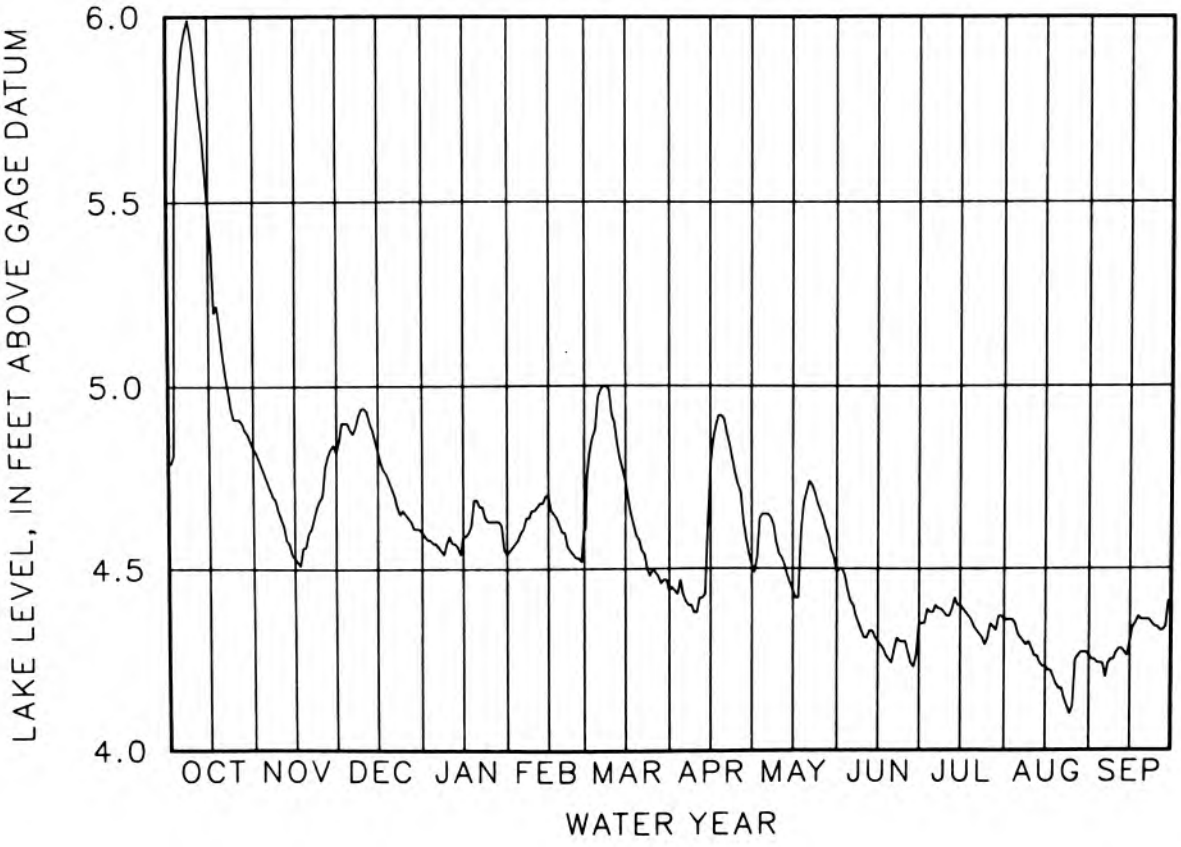
INLET AND OUTLET.--Willets Ditch enters at the southwestern tip of the lake from Eagle Lake, 0.6 mi upstream. One unnamed ditch enters the lake from the south. The outlet flows from the lake at the southeastern edge and joins the South Branch of the Elkhart River 0.8 mi downstream.

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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.85	4.74	4.88	4.57	4.60	4.97	4.43	4.65	4.41	4.38	4.32	4.24
10	5.89	4.64	4.94	4.59	4.66	4.92	4.38	4.54	4.31	4.37	4.28	4.27
15	5.48	4.53	4.82	4.59	4.70	4.74	4.78	4.44	4.30	4.40	4.23	4.30
20	5.09	4.60	4.72	4.69	4.60	4.58	4.91	4.71	4.24	4.34	4.17	4.36
25	4.91	4.70	4.65	4.63	4.53	4.50	4.73	4.66	4.30	4.31	4.12	4.34
EOM	4.83	4.82	4.60	4.54	4.61	4.44	4.51	4.49	4.35	4.36	4.26	4.40

WTR YR 1987 MEAN 4.59 HIGH 5.99 OCT 8 LOW 4.10 AUG 24



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.

LAKE-LEVEL CONTROL.--The lake level is controlled by the outlet channel at low water and the first culvert downstream at higher stages.

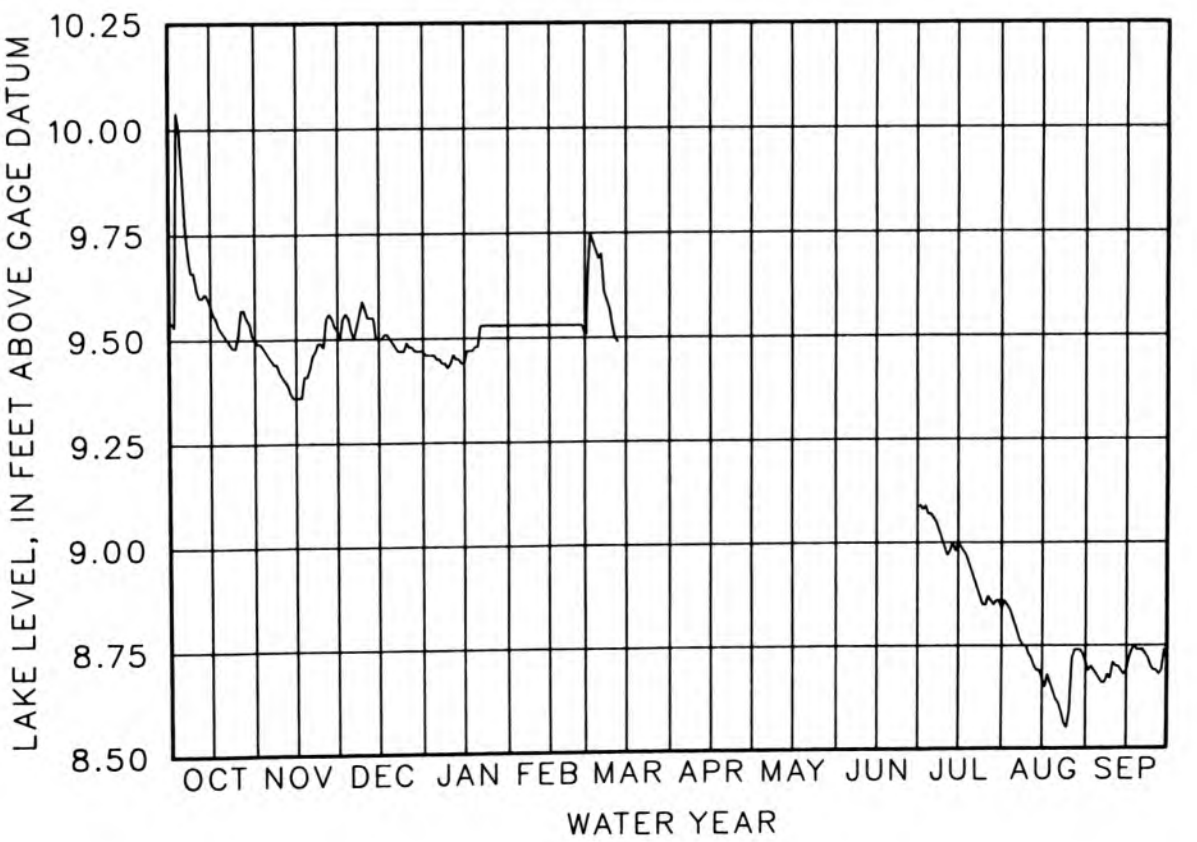
INLET AND OUTLET.--Sparta Lake ditch feeds the lake from the south, flowing from Sparta Lake. The outlet flows from the northern shore through Indian Lake and into the Elkhart River 1.7 mi downstream.

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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.89	9.46	9.52	9.45	9.53	9.69				9.07	8.80	8.67
10	9.62	9.41	9.57	9.44	9.53	9.53				8.99	8.73	8.71
15	9.58	9.36	9.50	9.44	9.53	---				9.00	8.67	8.69
20	9.51	9.43	9.49	9.48	9.53	---				8.93	8.62	8.74
25	9.51	9.48	9.49	9.53	9.53	---				8.85	8.59	8.69
EOM	9.50	9.52	9.47	9.53	9.51	---				8.84	8.71	8.73

WTR YR 1987 MEAN 9.26 HIGH 10.04 OCT 3 LOW 8.55 AUG 24



04099670 FISH LAKE NEAR PLATO, IN

LOCATION.--Lat 41°37'27", long 85°19'56", in SW¼NE¼NE¼ 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.

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.--5.75 ft gage datum or 936.50 ft above National Geodetic Vertical Datum of 1929.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by the outlet channel.

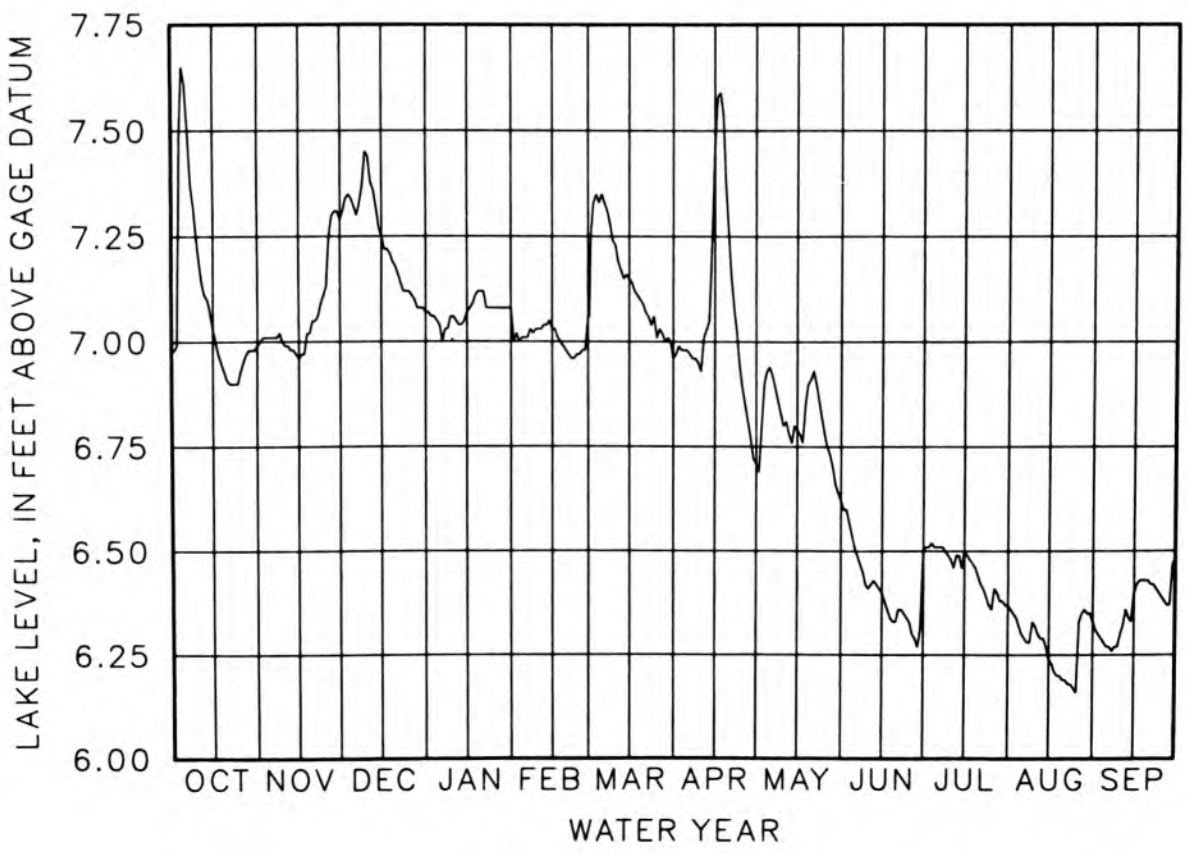
INLET AND OUTLET.--One inlet enters at the extreme southern tip from Royer Lake 700 ft upstream. The other enters on the north shore of the east lobe from Grass Lake, approximately 1.4 mi upstream. The outlet, East Fly Creek, flows from the lake on the northwest shore and joins Fly Creek, which empties 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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.61	7.01	7.32	7.04	7.01	7.35	6.98	6.94	6.51	6.51	6.30	6.27
10	7.19	6.99	7.44	7.06	7.03	7.23	6.93	6.80	6.41	6.48	6.32	6.30
15	7.03	6.96	7.25	7.07	7.03	7.15	7.46	6.79	6.40	6.50	6.24	6.40
20	6.91	7.05	7.18	7.12	6.98	7.09	7.26	6.91	6.33	6.44	6.19	6.43
25	6.93	7.13	7.12	7.08	6.97	7.01	6.89	6.78	6.33	6.36	6.16	6.39
EOM	6.99	7.29	7.07	7.08	7.06	6.96	6.71	6.62	6.50	6.37	6.33	6.48

WTR YR 1987 MEAN 6.83 HIGH 7.65 OCT 4 LOW 6.16 AUG 25



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.

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.--4.58 ft gage datum or 814.42 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.

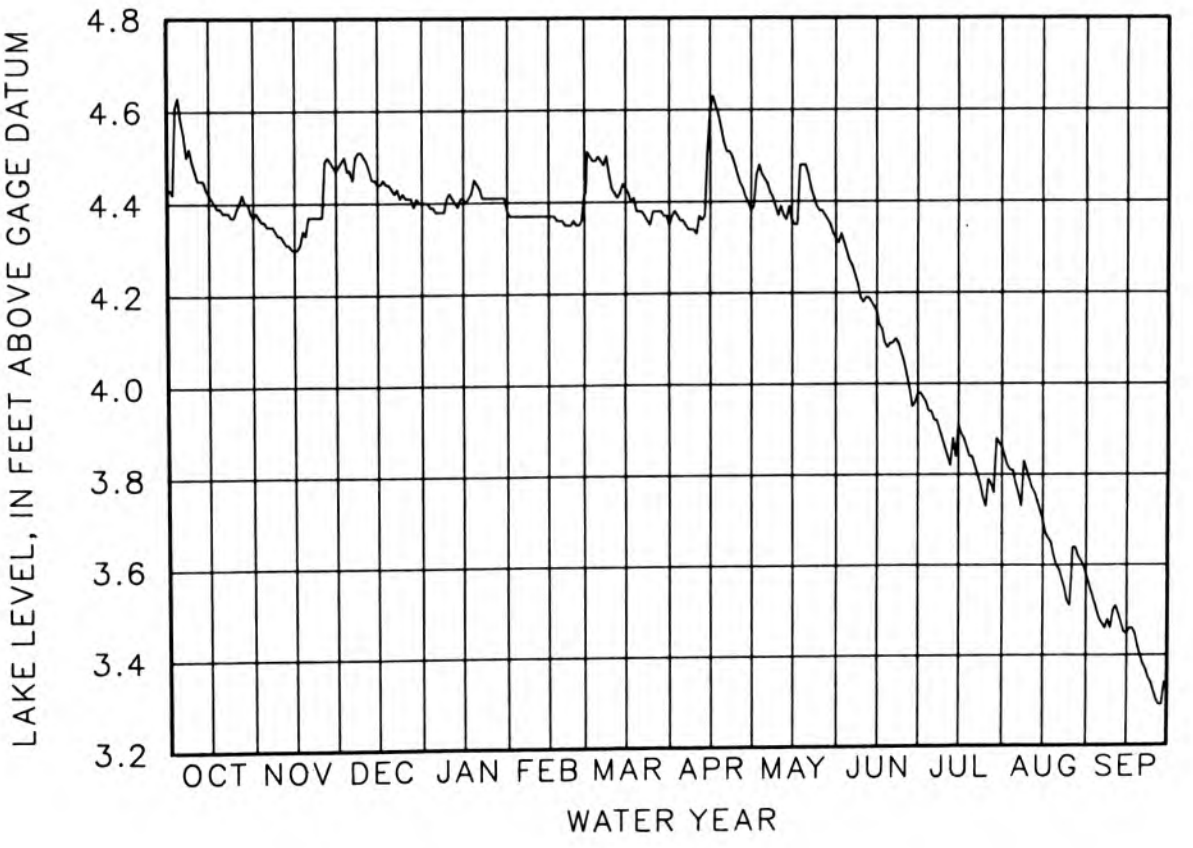
INLET AND OUTLET.--The inlet, Fetch ditch, enters on the southeastern shore. The outlet flows from the lake at the lower west shore and empties into Pigeon River.

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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.58	4.35	4.47	4.38	4.37	4.50	4.36	4.45	4.27	3.94	3.78	3.48
10	4.47	4.33	4.50	4.42	4.37	4.43	4.33	4.37	4.18	3.86	3.79	3.50
15	4.42	4.30	4.44	4.41	4.37	4.43	4.60	4.36	4.16	3.91	3.70	3.45
20	4.38	4.37	4.43	4.44	4.36	4.38	4.53	4.48	4.09	3.84	3.60	3.40
25	4.39	4.37	4.41	4.41	4.35	4.38	4.46	4.38	4.05	3.73	3.51	3.32
EOM	4.37	4.47	4.40	4.38	4.42	4.35	4.38	4.32	3.98	3.86	3.58	3.32

WTR YR 1987 MEAN 4.20 HIGH 4.63 OCT 4 AND OTHERS LOW 3.29 SEP 27 AND OTHERS



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.--2.62 mi^2.

PERIOD OF RECORD.--1946-1985. 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 Aug. 19, 1963.

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.

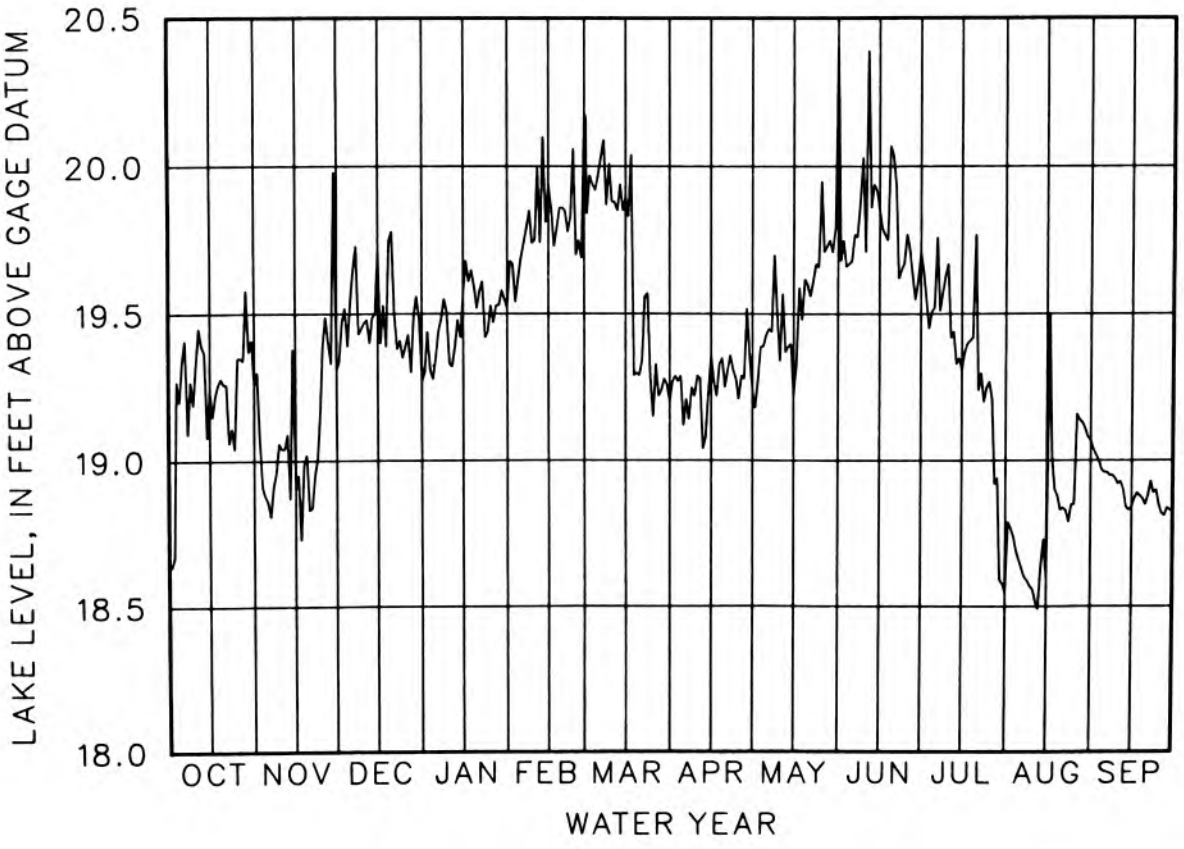
INLET AND OUTLET.--There are two inlets. One drains Long Lake to the northwest and the other drains Loomis Lake to the west. The outlet flows from the lake at the southeast corner and into the West Branch of Crooked Creek approximately 5.0 mi downstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 21.10 ft Apr. 22, 1973; minimum stage, 12.59 ft Dec. 29, 1948.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	19.34	18.86	19.54	19.35	19.69	19.97	19.12	19.43	19.68	19.52	18.66	18.96
10	19.33	19.04	19.47	19.33	19.75	19.88	19.29	19.34	19.71	19.67	18.56	18.92
15	19.24	18.90	19.71	19.57	19.94	19.90	19.36	19.22	19.85	19.31	18.60	18.84
20	19.26	18.83	19.78	19.52	19.86	19.29	19.25	19.60	20.04	19.77	18.83	18.85
25	19.35	19.39	19.39	19.53	19.70	19.15	19.21	19.95	19.77	19.27	18.85	18.85
EOM	19.26	19.31	19.27	19.52	20.17	19.20	19.24	20.40	19.71	18.55	19.07	18.83

WTR YR 1987 MEAN 19.36 HIGH 20.40 MAY 31 LOW 18.49 AUG 12



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 (ORMAS, 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 (revised) above National Geodetic Vertical Datum of 1929 (determined from levels of State of 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.

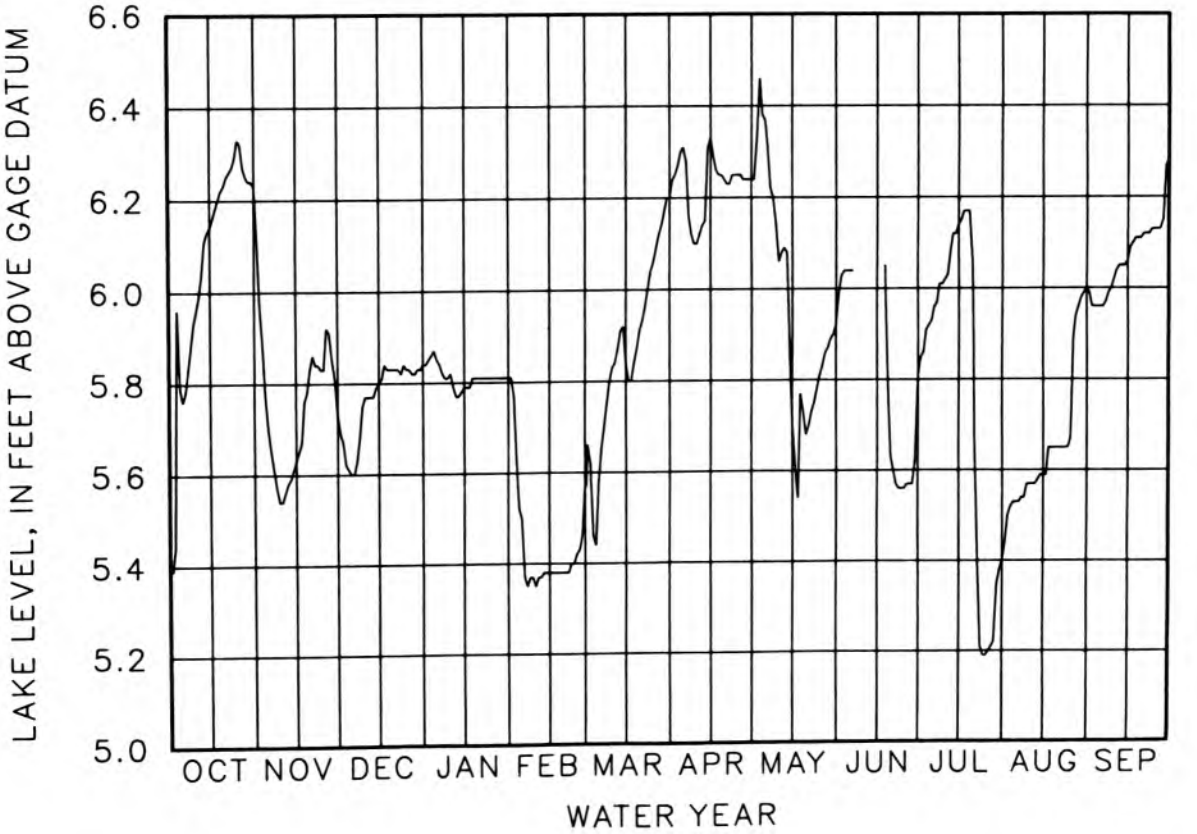
INLET AND OUTLET.--The lake has no inlet. The outlet leaves from the southeastern side and flows into Stump Lake.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 6.46 ft May 3, 1987; minimum stage, 3.53 ft Nov. 1, 1963.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.76	5.70	5.60	5.85	5.50	5.58	6.31	6.37	6.04	5.93	5.53	5.96
10	5.96	5.54	5.77	5.82	5.35	5.83	6.10	6.06	---	6.02	5.57	6.02
15	6.14	5.63	5.80	5.79	5.38	5.84	6.33	5.71	---	6.14	5.59	6.06
20	6.23	5.83	5.83	5.81	5.38	5.91	6.24	5.68	5.63	6.06	5.65	6.11
25	6.33	5.83	5.83	5.81	5.42	6.06	6.25	5.81	5.56	5.19	5.67	6.13
EOM	6.23	5.73	5.84	5.81	5.57	6.20	6.24	5.92	5.81	5.40	6.00	6.28

WTR YR 1987 MEAN 5.85 HIGH 6.46 MAY 3 LOW 5.19 JUL 24 AND OTHERS



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 Feb. 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.

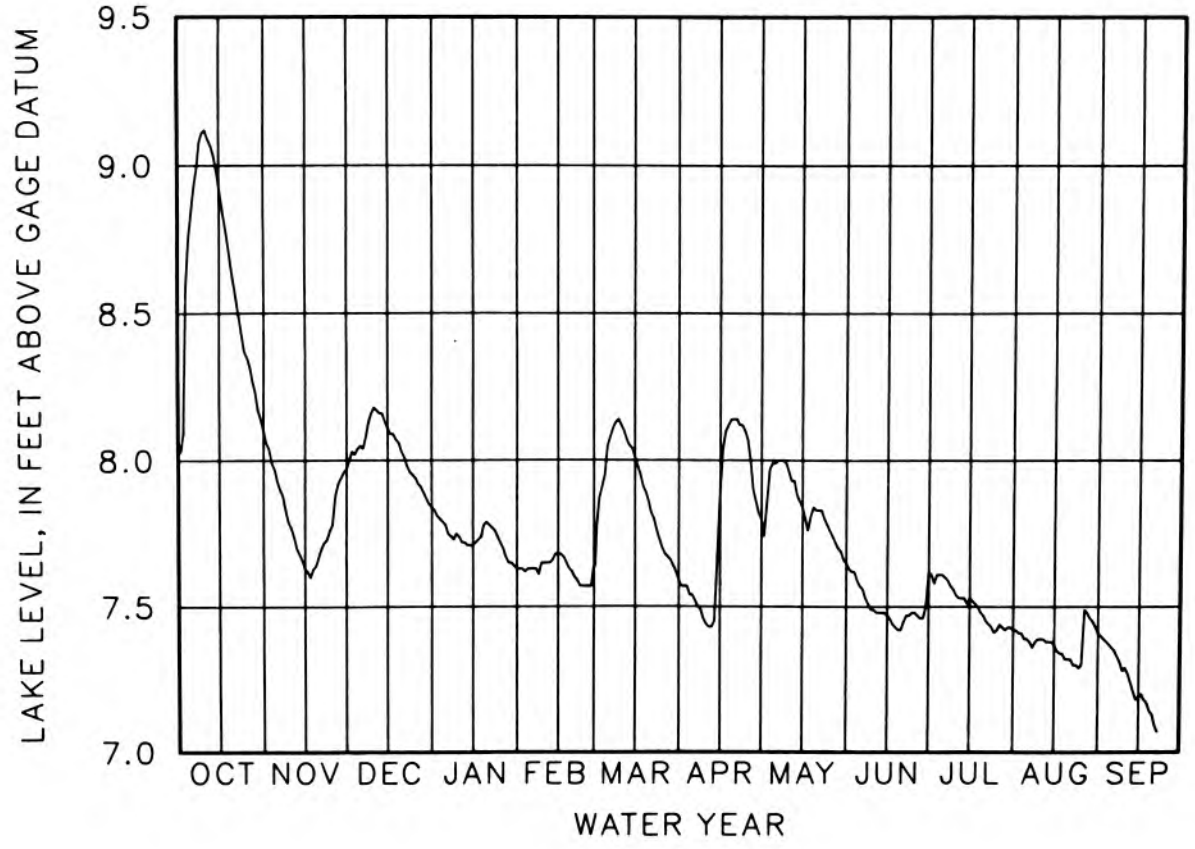
INLET AND OUTLET.--One inlet enters on the north shore from Oliver Lake 1.6 mi upstream. The other inlet enters on the east shore from Dallas Lake 0.5 mi upstream, which is part of a chain of lakes including Westler and Witmer Lakes. The outlet flows from the lake on the southwest shore and into Messick 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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.85	7.93	8.05	7.78	7.63	8.05	7.54	7.99	7.57	7.61	7.39	7.36
10	9.12	7.77	8.18	7.74	7.65	8.12	7.44	7.96	7.49	7.54	7.39	7.29
15	8.93	7.63	8.11	7.71	7.68	8.01	7.89	7.84	7.47	7.53	7.37	7.19
20	8.61	7.67	8.03	7.79	7.62	7.86	8.14	7.83	7.42	7.47	7.32	7.13
25	8.35	7.78	7.94	7.72	7.57	7.70	8.07	7.76	7.48	7.42	7.30	---
EOM	8.10	7.97	7.84	7.63	7.64	7.59	7.80	7.65	7.62	7.42	7.41	---

WTR YR 1987 MEAN 7.76 HIGH 9.12 OCT 10 LOW 7.07 SEP 22



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 mi².

PERIOD OF RECORD.--1943 to current year.

DATUM OF GAGE.--890.10 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.--8.73 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.

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 adjustable gates.

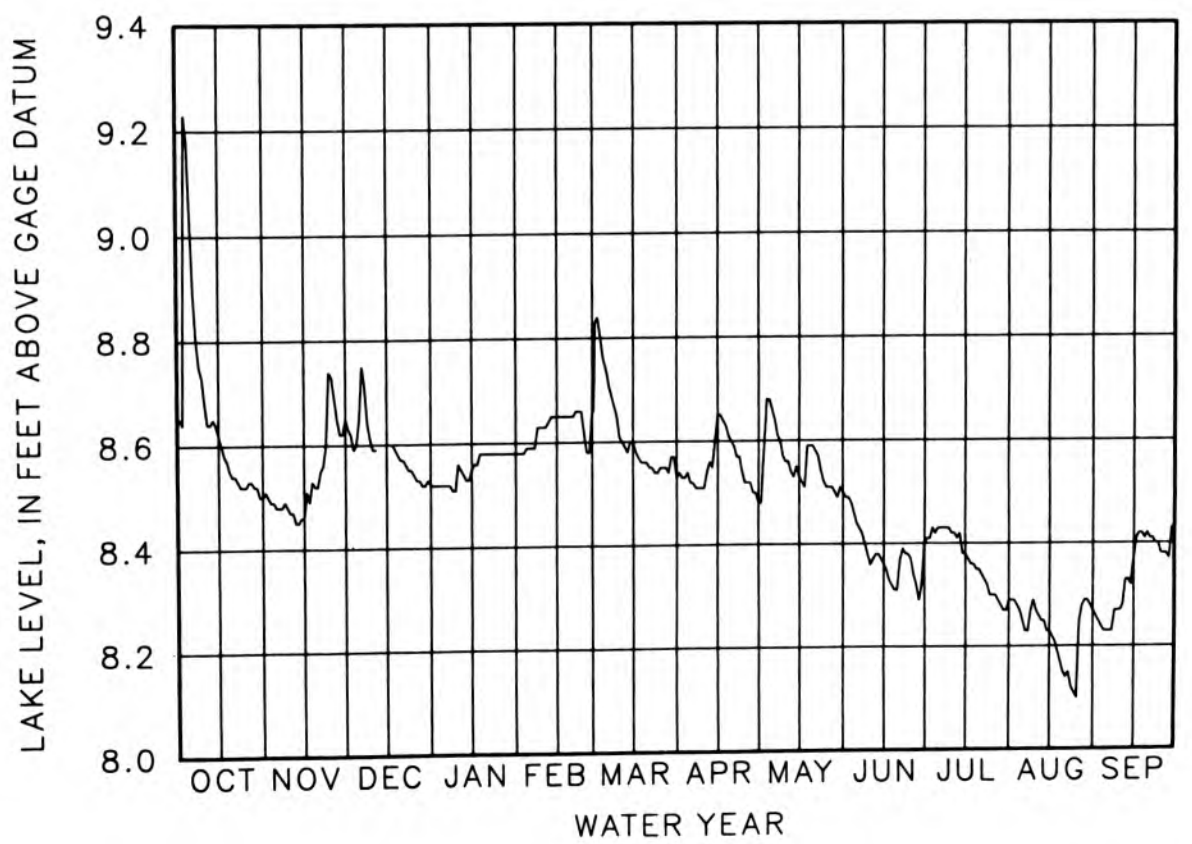
INLET AND OUTLET.--Black Creek enters the lake on the northeast shore. Two small ditches enter from the east and the north. There are two outlets, both on the southern lobe, that flow into Fish Creek thence into the St. Joseph River.

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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.03	8.48	8.65	8.52	8.59	8.74	8.52	8.66	8.44	8.43	8.25	8.23
10	8.68	8.47	8.59	8.56	8.63	8.61	8.51	8.56	8.36	8.42	8.27	8.27
15	8.62	8.46	---	8.55	8.65	8.60	8.65	8.53	8.36	8.38	8.23	8.37
20	8.54	8.52	8.57	8.58	8.65	8.56	8.60	8.59	8.31	8.35	8.15	8.42
25	8.52	8.73	8.54	8.58	8.62	8.55	8.52	8.51	8.37	8.30	8.10	8.38
EOM	8.50	8.65	8.52	8.58	8.66	8.53	8.48	8.50	8.40	8.29	8.27	8.43

WTR YR 1987 MEAN 8.50 HIGH 9.23 OCT 3 LOW 8.10 AUG 25



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 Sept. 25, 1950, by the Elkhart County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a fixed-crest concrete dam.

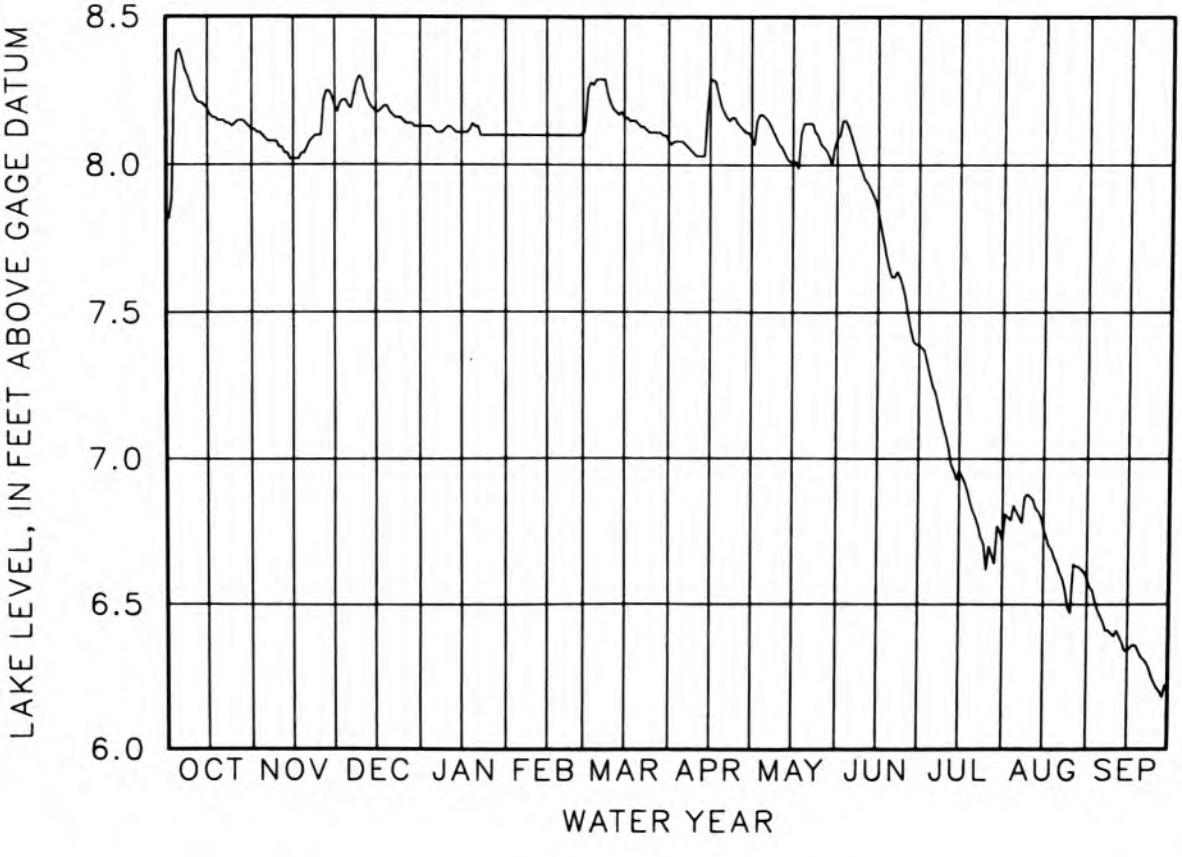
INLET AND OUTLET.--The one inlet enters the lake at the extreme northern point of the lake. The outlet, Puterbaugh Creek, flows from the west end of the lake and enters the St. Joseph River approximately 4.0 mi downstream.

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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.39	8.09	8.20	8.12	8.10	8.29	8.08	8.16	8.10	7.25	6.82	6.46
10	8.24	8.06	8.29	8.13	8.10	8.21	8.03	8.07	7.95	7.08	6.87	6.39
15	8.19	8.02	8.18	8.11	8.10	8.16	8.28	8.01	7.84	6.96	6.76	6.34
20	8.15	8.06	8.18	8.13	8.10	8.14	8.18	8.14	7.62	6.82	6.64	6.32
25	8.14	8.10	8.15	8.10	8.10	8.11	8.14	8.07	7.55	6.62	6.47	6.23
EOM	8.12	8.20	8.13	8.10	8.11	8.08	8.09	8.09	7.39	6.72	6.59	6.21

WTR YR 1987 MEAN 7.74 HIGH 8.39 OCT 5 LOW 6.18 SEP 28



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 Feb. 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.

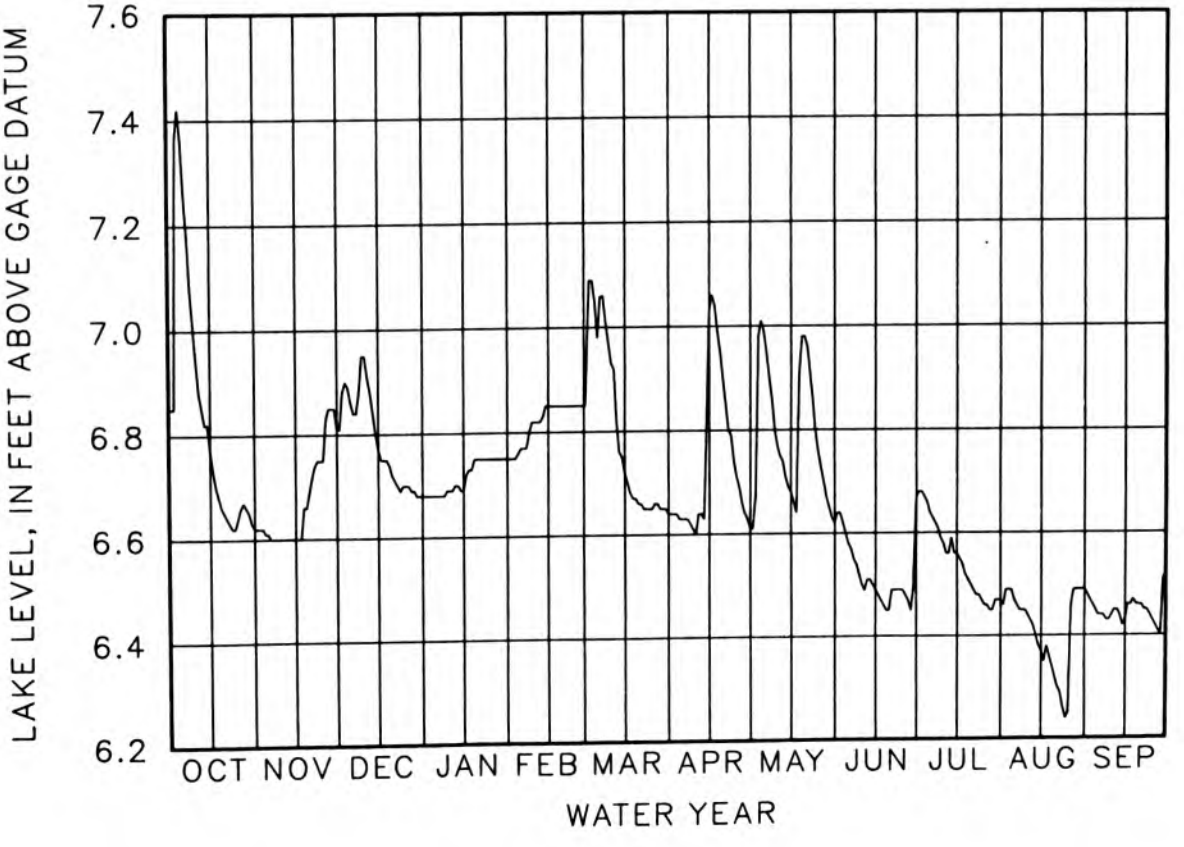
INLET AND OUTLET.--The one inlet, Beal Branch, enters the lake on the southeast shore. The outlet flows from the east side of the north lobe, through Bear Lake, 0.6 mi downstream, into Carrol Creek, and eventually into the Elkhart River.

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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.36	6.61	6.86	6.68	6.77	6.98	6.63	6.99	6.58	6.64	6.47	6.44
10	6.94	6.60	6.95	6.69	6.82	6.93	6.60	6.77	6.50	6.58	6.44	6.44
15	6.77	6.60	6.77	6.69	6.85	6.72	7.03	6.68	6.49	6.56	6.37	6.43
20	6.65	6.69	6.72	6.75	6.85	6.66	6.90	6.98	6.45	6.50	6.32	6.46
25	6.64	6.75	6.70	6.75	6.85	6.65	6.71	6.76	6.49	6.46	6.25	6.43
EOM	6.62	6.81	6.68	6.75	6.85	6.64	6.61	6.62	6.67	6.47	6.49	6.52

WTR YR 1987 MEAN 6.67 HIGH 7.42 OCT 4 LOW 6.24 AUG 24



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 Sept. 10, 1959, by the Koscuisko County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete fixed sill with removable boards.

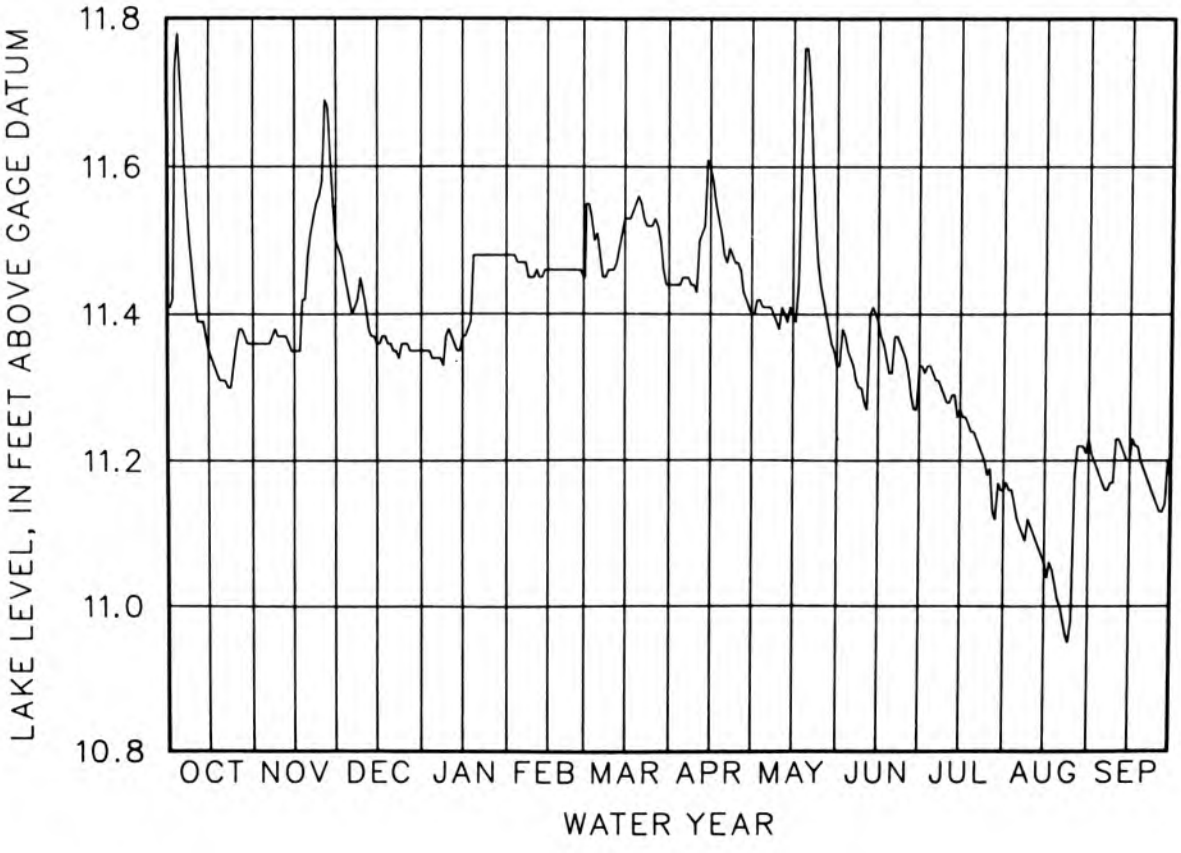
INLET AND OUTLET.--There are no surface inlets. The one outlet flows from the western edge of the lake and empties into Diamond Lake 1.5 mi downstream.

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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	11.71	11.36	11.42	11.34	11.47	11.51	11.45	11.41	11.34	11.32	11.12	11.17
10	11.42	11.37	11.43	11.38	11.45	11.46	11.43	11.38	11.28	11.28	11.11	11.23
15	11.35	11.35	11.36	11.37	11.46	11.53	11.60	11.40	11.39	11.27	11.06	11.20
20	11.31	11.48	11.36	11.48	11.46	11.56	11.48	11.76	11.32	11.24	11.01	11.19
25	11.36	11.58	11.36	11.48	11.46	11.52	11.47	11.44	11.34	11.18	10.98	11.14
EOM	11.36	11.50	11.35	11.48	11.45	11.44	11.40	11.33	11.33	11.16	11.23	11.19

WTR YR 1987 MEAN 11.37 HIGH 11.78 OCT 4 LOW 10.95 AUG 24



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 Oct. 28, 1959, by the Steuben County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by the outlet channel (Pigeon Creek).

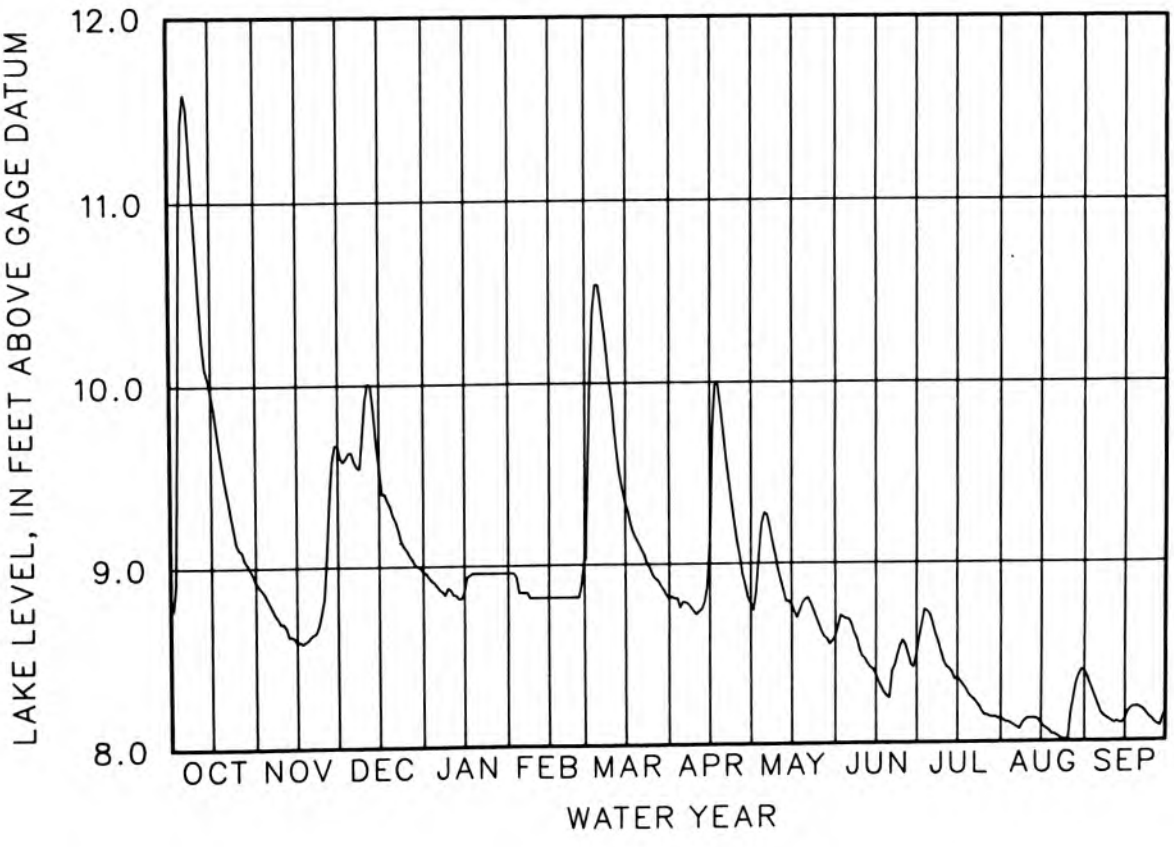
INLET AND OUTLET.--There are three inlets to the lake. One unnamed ditch enters from the north. A small tributary enters on the eastern tip from Silver Lake, 0.7 mi upstream. Pigeon Creek flows through the lake, entering at the southeastern shore from Golden Lake, 1.2 mi upstream and leaving at the north 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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	11.44	8.80	9.63	8.89	8.85	10.54	8.79	9.28	8.69	8.71	8.09	8.20
10	10.72	8.69	9.92	8.87	8.82	9.91	8.72	8.97	8.48	8.45	8.13	8.11
15	9.96	8.59	9.55	8.86	8.82	9.34	9.12	8.77	8.38	8.36	8.10	8.12
20	9.46	8.62	9.28	8.96	8.82	9.11	9.72	8.80	8.25	8.25	8.04	8.19
25	9.10	8.83	9.09	8.96	8.82	8.94	9.12	8.66	8.57	8.15	8.01	8.12
EOM	8.92	9.67	8.97	8.96	9.03	8.81	8.78	8.59	8.49	8.13	8.39	8.16

WTR YR 1987 MEAN 8.87 HIGH 11.59 OCT 6 LOW 8.01 AUG 23 AND OTHERS



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 Aug. 31, 1949.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a 24-inch reinforced concrete pipe with a gate chamber and slide gate.

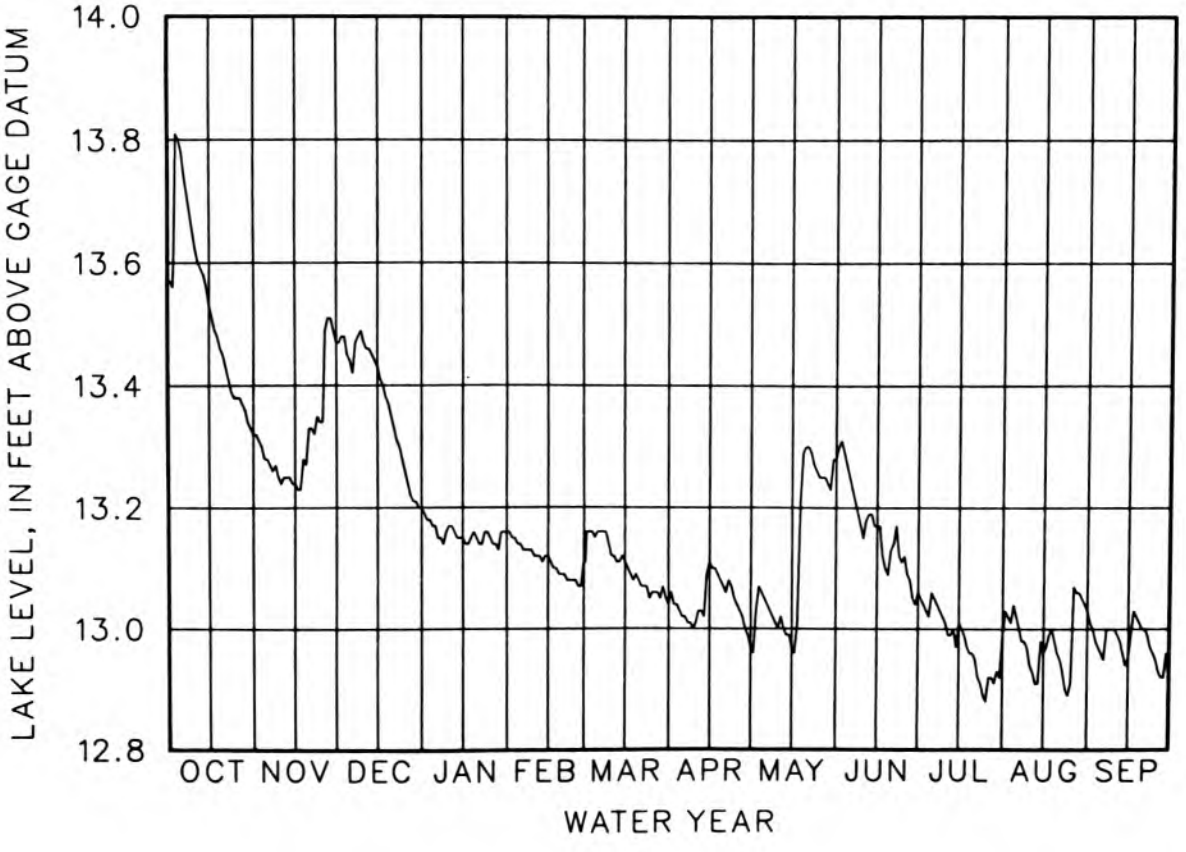
INLET AND OUTLET.--The one inlet flows into the lake at the extreme northeast tip from Saugany Lake, approximately 1.7 mi upstream. The outlet flows from the lake on the east shore to Geyer ditch and eventually into the Kankakee River.

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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	13.78	13.28	13.44	13.17	13.14	13.16	13.02	13.05	13.25	13.06	13.02	12.96
10	13.62	13.24	13.47	13.17	13.12	13.12	13.01	13.00	13.15	13.01	12.94	13.00
15	13.53	13.24	13.43	13.15	13.12	13.11	13.11	12.97	13.17	13.01	12.96	12.95
20	13.45	13.33	13.35	13.15	13.09	13.08	13.07	13.30	13.13	12.96	12.96	13.00
25	13.38	13.34	13.26	13.15	13.08	13.06	13.04	13.25	13.12	12.88	12.91	12.95
EOM	13.32	13.47	13.20	13.16	13.11	13.04	12.97	13.28	13.06	12.99	13.03	12.94

WTR YR 1987 MEAN 13.15 HIGH 13.81 OCT 3 LOW 12.88 JUL 25



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.--959.85 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 attached to the control structure. An auxiliary staff gage is bolted to the same wall.

ESTABLISHED LEGAL LEVEL.--4.81 ft gage datum or 964.66 ft above National Geodetic Vertical Datum of 1929.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete fixed-crest dam.

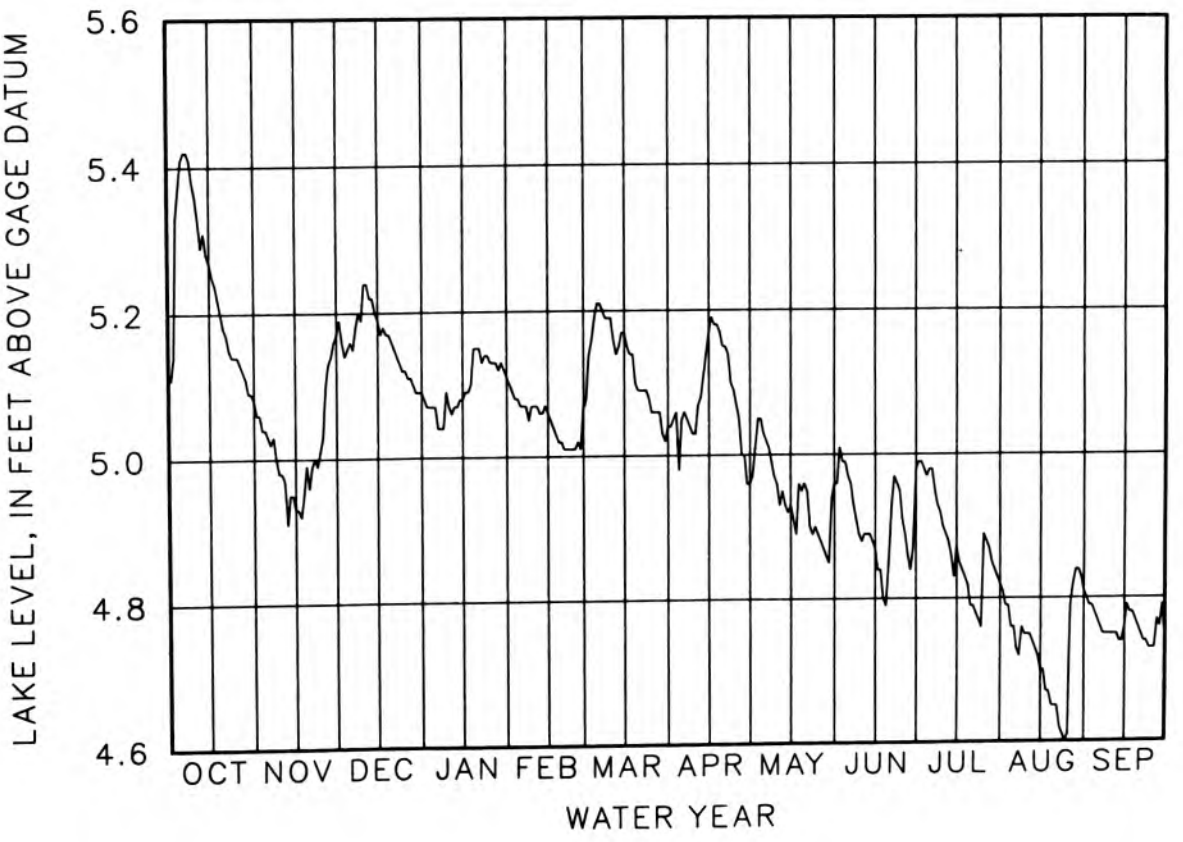
INLET AND OUTLET.--Crooked Creek flows through the lake, entering from Lake James at the extreme southeast end, and leaving from the northwest. Crooked Creek flows through Tamarack Lake and becomes Fawn River, which eventually empties into the St. Joseph River.

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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.41	5.03	5.16	5.07	5.07	5.21	5.05	5.03	4.97	4.98	4.76	4.77
10	5.36	4.98	5.24	5.07	5.07	5.19	5.03	4.96	4.88	4.90	4.75	4.75
15	5.27	4.93	5.19	5.08	5.06	5.17	5.17	4.93	4.87	4.87	4.70	4.76
20	5.18	4.96	5.16	5.15	5.02	5.09	5.15	4.96	4.85	4.79	4.65	4.76
25	5.14	5.03	5.12	5.13	5.01	5.06	5.07	4.89	4.91	4.89	4.61	4.73
EOM	5.08	5.17	5.09	5.11	5.07	5.04	4.96	4.96	4.98	4.82	4.81	4.74

WTR YR 1987 MEAN 5.00 HIGH 5.42 OCT 6 AND OTHERS LOW 4.60 AUG 24



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.

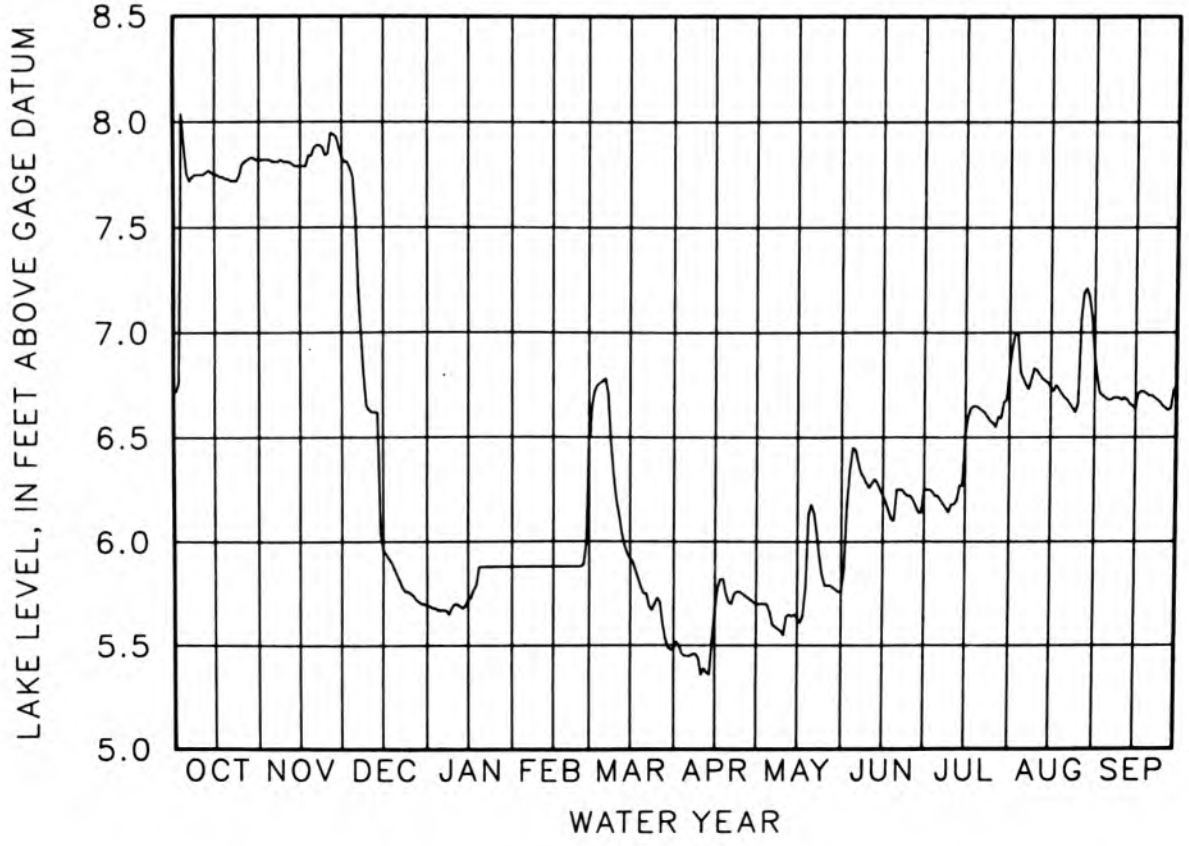
INLET AND OUTLET.--The inlet is an unnamed ditch which enters the lake from the southeastern side. The outlet exits the lake on the northern side and flows north approximately 1.5 mi to the Tippecanoe River.

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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.75	7.81	7.54	5.67	5.88	6.77	5.45	5.66	6.44	6.22	6.78	6.68
10	7.75	7.81	6.63	5.70	5.88	6.20	5.36	5.55	6.26	6.18	6.82	6.68
15	7.75	7.79	5.96	5.72	5.88	5.92	5.67	5.63	6.22	6.51	6.74	6.64
20	7.73	7.88	5.84	5.88	5.88	5.75	5.71	6.18	6.25	6.64	6.69	6.70
25	7.80	7.85	5.75	5.88	5.88	5.73	5.75	5.79	6.22	6.57	6.66	6.65
EOM	7.82	7.83	5.69	5.88	6.51	5.49	5.70	5.76	6.25	6.83	6.89	6.73

WTR YR 1987 MEAN 6.43 HIGH 8.04 OCT 3 LOW 5.36 APR 10 AND OTHERS



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 Oct. 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.

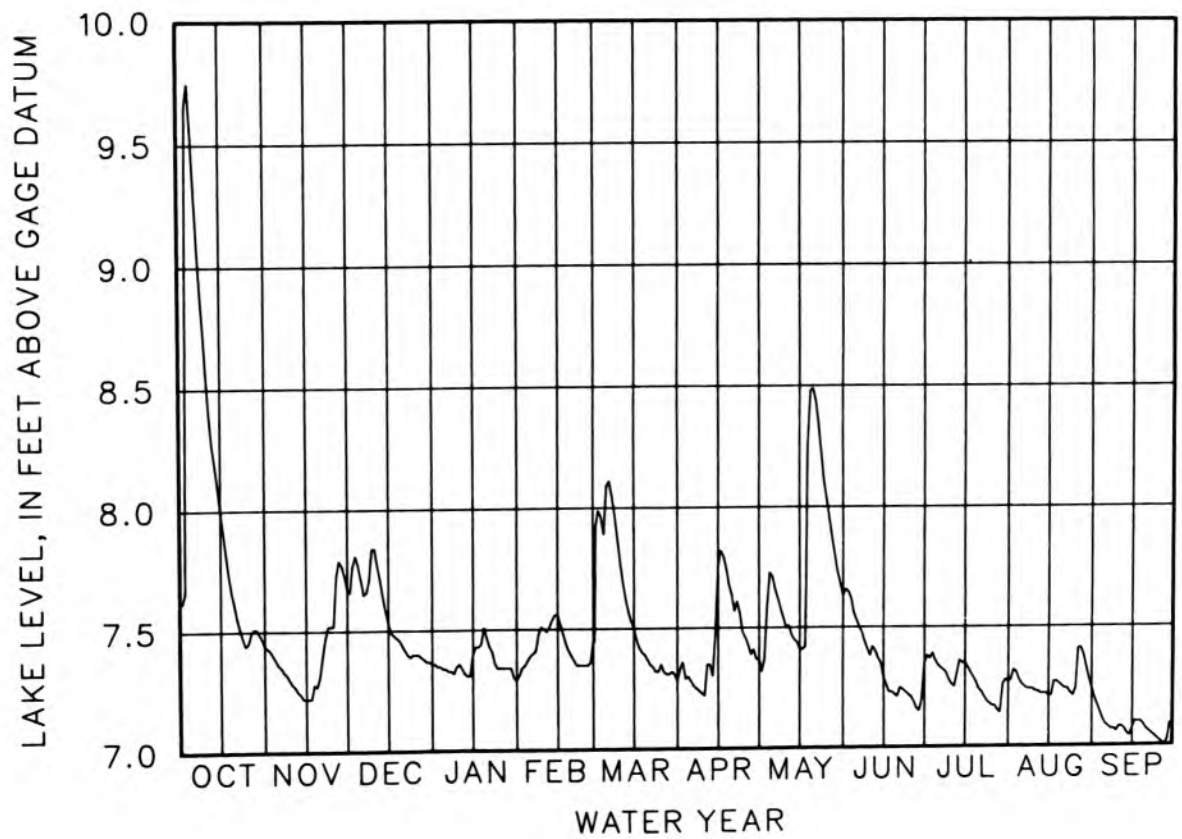
INLET AND OUTLET.--There are three inlets. The outlet of Little Knapp Lake enters at the southeastern corner, the outlet of Harper Lake enters at the southernmost tip, and Galloway ditch enters on the eastern shore. The outlet flows from the lake on the western shore, through a series of lakes, into 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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.56	7.36	7.71	7.34	7.39	8.09	7.28	7.71	7.53	7.34	7.26	7.09
10	8.55	7.28	7.84	7.36	7.50	7.77	7.22	7.50	7.38	7.26	7.23	7.08
15	8.00	7.22	7.53	7.40	7.56	7.50	7.76	7.41	7.29	7.35	7.21	7.07
20	7.61	7.31	7.44	7.47	7.39	7.37	7.64	8.49	7.21	7.24	7.25	7.07
25	7.45	7.52	7.40	7.34	7.35	7.35	7.46	8.03	7.21	7.17	7.24	7.02
EOM	7.44	7.67	7.36	7.29	7.45	7.28	7.37	7.63	7.35	7.27	7.24	7.08

WTR YR 1987 MEAN 7.47 HIGH 9.75 OCT 4 LOW 7.00 SEP 27



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.--710.00 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.--4.56 ft gage datum or 714.56 ft above National Geodetic Vertical Datum of 1929 as decreed on Sept. 15, 1948, by the Starke County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a steel sheet piling dam with a fixed crest.

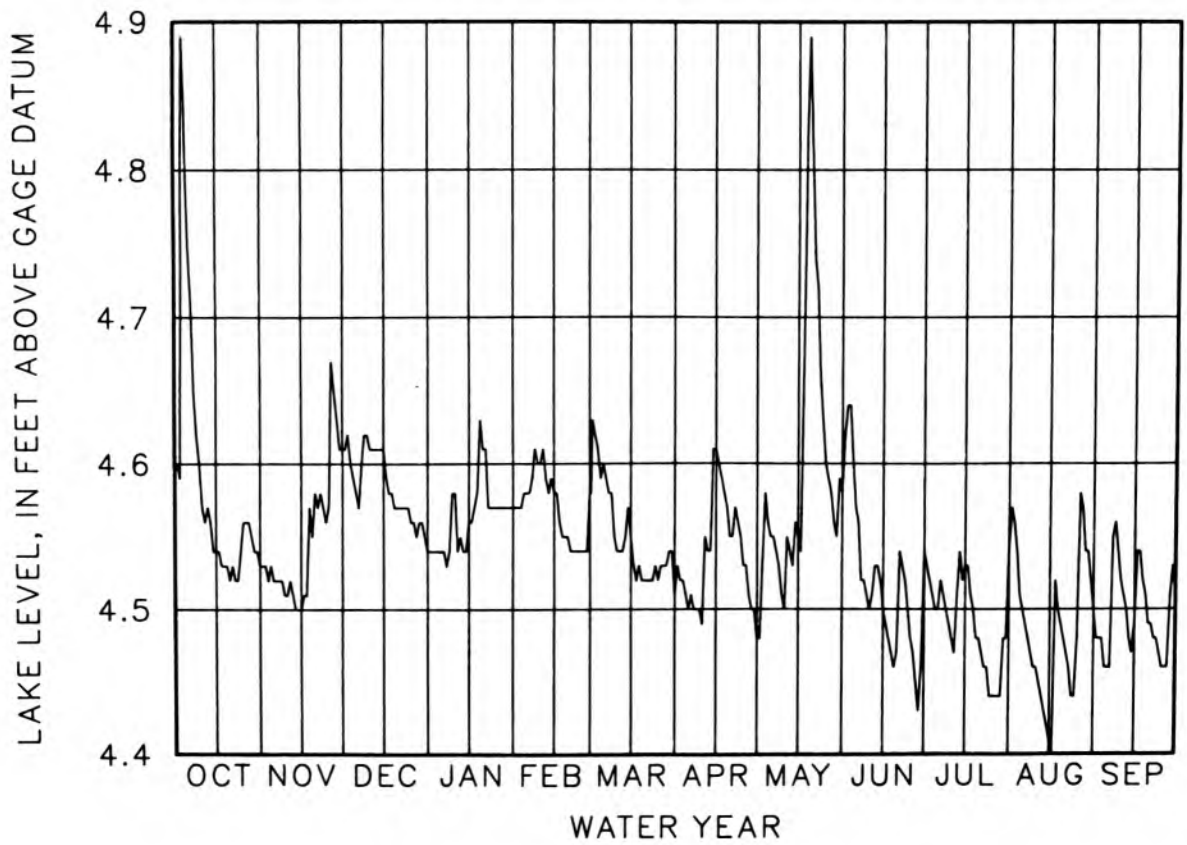
INLET AND OUTLET.--Lawrence Pontius ditch and an unnamed ditch enter the lake on the south shore of the east lobe. The outlet flows from the lake at the western tip and into Robbins ditch 1400 ft downstream. Robbins ditch empties into the Kankakee River.

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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.75	4.52	4.58	4.54	4.58	4.60	4.50	4.55	4.57	4.50	4.50	4.46
10	4.57	4.51	4.61	4.58	4.60	4.54	4.49	4.50	4.50	4.48	4.46	4.52
15	4.54	4.50	4.61	4.56	4.58	4.55	4.61	4.55	4.50	4.53	4.41	4.49
20	4.52	4.58	4.57	4.61	4.55	4.52	4.55	4.81	4.47	4.48	4.48	4.49
25	4.56	4.57	4.56	4.57	4.54	4.52	4.53	4.60	4.48	4.44	4.48	4.46
EOM	4.53	4.61	4.54	4.57	4.58	4.51	4.48	4.58	4.54	4.54	4.50	4.51

WTR YR 1987 MEAN 4.54 HIGH 4.89 OCT 3 AND OTHERS LOW 4.40 AUG 16



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.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by the outlet channel.

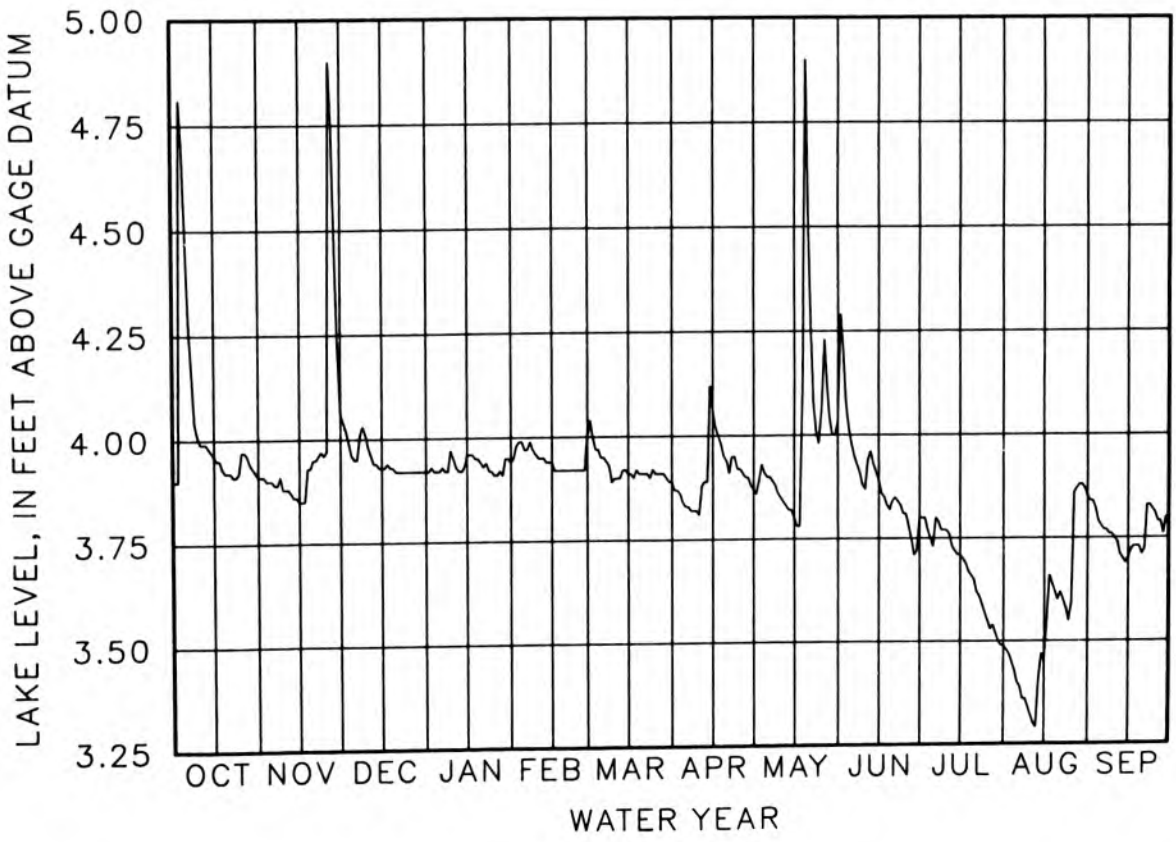
INLET AND OUTLET.--Two small inlets enter the lake from the northwest and the northeast. The outlet flows from the lake on the south side through a dredged channel, forms the head waters of Wolf Creek, and eventually joins the Kankakee River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 7.24 ft June 14, 1981; minimum stage, 2.68 ft Nov. 28-30, 1956.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.48	3.90	3.95	3.92	3.97	3.95	3.83	3.90	3.98	3.73	3.40	3.78
10	3.99	3.88	3.98	3.95	3.95	3.90	3.81	3.85	3.87	3.77	3.32	3.75
15	3.96	3.85	3.93	3.96	3.94	3.91	4.06	3.80	3.89	3.71	3.45	3.70
20	3.92	3.95	3.92	3.94	3.92	3.91	3.94	4.56	3.84	3.65	3.60	3.71
25	3.97	3.97	3.92	3.91	3.92	3.91	3.92	4.06	3.81	3.55	3.59	3.81
EOM	3.91	4.06	3.92	3.94	4.01	3.89	3.87	4.03	3.80	3.49	3.85	3.78

WTR YR 1987 MEAN 3.88 HIGH 4.90 NOV 26 AND OTHERS LOW 3.29 AUG 12



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.

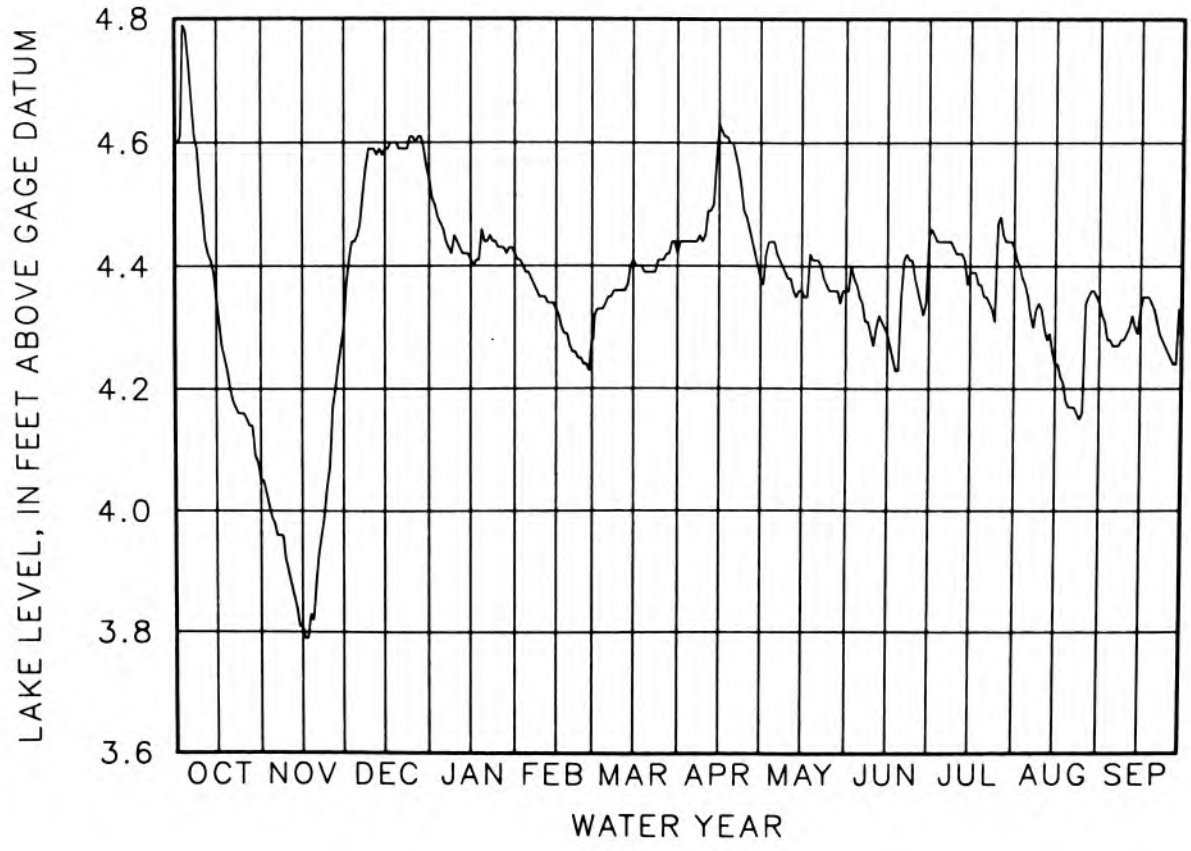
INLET AND OUTLET.--The one inlet flows into the lake on the extreme eastern shore from the Third Basin of Crooked Lake, 1.4 mi upstream. The outlet flows from the northern tip into Lime Lake approximately 600 ft downstream, then eventually into the St. Joseph River.

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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.73	3.98	4.45	4.46	4.39	4.34	4.44	4.44	4.35	4.44	4.35	4.27
10	4.49	3.90	4.59	4.44	4.35	4.36	4.45	4.38	4.27	4.42	4.33	4.29
15	4.35	3.81	4.59	4.41	4.33	4.41	4.63	4.36	4.29	4.39	4.24	4.33
20	4.20	3.88	4.59	4.44	4.27	4.39	4.60	4.41	4.35	4.35	4.17	4.33
25	4.16	4.07	4.61	4.43	4.24	4.41	4.48	4.36	4.38	4.47	4.16	4.26
EOM	4.05	4.30	4.54	4.42	4.28	4.42	4.38	4.36	4.45	4.43	4.34	4.33

WTR YR 1987 MEAN 4.35 HIGH 4.79 OCT 3 LOW 3.79 NOV 16 AND OTHERS



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.--124 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 Sept. 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.

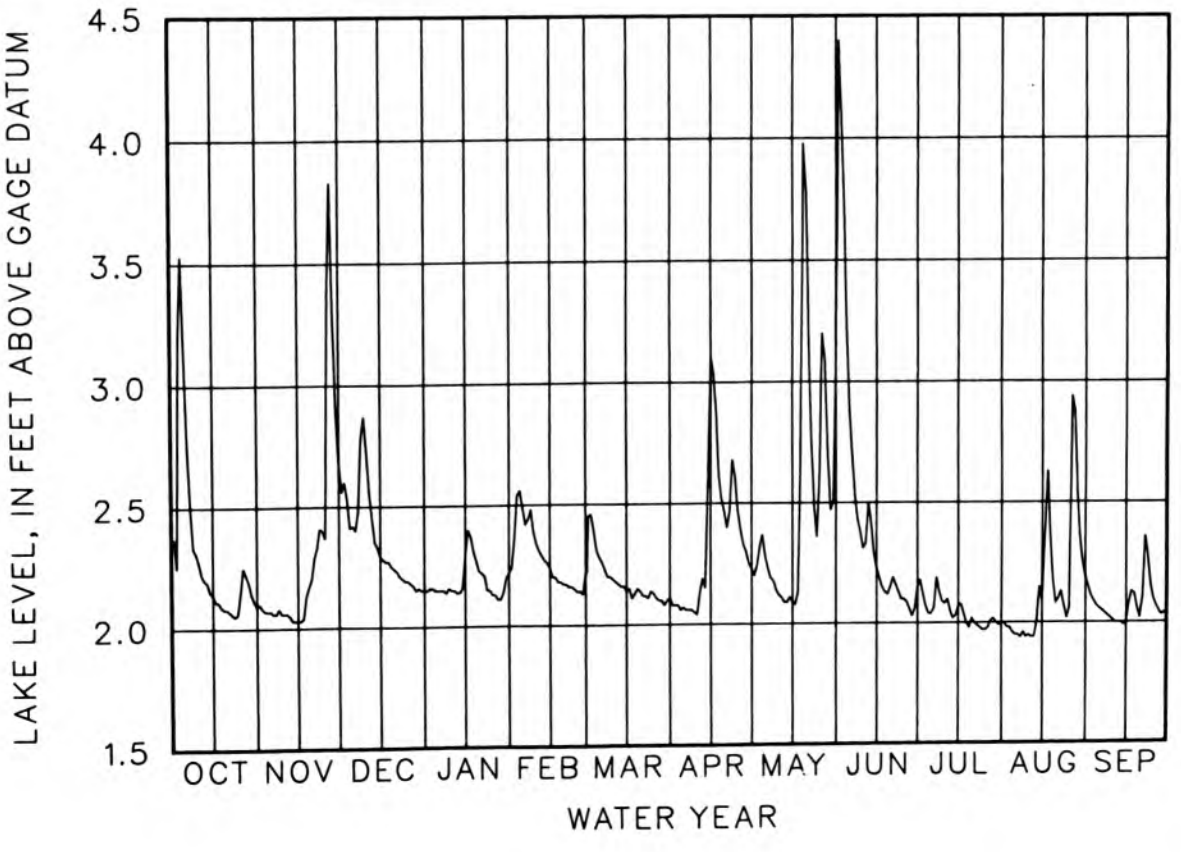
INLET AND OUTLET.--The two principal inlets are Turkey Creek, entering from the extreme southwestern tip, and Deep River, entering on the northeastern shore of the southern lobe. Three unnamed tributaries enter from the northwest, south, and southeast. The outlet, Deep River, flows from the lake at the 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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	3.11	2.07	2.42	2.15	2.49	2.28	2.07	2.28	2.87	2.04	1.95	2.06
10	2.27	2.06	2.73	2.15	2.34	2.19	2.04	2.12	2.31	2.08	1.95	2.01
15	2.14	2.03	2.29	2.30	2.24	2.14	3.10	2.09	2.23	2.07	2.09	2.00
20	2.08	2.20	2.24	2.23	2.17	2.14	2.47	3.79	2.15	2.02	2.08	2.02
25	2.15	2.37	2.19	2.13	2.14	2.13	2.47	2.63	2.10	1.97	2.06	2.10
EOM	2.09	2.68	2.15	2.22	2.22	2.11	2.23	3.04	2.15	2.00	2.19	2.03

WTR YR 1987 MEAN 2.27 HIGH 4.40 JUN 1 LOW 1.94 AUG 7 AND OTHERS



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 Oct. 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.

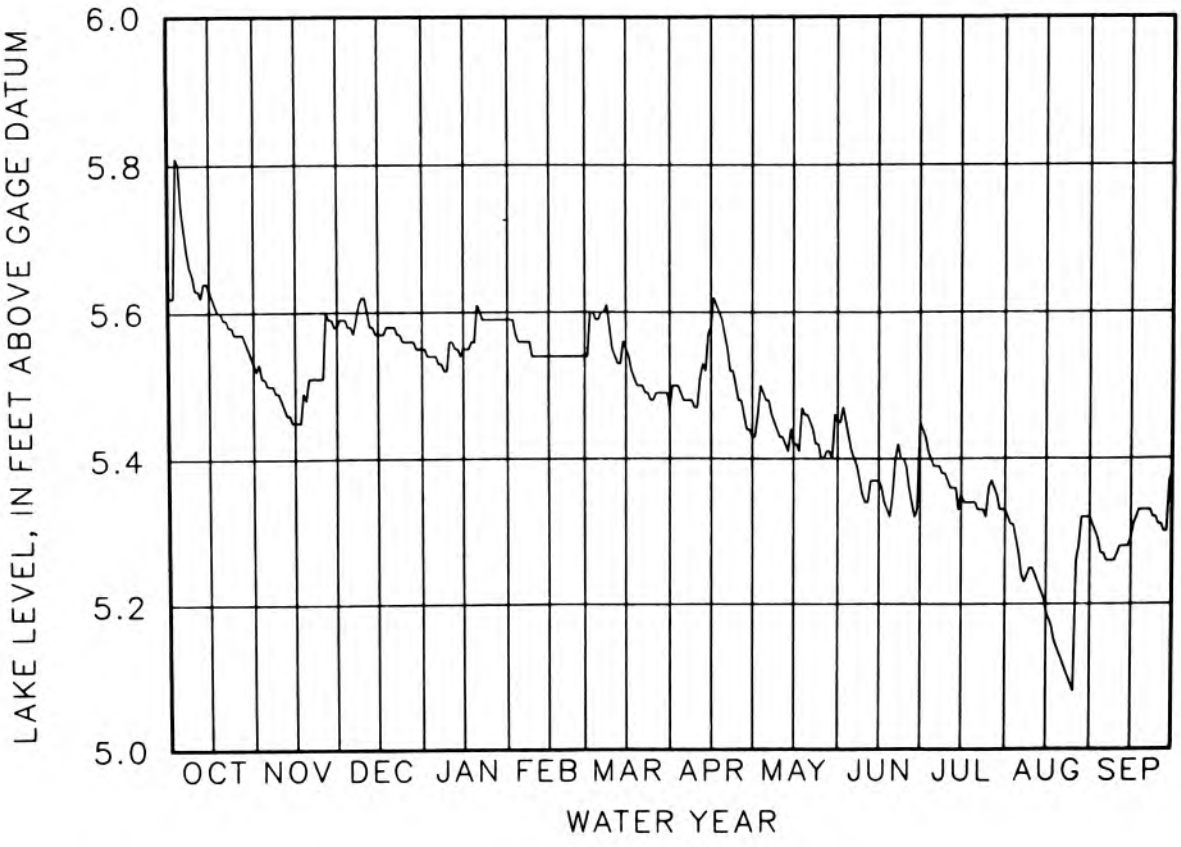
INLET AND OUTLET.--The inlet flows from Silver Lake, 0.8 mi upstream, and enters on the north shore. The outlet flows from the southwest end of the lake and forms Crooked Creek. Crooked Creek flows into Mud Lake 0.8 mi downstream, then enters Snow Lake.

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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.74	5.50	5.58	5.54	5.56	5.59	5.48	5.48	5.41	5.39	5.27	5.27
10	5.63	5.48	5.62	5.56	5.54	5.55	5.47	5.43	5.34	5.37	5.25	5.27
15	5.63	5.45	5.57	5.55	5.54	5.55	5.58	5.42	5.37	5.35	5.19	5.29
20	5.59	5.51	5.58	5.61	5.54	5.50	5.57	5.46	5.35	5.34	5.13	5.33
25	5.57	5.51	5.56	5.59	5.54	5.48	5.48	5.40	5.39	5.36	5.08	5.31
EOM	5.53	5.58	5.55	5.59	5.54	5.47	5.43	5.45	5.45	5.33	5.32	5.38

WTR YR 1987 MEAN 5.46 HIGH 5.81 OCT 3 LOW 5.08 AUG 25



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.

LAKE-LEVEL CONTROL.--The lake level is controlled by a concrete dam and the gate of a feeder canal at the lake outlet.

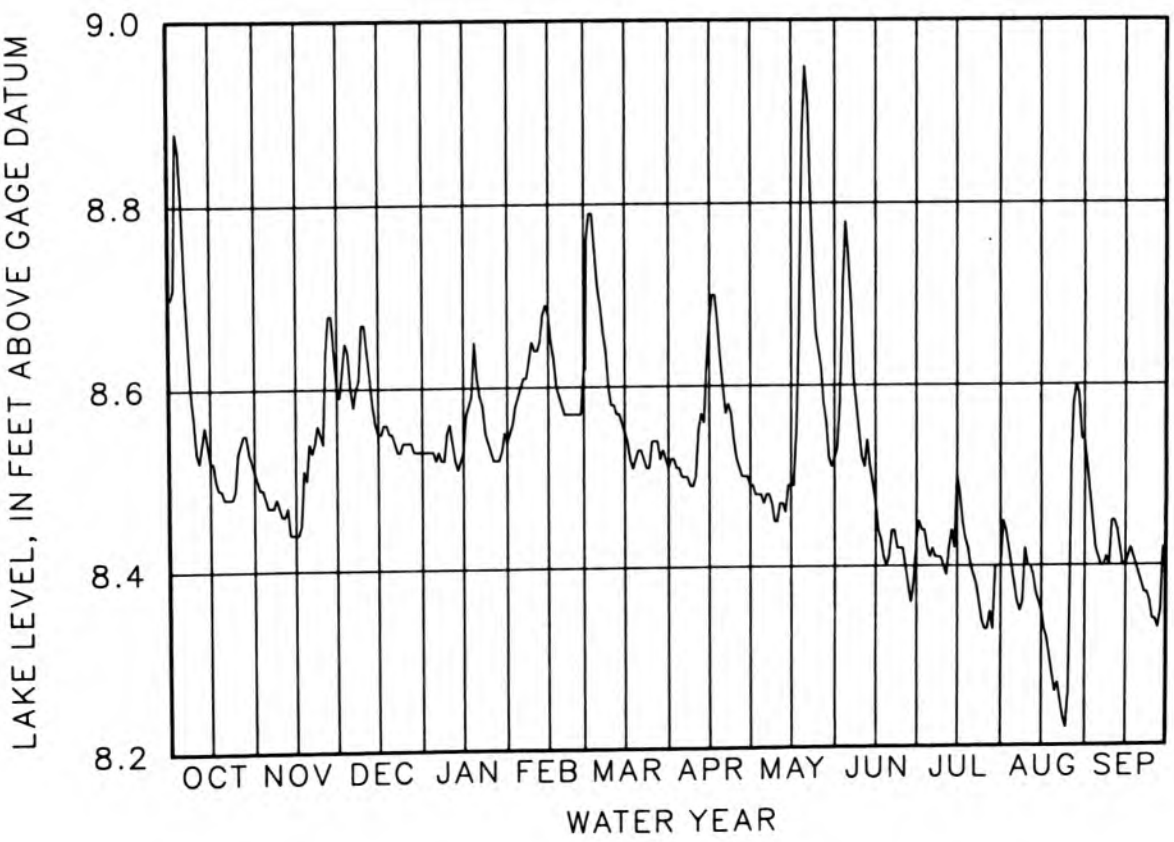
INLET AND OUTLET.--Rain Creek is the main inlet and enters at the southeastern edge of the lake. The other inlet is located on the eastern shore of the lake at the site of the gage. The outlet is Mill Creek, which exits at the northwestern tip of the lake and flows 3.5 mi to the Tippecanoe River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 10.14 ft Mar. 13, 1982; minimum stage, 6.48 ft Nov. 14, 25-27, 1964.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.80	8.47	8.60	8.52	8.60	8.71	8.50	8.47	8.74	8.41	8.38	8.41
10	8.53	8.46	8.67	8.56	8.64	8.58	8.50	8.45	8.52	8.40	8.40	8.45
15	8.52	8.44	8.55	8.53	8.68	8.55	8.67	8.49	8.47	8.50	8.35	8.40
20	8.48	8.54	8.55	8.61	8.58	8.53	8.60	8.95	8.41	8.40	8.26	8.39
25	8.53	8.54	8.54	8.53	8.57	8.54	8.52	8.64	8.42	8.33	8.26	8.34
EOM	8.51	8.60	8.53	8.54	8.62	8.51	8.49	8.52	8.43	8.40	8.54	8.40

WTR YR 1987 MEAN 8.52 HIGH 8.95 MAY 20 LOW 8.22 AUG 24



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 Aug. 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.

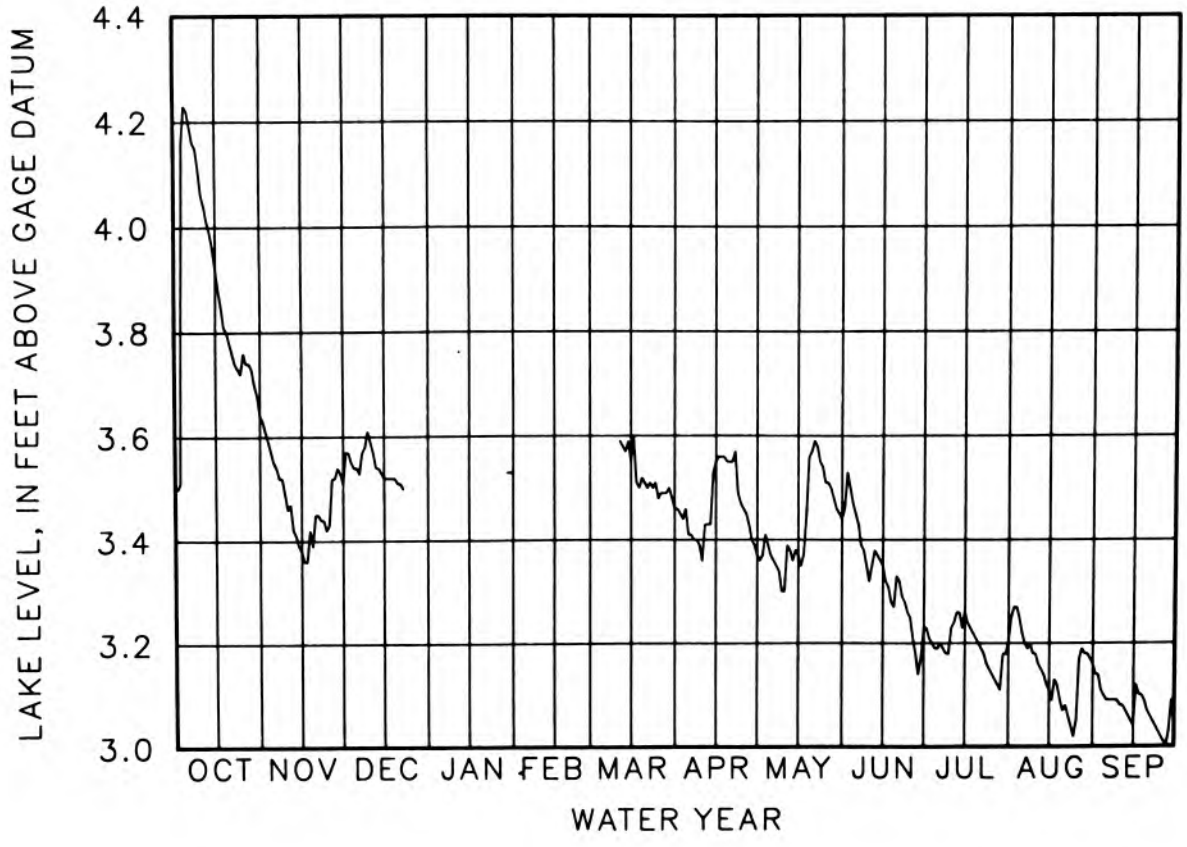
INLET AND OUTLET.--Wilson ditch enters the lake at the northeast corner, Curtiss ditch enters at the east center, and Norris inlet enters at the southeast corner. The outlet leaves the lake at the western shore, north of the point, and flows into Lost Lake 1,600 ft downstream, thence into the Tippecanoe 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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.22	3.55	3.54	---		---	3.41	3.37	3.45	3.19	3.22	3.09
10	4.06	3.46	3.59	---		---	3.36	3.30	3.32	3.23	3.18	3.08
15	3.92	3.38	3.52	---		3.55	3.55	3.37	3.35	3.26	3.11	3.04
20	3.78	3.45	3.51	---		3.51	3.55	3.57	3.33	3.20	3.07	3.07
25	3.76	3.43	---	---		3.48	3.46	3.51	3.25	3.14	3.05	3.02
EOM	3.64	3.51	---	3.53		3.46	3.37	3.44	3.23	3.20	3.16	3.07

WTR YR 1987 MEAN 3.40 HIGH 4.23 OCT 4 LOW 3.00 SEP 27



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 Aug. 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.

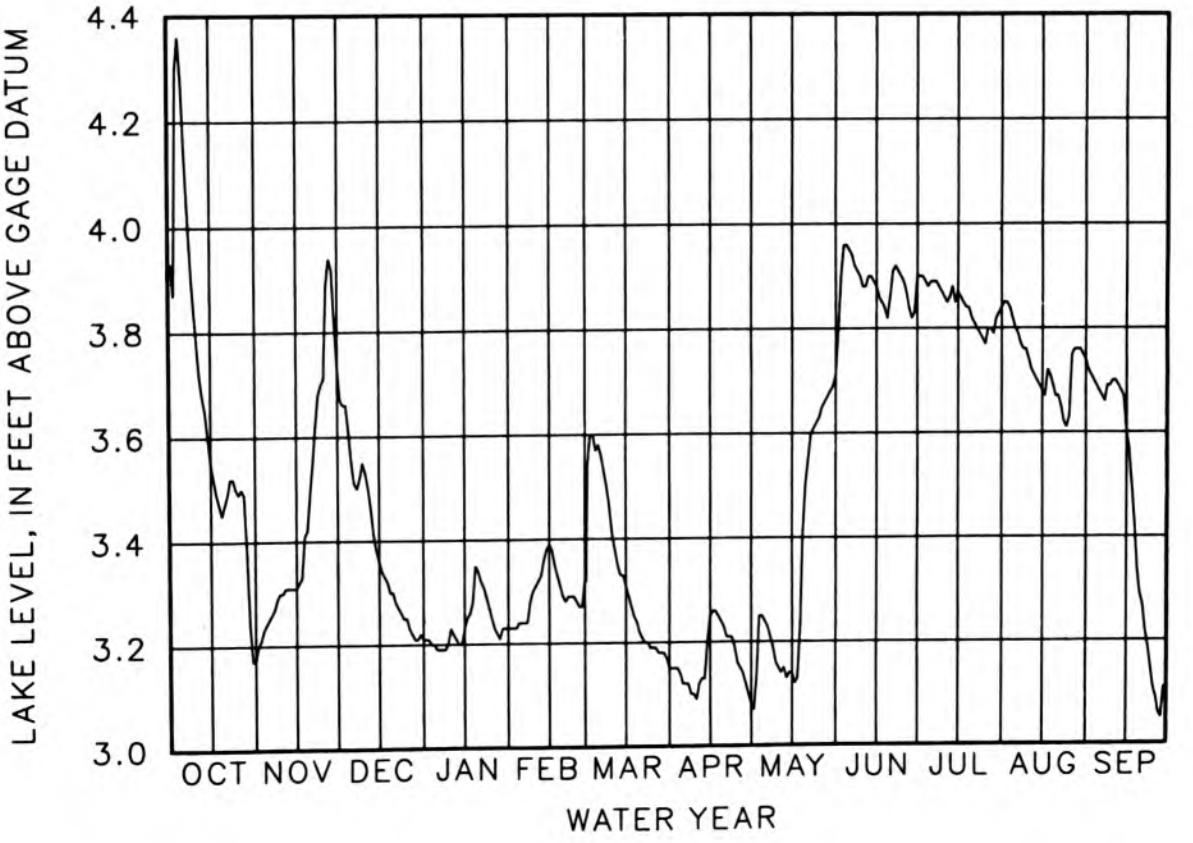
INLET AND OUTLET.--Three ditches, Kimble, Martin, and Seltenright, enter the lake on the northwest shore. Scofield ditch enters at the west lobe. The outlet, Clark ditch, flows from the lake at the southern end and eventually into Yellow River.

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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.28	3.25	3.55	3.19	3.24	3.58	3.12	3.24	3.95	3.89	3.80	3.68
10	3.79	3.30	3.53	3.23	3.31	3.41	3.09	3.15	3.88	3.86	3.74	3.70
15	3.55	3.31	3.36	3.23	3.39	3.31	3.25	3.14	3.88	3.87	3.68	3.60
20	3.47	3.49	3.30	3.34	3.29	3.22	3.23	3.50	3.86	3.82	3.67	3.29
25	3.49	3.71	3.25	3.25	3.28	3.19	3.16	3.63	3.89	3.77	3.63	3.11
EOM	3.17	3.73	3.21	3.23	3.32	3.15	3.08	3.71	3.90	3.84	3.74	3.08

WTR YR 1987 MEAN 3.49 HIGH 4.36 OCT 4 LOW 3.05 SEP 28



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.

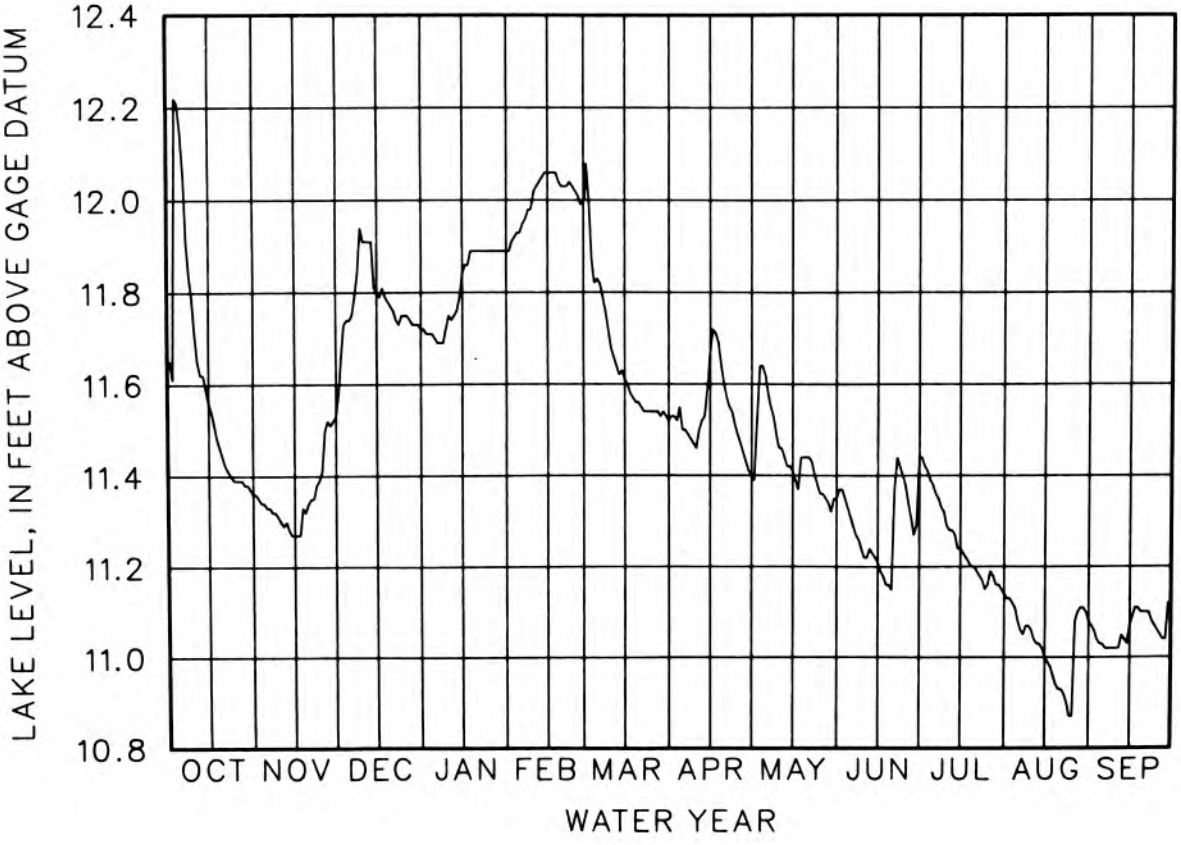
INLET AND OUTLET.--There are four inlets to the lake. Spectacle Lakes drain into the west shore, Maumee ditch enters from the south, Goose Pond flows through a short channel to the southwest shore, and McClish Lake drains into the lake on the southeast shore. The outlet flows to the north from the east 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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	12.15	11.33	11.74	11.70	11.93	11.83	11.50	11.62	11.31	11.38	11.08	11.03
10	11.71	11.30	11.91	11.75	12.02	11.68	11.46	11.46	11.22	11.29	11.06	11.02
15	11.56	11.27	11.80	11.84	12.06	11.61	11.67	11.41	11.21	11.24	11.00	11.07
20	11.44	11.34	11.77	11.89	12.03	11.56	11.60	11.44	11.15	11.20	10.93	11.10
25	11.39	11.41	11.75	11.89	12.02	11.54	11.49	11.36	11.38	11.16	10.87	11.06
EOM	11.36	11.53	11.72	11.89	12.00	11.52	11.40	11.35	11.44	11.14	11.08	11.12

WTR YR 1987 MEAN 11.48 HIGH 12.22 OCT 3 LOW 10.87 AUG 24 AND OTHERS



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.

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.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by the outlet channel.

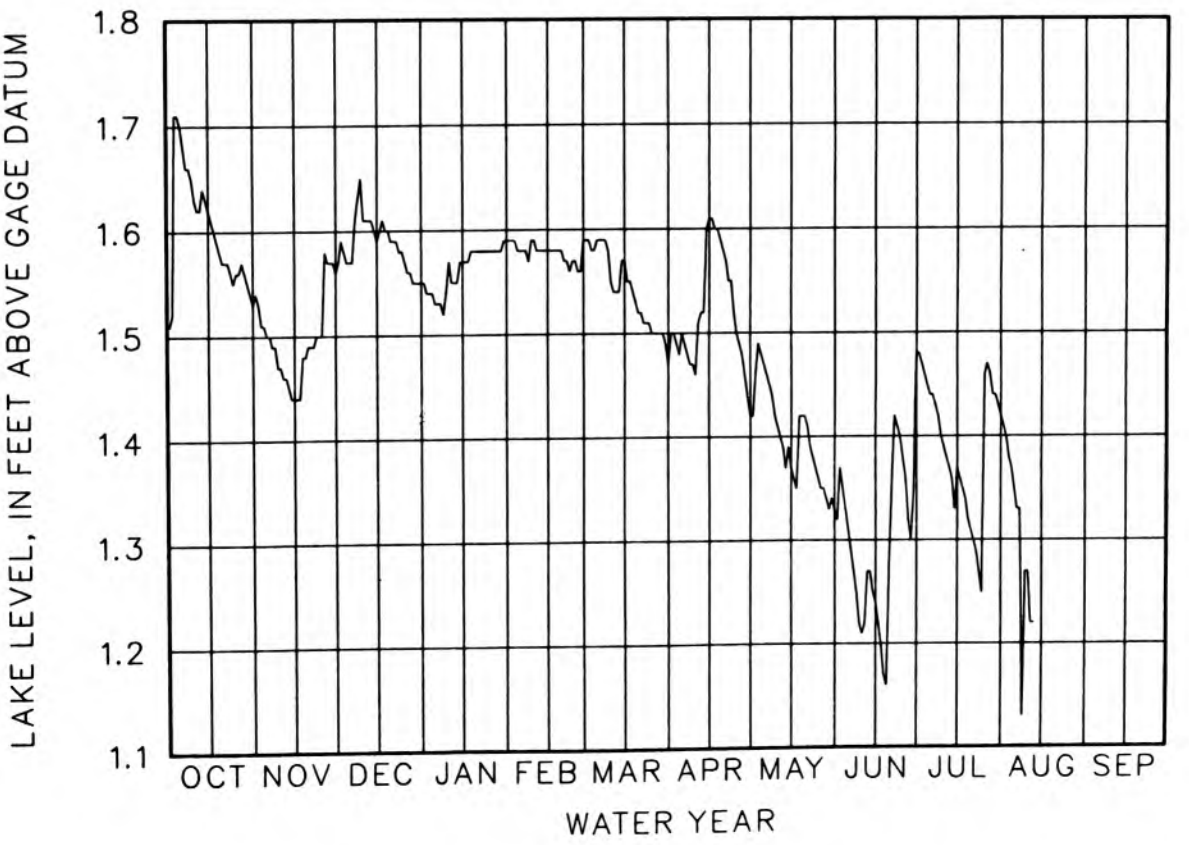
INLET AND OUTLET.--The one inlet enters the lake on the west side. The outlet flows from the northern shore, enters Michigan, and eventually empties into Prairie River.

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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	1.70	1.50	1.57	1.53	1.58	1.59	1.50	1.47	1.31	1.44	1.35	
10	1.63	1.47	1.61	1.57	1.59	1.55	1.46	1.41	1.21	1.39	1.27	
15	1.62	1.44	1.59	1.57	1.58	1.57	1.61	1.37	1.24	1.37	---	
20	1.57	1.49	1.59	1.58	1.58	1.52	1.58	1.42	1.28	1.31	---	
25	1.56	1.50	1.57	1.58	1.57	1.50	1.50	1.36	1.38	1.46	---	
EOM	1.53	1.56	1.55	1.59	1.59	1.47	1.42	1.33	1.48	1.42	---	

WTR YR 1987 MEAN 1.49 HIGH 1.71 OCT 3 AND OTHERS LOW 1.13 AUG 8



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 Mar. 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.

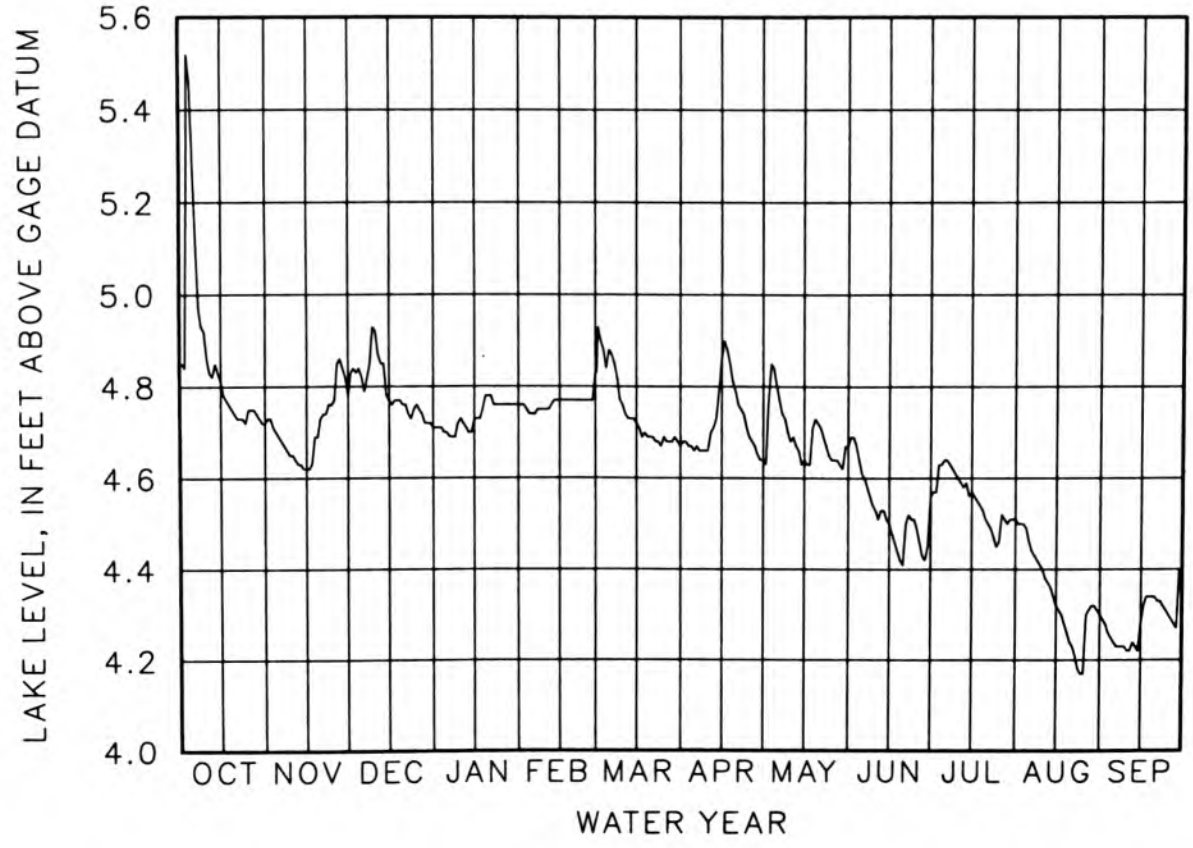
INLET AND OUTLET.--The one inlet enters on the east side from Round Lake. The outlet, Waterhouse ditch, flows from the lake at the southwest end and into Henderson Lake ditch, thence into Sylvan Lake 4.8 mi downstream.

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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.26	4.69	4.82	4.70	4.74	4.88	4.66	4.80	4.61	4.64	4.46	4.24
10	4.86	4.65	4.92	4.73	4.75	4.76	4.66	4.68	4.53	4.60	4.40	4.22
15	4.81	4.62	4.77	4.73	4.77	4.72	4.86	4.64	4.50	4.57	4.32	4.28
20	4.74	4.73	4.76	4.78	4.77	4.69	4.79	4.72	4.41	4.51	4.24	4.34
25	4.75	4.77	4.76	4.76	4.77	4.69	4.69	4.64	4.49	4.46	4.17	4.30
EOM	4.72	4.78	4.71	4.76	4.83	4.67	4.64	4.67	4.56	4.51	4.30	4.40

WTR YR 1987 MEAN 4.64 HIGH 5.52 OCT 3 LOW 4.17 AUG 24 AND OTHERS



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.

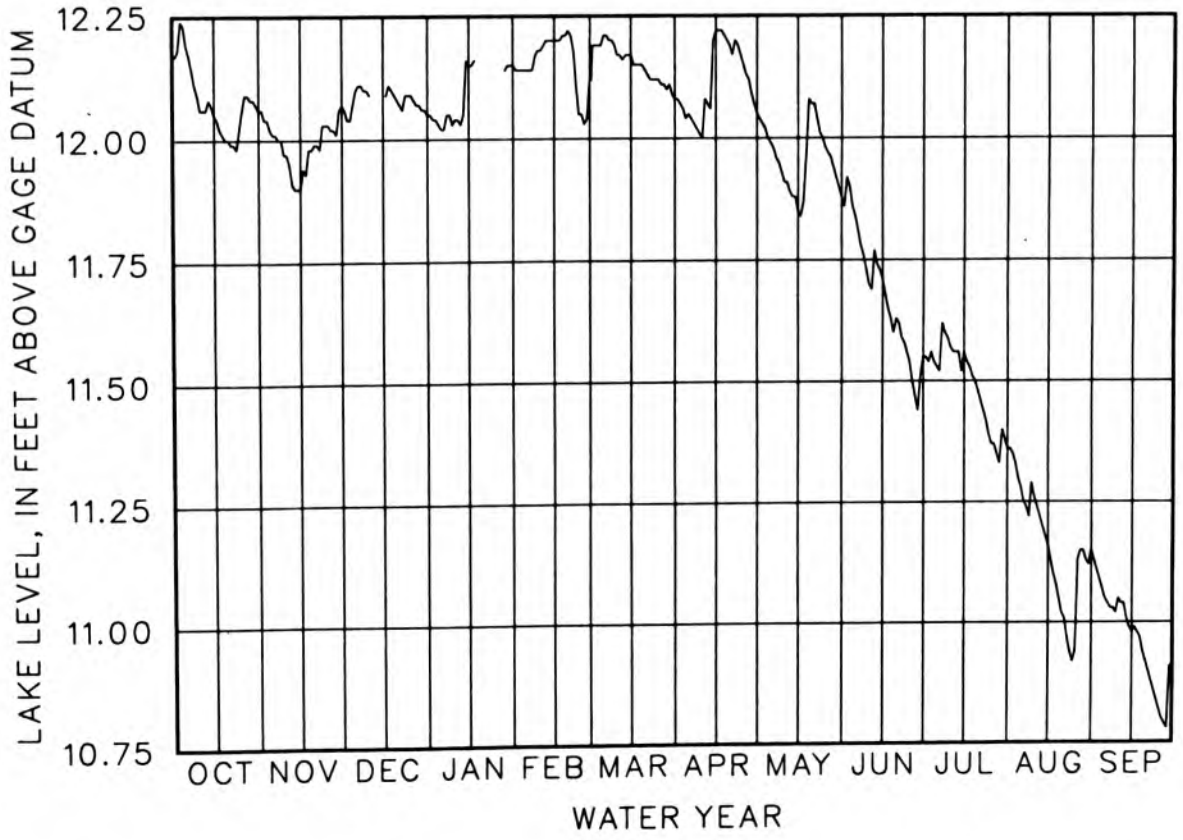
INLET AND OUTLET.--Two tile ditches flow into the lake. The outlet flows from the west end of the lake, joins the outlet of Mud Lake, continues through Round Lake, then into Eel River.

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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	12.19	12.01	12.10	12.02	12.14	12.21	12.05	11.99	11.84	11.53	11.28	11.05
10	12.06	11.97	12.09	12.04	12.18	12.17	12.00	11.91	11.70	11.57	11.26	11.05
15	12.05	11.90	---	12.15	12.20	12.17	12.22	11.85	11.71	11.56	11.16	10.98
20	12.00	11.99	12.08	---	12.22	12.14	12.19	12.07	11.63	11.48	11.02	10.92
25	12.06	12.03	12.09	---	12.05	12.12	12.15	11.98	11.54	11.37	10.94	10.82
EOM	12.06	12.07	12.05	12.15	12.12	12.08	12.05	11.88	11.55	11.36	11.15	10.88

WTR YR 1987 MEAN 11.81 HIGH 12.24 OCT 3 LOW 10.78 SEP 28



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.

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.

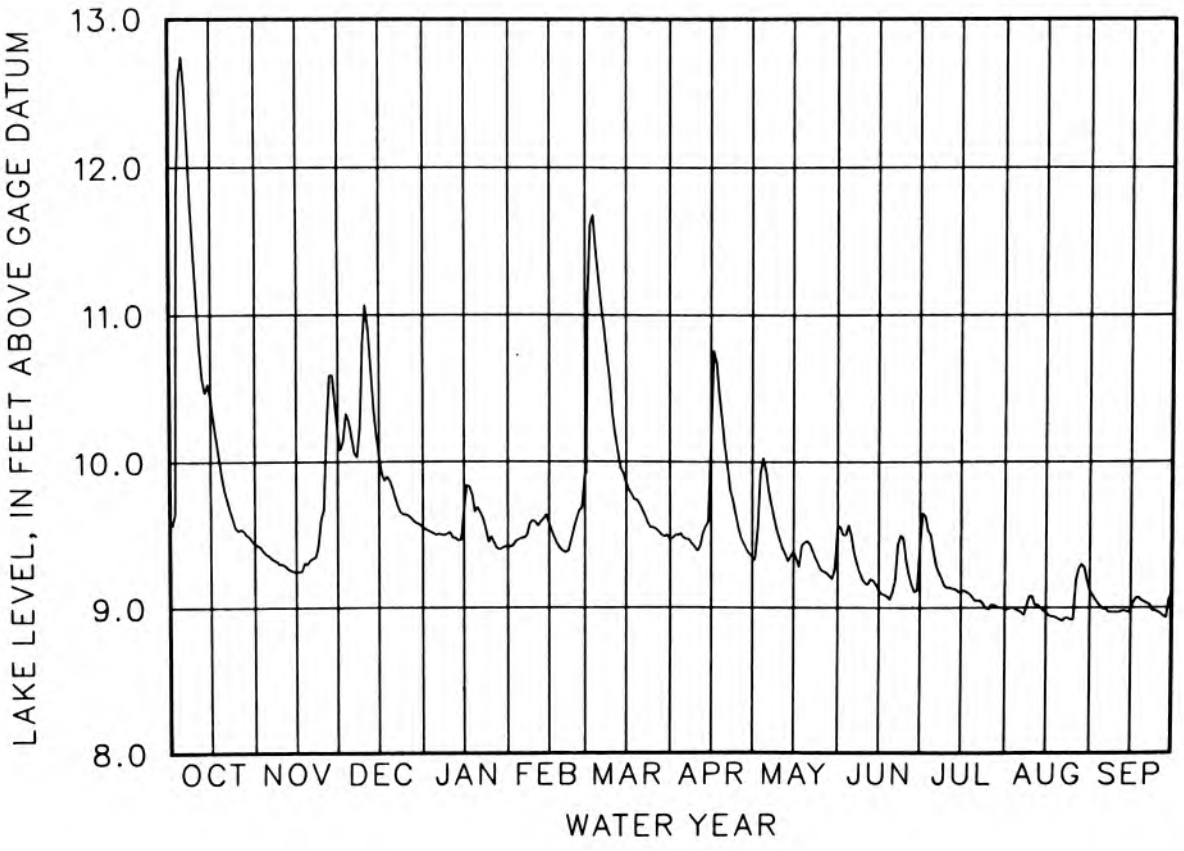
INLET AND OUTLET.--Pigeon Creek flows into Long Lake at the eastern end of the lake and exits at the western end.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 17.42 ft Mar. 22, 1982; minimum stage, 8.91 ft Aug. 21, 1987.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	12.75	9.36	10.17	9.50	9.48	11.25	9.48	9.94	9.50	9.38	8.98	8.99
10	11.10	9.30	11.07	9.52	9.59	10.34	9.39	9.47	9.17	9.14	9.08	8.97
15	10.44	9.25	10.04	9.67	9.58	9.86	10.13	9.39	9.12	9.11	8.97	8.99
20	9.81	9.33	9.82	9.69	9.39	9.71	10.11	9.46	9.11	9.05	8.92	9.04
25	9.53	9.67	9.64	9.49	9.61	9.55	9.55	9.26	9.33	8.99	8.92	8.97
EOM	9.44	10.20	9.55	9.42	9.92	9.47	9.35	9.55	9.41	8.99	9.12	9.09

WTR YR 1987 MEAN 9.57 HIGH 12.75 OCT 5 LOW 8.91 AUG 21



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 mi².

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 Feb. 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.

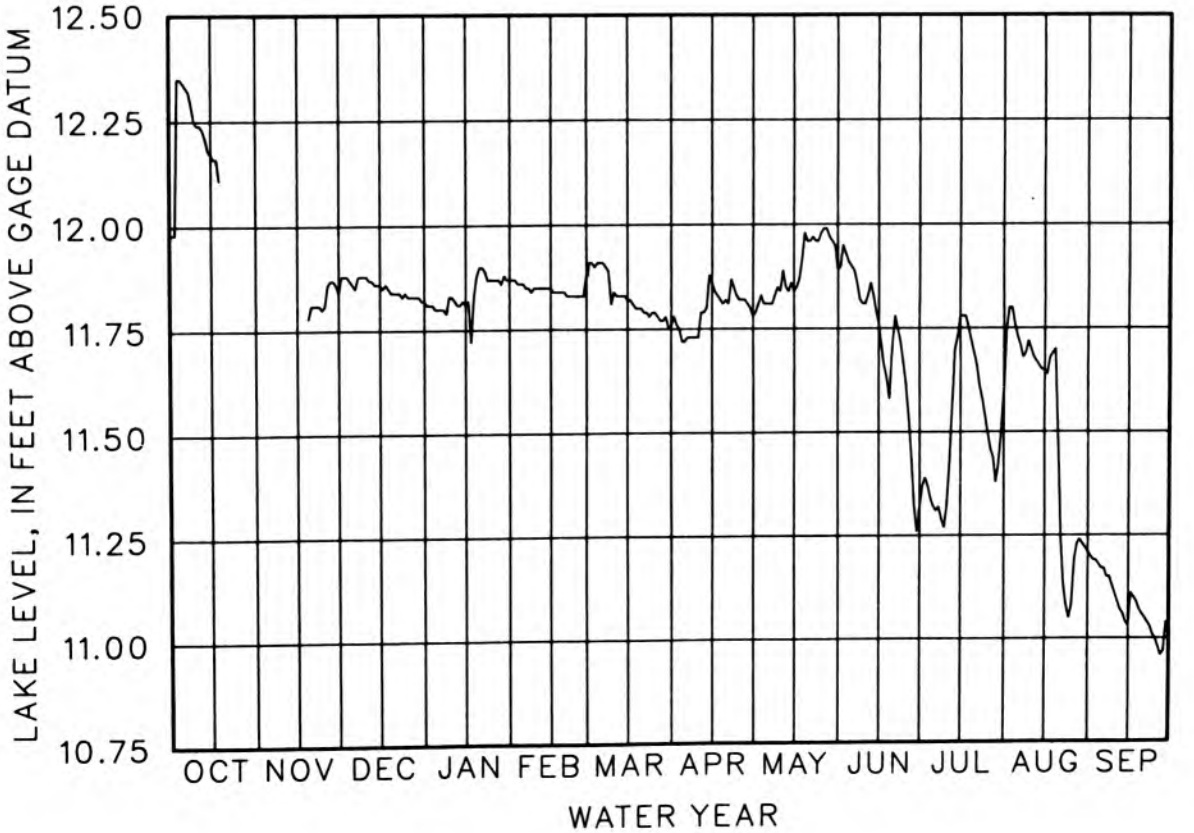
INLET AND OUTLET.--The one inlet flows into the lake from Maxinkuckee Lake and enters on the north shore. The outlet flows from the south end of the lake to the Tippecanoe River 3.7 mi downstream.

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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	12.34	---	11.86	11.80	11.86	11.91	11.72	11.81	11.90	11.32	11.73	11.17
10	12.24	---	11.88	11.83	11.85	11.84	11.73	11.84	11.81	11.32	11.70	11.11
15	12.17	---	11.86	11.81	11.85	11.82	11.86	11.84	11.76	11.78	11.65	11.03
20	---	11.81	11.84	11.90	11.84	11.80	11.82	11.96	11.70	11.69	11.52	11.06
25	---	11.81	11.83	11.87	11.83	11.79	11.82	11.98	11.62	11.50	11.08	11.00
EOM	---	11.84	11.82	11.87	11.88	11.76	11.78	11.89	11.32	11.60	11.21	11.03

WTR YR 1987 MEAN 11.72 HIGH 12.35 OCT 3 AND OTHERS LOW 10.96 SEP 27



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 Mar. 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.

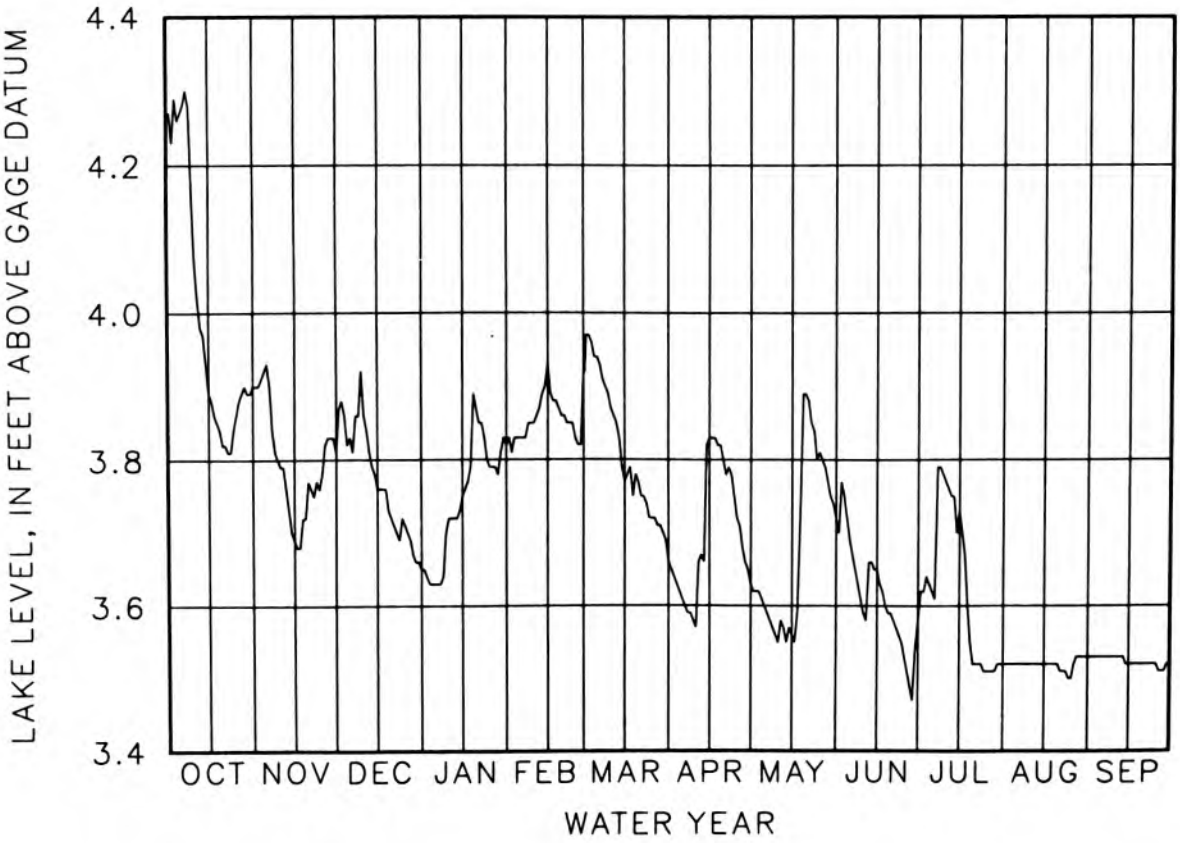
INLET AND OUTLET.--The principal inlet is a tile drain from McColley Lake, 0.5 mi to the north. The outlet flows from the southwestern shore, into Bolley Ditch 0.7 mi downstream, thence into Squirrel Creek, and eventually into Eel River.

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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.27	3.93	3.83	3.63	3.83	3.94	3.61	3.60	3.69	3.62	3.52	3.53
10	4.07	3.79	3.86	3.72	3.85	3.87	3.57	3.55	3.59	3.77	3.52	3.53
15	3.89	3.69	3.76	3.75	3.93	3.77	3.83	3.56	3.65	3.73	3.52	3.52
20	3.82	3.77	3.72	3.87	3.86	3.77	3.80	3.89	3.59	3.52	3.52	3.52
25	3.86	3.78	3.71	3.79	3.83	3.72	3.72	3.81	3.53	3.51	3.50	3.52
EOM	3.90	3.81	3.65	3.82	3.92	3.66	3.63	3.72	3.58	3.52	3.53	3.52

WTR YR 1987 MEAN 3.72 HIGH 4.30 OCT 7 LOW 3.47 JUN 28



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.

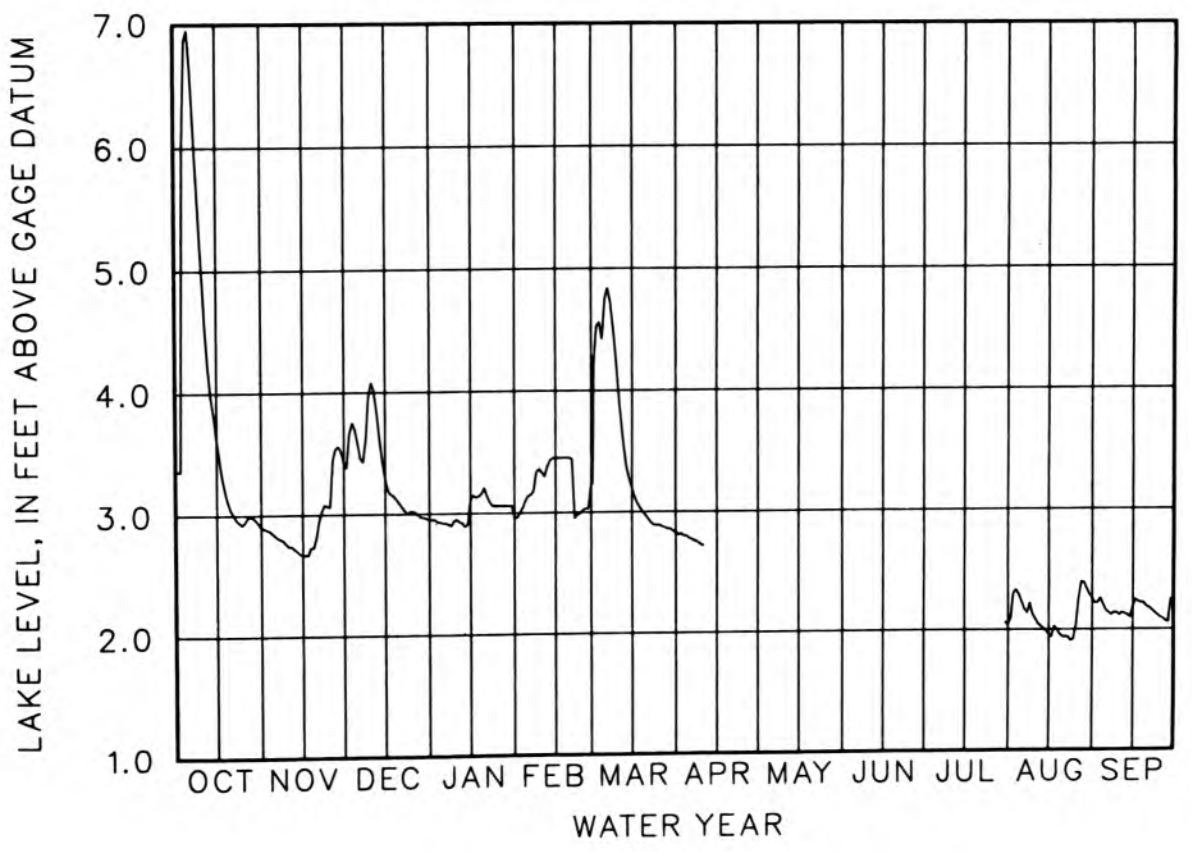
INLET AND OUTLET.--There are three inlets to the lake. Forker Creek flows into the lake from the east, Brown Ditch from the southeast, and Carrol Creek from the west. The outlet flows from the northwest shore into Williams Lake, then into the South Branch of the Elkhart River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 9.47 ft Mar. 24, 25, 1978, Feb. 25, 26, 1985; minimum stage, 1.91 ft Aug. 23, 1987.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.95	2.83	3.59	2.92	3.14	4.75	2.78			---	2.23	2.16
10	4.92	2.74	4.08	2.95	3.33	3.99	2.72			---	2.09	2.12
15	3.62	2.67	3.29	3.11	3.45	3.20	---			---	1.96	2.18
20	3.04	2.81	3.09	3.21	3.45	2.97	---			---	1.94	2.19
25	2.94	3.06	3.02	3.06	3.02	2.89	---			---	2.04	2.10
EOM	2.90	3.42	2.95	2.97	3.24	2.83	---			2.04	2.26	2.26

WTR YR 1987 MEAN 3.02 HIGH 6.95 OCT 5 LOW 1.91 AUG 23



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 Sept. 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 Oct. 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 Oct. 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.

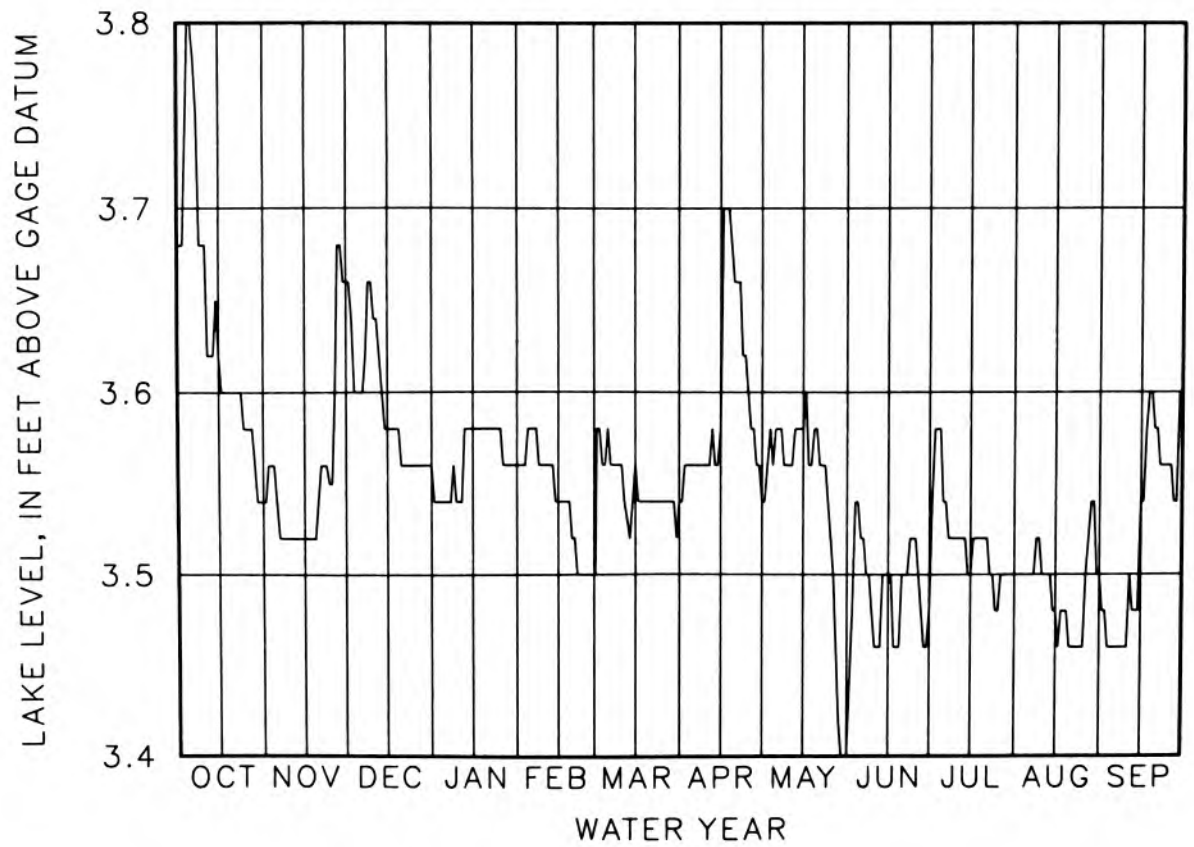
INLET AND OUTLET.--There are two inlets to the lake. One enters at the southeast shore from Still Lake 0.9 mi upstream, and the other, which drains the adjacent marsh land, enters on the northwest shore. The outlet flows from the southwest shore and into South Twin Lake approximately 200 ft downstream.

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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	3.80	3.54	3.60	3.54	3.58	3.58	3.56	3.58	3.52	3.54	3.50	3.46
10	3.68	3.52	3.64	3.54	3.56	3.56	3.56	3.56	3.46	3.52	3.50	3.46
15	3.62	3.52	3.58	3.58	3.54	3.56	3.58	3.58	3.50	3.50	3.48	3.54
20	3.60	3.54	3.56	3.58	3.52	3.54	3.66	3.58	3.50	3.52	3.46	3.58
25	3.58	3.55	3.56	3.58	3.50	3.54	3.60	3.52	3.52	3.48	3.46	3.56
EOM	3.54	3.66	3.56	3.56	3.50	3.54	3.54	3.40	3.48	3.50	3.50	3.60

WTR YR 1987 MEAN 3.55 HIGH 3.80 OCT 4 AND OTHERS LOW 3.40 MAY 29 AND OTHERS



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.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete dam with a fixed crest.

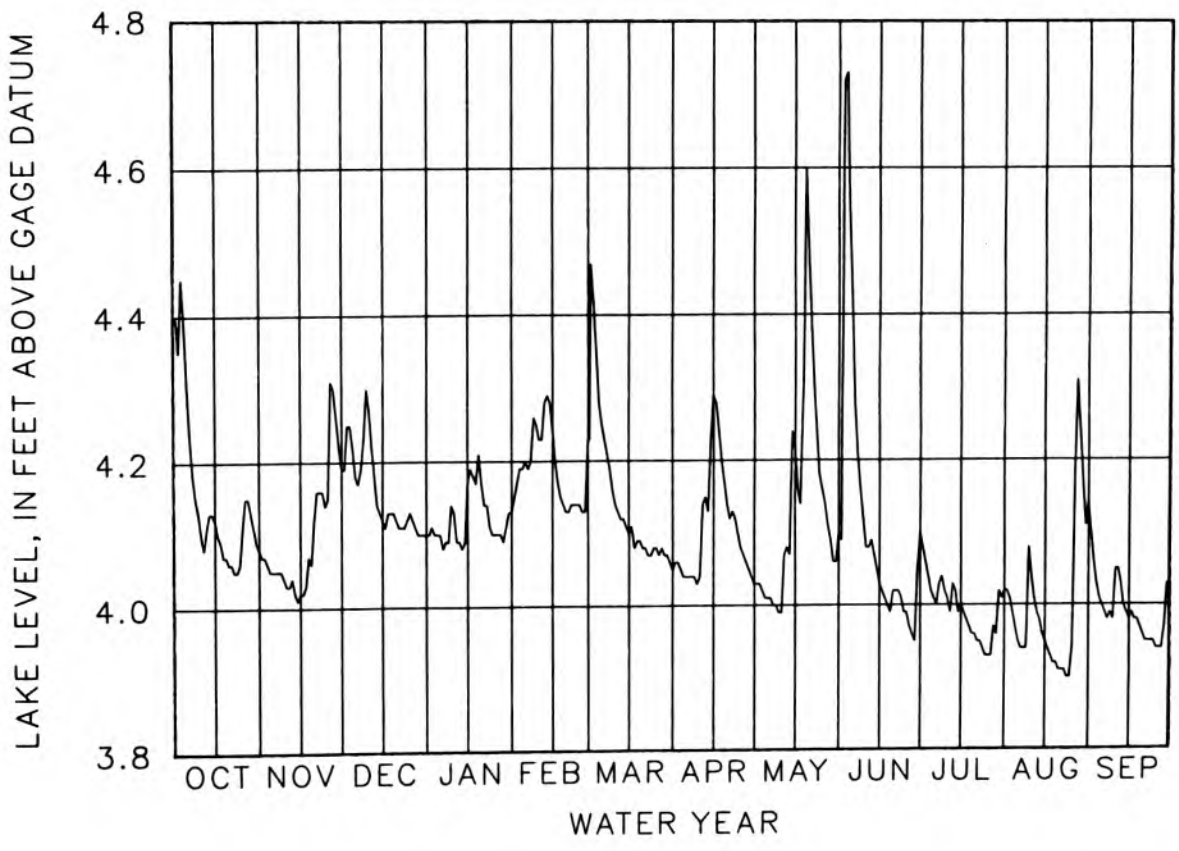
INLET AND OUTLET.--The lake is fed by two small ditches entering from the east and northeast. The outlet flows from the lake at the southwest corner and into Mud Creek, which eventually joins the Tippecanoe River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 6.00 ft June 14, 1958; minimum stage, 2.98 ft Oct. 12-19, 25, 26, 1953.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.30	4.05	4.18	4.10	4.20	4.25	4.04	4.01	4.40	4.01	3.95	4.00
10	4.10	4.03	4.27	4.13	4.23	4.14	4.04	3.99	4.08	4.01	4.04	4.05
15	4.12	4.02	4.12	4.17	4.24	4.10	4.29	4.22	4.03	4.00	3.95	3.98
20	4.06	4.12	4.12	4.17	4.13	4.08	4.14	4.49	4.02	3.96	3.91	3.96
25	4.11	4.15	4.13	4.10	4.14	4.08	4.08	4.16	3.99	3.93	3.94	3.94
EOM	4.08	4.19	4.10	4.13	4.23	4.05	4.03	4.10	4.10	4.02	4.14	4.00

WTR YR 1987 MEAN 4.10 HIGH 4.73 JUN 3 LOW 3.90 AUG 23 AND OTHERS



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.

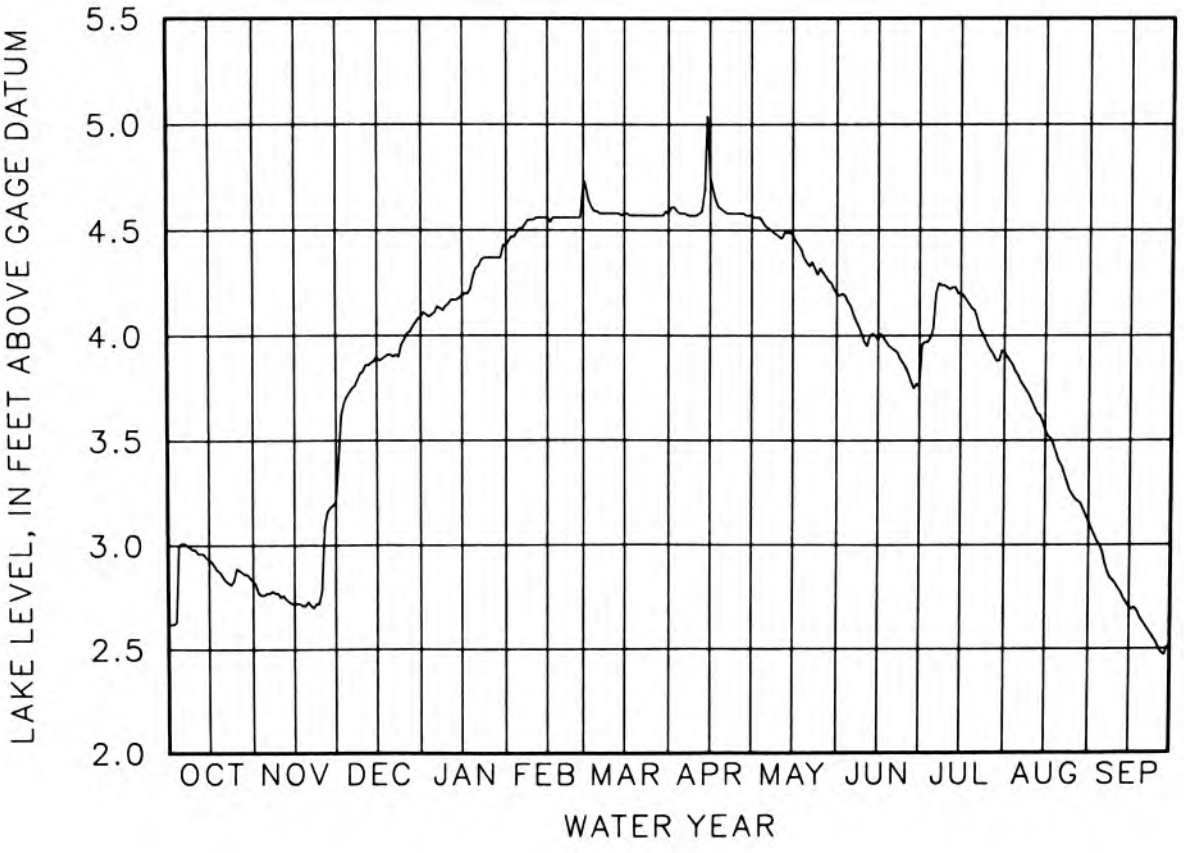
INLET AND OUTLET.--Two ditches enter the lake, one from the east and one from the southeast. The outlet flows into Upper Schooner Creek, which joins Lower Schooner Creek, then flows into the North Fork of Salt Creek. The North Fork of Salt Creek empties into Monroe Reservoir.

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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	3.01	2.77	3.73	4.11	4.51	4.59	4.58	4.52	4.14	4.03	3.81	2.97
10	2.98	2.75	3.83	4.15	4.55	4.58	4.57	4.47	3.97	4.23	3.69	2.81
15	2.93	2.72	3.90	4.19	4.56	4.58	4.75	4.48	3.98	4.20	3.55	2.70
20	2.85	2.73	3.91	4.32	4.56	4.57	4.59	4.35	3.94	4.12	3.40	2.63
25	2.89	2.78	3.98	4.37	4.56	4.57	4.58	4.32	3.85	3.95	3.24	2.53
EOM	2.83	3.21	4.09	4.43	4.73	4.58	4.57	4.20	3.76	3.92	3.11	2.49

WTR YR 1987 MEAN 3.85 HIGH 5.04 APR 14 LOW 2.47 SEP 28



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.--889.75 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 dam in the outlet.

ESTABLISHED LEGAL LEVEL.--9.70 ft gage datum or 899.45 ft above National Geodetic Vertical Datum of 1929 as decreed on Sept. 29, 1952, by the Lagrange County Circuit Court. Martin and Olin Lakes near Valentine 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.

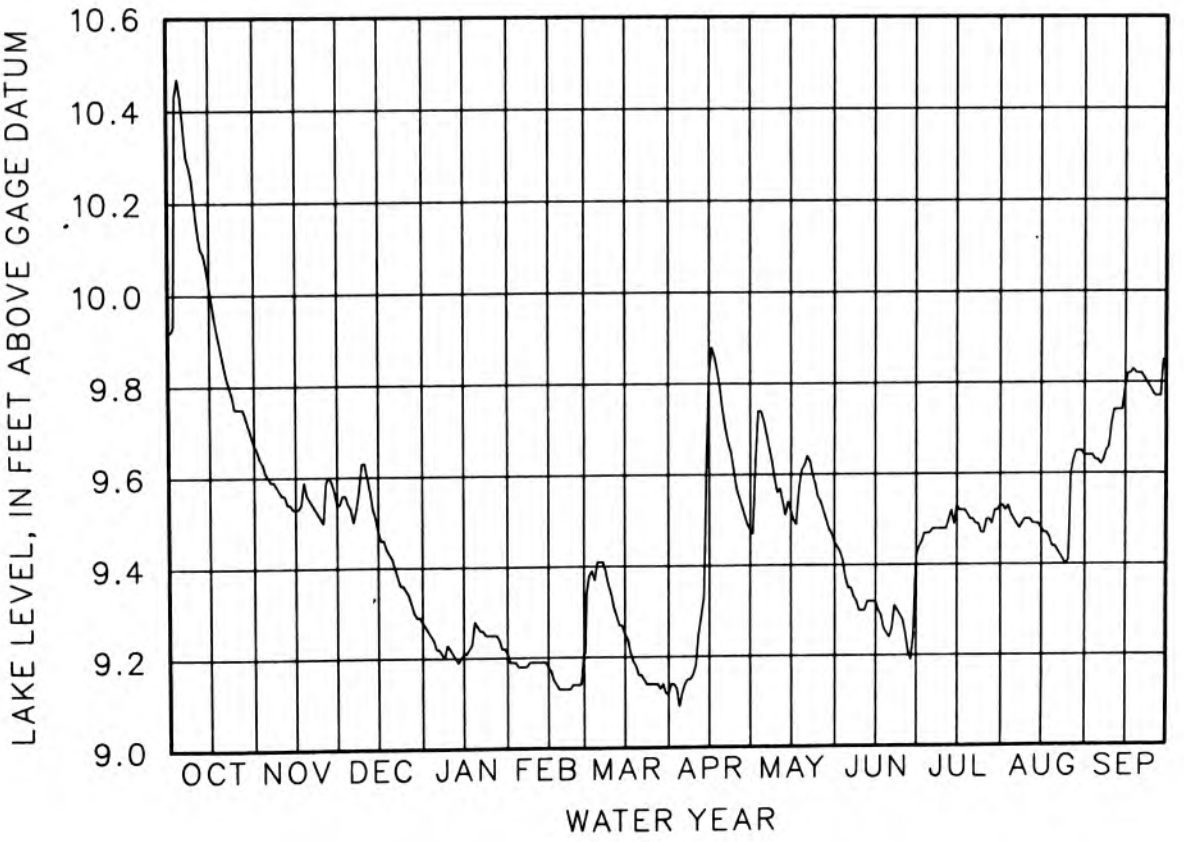
INLET AND OUTLET.--The lake has several inlets. Dove Creek enters on the northwest, the outlet of Holsinger Hole on the north, Hart ditch on the east, and the channel between Oliver and Olin Lakes on the southeast shore. The Oliver Lake outlet flows from the southwest lobe of the lake, through a wetland, 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, Feb. 3-5, 1961.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.43	9.60	9.53	9.22	9.18	9.41	9.12	9.72	9.35	9.47	9.50	9.63
10	10.19	9.56	9.63	9.22	9.19	9.34	9.18	9.56	9.30	9.48	9.50	9.71
15	10.02	9.53	9.48	9.21	9.18	9.25	9.82	9.52	9.32	9.53	9.48	9.79
20	9.85	9.55	9.42	9.27	9.13	9.16	9.74	9.62	9.24	9.50	9.44	9.82
25	9.75	9.50	9.35	9.25	9.14	9.14	9.57	9.55	9.28	9.47	9.41	9.78
EOM	9.67	9.54	9.28	9.21	9.21	9.12	9.48	9.45	9.42	9.53	9.64	9.84

WTR YR 1987 MEAN 9.48 HIGH 10.47 OCT 4 LOW 9.09 APR 4



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.

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.

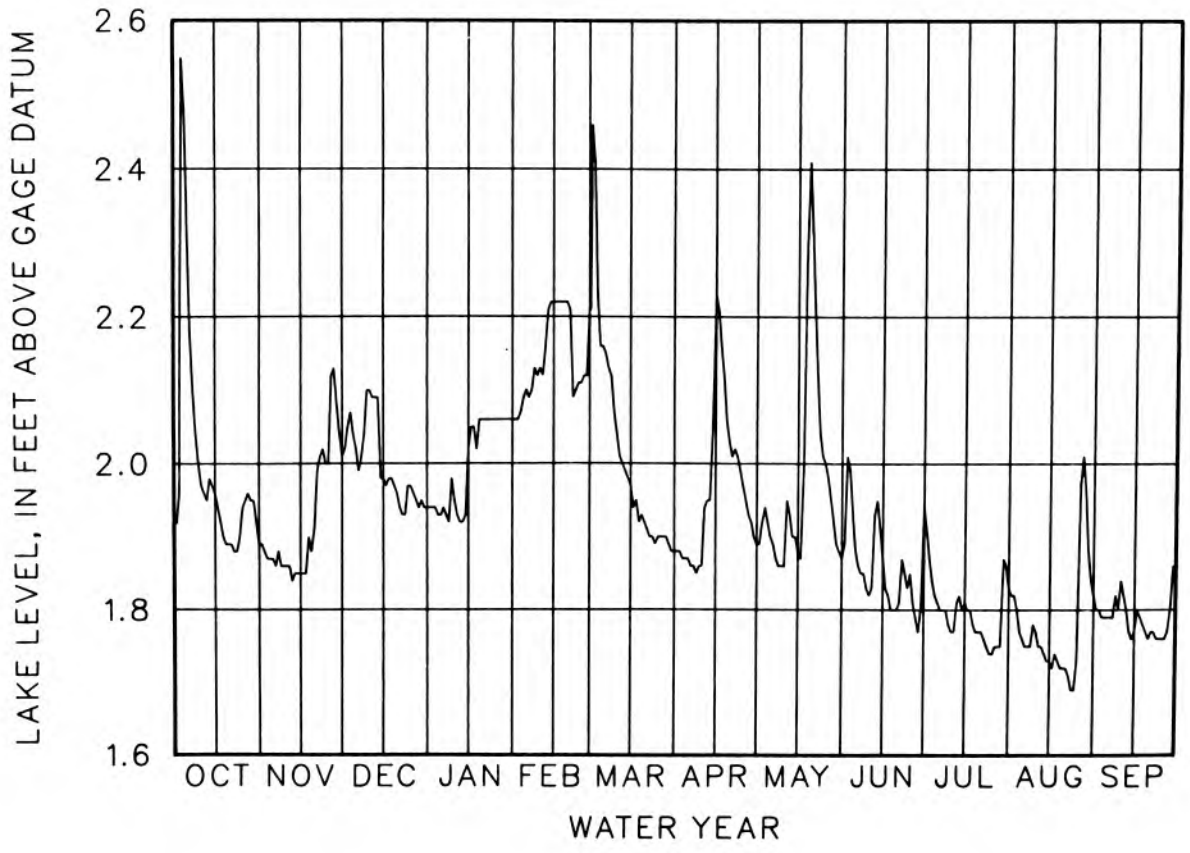
INLET AND OUTLET.--There are four inlets to the lake. Magee ditch enters from the north, Williamson ditch from the west and the confluence of Adams and Sloan ditches from the southeast. Trimble Creek flows through the lake, entering on the extreme southeastern end, leaving at the northwestern lobe and flowing into the Tippecanoe River 7.5 mi downstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 4.35 ft June 13, 1981; minimum stage, 0.48 ft Oct. 2, 1962.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	2.31	1.87	2.02	1.93	2.10	2.16	1.87	1.90	1.88	1.81	1.76	1.79
10	1.97	1.86	2.10	1.95	2.13	2.04	1.86	1.86	1.82	1.77	1.77	1.84
15	1.96	1.85	1.98	2.02	2.22	1.97	2.23	1.88	1.87	1.81	1.73	1.77
20	1.89	1.91	1.96	2.06	2.22	1.92	2.03	2.32	1.80	1.77	1.72	1.76
25	1.94	2.00	1.97	2.06	2.11	1.90	1.97	2.00	1.85	1.74	1.73	1.76
EOM	1.89	2.01	1.94	2.06	2.21	1.88	1.89	1.87	1.94	1.83	1.82	1.85

WTR YR 1987 MEAN 1.94 HIGH 2.55 OCT 3 LOW 1.69 AUG 23 AND OTHERS



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 Dec. 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.

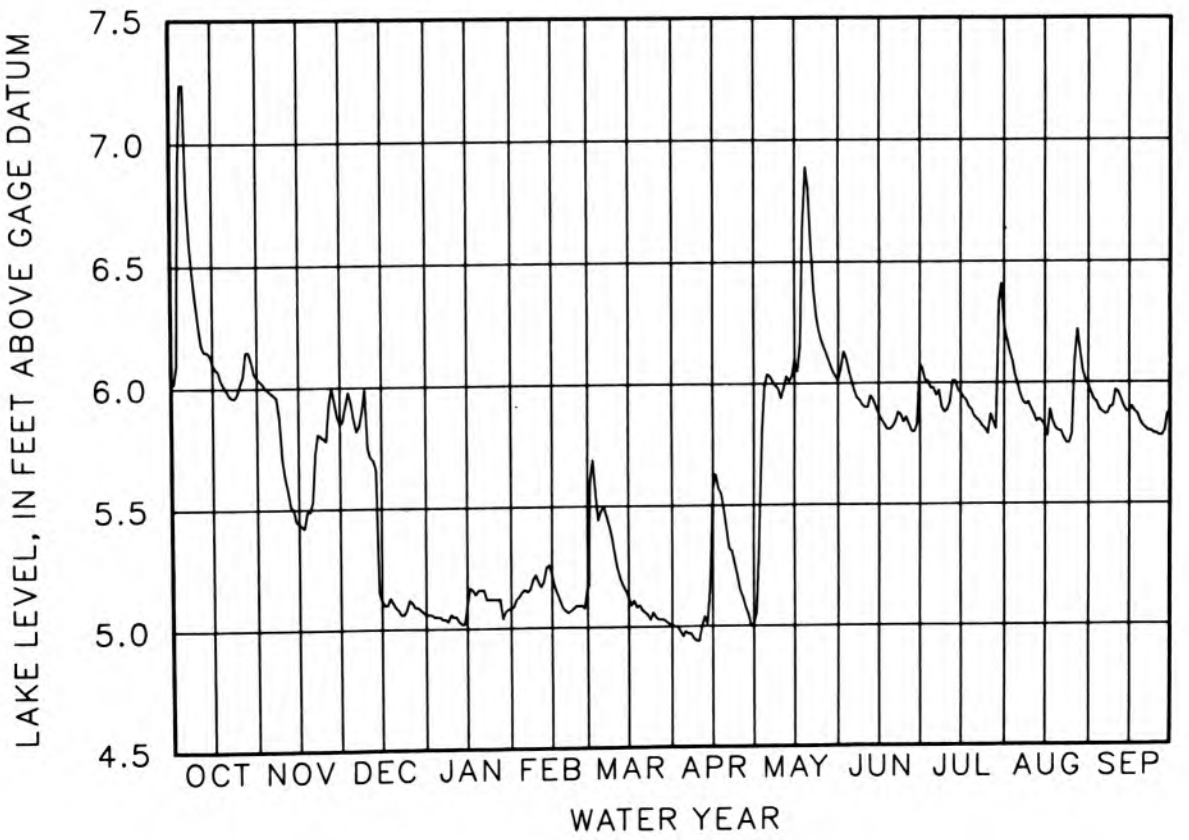
INLET AND OUTLET.--The one inlet, Deeds Creek, flows from Little Chapman Lake 3.4 mi upstream, and enters the lake on the lower northern shore. The outlet flows to the west from the extreme northern end of the lake and enters the Tippecanoe River 0.9 mi downstream.

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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.24	5.98	5.87	5.05	5.16	5.48	4.98	6.04	6.01	5.98	5.99	5.88
10	6.26	5.63	5.75	5.05	5.19	5.30	4.94	5.94	5.90	5.89	5.89	5.97
15	6.10	5.44	5.12	5.10	5.22	5.12	5.57	6.10	5.87	5.96	5.82	5.88
20	5.99	5.53	5.09	5.16	5.07	5.07	5.40	6.80	5.82	5.86	5.80	5.82
25	6.02	5.78	5.12	5.12	5.09	5.04	5.15	6.17	5.86	5.79	5.79	5.79
EOM	6.04	5.85	5.06	5.08	5.17	5.01	5.01	6.01	6.08	6.23	5.99	5.88

WTR YR 1987 MEAN 5.65 HIGH 7.24 OCT 4 AND OTHERS LOW 4.94 APR 9 AND OTHERS



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 Aug. 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.

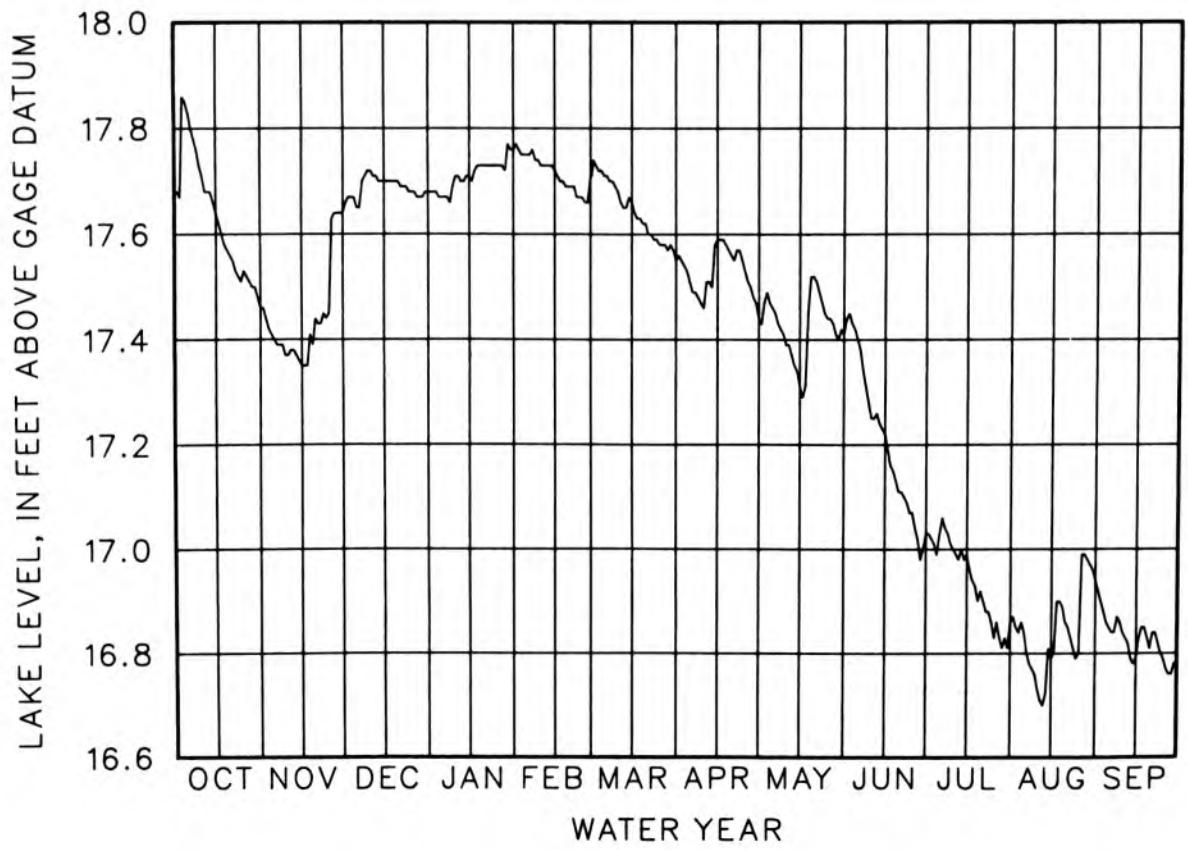
INLET AND OUTLET.--Kabelin ditch enters Pine Lake from the northwest through a large drain tile. Pine Lake is connected to Stone Lake by a channel on the southern tip.

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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	17.83	17.40	17.65	17.67	17.75	17.71	17.51	17.46	17.40	17.03	16.84	16.85
10	17.71	17.37	17.72	17.71	17.73	17.68	17.46	17.39	17.25	17.00	16.73	16.84
15	17.64	17.35	17.70	17.71	17.72	17.66	17.59	17.31	17.22	16.99	16.79	16.79
20	17.56	17.44	17.70	17.73	17.69	17.62	17.56	17.52	17.11	16.92	16.86	16.81
25	17.53	17.45	17.68	17.73	17.67	17.58	17.53	17.44	17.07	16.83	16.80	16.79
EOM	17.46	17.64	17.68	17.76	17.71	17.55	17.44	17.41	17.03	16.86	16.94	16.77

WTR YR 1987 MEAN 17.38 HIGH 17.86 OCT 3 LOW 16.70 AUG 12



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.

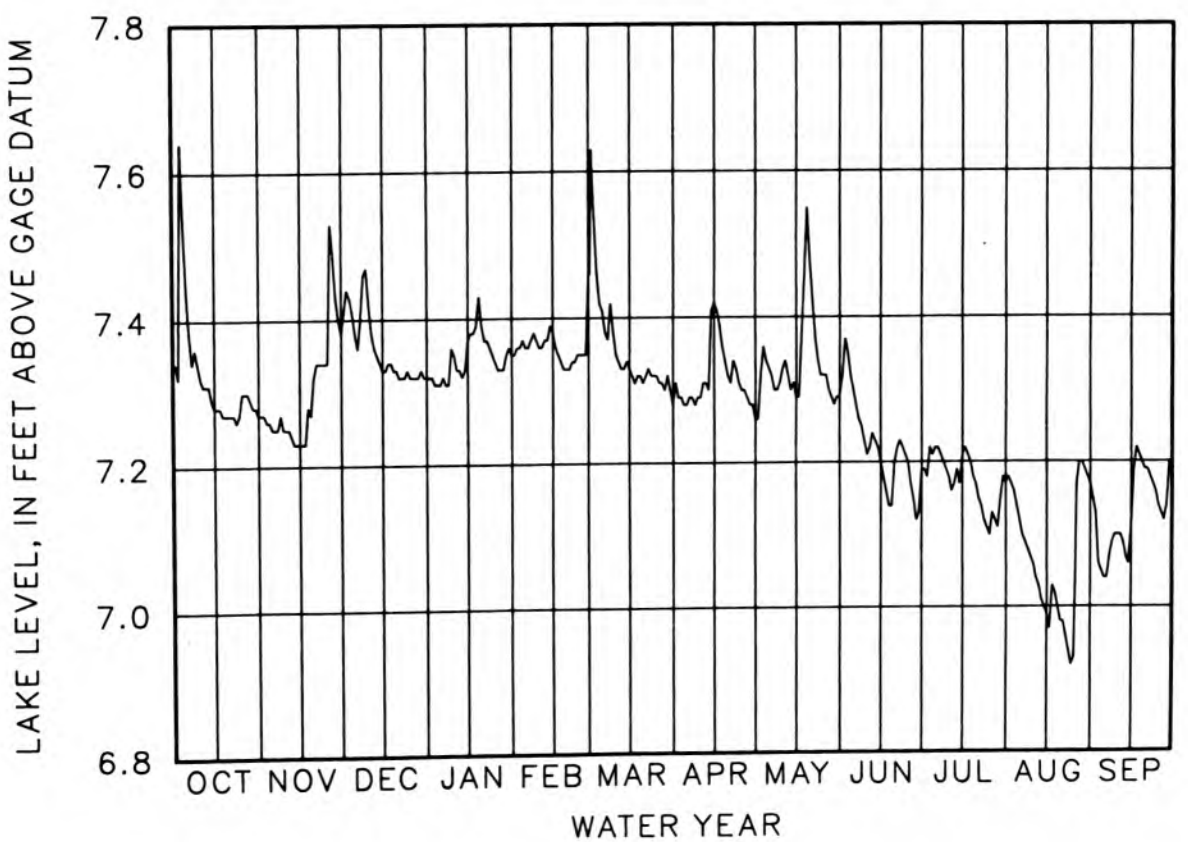
INLET AND OUTLET.--Heston ditch flows through the lake, entering on the northern shore and leaving on the southern. The outflow eventually enters Yellow River.

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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.44	7.25	7.38	7.31	7.36	7.41	7.28	7.33	7.30	7.22	7.12	7.04
10	7.32	7.25	7.42	7.35	7.36	7.35	7.29	7.33	7.21	7.18	7.06	7.10
15	7.28	7.23	7.33	7.37	7.38	7.33	7.42	7.29	7.20	7.21	6.99	7.11
20	7.27	7.32	7.33	7.39	7.33	7.31	7.32	7.48	7.20	7.17	6.98	7.19
25	7.30	7.34	7.32	7.34	7.35	7.32	7.30	7.32	7.20	7.10	6.93	7.14
EOM	7.27	7.38	7.32	7.35	7.46	7.28	7.26	7.29	7.19	7.17	7.17	7.19

WTR YR 1987 MEAN 7.27 HIGH 7.64 OCT 3 LOW 6.92 AUG 24



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., Whitley 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 Apr. 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.

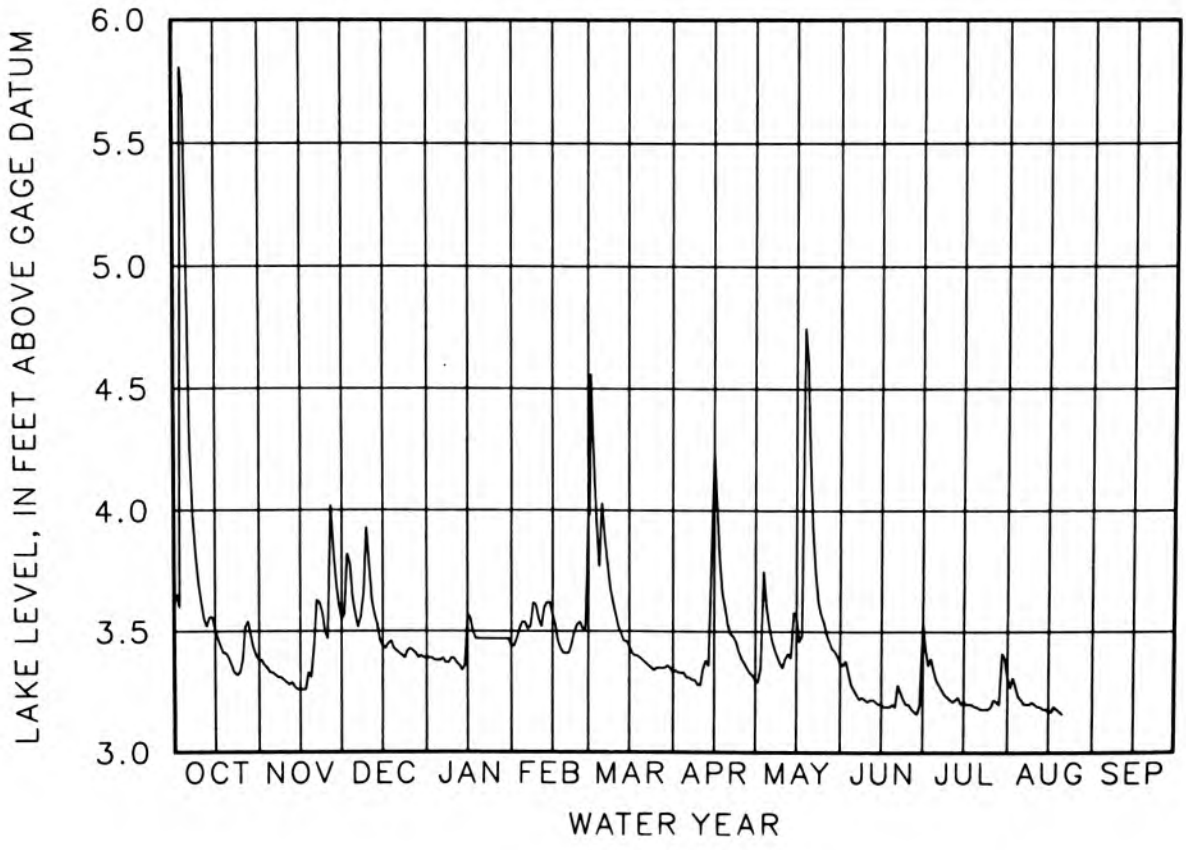
INLET AND OUTLET.--Grassy Creek flows through the lake, entering at the southwestern end. Grassy Creek is formed 1.5 mi upstream by the outlet of Robinson Lake and Cedar Lake Branch. Grassy Creek leaves the lake at the northwestern end and flows into Big Barbee Lake, 3.5 mi downstream.

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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.91	3.33	3.57	3.38	3.54	4.03	3.31	3.53	3.26	3.30	3.22	
10	3.62	3.29	3.78	3.39	3.55	3.57	3.28	3.35	3.21	3.22	3.20	
15	3.51	3.26	3.44	3.57	3.57	3.44	4.25	3.56	3.20	3.21	3.17	
20	3.39	3.43	3.42	3.47	3.41	3.38	3.53	4.20	3.19	3.19	3.16	
25	3.38	3.47	3.43	3.47	3.54	3.35	3.39	3.54	3.20	3.19	---	
EOM	3.38	3.55	3.39	3.44	3.98	3.33	3.30	3.37	3.54	3.31	---	

WTR YR 1987 MEAN 3.46 HIGH 5.81 OCT 3 LOW 3.16 JUN 28 AND OTHERS



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 mi².

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 Oct. 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.

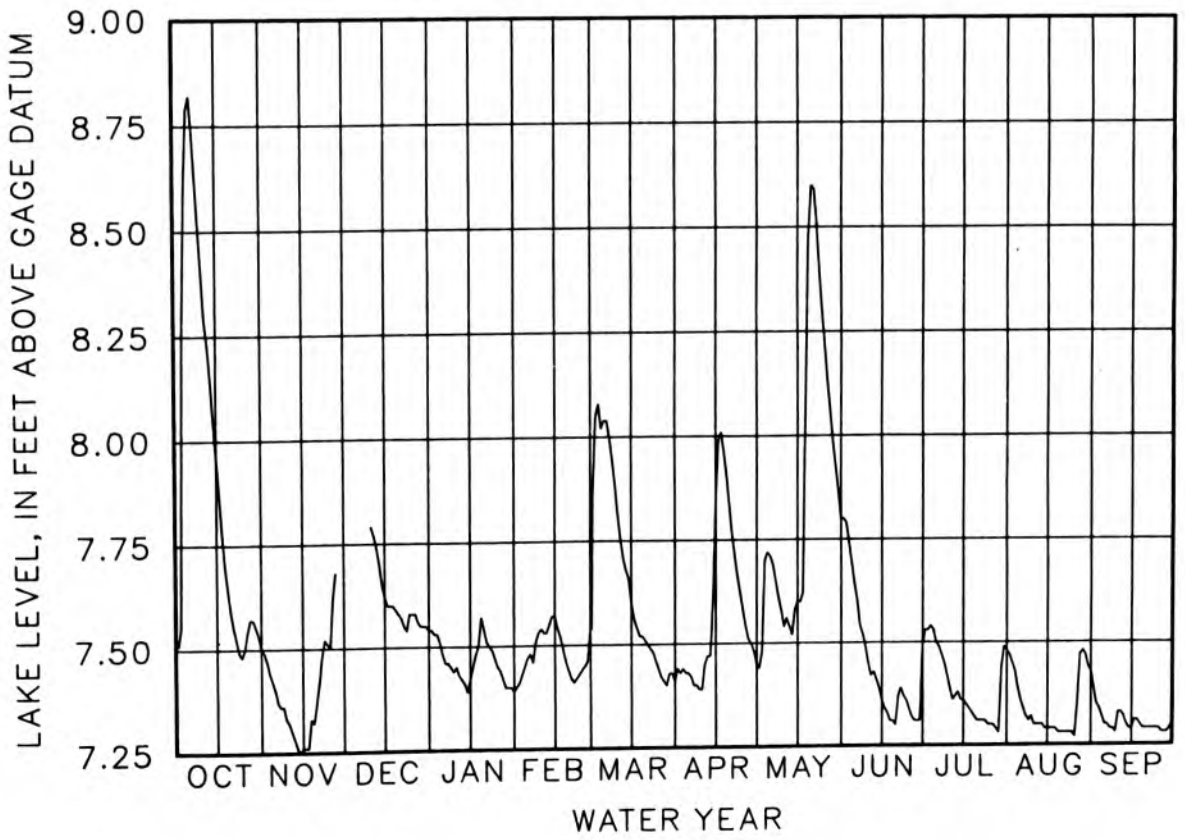
INLET AND OUTLET.--There are four inlets to the Barbee Chain. Grassy Creek flows into Big Barbee Lake at the southeastern side. The outlet of Heron Lake flows into Kuhn Lake from the north. Puntney ditch enters Little Barbee Lake from the south. The outlet from Shoe Lake flows into Banning Lake on the 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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.79	7.40	---	7.48	7.47	8.04	7.43	7.71	7.64	7.50	7.36	7.30
10	8.40	7.32	7.79	7.45	7.54	7.82	7.39	7.54	7.45	7.39	7.30	7.33
15	7.96	7.26	7.62	7.42	7.57	7.60	7.85	7.60	7.36	7.36	7.29	7.29
20	7.59	7.37	7.58	7.54	7.44	7.51	7.83	8.60	7.30	7.31	7.28	7.29
25	7.50	7.50	7.58	7.45	7.44	7.44	7.58	8.21	7.34	7.30	7.27	7.29
EOM	7.50	---	7.54	7.39	7.54	7.41	7.45	7.80	7.49	7.48	7.43	7.30

WTR YR 1987 MEAN 7.54 HIGH 8.82 OCT 6 LOW 7.25 NOV 14



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.

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.

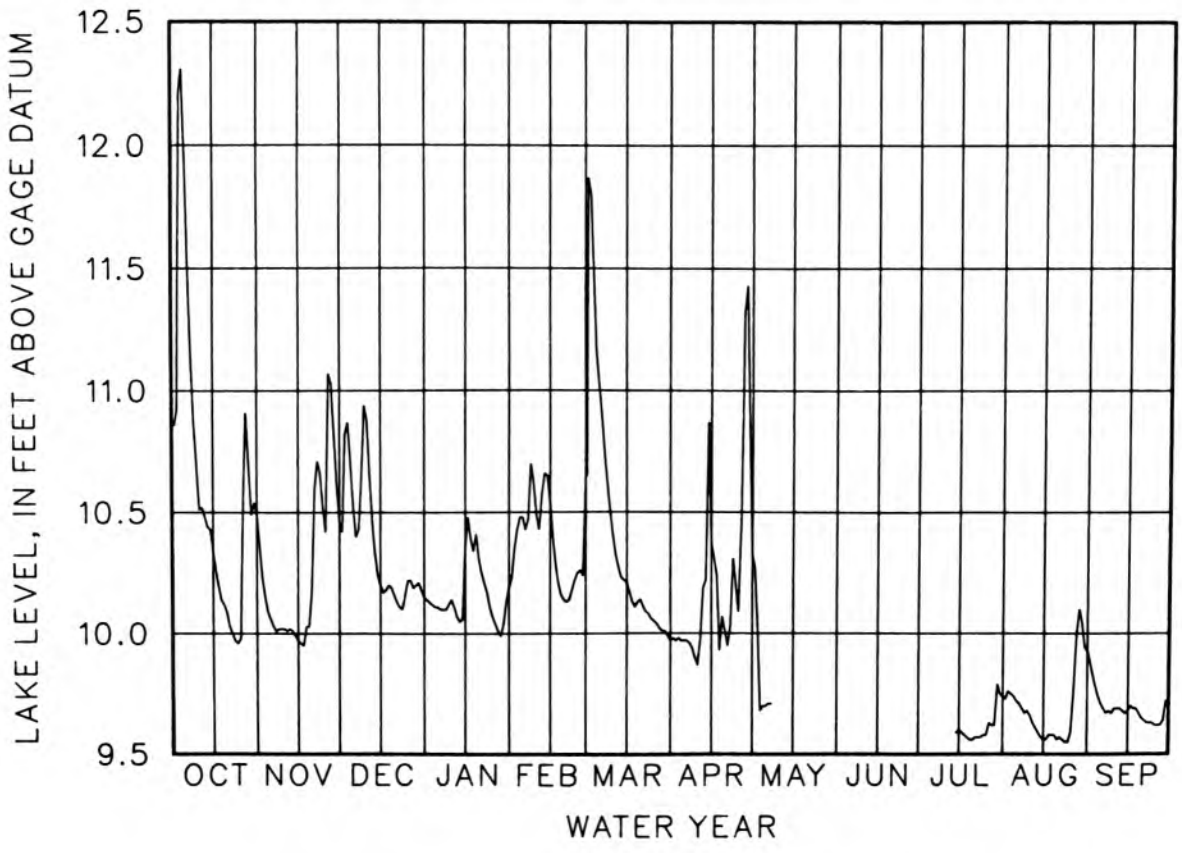
INLET AND OUTLET.--The one inlet flows from Sellers Lake 0.35 mi upstream. The outlet flows from the northern shore through Wyland ditch and into Winona Lake 6.7 mi downstream.

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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	11.93	10.06	10.52	10.11	10.48	11.02	9.97	9.70		---	9.72	9.71
10	10.51	10.02	10.88	10.14	10.49	10.40	9.87	---		---	9.66	9.69
15	10.34	9.97	10.20	10.36	10.54	10.21	10.38	---		9.60	9.56	9.68
20	10.09	10.18	10.16	10.31	10.14	10.14	10.01	---		9.56	9.56	9.65
25	9.98	10.42	10.22	10.07	10.25	10.05	10.09	---		9.58	9.59	9.62
EOM	10.49	10.46	10.15	10.19	10.65	9.97	10.33	---		9.74	9.93	9.72

WTR YR 1987 MEAN 10.16 HIGH 12.31 OCT 4 LOW 9.55 AUG 23 AND OTHERS



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 Mar. 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.

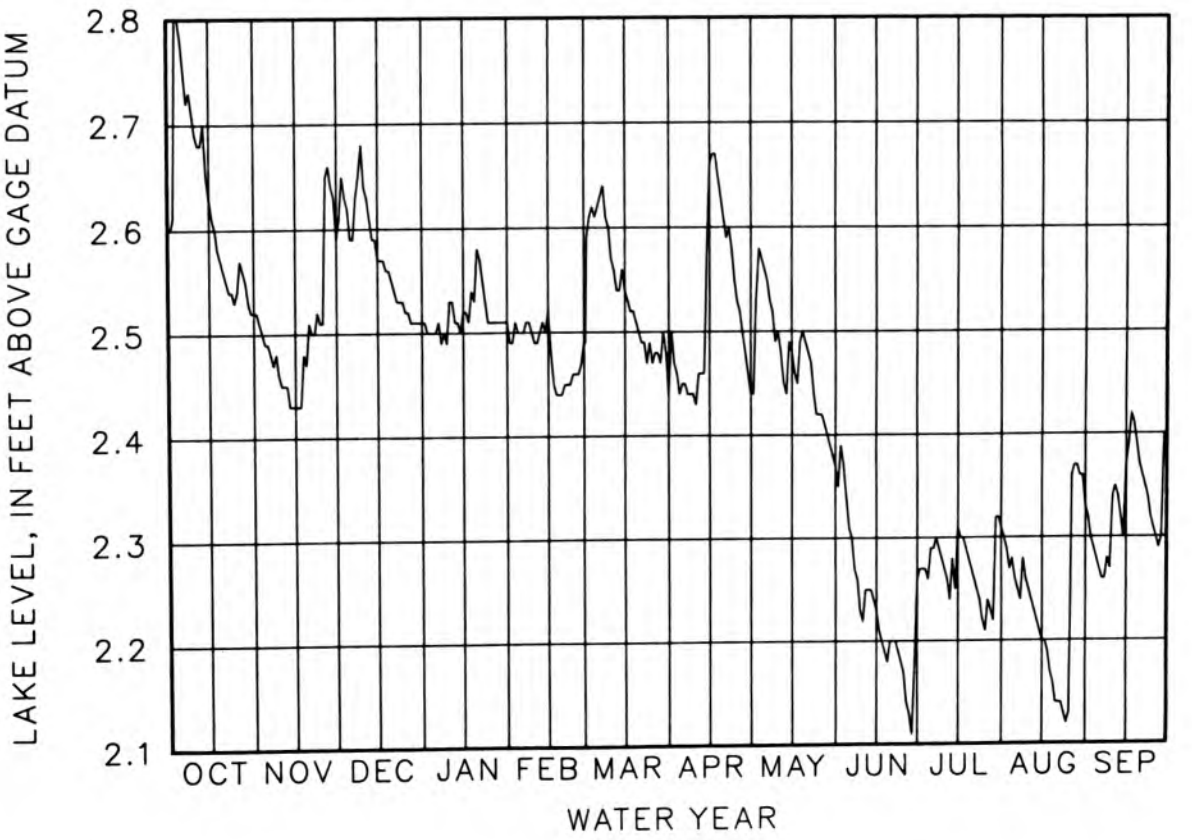
INLET AND OUTLET.--The principal inlet enters on the southern shore from Cotton Lake 2.0 mi upstream. Another small ditch enters on the western shore. The outlet is on the extreme eastern tip of the lake and flows to the northeast through Page ditch, which empties into Pigeon River, 6.1 mi downstream.

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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	2.78	2.49	2.59	2.50	2.50	2.62	2.45	2.56	2.31	2.29	2.26	2.27
10	2.69	2.45	2.64	2.53	2.49	2.57	2.43	2.50	2.22	2.27	2.25	2.34
15	2.63	2.43	2.57	2.52	2.52	2.54	2.66	2.48	2.23	2.31	2.20	2.37
20	2.56	2.51	2.55	2.58	2.44	2.50	2.61	2.49	2.20	2.27	2.14	2.37
25	2.54	2.51	2.52	2.51	2.46	2.47	2.53	2.42	2.17	2.21	2.13	2.31
EOM	2.52	2.59	2.51	2.51	2.49	2.44	2.44	2.37	2.26	2.31	2.33	2.39

WTR YR 1987 MEAN 2.44 HIGH 2.80 OCT 3 AND OTHERS LOW 2.11 JUN 28



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 Oct. 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.

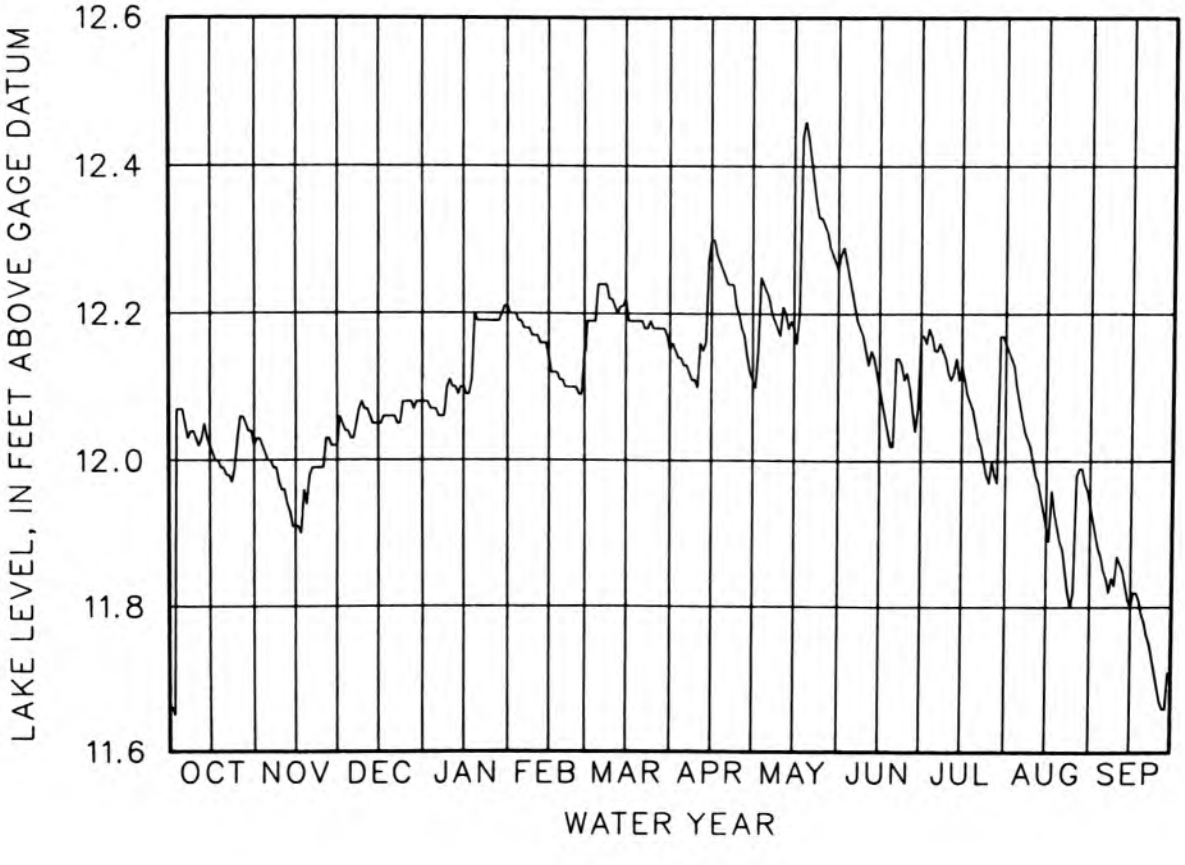
INLET AND OUTLET.--There is no inlet except for small drainage ditches. The outlet leaves the lake at the southeastern end and flows into Banning Lake 0.3 mi downstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 12.95 ft Dec. 13-15, 1972; minimum stage, 10.52 ft Feb. 10, 1977.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	12.07	12.00	12.03	12.07	12.19	12.24	12.13	12.23	12.23	12.15	12.08	11.85
10	12.03	11.96	12.07	12.11	12.17	12.22	12.10	12.17	12.15	12.12	12.00	11.87
15	12.02	11.91	12.05	12.10	12.14	12.22	12.30	12.18	12.10	12.13	11.91	11.80
20	11.99	11.98	12.06	12.19	12.11	12.19	12.25	12.44	12.02	12.05	11.89	11.78
25	12.03	11.99	12.08	12.19	12.10	12.18	12.20	12.33	12.12	11.97	11.82	11.69
EOM	12.02	12.02	12.08	12.21	12.15	12.15	12.11	12.26	12.17	12.16	11.94	11.70

WTR YR 1987 MEAN 12.08 HIGH 12.46 MAY 19 LOW 11.65 OCT 2



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.--900.20 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 907.24 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.

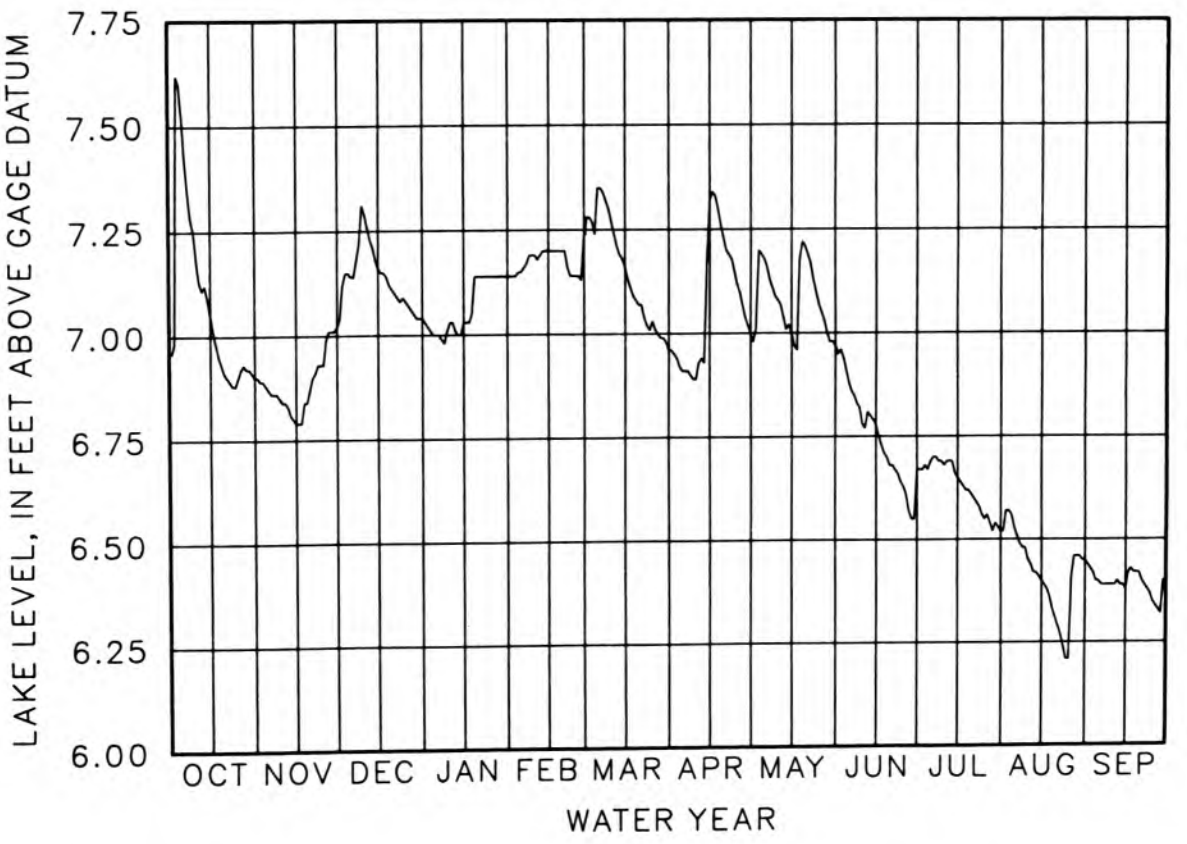
INLET AND OUTLET.--A ditch from Catfish Lake, 650 ft upstream, enters at the extreme western end of the lake. Two small ditches enter on the southern shore. The outlet is a dredged channel at the eastern edge of the lake that empties into Round Lake 930 ft downstream.

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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.52	6.87	7.14	7.00	7.15	7.35	6.91	7.18	6.88	6.69	6.53	6.40
10	7.18	6.84	7.29	7.03	7.19	7.27	6.89	7.08	6.78	6.68	6.45	6.39
15	7.05	6.79	7.16	7.03	7.20	7.16	7.32	7.00	6.78	6.65	6.40	6.38
20	6.91	6.87	7.11	7.14	7.20	7.07	7.23	7.21	6.68	6.61	6.31	6.42
25	6.90	6.93	7.08	7.14	7.14	7.03	7.12	7.07	6.63	6.55	6.21	6.35
EOM	6.90	7.02	7.04	7.14	7.24	6.96	7.00	6.97	6.67	6.52	6.45	6.40

WTR YR 1987 MEAN 6.90 HIGH 7.62 OCT 3 LOW 6.21 AUG 24 AND OTHERS



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 (determined from State of Indiana, Department of Natural Resources levels of 1974). Prior to 1974, the datum of the gage was 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 in one section is attached to the dam.

ESTABLISHED LEGAL LEVEL.--1.73 ft gage datum or 861.58 ft above National Geodetic Vertical Datum of 1929 as decreed on Sept. 20, 1948, by the Kosciusko County Circuit Court. 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.

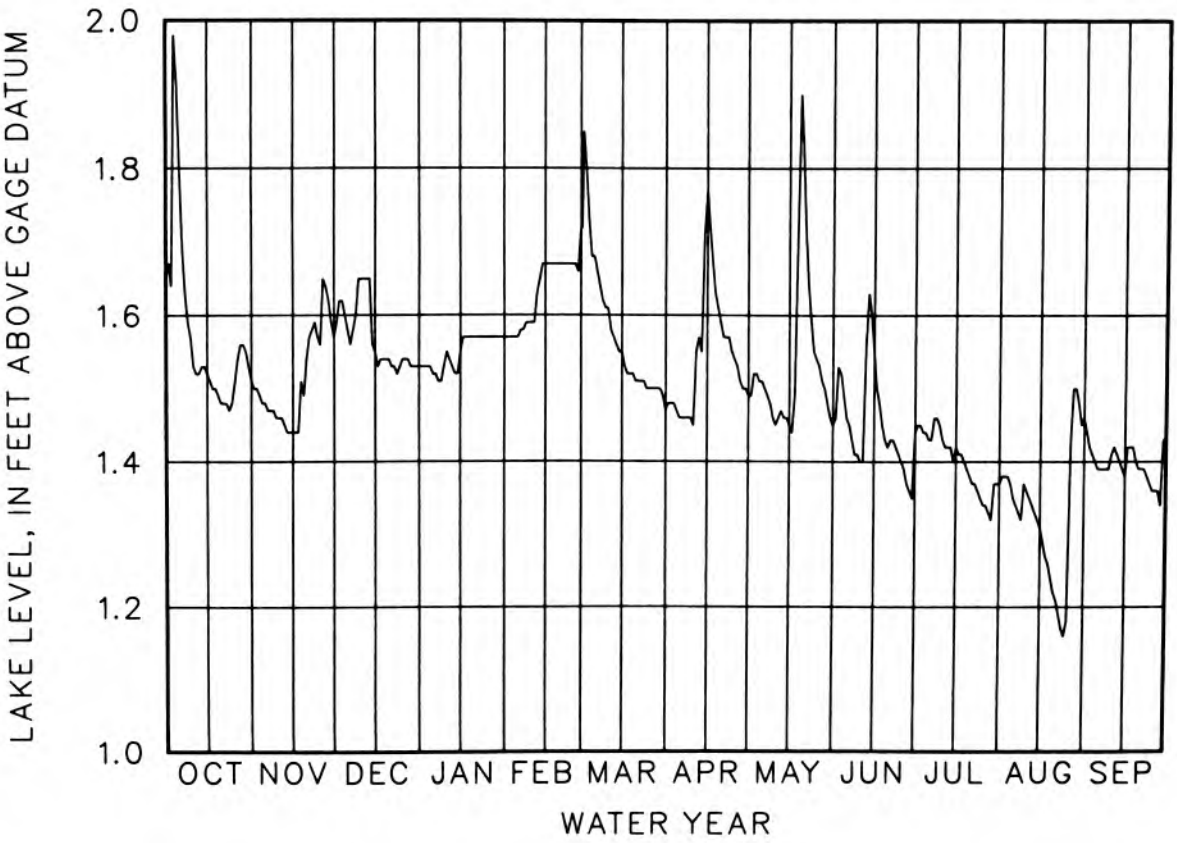
INLET AND OUTLET.--The outlet from North Little Lake enters from the north and two ditches enter from the east and southeast. The outlet leaves from the western side and flows into South Little Lake, then into Silver Creek, which joins Eel River 12 mi downstream.

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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	1.79	1.48	1.58	1.52	1.57	1.68	1.46	1.51	1.46	1.43	1.35	1.39
10	1.53	1.46	1.65	1.55	1.59	1.61	1.45	1.45	1.40	1.43	1.36	1.41
15	1.52	1.44	1.55	1.55	1.67	1.55	1.77	1.45	1.55	1.42	1.31	1.38
20	1.48	1.54	1.54	1.57	1.67	1.51	1.59	1.82	1.42	1.38	1.22	1.39
25	1.51	1.56	1.54	1.57	1.67	1.50	1.54	1.54	1.40	1.34	1.18	1.36
EOM	1.51	1.57	1.53	1.57	1.72	1.47	1.49	1.45	1.44	1.37	1.46	1.43

WTR YR 1987 MEAN 1.51 HIGH 1.98 OCT 3 LOW 1.16 AUG 24



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 Sept. 25, 1950, by the Elkhart County Circuit Court.

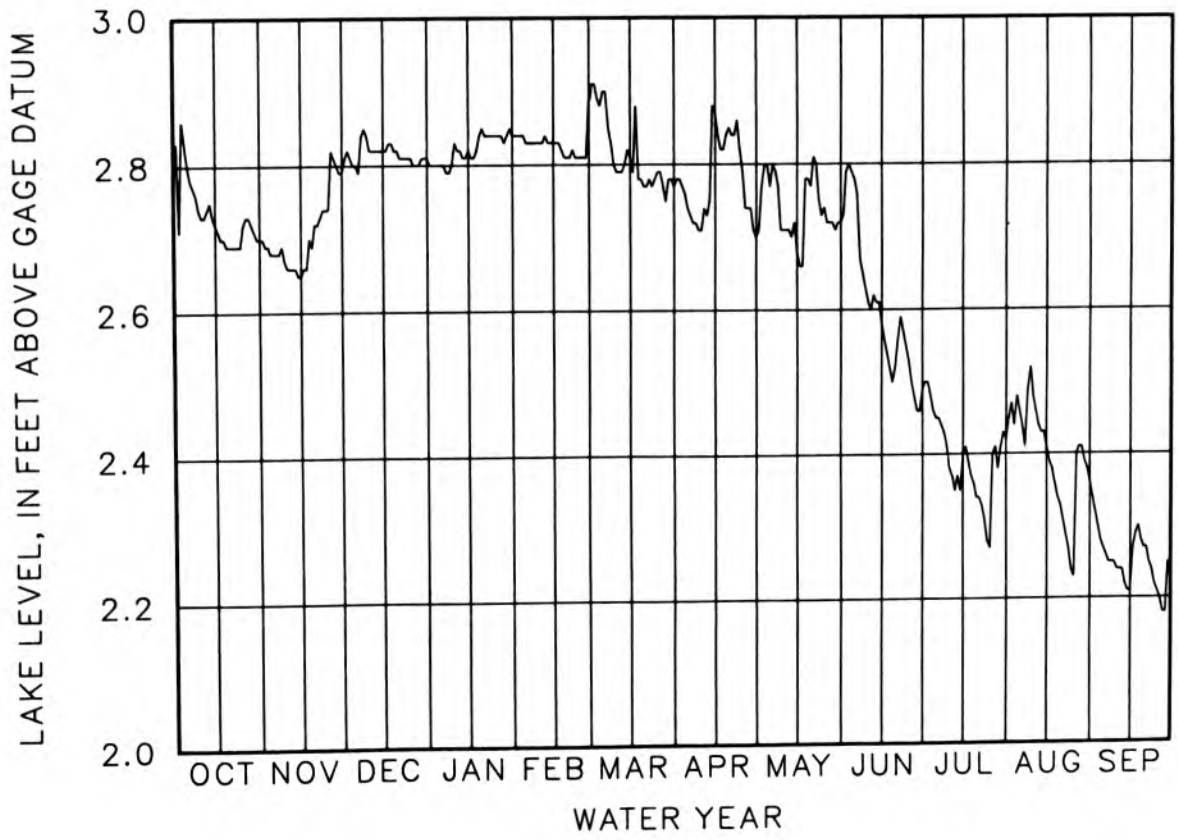
LAKE-LEVEL CONTROL.--The level of the lake is controlled by the outlet channel.

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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	2.80	2.68	2.80	2.80	2.83	2.90	2.74	2.77	2.78	2.45	2.46	2.27
10	2.73	2.66	2.82	2.83	2.83	2.79	2.71	2.71	2.61	2.38	2.48	2.24
15	2.72	2.65	2.82	2.82	2.83	2.81	2.87	2.68	2.58	2.40	2.41	2.21
20	2.69	2.72	2.82	2.85	2.81	2.77	2.85	2.77	2.52	2.34	2.33	2.27
25	2.72	2.74	2.81	2.84	2.81	2.79	2.79	2.74	2.53	2.27	2.23	2.21
EOM	2.70	2.79	2.81	2.84	2.89	2.77	2.70	2.72	2.49	2.42	2.36	2.24

WTR YR 1987 MEAN 2.66 HIGH 2.91 MAR 1 AND OTHERS LOW 2.18 SEP 27 AND OTHERS



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 Aug. 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.

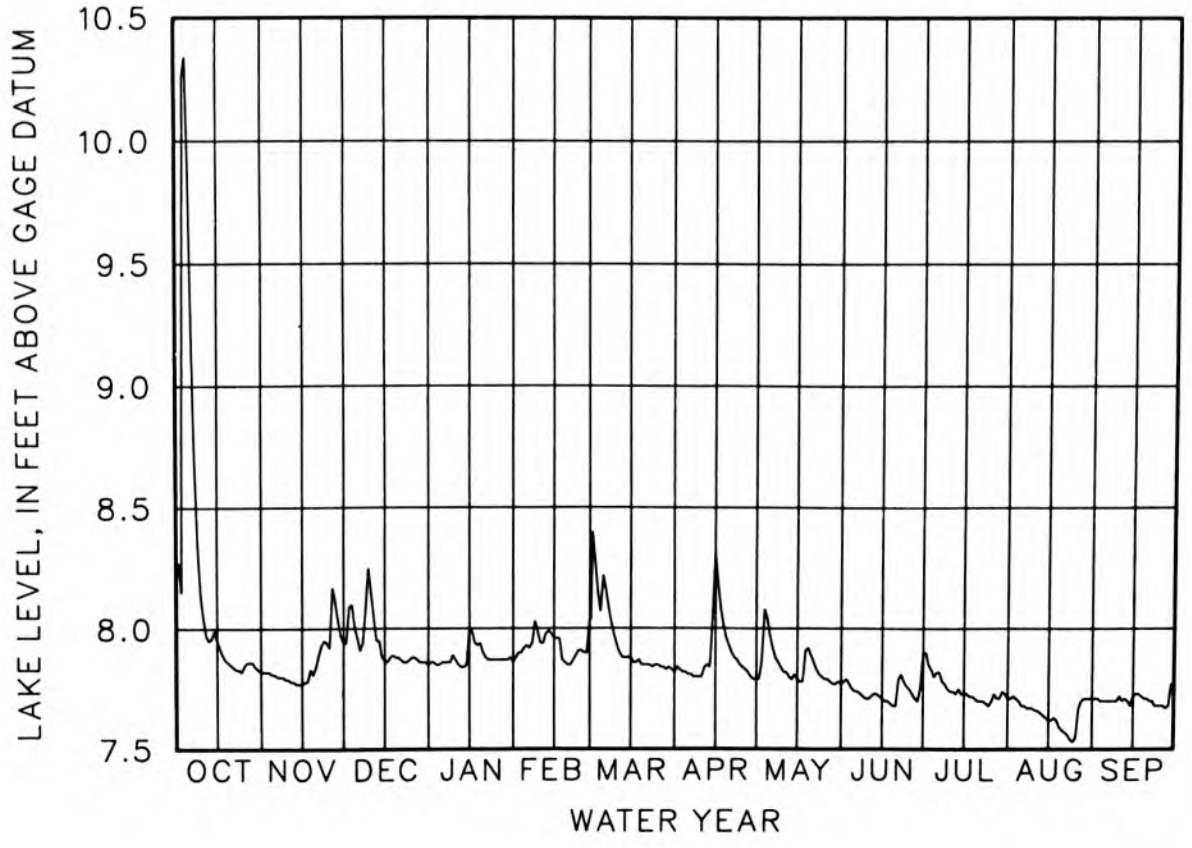
INLET AND OUTLET.--Rimmell Branch enters the lake on the southern shore, a small ditch enters on the southeast tip, and the outlet channel of Sweet Lake flows into the lake from the northeast. The outlet, Croft ditch, flows from the lake on the south shore of the northwest lobe, and into the South Branch 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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.77	7.81	7.96	7.86	7.93	8.22	7.81	7.97	7.74	7.82	7.68	7.70
10	8.04	7.79	8.15	7.87	7.94	7.93	7.80	7.82	7.71	7.74	7.66	7.72
15	7.95	7.77	7.87	8.00	7.96	7.88	8.31	7.79	7.71	7.73	7.62	7.72
20	7.85	7.84	7.88	7.90	7.85	7.85	7.93	7.89	7.68	7.70	7.58	7.71
25	7.85	7.92	7.88	7.87	7.91	7.85	7.84	7.79	7.75	7.70	7.55	7.68
EOM	7.82	7.94	7.85	7.86	8.04	7.82	7.79	7.77	7.90	7.71	7.71	7.75

WTR YR 1987 MEAN 7.86 HIGH 10.34 OCT 4 LOW 7.53 AUG 24



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 (ORMAS, 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.

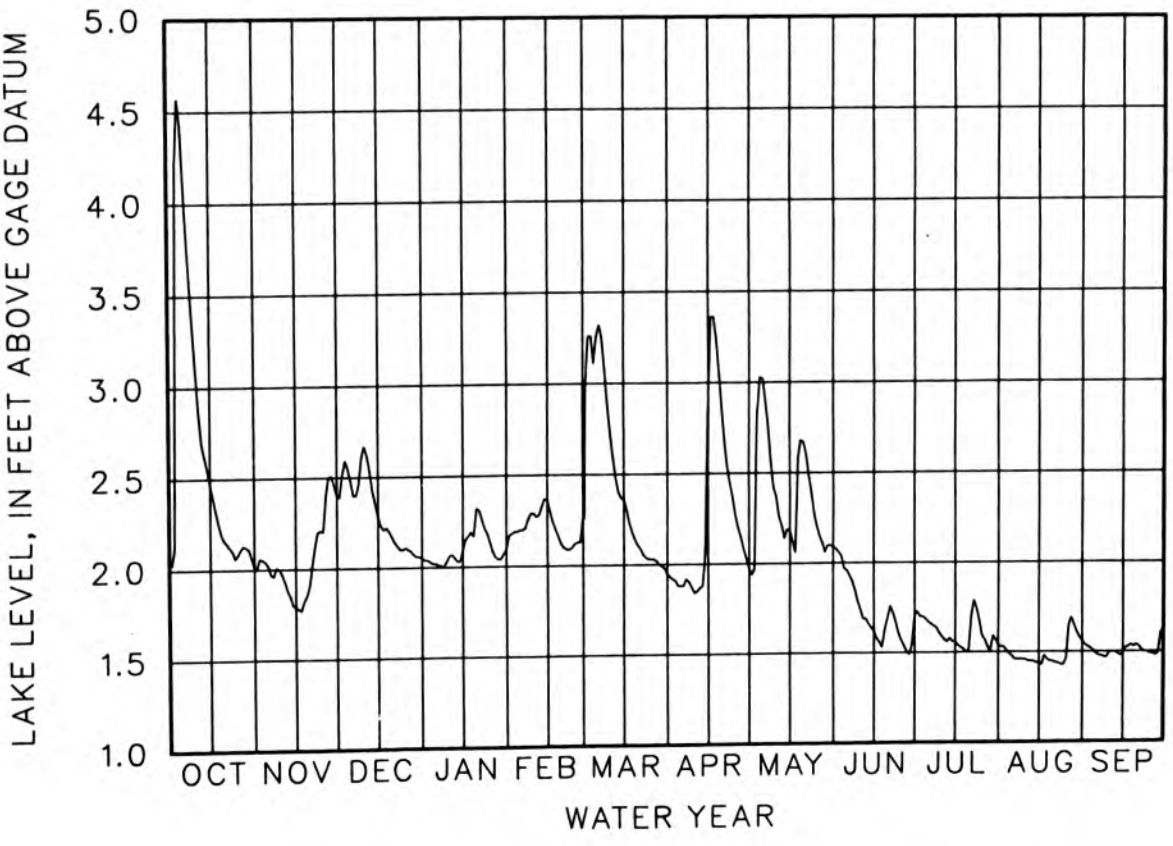
INLET AND OUTLET.--The Tippecanoe River flows through the lake, entering at the south end from Big Lake, 4.2 mi upstream, and flowing from the lake at the northwestern end into Baugher Lake, 1.2 mi downstream. Another inlet enters on the north shore from Gilbert Lake 0.9 mi upstream.

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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.42	2.02	2.48	2.02	2.20	3.26	1.88	3.02	1.96	1.67	1.48	1.49
10	3.07	1.97	2.67	2.06	2.29	2.73	1.84	2.37	1.74	1.59	1.46	1.50
15	2.47	1.79	2.28	2.09	2.36	2.36	2.94	2.18	1.62	1.56	1.44	1.49
20	2.16	1.90	2.17	2.32	2.12	2.11	2.85	2.67	1.69	1.51	1.45	1.54
25	2.08	2.20	2.11	2.13	2.12	2.03	2.27	2.20	1.57	1.59	1.46	1.49
EOM	2.01	2.40	2.05	2.09	2.26	1.95	1.97	2.09	1.71	1.54	1.56	1.62

WTR YR 1987 MEAN 2.06 HIGH 4.57 OCT 4 LOW 1.43 AUG 16 AND OTHERS



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.

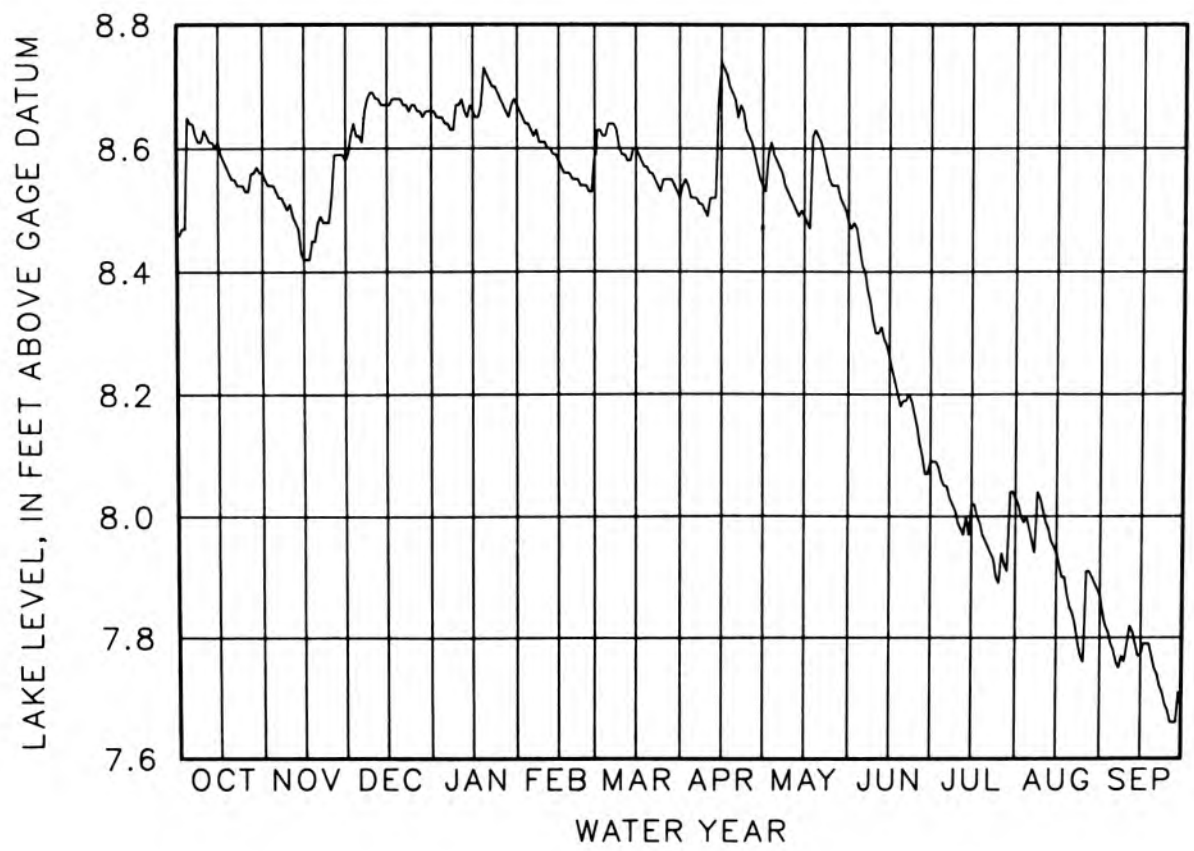
INLET AND OUTLET.--The inlet enters on the eastern end of the south shore from Brokesha Lake 0.2 mi upstream. The outlet flows from the lake at the northern shore.

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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.64	8.53	8.62	8.64	8.63	8.64	8.52	8.58	8.41	8.05	7.98	7.78
10	8.63	8.51	8.69	8.67	8.61	8.59	8.49	8.52	8.30	7.99	8.01	7.79
15	8.61	8.42	8.67	8.66	8.58	8.60	8.74	8.49	8.26	8.02	7.94	7.77
20	8.55	8.48	8.68	8.72	8.55	8.56	8.68	8.62	8.19	7.96	7.85	7.75
25	8.53	8.52	8.67	8.68	8.54	8.55	8.62	8.54	8.15	7.89	7.76	7.68
EOM	8.56	8.58	8.66	8.67	8.59	8.52	8.54	8.48	8.09	8.03	7.87	7.69

WTR YR 1987 MEAN 8.39 HIGH 8.74 APR 15 LOW 7.66 SEP 26 AND OTHERS



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 mi².

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. The annual extreme 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 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.

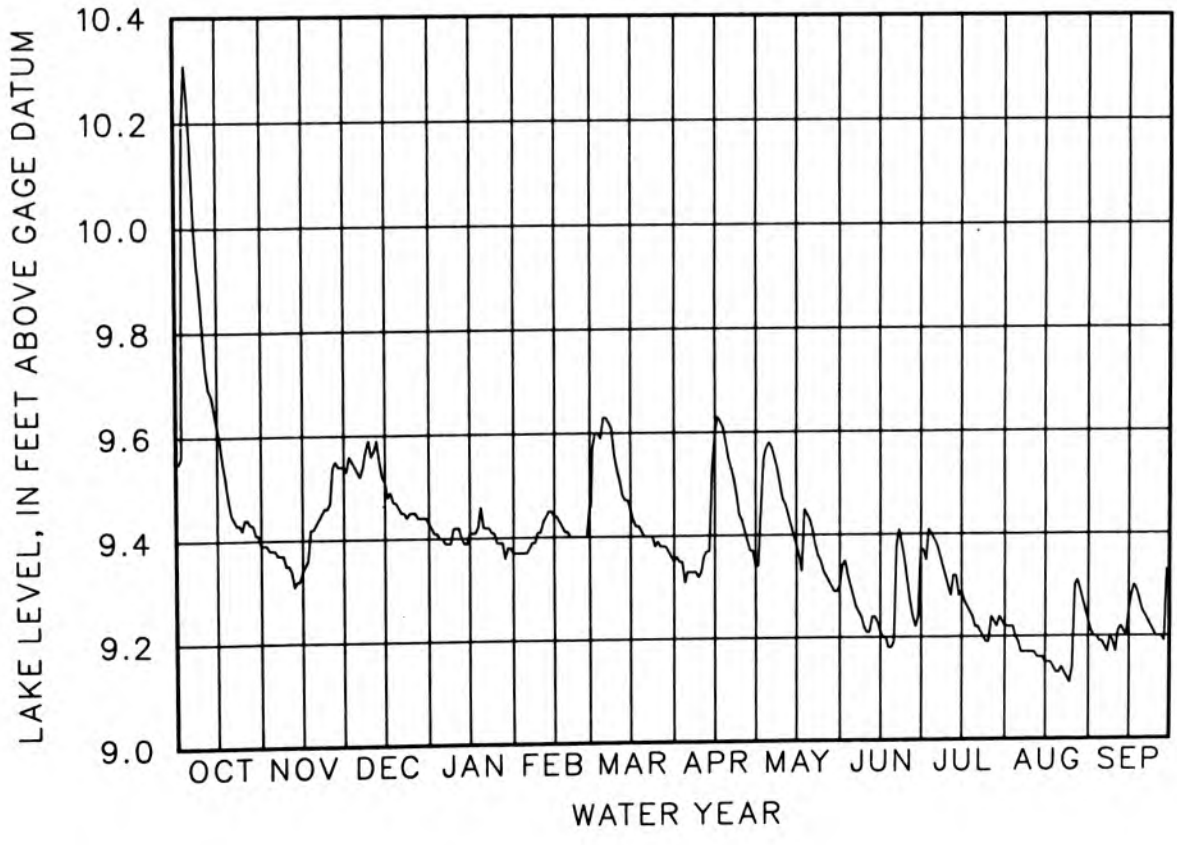
INLET AND OUTLET.--Barr Lake, 0.2 mi upstream, empties into Sylvan Lake on the southeast shore of the northwest lobe. Oviatt ditch and Henderson Lake ditch both enter the lake on the extreme eastern end. The outlet flows from the lake at the western tip, into Jones Lake 2.8 mi downstream and eventually 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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.24	9.38	9.53	9.40	9.37	9.63	9.33	9.58	9.28	9.39	9.19	9.19
10	9.80	9.35	9.56	9.42	9.41	9.53	9.33	9.47	9.21	9.30	9.17	9.17
15	9.62	9.34	9.51	9.41	9.44	9.45	9.60	9.38	9.21	9.29	9.15	9.25
20	9.45	9.43	9.46	9.42	9.41	9.40	9.55	9.43	9.19	9.22	9.13	9.25
25	9.44	9.47	9.45	9.39	9.40	9.39	9.43	9.33	9.31	9.19	9.14	9.20
EOM	9.39	9.54	9.43	9.37	9.46	9.35	9.34	9.30	9.37	9.22	9.23	9.31

WTR YR 1987 MEAN 9.39 HIGH 10.31 OCT 4 LOW 9.11 AUG 24



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.

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.--8.02 ft gage datum or 857.87 ft above National Geodetic Vertical Datum of 1929 as decreed on Sept. 20, 1948, by the Kosciusko County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete dam with two steel lift gates.

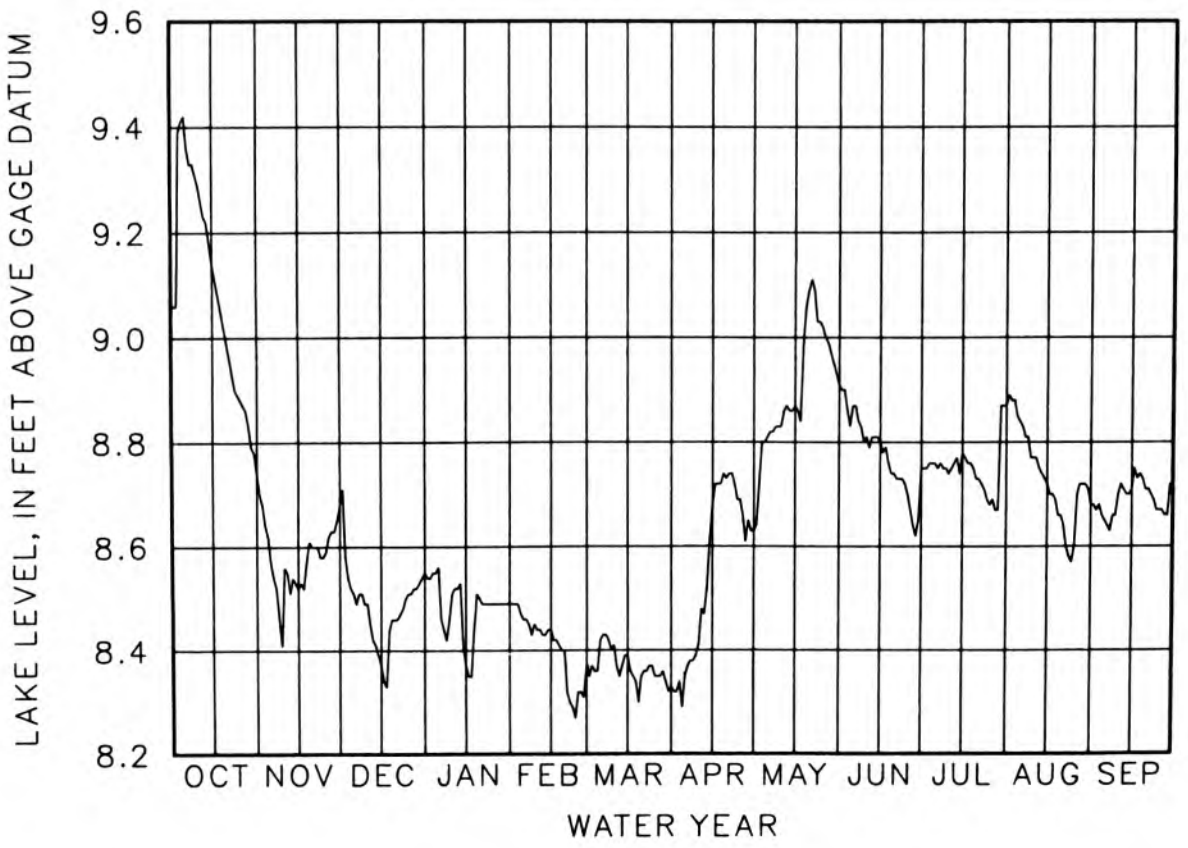
INLET AND OUTLET.--The one inlet is the outlet channel from Lake Wawasee on the southern shore of the lake. The outlet, Turkey Creek, flows from the lake at the southwest end and eventually into the Elkhart River.

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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.42	8.57	8.51	8.56	8.46	8.42	8.35	8.81	8.87	8.76	8.84	8.65
10	9.29	8.56	8.49	8.51	8.44	8.41	8.41	8.83	8.81	8.74	8.77	8.70
15	9.14	8.52	8.37	8.37	8.44	8.39	8.68	8.87	8.80	8.78	8.72	8.71
20	8.99	8.60	8.46	8.50	8.40	8.35	8.73	9.09	8.74	8.73	8.66	8.71
25	8.88	8.59	8.51	8.49	8.32	8.35	8.69	9.02	8.70	8.68	8.60	8.67
EOM	8.74	8.68	8.55	8.49	8.37	8.33	8.63	8.91	8.75	8.87	8.68	8.69

WTR YR 1987 MEAN 8.65 HIGH 9.42 OCT 5 LOW 8.27 FEB 24



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 mi².

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 Oct. 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.

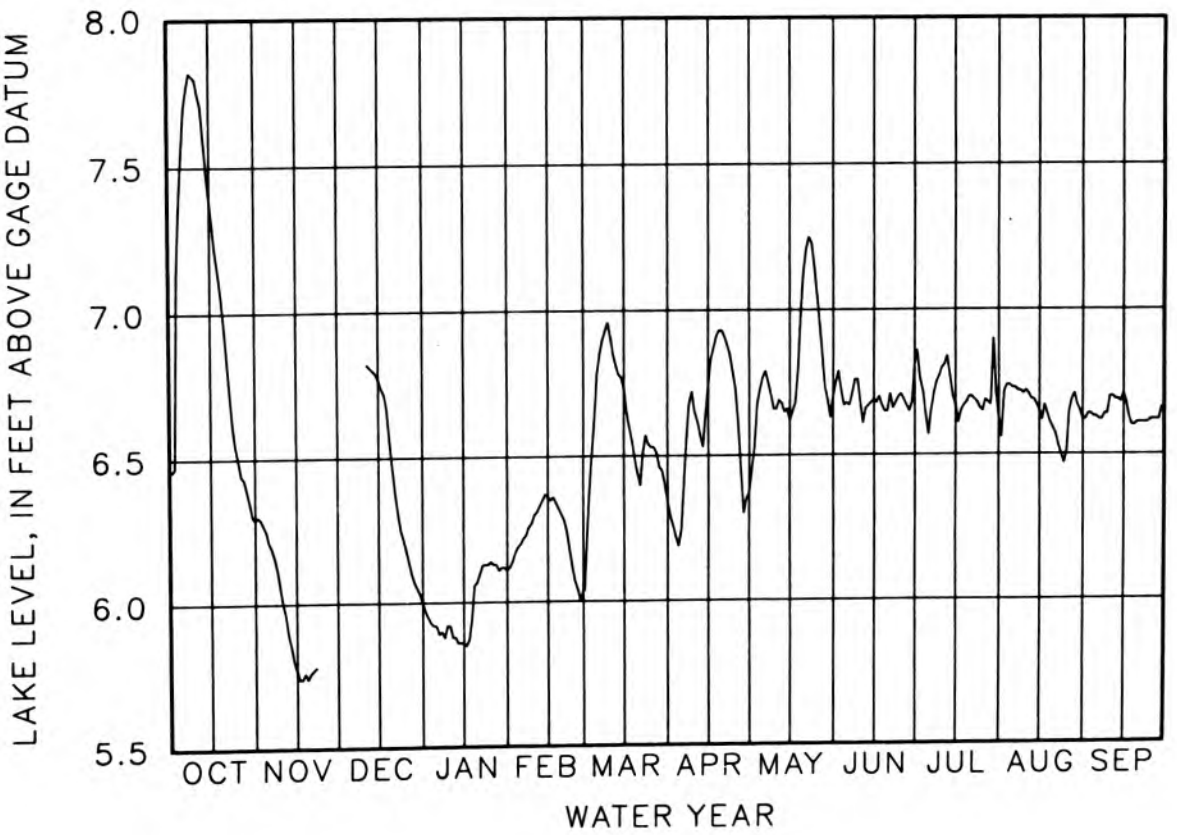
INLET AND OUTLET.--The lake has two principal inlets. The Tippecanoe River flows from Webster Lake, enters James Lake, and flows into Tippecanoe Lake on the eastern side. The outlet from the Barbee Chain of Lakes enters from the southeast. The outlet, the Tippecanoe River, leaves the lake on the southwestern 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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.55	6.21	---	5.92	6.20	6.78	6.24	6.77	6.68	6.57	6.73	6.63
10	7.80	6.00	---	5.92	6.30	6.91	6.65	6.66	6.68	6.80	6.72	6.70
15	7.39	5.77	6.77	5.86	6.36	6.73	6.74	6.62	6.69	6.67	6.65	6.71
20	6.96	5.76	6.47	6.07	6.30	6.44	6.93	7.13	6.65	6.70	6.59	6.61
25	6.49	---	6.18	6.14	6.07	6.53	6.73	7.05	6.71	6.65	6.51	6.62
EOM	6.29	---	6.00	6.11	6.04	6.34	6.37	6.70	6.81	6.63	6.62	6.66

WTR YR 1987 MEAN 6.55 HIGH 7.82 OCT 8 LOW 5.74 NOV 16 AND OTHERS



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 1.8 mi north-northeast of the town of Wolflake.

SURFACE AREA.--86 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.

LAKE-LEVEL CONTROL.--The lake level is controlled by a fixed-sill concrete dam.

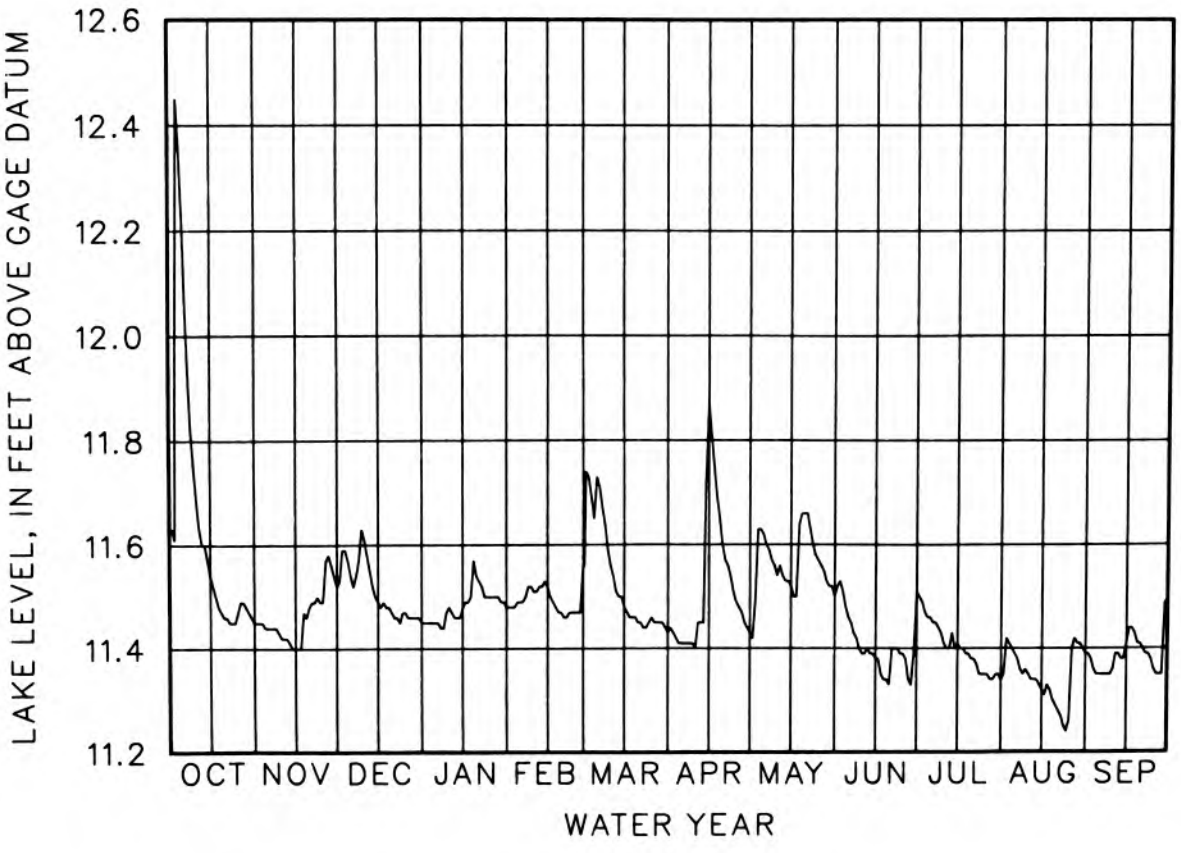
INLET AND OUTLET.--There is one inlet that enters the lake from the eastern side. The outlet flows to the north through Dollar Lake, and eventually into the South Branch Elkhart River.

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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	12.23	11.44	11.54	11.45	11.49	11.73	11.41	11.62	11.46	11.46	11.39	11.35
10	11.68	11.42	11.61	11.48	11.51	11.56	11.40	11.54	11.39	11.41	11.35	11.36
15	11.54	11.40	11.49	11.48	11.52	11.48	11.87	11.52	11.38	11.41	11.32	11.41
20	11.46	11.48	11.47	11.54	11.47	11.45	11.60	11.66	11.33	11.38	11.29	11.41
25	11.47	11.49	11.47	11.50	11.47	11.46	11.49	11.57	11.39	11.35	11.26	11.36
EOM	11.45	11.52	11.45	11.48	11.56	11.43	11.43	11.50	11.51	11.34	11.39	11.46

WTR YR 1987 MEAN 11.48 HIGH 12.45 OCT 3 LOW 11.24 AUG 24



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.

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.

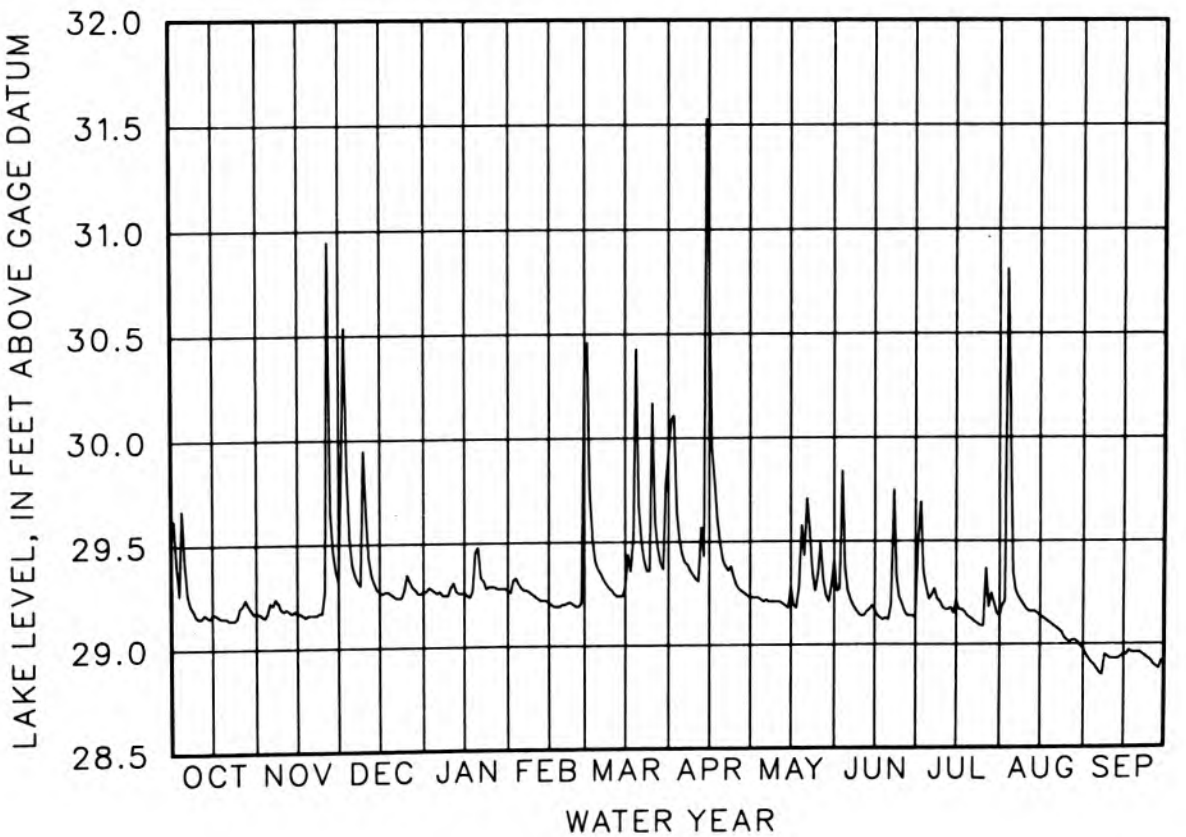
INLET AND OUTLET.--The inlets are Laughery Creek, Falling Timber Creek, and Cedar Creek. The outlet is Laughery Creek, which flows southeasterly and empties into the Ohio River.

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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	29.41	29.22	29.40	29.26	29.28	29.37	29.44	29.21	29.26	29.22	29.35	28.88
10	29.15	29.18	29.64	29.29	29.24	29.27	29.32	29.21	29.14	29.18	29.17	28.93
15	29.17	29.17	29.27	29.26	29.21	29.28	30.76	29.28	29.17	29.21	29.14	28.95
20	29.15	29.16	29.25	29.48	29.20	29.67	29.41	29.43	29.12	29.13	29.09	28.96
25	29.20	29.27	29.35	29.29	29.19	30.17	29.29	29.34	29.20	29.09	29.02	28.92
EOM	29.17	29.32	29.27	29.27	30.34	29.92	29.23	29.41	29.13	29.14	28.98	28.91

WTR YR 1987 MEAN 29.29 HIGH 31.53 APR 14 LOW 28.85 SEP 7



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.--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 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.

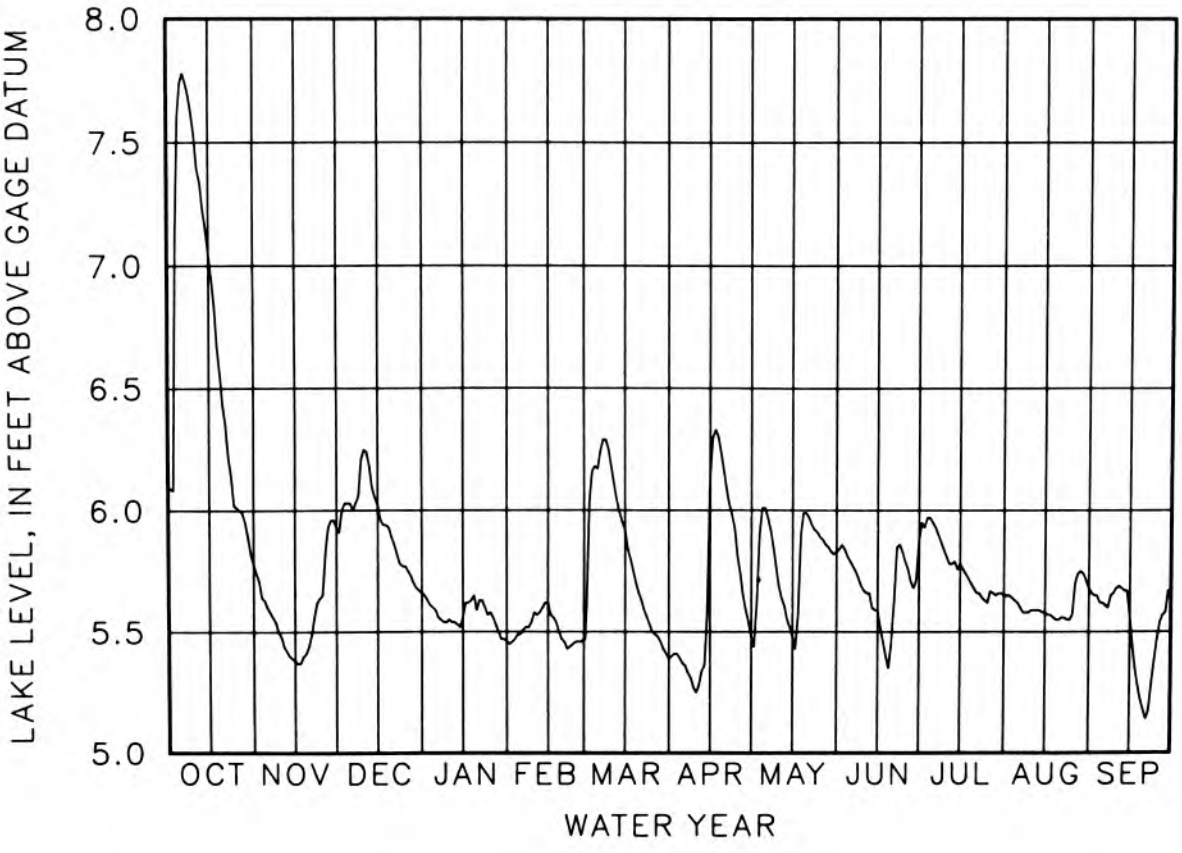
INLET AND OUTLET.--The North Branch of the Elkhart River flows through the lake, entering through Jones Lake at the north and leaving at the west end of Waldron Lake. Another inlet enters at the southeast from Steinbarger Lake, 0.1 mi upstream.

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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.74	5.60	6.03	5.59	5.49	6.17	5.37	6.01	5.79	5.95	5.62	5.62
10	7.53	5.48	6.25	5.55	5.58	6.18	5.25	5.69	5.67	5.81	5.59	5.68
15	7.05	5.38	6.02	5.56	5.62	5.92	6.14	5.48	5.59	5.78	5.58	5.57
20	6.43	5.44	5.89	5.59	5.47	5.66	6.16	5.99	5.45	5.68	5.55	5.18
25	6.01	5.65	5.77	5.58	5.46	5.50	5.81	5.89	5.79	5.62	5.57	5.47
EOM	5.78	5.93	5.66	5.46	5.47	5.39	5.48	5.83	5.88	5.65	5.68	5.67

WTR YR 1987 MEAN 5.77 HIGH 7.78 OCT 6 LOW 5.14 SEP 21



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.

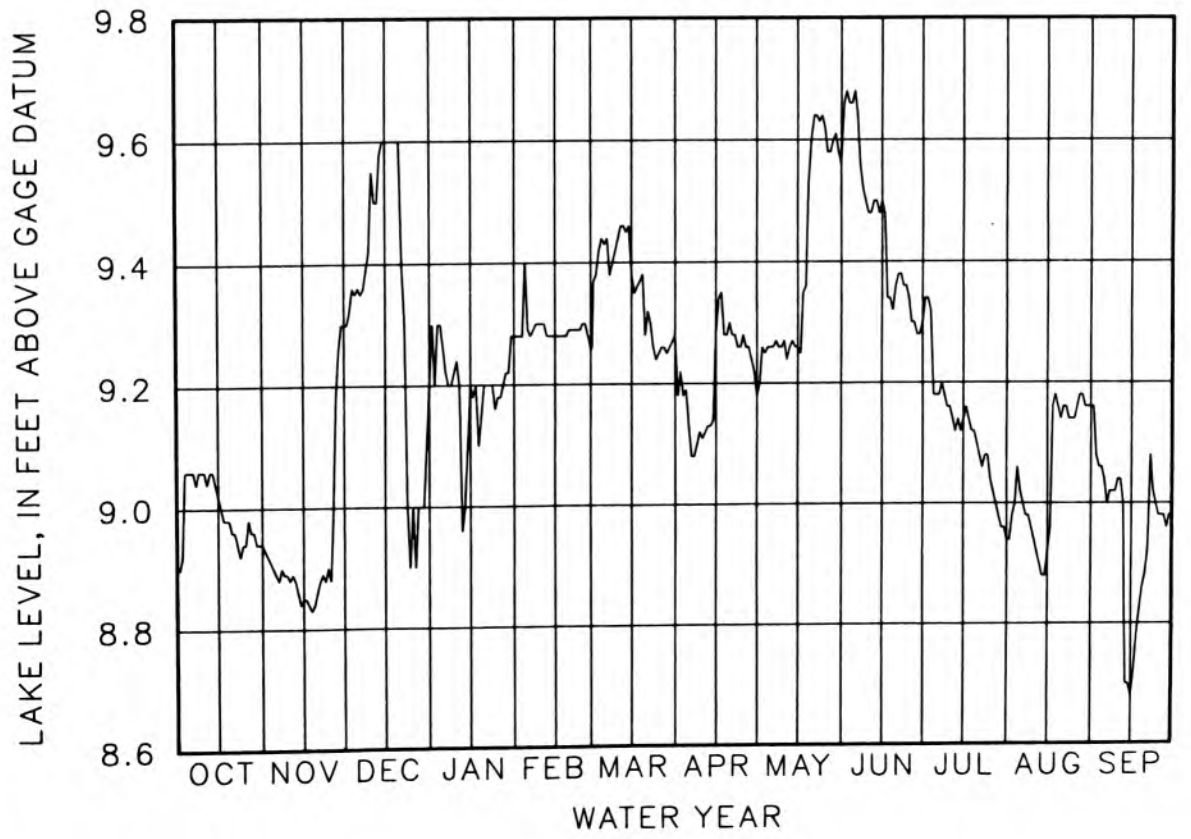
INLET AND OUTLET.--The lake has one inlet entering on the northeast side from Mink Lake 0.3 mi upstream. The outlet flows from the southeast shore, southwesterly through a swamp to Canada Lake 0.3 mi downstream.

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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.06	8.89	9.36	9.26	9.29	9.43	9.13	9.26	9.68	9.18	9.02	9.04
10	9.06	8.88	9.55	9.24	9.30	9.44	9.11	9.27	9.48	9.16	8.94	9.04
15	9.02	8.85	9.60	9.20	9.28	9.38	9.28	9.26	9.50	9.14	8.92	8.68
20	8.96	8.86	9.60	9.20	9.29	9.28	9.30	9.60	9.36	9.10	9.14	8.88
25	8.94	8.88	9.00	9.18	9.30	9.25	9.28	9.62	9.34	9.04	9.14	8.98
EOM	8.94	9.30	9.20	9.28	9.26	9.28	9.18	9.56	9.30	8.94	9.16	8.98

WTR YR 1987 MEAN 9.19 HIGH 9.68 JUN 2 AND OTHERS LOW 8.68 SEP 15



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 (from levels of State 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 auxiliary 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.--12.82 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.

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.

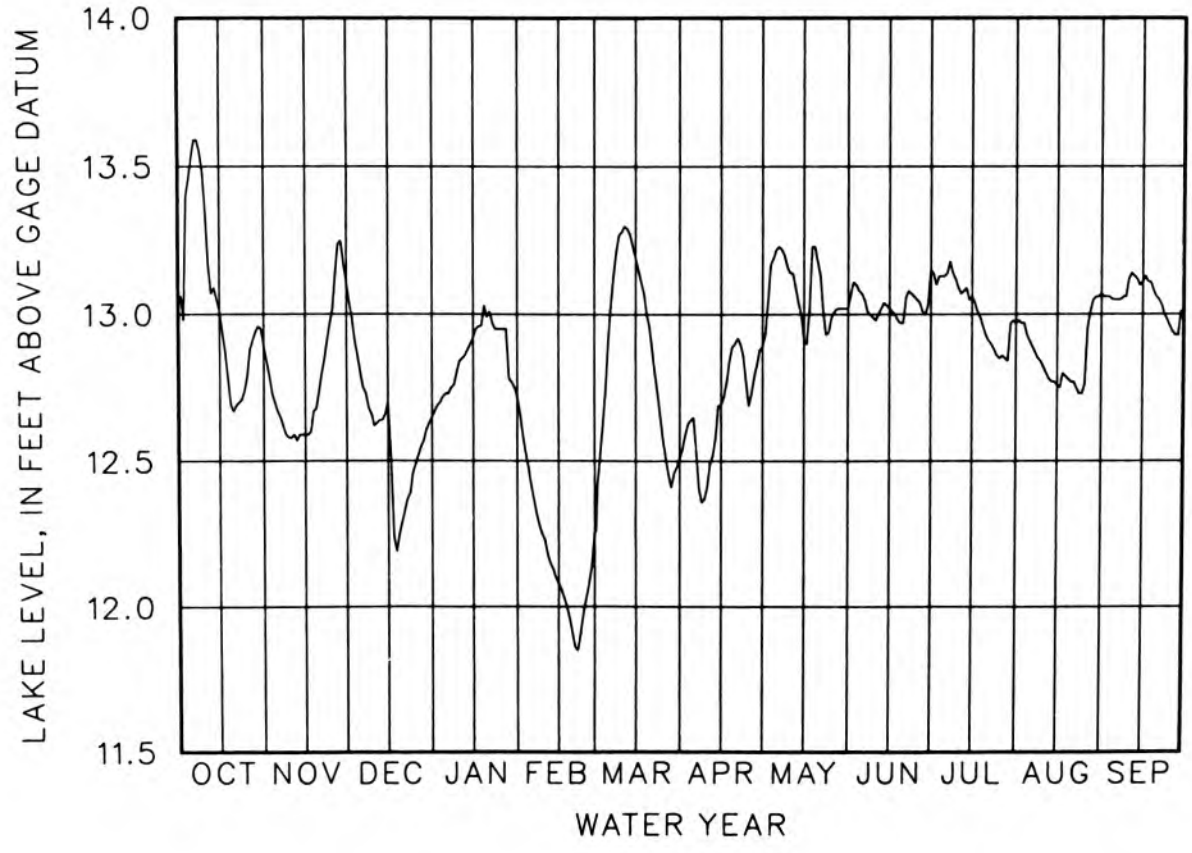
INLET AND OUTLET.--The Tippecanoe River flows through Webster Lake, entering at the southeast end and leaving at the southwest side. The Tippecanoe River enters James Lake, 2.1 mi downstream.

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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	13.53	12.67	12.80	12.73	12.42	12.90	12.65	13.22	13.07	13.13	12.91	13.05
10	13.34	12.58	12.62	12.84	12.23	13.28	12.41	13.14	12.98	13.09	12.82	13.12
15	13.01	12.59	12.70	12.92	12.08	13.19	12.69	12.92	13.02	13.06	12.76	13.11
20	12.67	12.74	12.29	12.99	11.91	12.96	12.90	13.18	12.97	12.93	12.77	13.06
25	12.79	13.02	12.49	12.95	12.03	12.57	12.69	12.99	13.05	12.85	12.76	12.96
EOM	12.89	13.11	12.65	12.72	12.26	12.51	12.89	13.02	13.15	12.97	13.07	13.00

WTR YR 1987 MEAN 12.84 HIGH 13.59 OCT 6 AND OTHERS LOW 11.85 FEB 22



ILLINOIS RIVER BASIN

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 mi².

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.

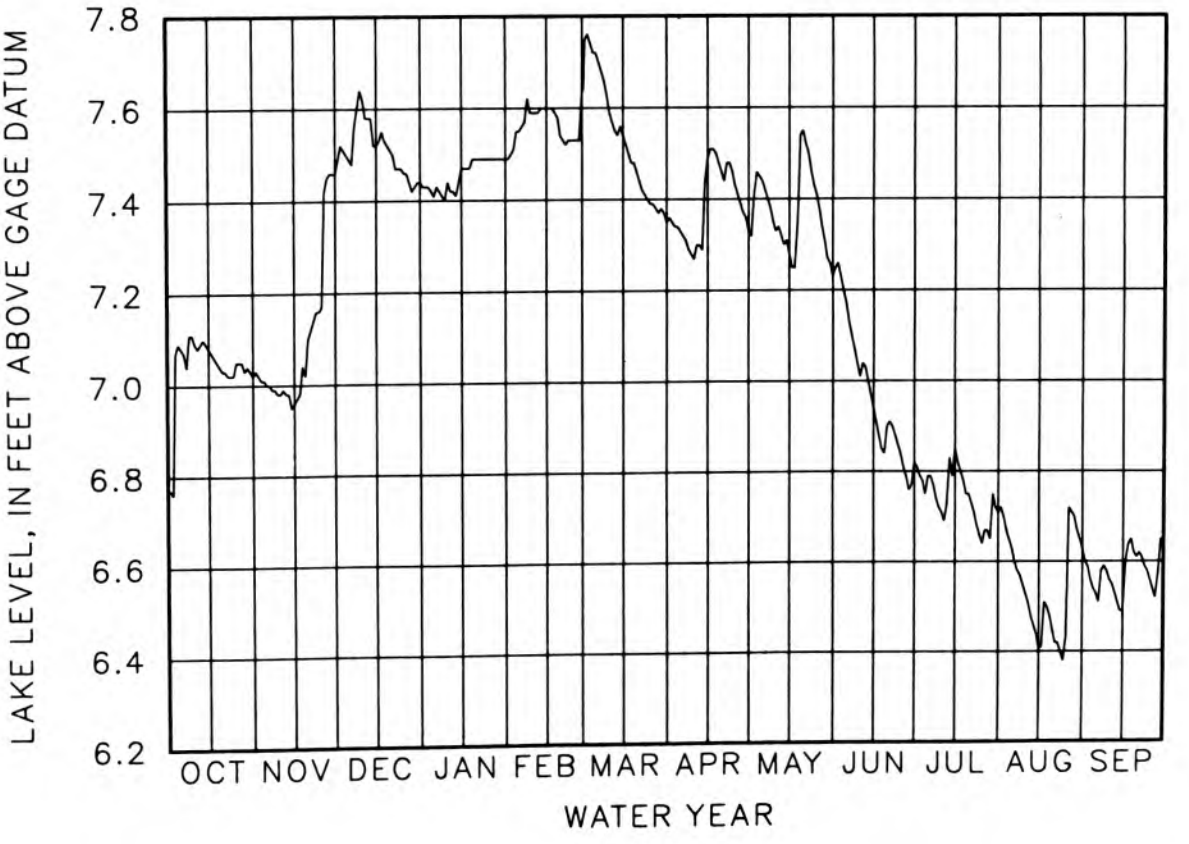
INLET AND OUTLET.--The one inlet enters the lake on the southeastern shore and drains the immediately surrounding area. The outlet flows from the lake on the western shore.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 8.41 ft Feb. 24, 1985; minimum stage, 4.97 ft Aug. 31, 1962.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.08	7.00	7.49	7.41	7.55	7.72	7.33	7.44	7.17	6.79	6.63	6.53
10	7.09	6.98	7.62	7.44	7.59	7.59	7.27	7.33	7.01	6.71	6.53	6.56
15	7.08	6.96	7.52	7.47	7.60	7.54	7.49	7.28	6.94	6.85	6.41	6.49
20	7.03	7.10	7.51	7.49	7.54	7.46	7.46	7.55	6.90	6.75	6.45	6.61
25	7.05	7.17	7.46	7.49	7.53	7.39	7.43	7.41	6.84	6.64	6.43	6.56
EOM	7.02	7.46	7.44	7.49	7.64	7.35	7.33	7.23	6.82	6.71	6.63	6.64

WTR YR 1987 MEAN 7.15 HIGH 7.76 MAR 2 LOW 6.38 AUG 24



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. All levels listed below are at the present datum.

GAGE.--A water-stage recorder is installed in an aluminum shelte over a 15-inch diameter stilling well. An auxiliary staff gage is attached to the stilling well.

ESTABLISHED LEGAL LEVEL.--10.96 ft gage datum or 811.06 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.

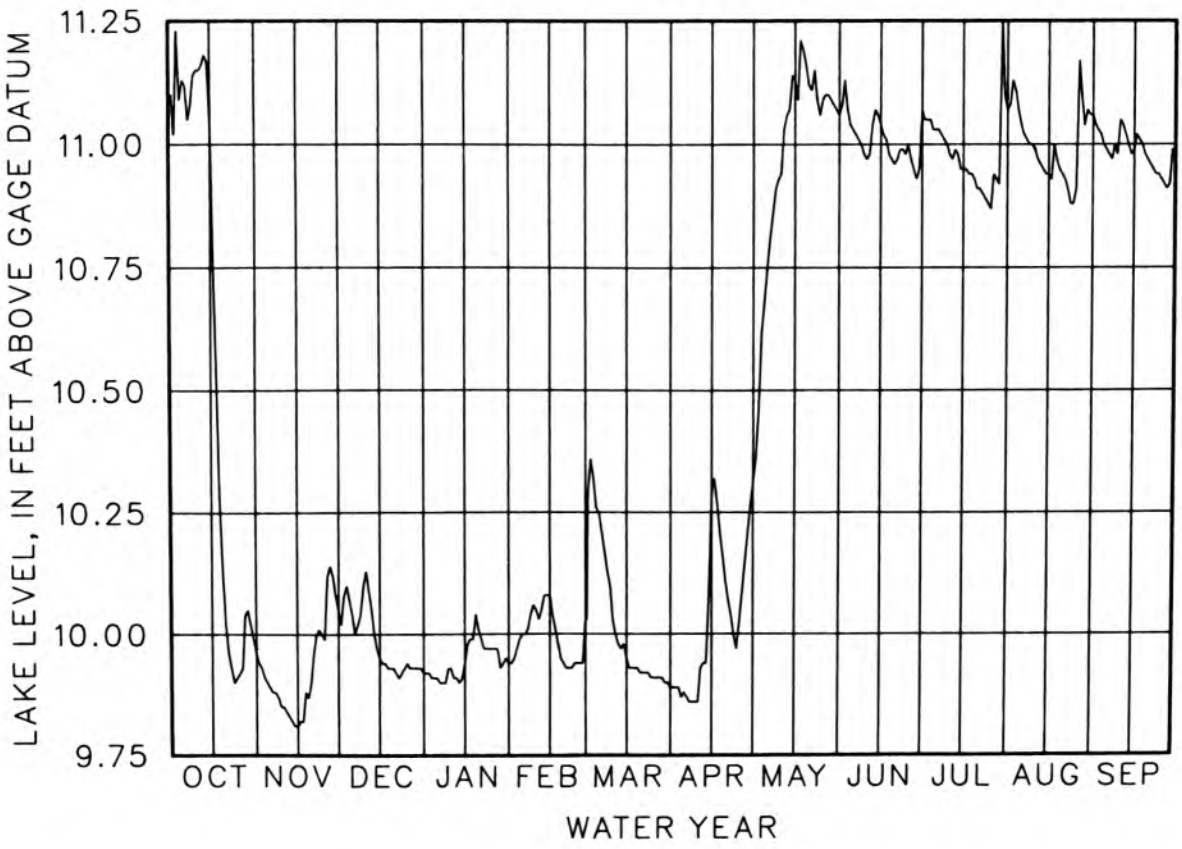
INLET AND OUTLET.--There are three inlets to the lake. Wyland ditch enters on the eastern shore from Sherburn Lake 6.7 mi upstream. Keefer-Evans ditch enters on the southeastern shore and Paterson ditch on the southwestern shore. The outlet, Eagle Creek, flows from the western lobe of the lake into Walnut 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 1986 TO SEPTEMBER 1987
2400 HR VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	11.13	9.89	10.04	9.91	10.00	10.25	9.88	10.75	11.03	11.03	11.04	10.99
10	11.15	9.85	10.13	9.93	10.05	10.03	9.86	10.94	10.97	10.98	10.99	11.05
15	11.04	9.81	9.95	9.94	10.08	9.95	10.29	11.13	11.04	10.95	10.94	10.99
20	10.02	9.90	9.93	10.01	9.94	9.92	10.11	11.12	10.96	10.91	10.94	10.97
25	9.92	9.99	9.94	9.97	9.94	9.91	10.02	11.09	11.00	10.87	10.91	10.93
EOM	9.96	10.05	9.92	9.94	10.03	9.89	10.31	11.06	11.07	11.07	11.06	10.98

WTR YR 1987 MEAN 10.46 HIGH 11.25 JUL 29 LOW 9.81 NOV 14 AND OTHERS



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[8]	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
04099150	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[8]	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

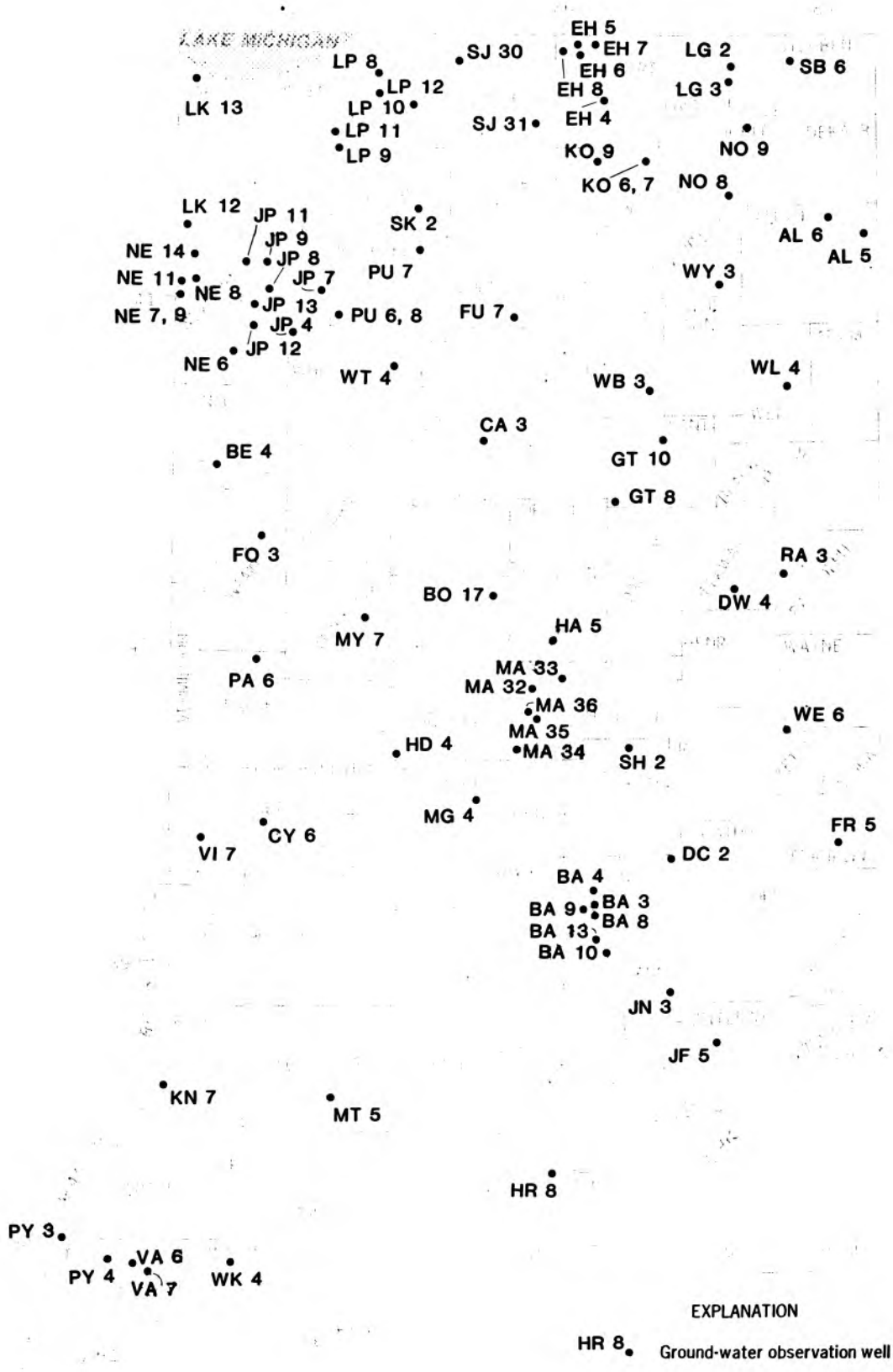


Figure 9.-- Locations of ground-water observation wells.

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, 0.00 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 1986 TO SEPTEMBER 1987

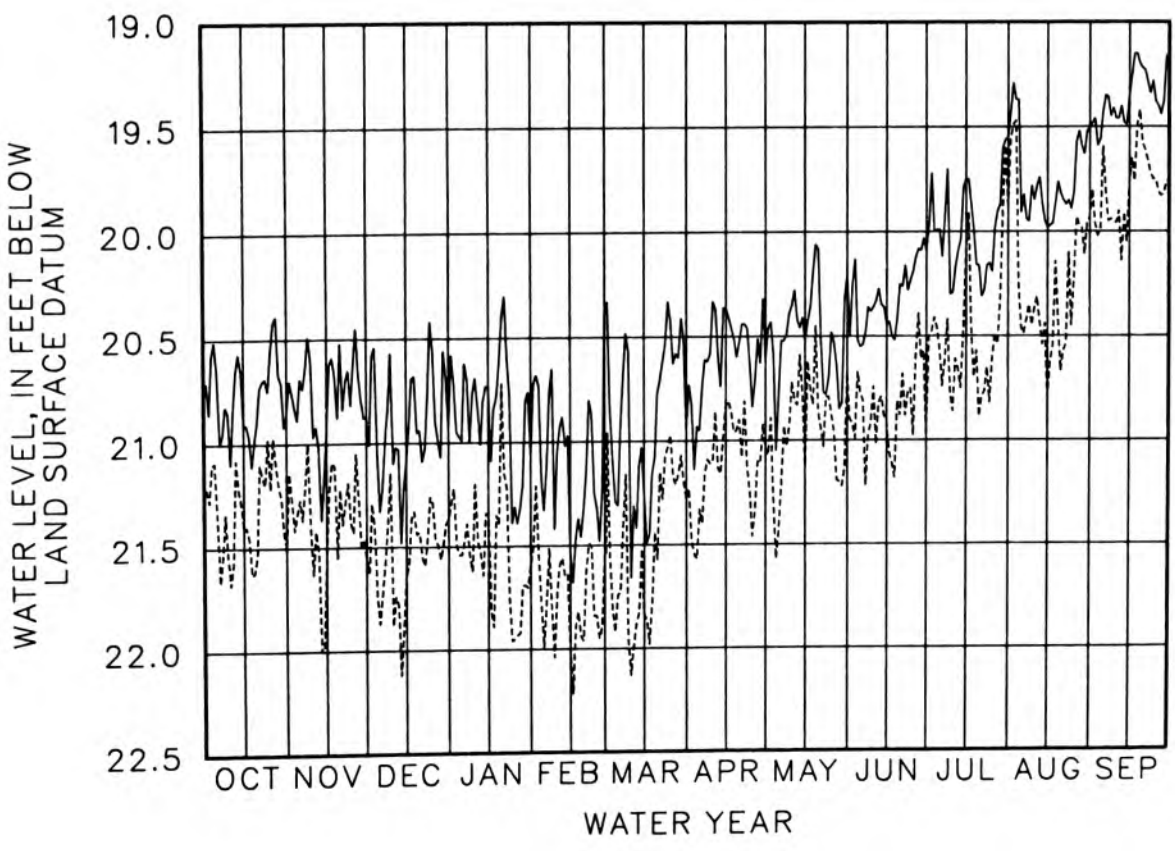
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	20.66	20.69	21.33	20.99	21.33	21.31	20.95	20.79	20.55	19.99	19.91	19.43
10	21.10	20.97	21.10	20.69	21.05	21.66	20.33	20.35	20.36	20.29	19.85	19.46
15	20.91	20.94	21.09	20.73	21.53	21.26	20.37	20.52	20.44	19.75	19.98	19.35
20	20.90	20.52	20.94	20.40	21.33	20.77	20.53	20.08	20.25	20.16	19.82	19.22
25	20.56	20.62	20.56	21.31	21.32	20.42	20.84	20.48	20.19	20.19	19.81	19.38
EOM	20.86	20.87	20.93	21.06	20.38	20.94	20.61	20.21	20.09	19.55	19.50	19.18

WTR YR 1987 HIGH 19.15 SEP 17 AND OTHERS

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	21.36	21.27	21.87	21.54	21.99	21.74	21.33	21.44	20.77	20.56	20.46	19.59
10	21.68	21.63	21.88	21.20	21.73	22.13	21.10	20.72	20.74	20.86	20.37	19.96
15	21.41	21.53	21.64	21.35	22.02	21.84	20.83	21.12	20.91	20.09	20.79	19.77
20	21.54	21.22	21.43	20.72	21.96	21.57	20.90	20.86	20.88	20.89	20.67	19.58
25	21.22	21.43	21.29	21.95	21.84	20.97	21.46	20.87	20.98	20.61	20.23	19.75
EOM	21.50	21.56	21.37	21.59	21.54	21.28	21.04	20.68	20.98	19.87	19.93	19.76

WTR YR 1987 LOW 22.22 FEB 16



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, 8.17 ft below land-surface datum, Mar. 13, 14, 1986; lowest, 14.77 ft below land-surface datum, Oct. 29, 1978.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

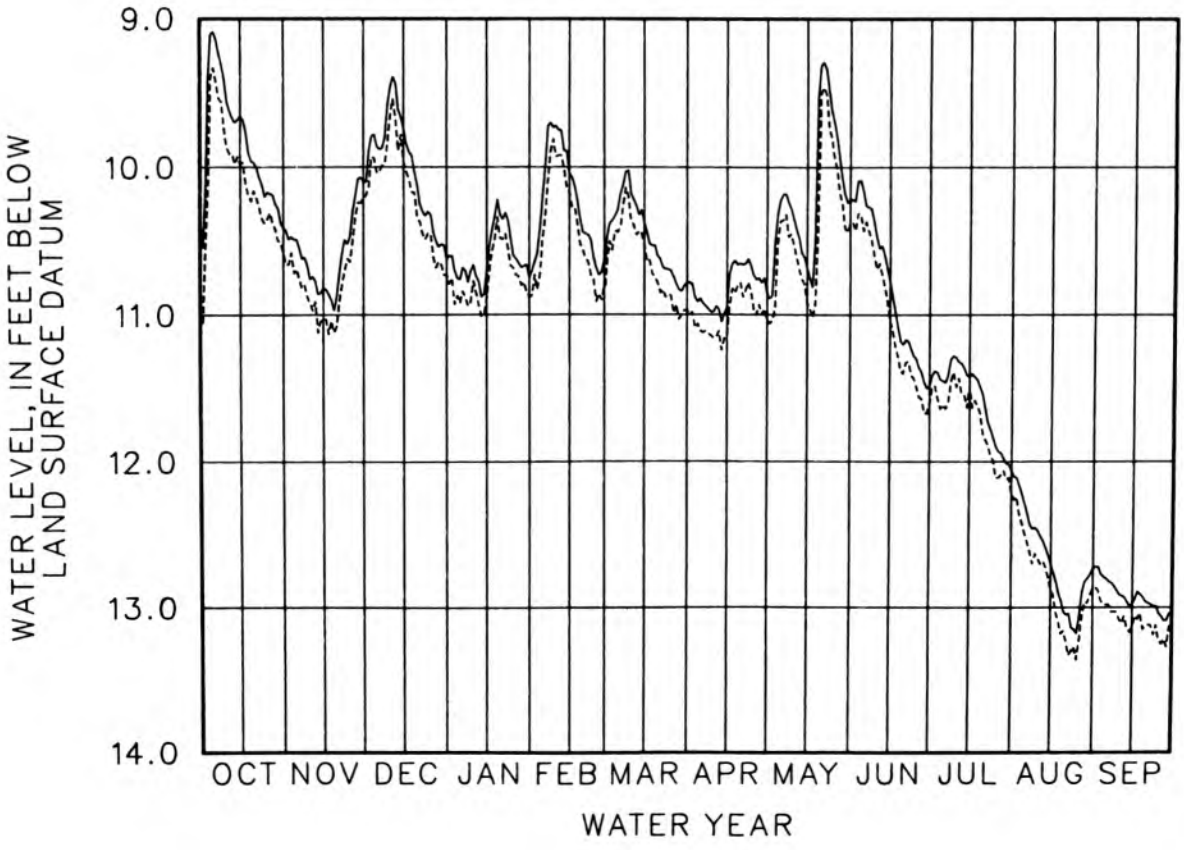
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.09	10.49	9.86	10.76	10.19	10.29	10.89	10.22	10.16	11.45	12.28	12.80
10	9.56	10.76	9.46	10.66	9.72	10.18	10.98	10.35	10.47	11.29	12.47	12.91
15	9.66	10.82	9.74	10.71	10.04	10.37	10.95	10.68	10.77	11.42	12.70	12.98
20	9.97	10.88	10.12	10.32	10.44	10.60	10.65	9.31	11.20	11.54	13.03	12.96
25	10.17	10.47	10.32	10.60	10.68	10.70	10.73	9.70	11.30	11.90	13.18	13.04
EOM	10.41	10.09	10.62	10.75	10.62	10.78	10.85	10.22	11.48	12.06	12.73	13.05

WTR YR 1987 HIGH 9.09 OCT 5

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.33	10.69	10.04	10.92	10.48	10.44	11.11	10.36	10.43	11.61	12.49	12.98
10	9.87	10.92	9.65	10.77	9.93	10.37	11.16	10.53	10.69	11.49	12.66	13.08
15	9.98	11.04	9.96	10.89	10.17	10.53	11.14	10.92	11.04	11.48	12.88	13.14
20	10.16	11.08	10.34	10.48	10.56	10.78	10.78	9.50	11.40	11.81	13.16	13.13
25	10.35	10.64	10.45	10.68	10.91	10.87	10.97	9.94	11.49	12.11	13.36	13.23
EOM	10.58	10.21	10.73	10.88	10.80	10.97	11.03	10.38	11.60	12.22	12.87	13.16

WTR YR 1987 LOW 13.36 AUG 25



391320085534601. Local number, BA 3.

LOCATION.--Lat 39°13'20", long 85°53'46", in NE¼NE¼SE¼ sec.18, T.9 N., R.6 E., Bartholomew County, Hydrologic Unit 05120205, in northeast corner of Lincoln Park in the city of Columbus.
Owner: City of Columbus.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 6 in., depth 123 ft, cased to 116 ft, screened to 121 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 639.8 ft above National Geodetic Vertical Datum of 1929.
Measuring point: Top of floor of shelter, 2.50 ft above land-surface datum.

REMARKS.--Water level affected by pumpage for water and sewage utilities.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 16.75 ft below land-surface datum, Feb. 24, 25, 1975; lowest, 28.74 ft below land-surface datum, Oct. 9, 1971.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

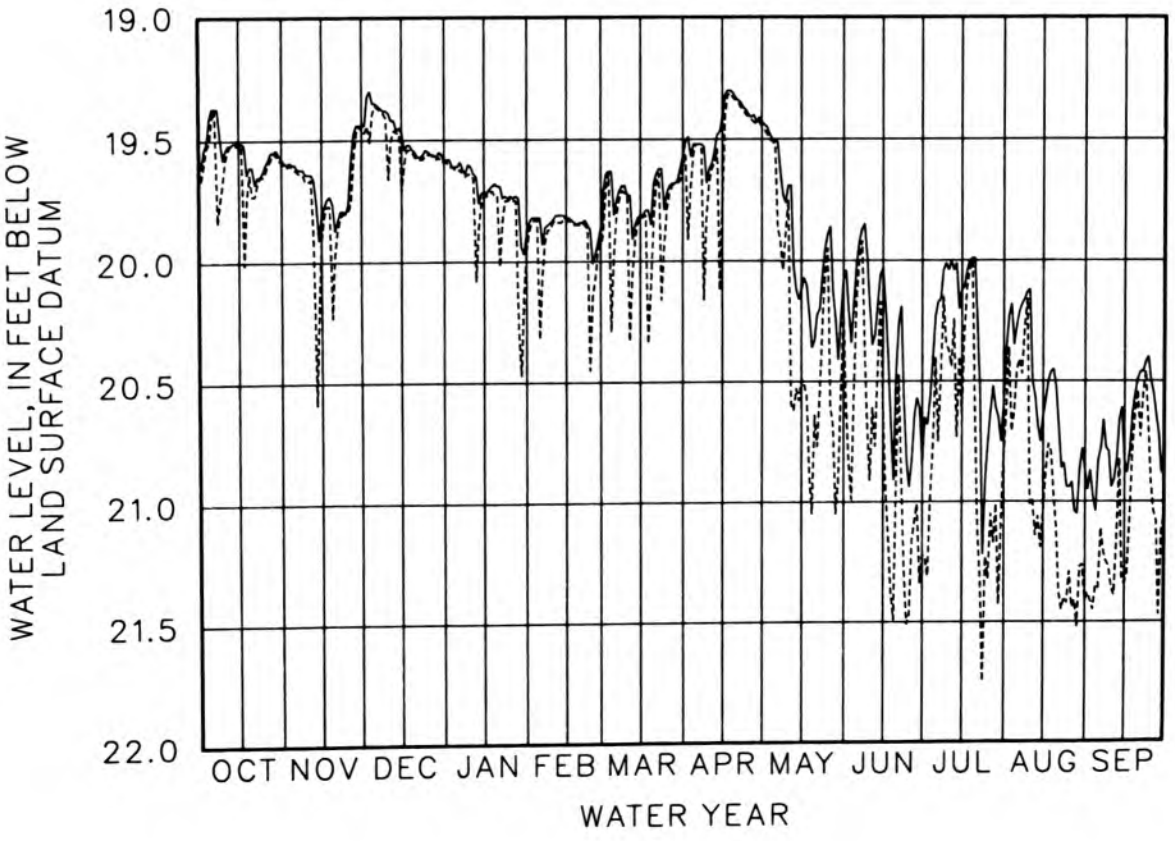
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	19.37	19.60	19.35	19.61	19.82	19.81	19.52	19.51	20.01	20.23	20.27	20.83
10	19.54	19.64	19.39	19.61	19.83	19.73	19.62	19.69	20.18	20.04	20.12	20.94
15	19.51	19.81	19.47	19.71	19.83	19.81	19.41	20.12	20.03	20.12	20.65	20.83
20	19.61	19.87	19.55	19.69	19.84	19.68	19.33	20.33	20.48	19.99	20.53	20.49
25	19.60	19.76	19.55	19.73	20.01	19.72	19.40	19.89	20.94	20.75	20.94	20.50
EOM	19.58	19.44	19.59	19.89	19.86	19.57	19.43	20.08	20.85	20.60	20.87	20.78

WTR YR 1987 HIGH 19.30 DEC 3 AND OTHERS

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	19.41	19.62	19.36	19.63	20.32	19.98	19.52	19.52	20.15	20.40	20.45	21.36
10	19.58	19.67	19.66	19.64	19.84	19.74	19.68	19.75	20.91	20.37	21.01	21.36
15	19.52	19.91	19.71	19.73	19.84	19.82	19.76	20.49	20.61	20.63	21.04	21.34
20	19.73	19.97	19.57	19.73	19.85	19.84	19.34	20.64	20.91	20.60	21.10	20.54
25	19.63	19.79	19.56	19.74	20.15	19.79	19.41	19.95	21.47	21.32	21.29	20.92
EOM	19.59	19.46	19.59	19.96	19.92	19.61	19.45	20.22	21.22	20.80	21.41	21.06

WTR YR 1987 LOW 21.75 JUL 23



GROUND-WATER DATA

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, 14.25 ft below land-surface datum, Mar. 23, 1979; lowest, 21.15 ft below land-surface datum, Feb. 11, 12, 1977.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

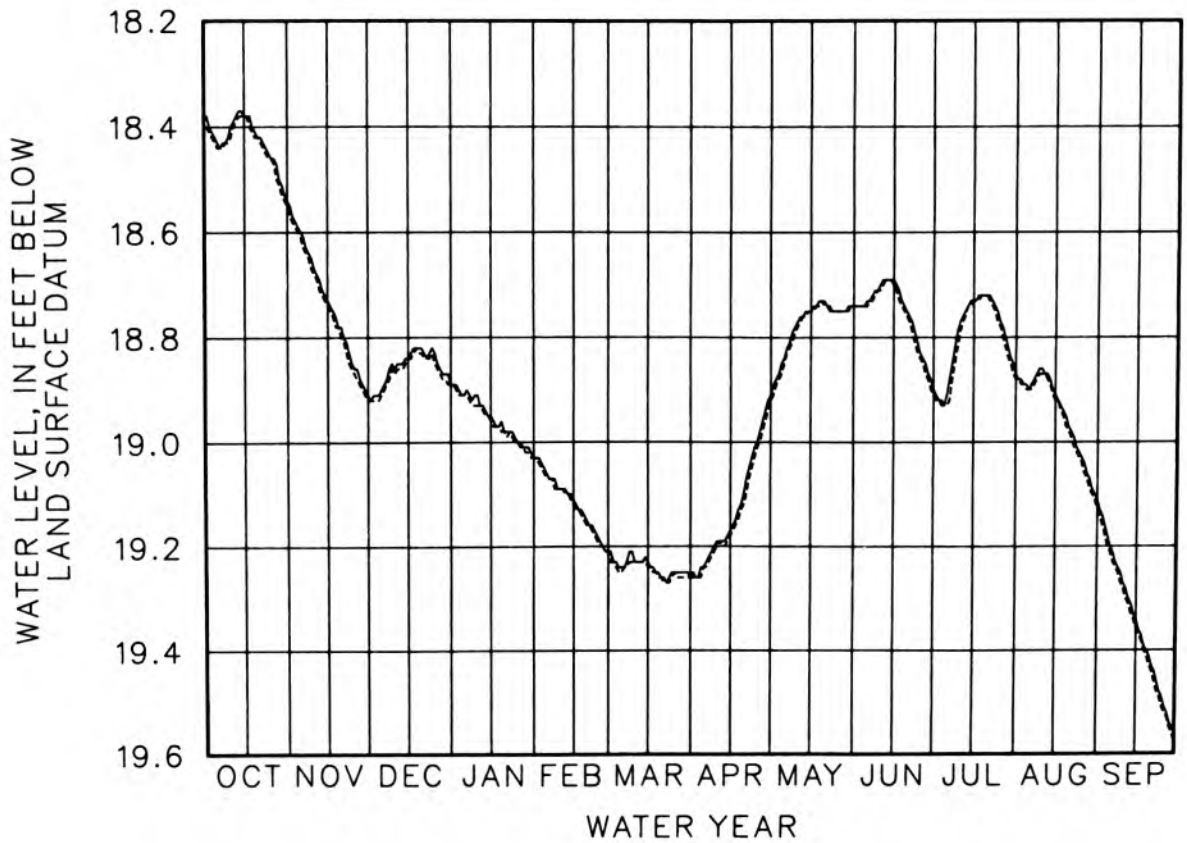
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	18.43	18.60	18.90	18.91	19.06	19.24	19.24	18.84	18.73	18.91	18.90	19.20
10	18.40	18.67	18.86	18.91	19.09	19.23	19.19	18.77	18.70	18.77	18.86	19.27
15	18.38	18.73	18.84	18.95	19.11	19.23	19.17	18.75	18.69	18.73	18.91	19.34
20	18.42	18.78	18.82	18.98	19.15	19.26	19.10	18.73	18.75	18.72	18.97	19.41
25	18.46	18.86	18.83	19.00	19.19	19.25	19.00	18.75	18.83	18.77	19.03	19.49
EOM	18.54	18.91	18.89	19.03	19.21	19.26	18.91	18.74	18.90	18.87	19.11	19.56

WTR YR 1987 HIGH 18.37 OCT 13 AND OTHERS

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	18.44	18.61	18.91	18.91	19.07	19.25	19.24	18.85	18.74	18.93	18.90	19.21
10	18.42	18.68	18.87	18.93	19.09	19.23	19.20	18.78	18.71	18.79	18.87	19.28
15	18.38	18.74	18.84	18.96	19.12	19.24	19.18	18.75	18.70	18.73	18.92	19.36
20	18.42	18.80	18.83	18.98	19.16	19.26	19.12	18.74	18.76	18.72	18.98	19.43
25	18.46	18.87	18.85	19.00	19.20	19.25	19.01	18.75	18.84	18.78	19.04	19.51
EOM	18.55	18.92	18.89	19.03	19.21	19.26	18.92	18.74	18.91	18.88	19.13	19.58

WTR YR 1987 LOW 19.58 SEP 30



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, 23.17 ft below land-surface datum, Nov. 30, 1977.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

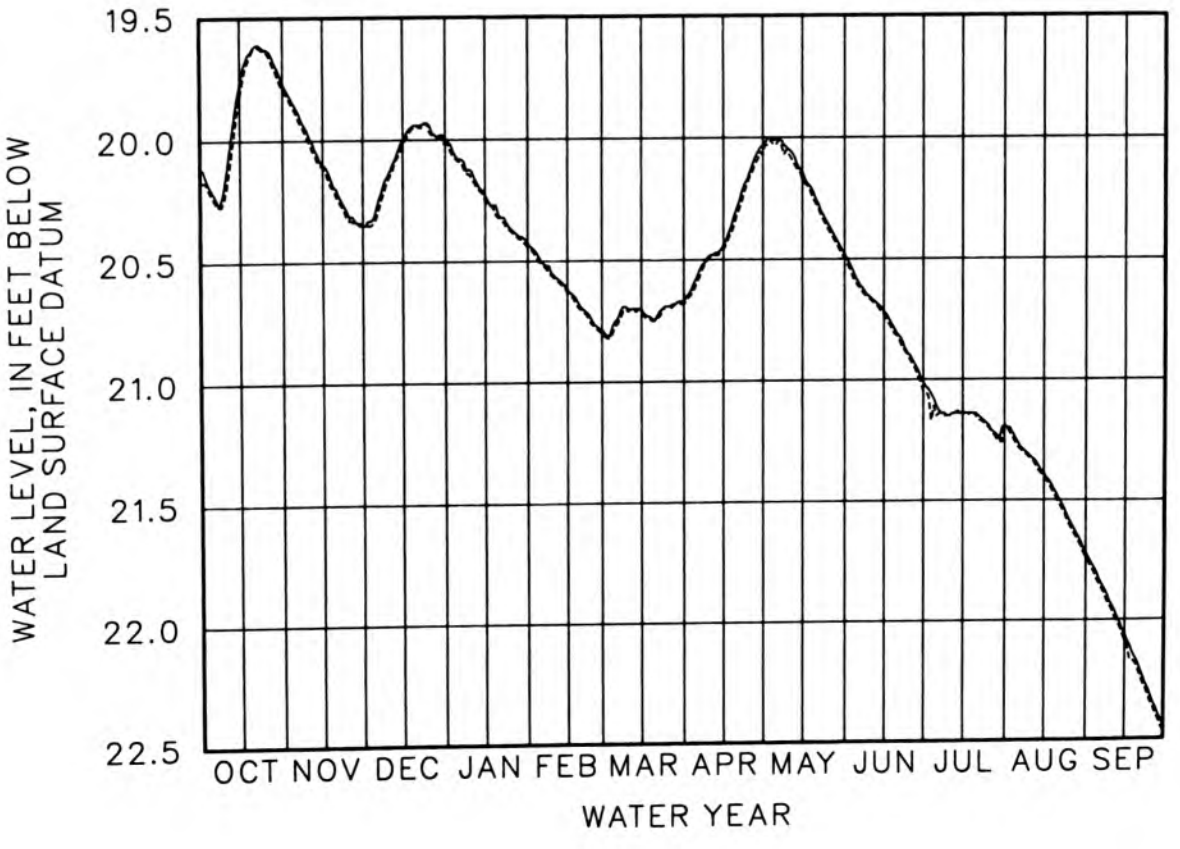
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	20.22	19.87	20.28	20.08	20.50	20.75	20.57	20.01	20.59	21.11	21.26	21.83
10	20.12	19.99	20.13	20.13	20.56	20.70	20.48	20.05	20.66	21.15	21.32	21.94
15	19.77	20.10	20.00	20.23	20.62	20.70	20.44	20.14	20.72	21.14	21.39	22.06
20	19.62	20.20	19.94	20.31	20.69	20.75	20.29	20.25	20.81	21.14	21.48	22.18
25	19.63	20.32	19.94	20.37	20.76	20.69	20.14	20.36	20.90	21.19	21.59	22.32
EOM	19.77	20.35	20.01	20.43	20.79	20.67	20.03	20.48	21.01	21.19	21.72	22.45

WTR YR 1987 HIGH 19.61 OCT 21 AND OTHERS

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	20.24	19.89	20.32	20.09	20.51	20.77	20.59	20.03	20.61	21.15	21.28	21.85
10	20.19	20.01	20.15	20.16	20.57	20.71	20.49	20.07	20.67	21.15	21.33	21.96
15	19.82	20.11	20.02	20.25	20.63	20.71	20.46	20.17	20.73	21.14	21.41	22.09
20	19.63	20.23	19.94	20.32	20.70	20.75	20.32	20.27	20.82	21.15	21.50	22.21
25	19.64	20.33	19.97	20.38	20.77	20.69	20.16	20.38	20.92	21.20	21.61	22.35
EOM	19.79	20.35	20.02	20.44	20.80	20.68	20.07	20.50	21.05	21.20	21.74	22.47

WTR YR 1987 LOW 22.47 SEP 30



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 1986 TO SEPTEMBER 1987

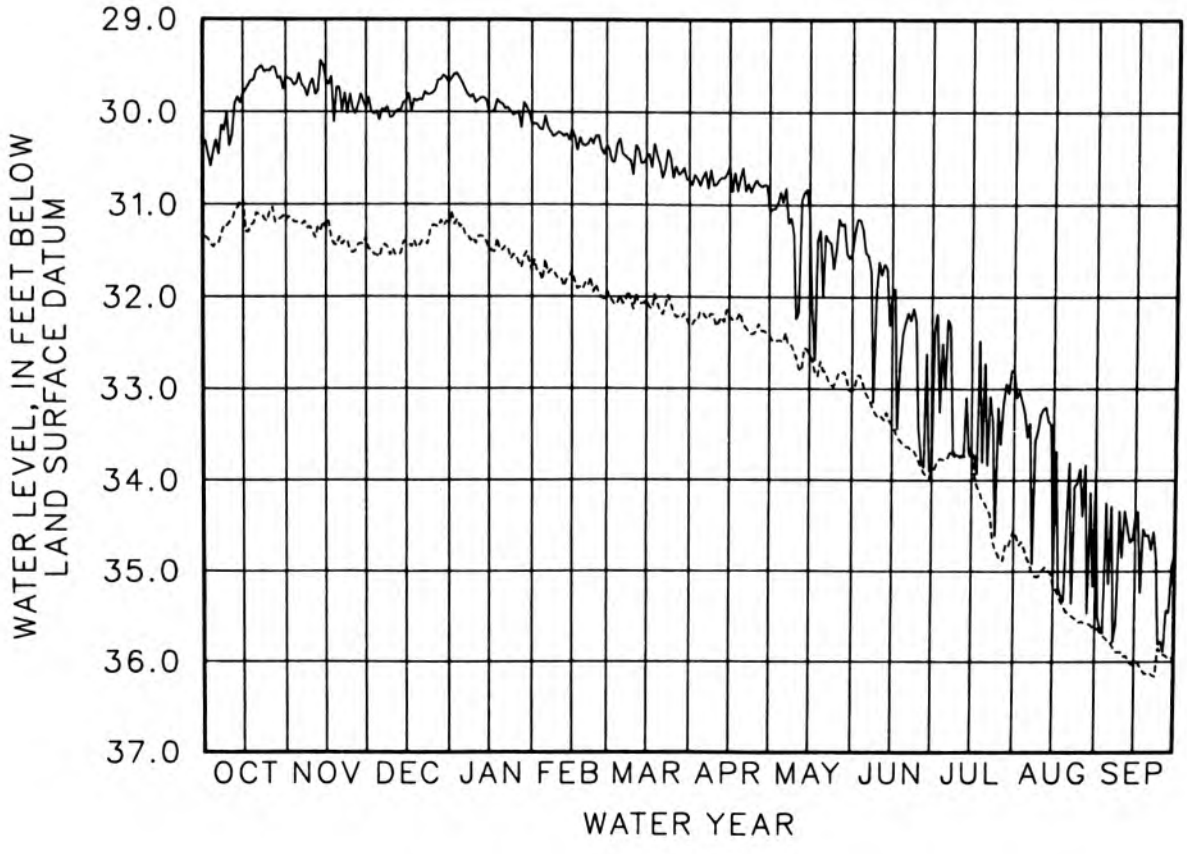
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	30.30	29.58	30.09	29.68	30.04	30.28	30.70	30.97	31.52	33.00	33.53	35.14
10	30.37	29.64	30.05	29.90	30.21	30.67	30.78	32.24	31.61	33.73	33.28	34.85
15	29.81	29.65	29.88	30.00	30.18	30.49	30.58	31.09	31.99	33.71	35.02	34.43
20	29.55	29.73	29.86	29.91	30.36	30.56	30.60	31.99	32.28	32.72	34.47	34.60
25	29.56	29.96	29.79	30.01	30.25	30.71	30.73	31.49	33.43	33.20	33.87	35.77
EOM	29.62	29.96	29.68	30.13	30.37	30.73	31.07	31.53	33.87	32.81	33.94	34.84

WTR YR 1987 HIGH 29.44 NOV 13

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	31.41	31.19	31.57	31.22	31.60	31.99	32.16	32.49	33.04	33.78	34.85	35.77
10	31.19	31.29	31.48	31.42	31.81	32.13	32.32	32.66	33.32	33.75	35.04	35.89
15	30.95	31.25	31.40	31.48	31.72	32.04	32.21	32.62	33.39	33.72	35.15	36.02
20	31.09	31.35	31.44	31.49	31.85	32.16	32.28	32.80	33.63	34.25	35.44	36.13
25	31.07	31.52	31.22	31.55	31.95	32.17	32.37	32.91	33.79	34.81	35.56	35.89
EOM	31.17	31.36	31.21	31.72	31.95	32.31	32.42	33.02	33.90	34.55	35.63	35.94

WTR YR 1987 LOW 36.16 SEP 23



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, 11.85 ft below land-surface datum, Nov. 12, 1982.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

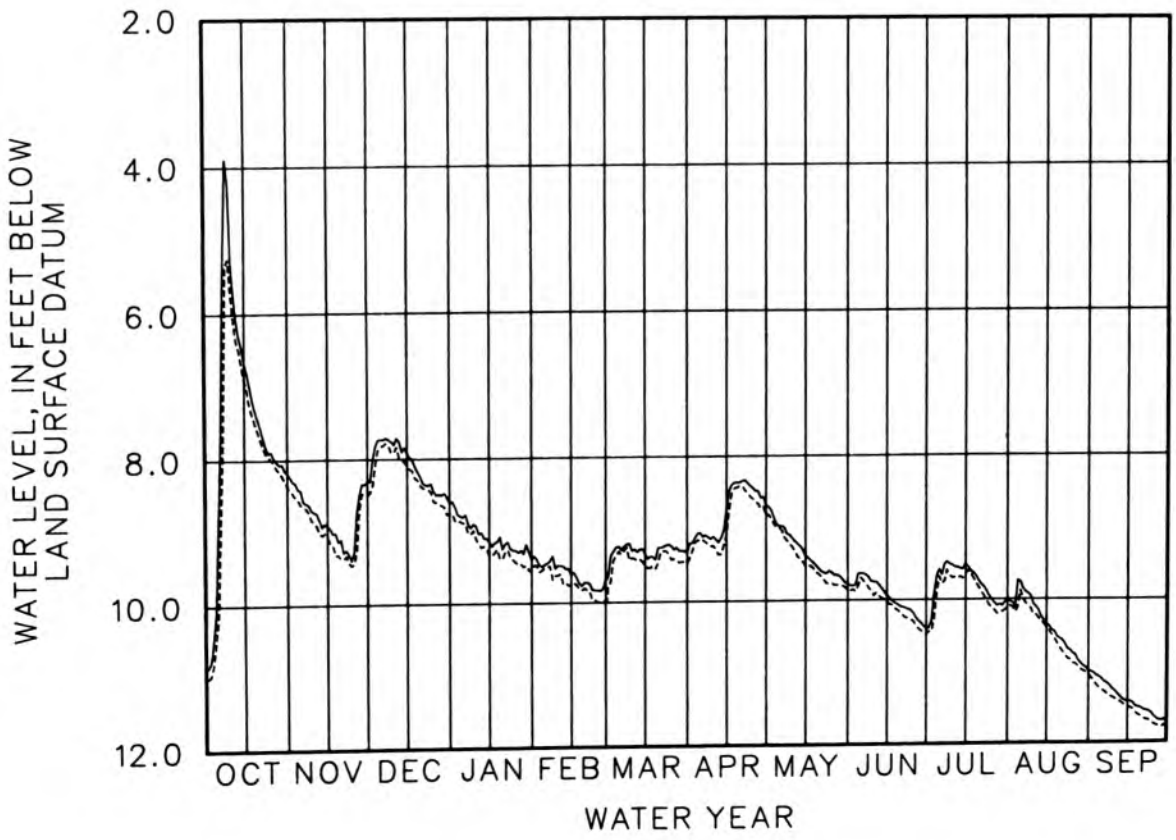
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.94	8.42	7.73	8.81	9.47	9.23	9.05	8.97	9.63	9.58	9.76	11.11
10	5.29	8.72	7.80	8.93	9.48	9.29	9.10	9.14	9.75	9.52	10.07	11.28
15	6.67	8.91	7.93	9.15	9.61	9.34	8.73	9.39	9.94	9.51	10.34	11.43
20	7.44	9.10	8.25	9.25	9.72	9.25	8.36	9.56	10.09	9.74	10.55	11.52
25	7.89	9.28	8.45	9.27	9.83	9.23	8.44	9.62	10.18	10.00	10.76	11.64
EOM	8.18	8.31	8.61	9.40	9.68	9.33	8.69	9.78	10.40	10.03	11.00	11.72

WTR YR 1987 HIGH 3.89 OCT 8

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.12	8.62	7.83	8.89	9.52	9.30	9.17	8.99	9.69	9.68	9.88	11.26
10	5.73	8.86	7.91	9.11	9.62	9.39	9.23	9.26	9.94	9.70	10.22	11.39
15	6.90	9.07	8.10	9.34	9.76	9.49	9.09	9.53	10.03	9.64	10.40	11.50
20	7.61	9.36	8.37	9.39	9.80	9.46	8.41	9.64	10.17	9.83	10.68	11.64
25	7.99	9.44	8.59	9.43	10.00	9.42	8.59	9.77	10.29	10.12	10.89	11.75
EOM	8.36	8.49	8.76	9.56	9.98	9.47	8.83	9.87	10.48	10.11	11.05	11.81

WTR YR 1987 LOW 11.81 SEP 30



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, 20.78 ft below land-surface datum, Jan. 19, 1987; lowest, 22.41 ft below land-surface datum, Nov. 13, 1986.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

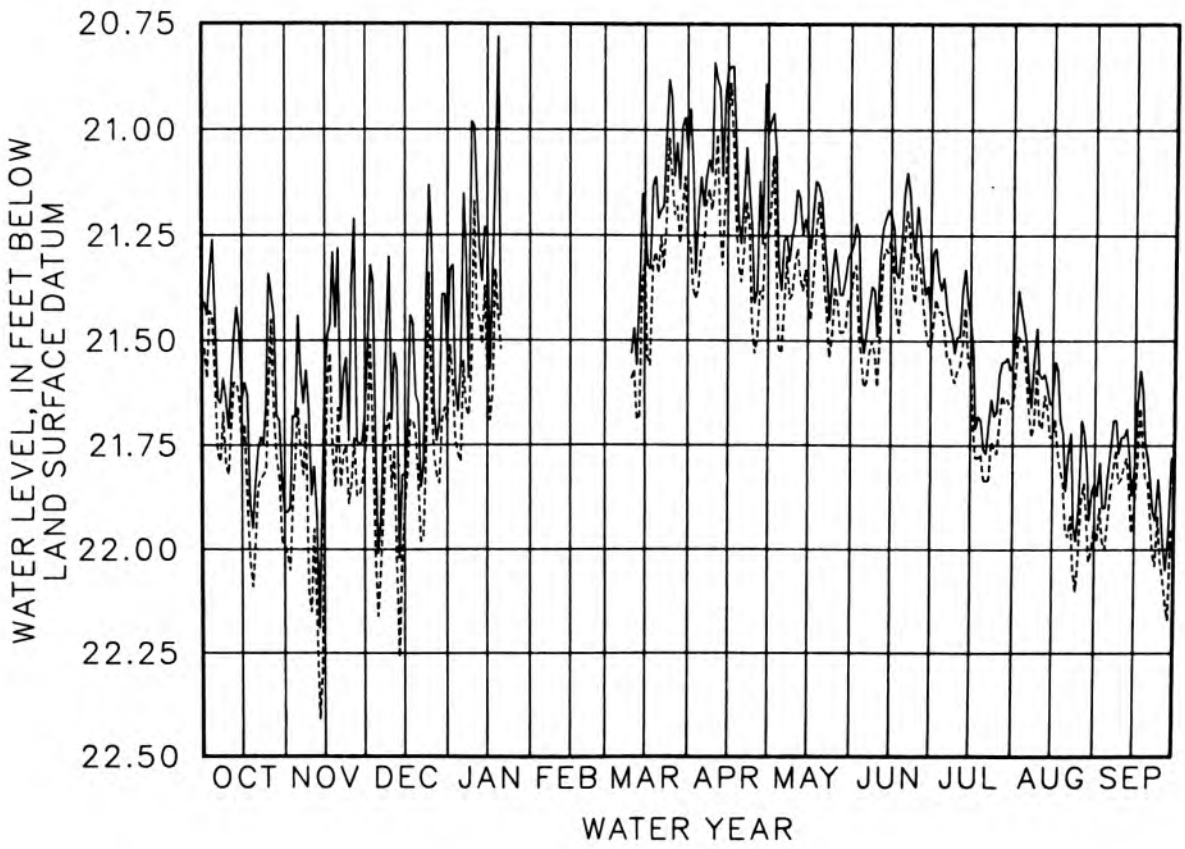
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	21.45	21.44	22.01	21.56		---	21.11	21.38	21.53	21.35	21.50	21.82
10	21.71	21.87	21.69	20.99		21.53	20.84	21.22	21.49	21.49	21.58	21.73
15	21.64	21.60	21.82	21.24		21.21	20.86	21.25	21.20	21.45	21.65	21.81
20	21.84	21.28	21.65	21.44		21.21	21.27	21.16	21.15	21.76	21.86	21.78
25	21.34	21.37	21.27	---		20.92	21.41	21.28	21.18	21.67	21.90	21.90
EOM	21.91	21.67	21.53	---		21.05	21.01	21.29	21.44	21.56	21.84	21.81

WTR YR 1987 HIGH 20.78 JAN 19

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	21.61	21.66	22.16	21.79		---	21.28	21.53	21.61	21.47	21.58	21.93
10	21.82	22.15	21.85	21.17		21.59	21.13	21.32	21.61	21.57	21.70	21.83
15	21.75	21.87	21.90	21.58		21.31	20.97	21.42	21.25	21.57	21.73	21.90
20	21.98	21.66	21.83	21.52		21.34	21.36	21.25	21.28	21.83	21.95	21.84
25	21.62	21.84	21.64	---		21.11	21.53	21.37	21.29	21.77	22.02	22.03
EOM	21.99	21.77	21.70	---		21.26	21.24	21.40	21.52	21.66	21.94	21.97

WTR YR 1987 LOW 22.41 NOV 13



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, 2.15 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, 16.11 ft below land-surface datum, Feb. 13, 1981.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

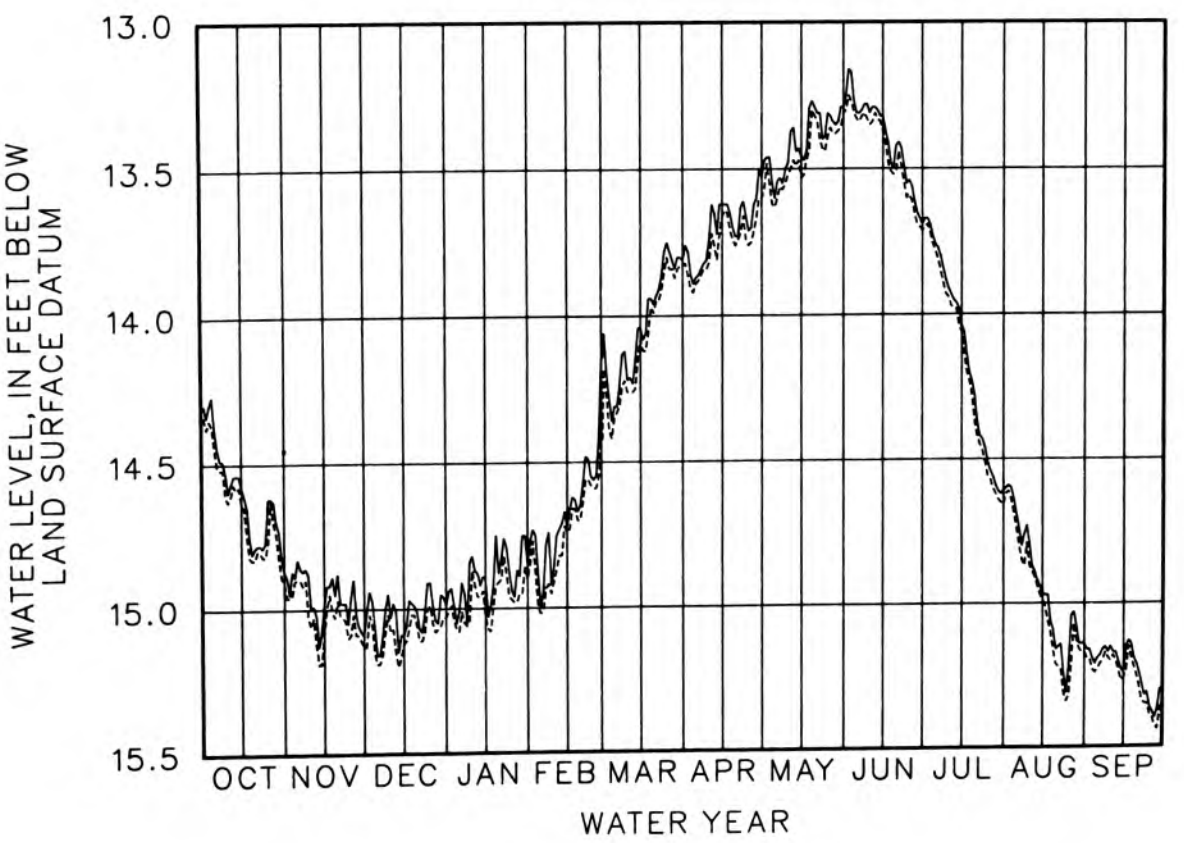
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	14.38	14.83	15.16	15.01	15.00	14.31	13.87	13.60	13.31	13.76	14.69	15.19
10	14.60	15.00	15.03	14.82	14.86	14.22	13.74	13.48	13.31	13.91	14.79	15.15
15	14.58	14.98	15.09	14.90	14.72	14.04	13.62	13.46	13.32	14.04	14.97	15.24
20	14.79	14.88	15.01	14.88	14.65	13.96	13.73	13.29	13.42	14.28	15.16	15.21
25	14.62	14.96	14.91	14.94	14.56	13.75	13.71	13.31	13.54	14.51	15.21	15.36
EOM	14.87	15.09	14.99	14.85	14.14	13.81	13.53	13.29	13.69	14.61	15.14	15.31

WTR YR 1987 HIGH 13.16 JUN 2

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	14.45	14.90	15.19	15.08	15.02	14.35	13.89	13.63	13.33	13.78	14.74	15.23
10	14.63	15.06	15.08	14.87	14.91	14.26	13.82	13.52	13.35	13.94	14.87	15.20
15	14.64	15.08	15.12	15.03	14.74	14.08	13.66	13.53	13.37	14.06	14.99	15.26
20	14.83	14.97	15.06	14.91	14.70	13.99	13.76	13.32	13.51	14.37	15.21	15.25
25	14.77	15.09	14.99	14.97	14.59	13.80	13.76	13.39	13.59	14.56	15.32	15.39
EOM	14.91	15.13	15.03	14.90	14.42	13.83	13.60	13.31	13.71	14.66	15.17	15.35

WTR YR 1987 LOW 15.44 SEP 28



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, 48.82 ft below land-surface datum, Sept. 28, 1987.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

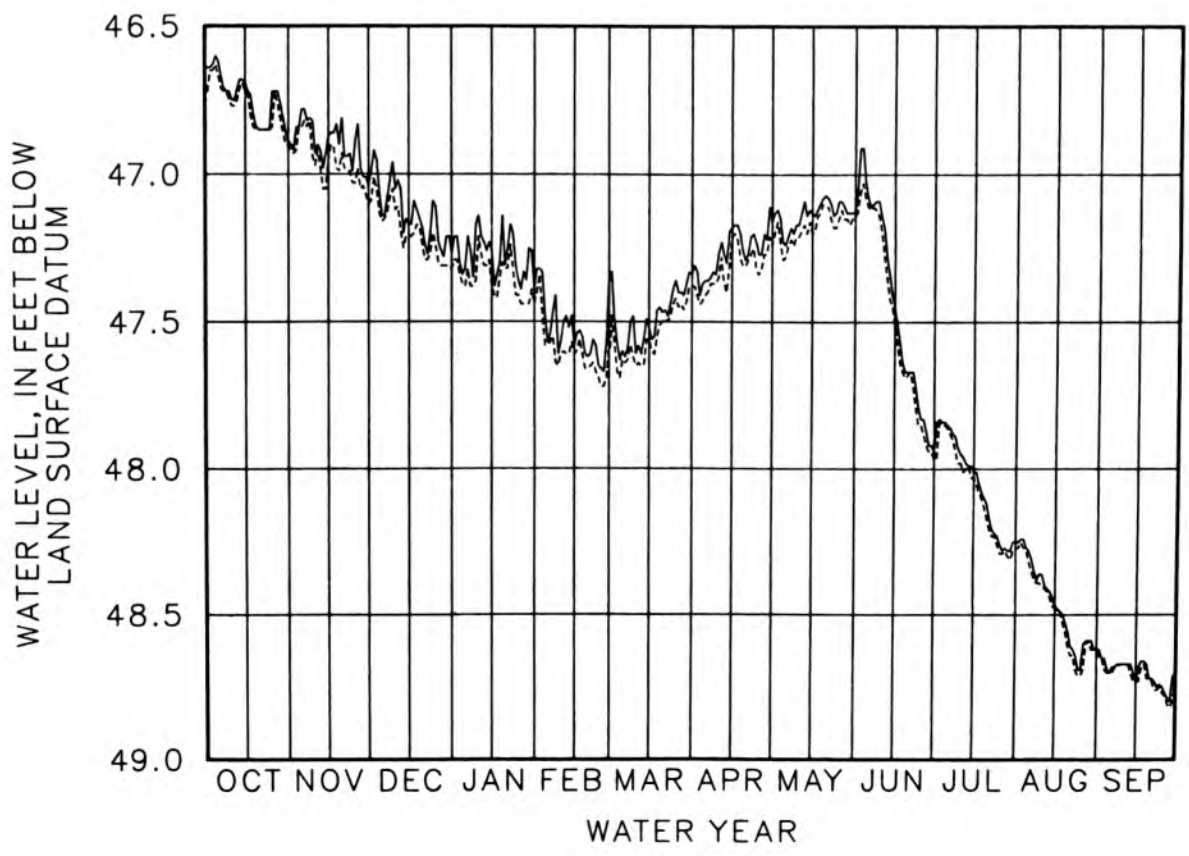
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	46.62	46.78	47.14	47.32	47.57	47.60	47.36	47.24	47.08	47.85	48.28	48.70
10	46.75	46.93	47.05	47.14	47.57	47.61	47.27	47.17	47.14	47.95	48.36	48.67
15	46.69	46.87	47.17	47.26	47.58	47.52	47.18	47.13	47.45	48.01	48.47	48.73
20	46.85	46.81	47.18	47.31	47.62	47.47	47.29	47.07	47.67	48.12	48.56	48.72
25	46.72	46.89	47.11	47.36	47.66	47.36	47.27	47.09	47.83	48.26	48.69	48.75
EOM	46.89	47.04	47.27	47.39	47.36	47.34	47.16	47.13	47.94	48.25	48.62	48.71

WTR YR 1987 HIGH 46.60 OCT 4

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	46.67	46.84	47.16	47.38	47.58	47.63	47.41	47.28	47.11	47.86	48.32	48.70
10	46.77	46.97	47.12	47.21	47.61	47.65	47.35	47.21	47.19	47.98	48.40	48.67
15	46.72	46.95	47.21	47.38	47.61	47.56	47.21	47.20	47.51	48.03	48.48	48.73
20	46.85	46.93	47.24	47.32	47.66	47.50	47.31	47.11	47.68	48.17	48.61	48.72
25	46.84	47.03	47.24	47.41	47.72	47.42	47.34	47.15	47.85	48.29	48.71	48.77
EOM	46.90	47.10	47.32	47.44	47.59	47.38	47.24	47.14	47.97	48.27	48.62	48.74

WTR YR 1987 LOW 48.82 SEP 28



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 78 ft, 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, 8.46 ft below land-surface datum, Oct. 27, 28, 1985.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

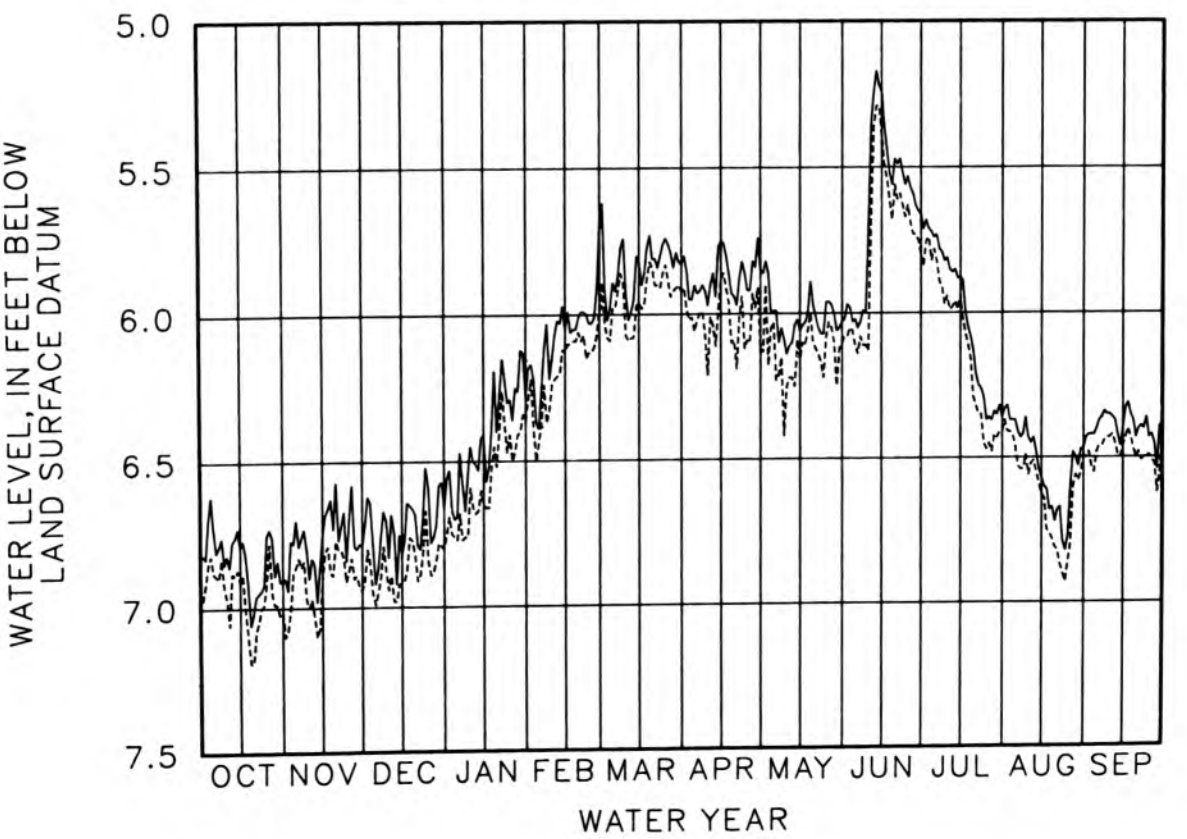
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.73	6.70	6.92	6.69	6.39	5.89	5.90	5.99	6.02	5.74	6.37	6.40
10	6.82	6.90	6.83	6.45	6.15	5.92	5.97	6.14	5.70	5.81	6.43	6.35
15	6.79	6.75	6.82	6.41	6.05	5.82	5.75	6.06	5.24	5.88	6.57	6.40
20	7.02	6.57	6.68	6.40	6.01	5.81	5.94	5.97	5.47	6.13	6.72	6.43
25	6.75	6.70	6.59	6.29	6.03	5.74	5.92	5.96	5.53	6.37	6.77	6.43
EOM	6.91	6.79	6.66	6.28	5.70	5.83	5.85	6.03	5.66	6.36	6.47	6.39

WTR YR 1987 HIGH 5.17 JUN 13

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.88	6.86	6.99	6.77	6.44	5.98	6.06	6.03	6.11	5.78	6.46	6.48
10	6.97	7.00	6.94	6.59	6.24	6.07	6.21	6.25	6.13	5.94	6.56	6.43
15	6.91	6.90	6.92	6.65	6.13	5.96	5.88	6.16	5.39	5.94	6.63	6.46
20	7.19	6.77	6.82	6.52	6.06	5.84	6.09	6.10	5.56	6.29	6.81	6.50
25	6.91	6.87	6.84	6.41	6.13	5.83	6.09	6.08	5.63	6.47	6.86	6.49
EOM	7.02	6.94	6.80	6.36	5.98	5.92	6.13	6.10	5.80	6.41	6.50	6.46

WTR YR 1987 LOW 7.19 OCT 19 AND OTHERS



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, 152.25 ft below land-surface datum, Sept. 17, 18, 1987; lowest, 152.48 ft below land-surface datum, Sept. 14, 1987.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

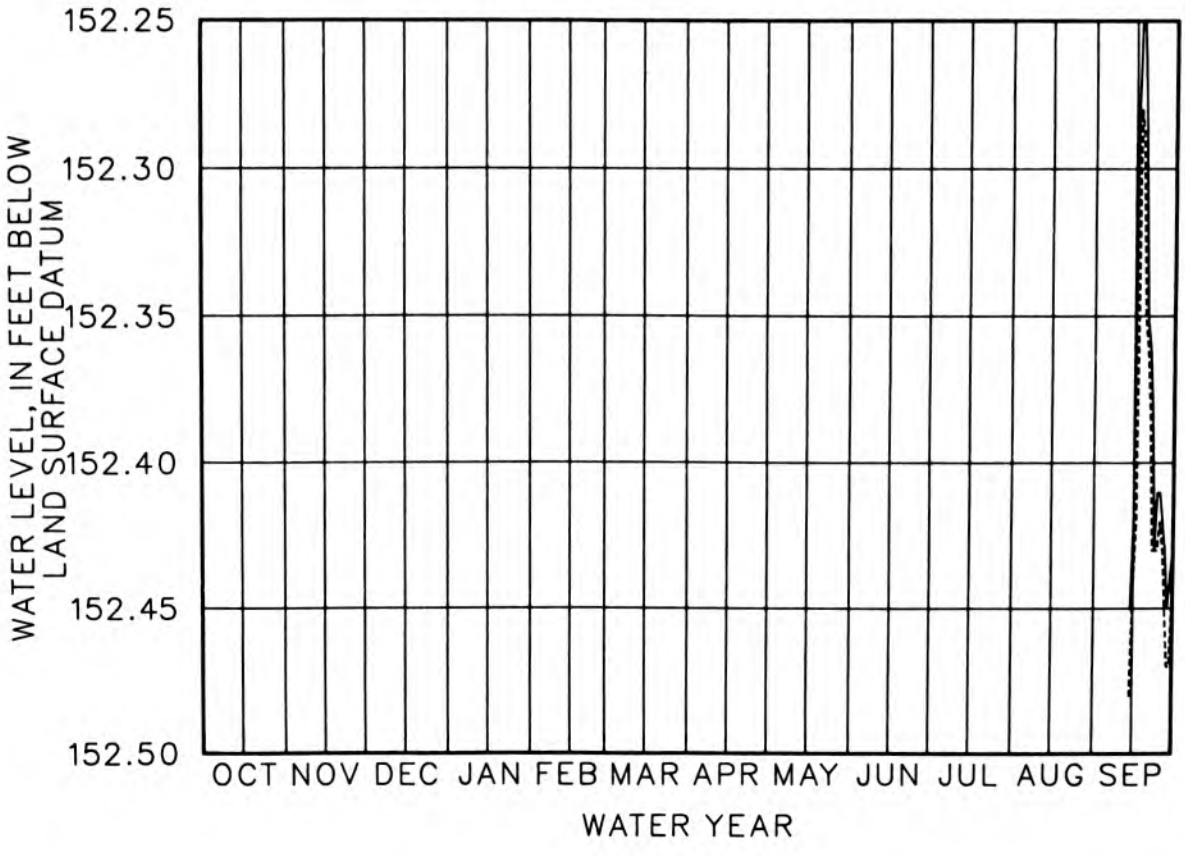
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5												---
10												---
15												152.42
20												152.35
25												152.41
EOM												152.43

WTR YR 1987 HIGH 152.25 SEP 17 AND OTHERS

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5												---
10												---
15												152.44
20												152.36
25												152.42
EOM												152.44

WTR YR 1987 LOW 152.48 SEP 14



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 1986 TO SEPTEMBER 1987

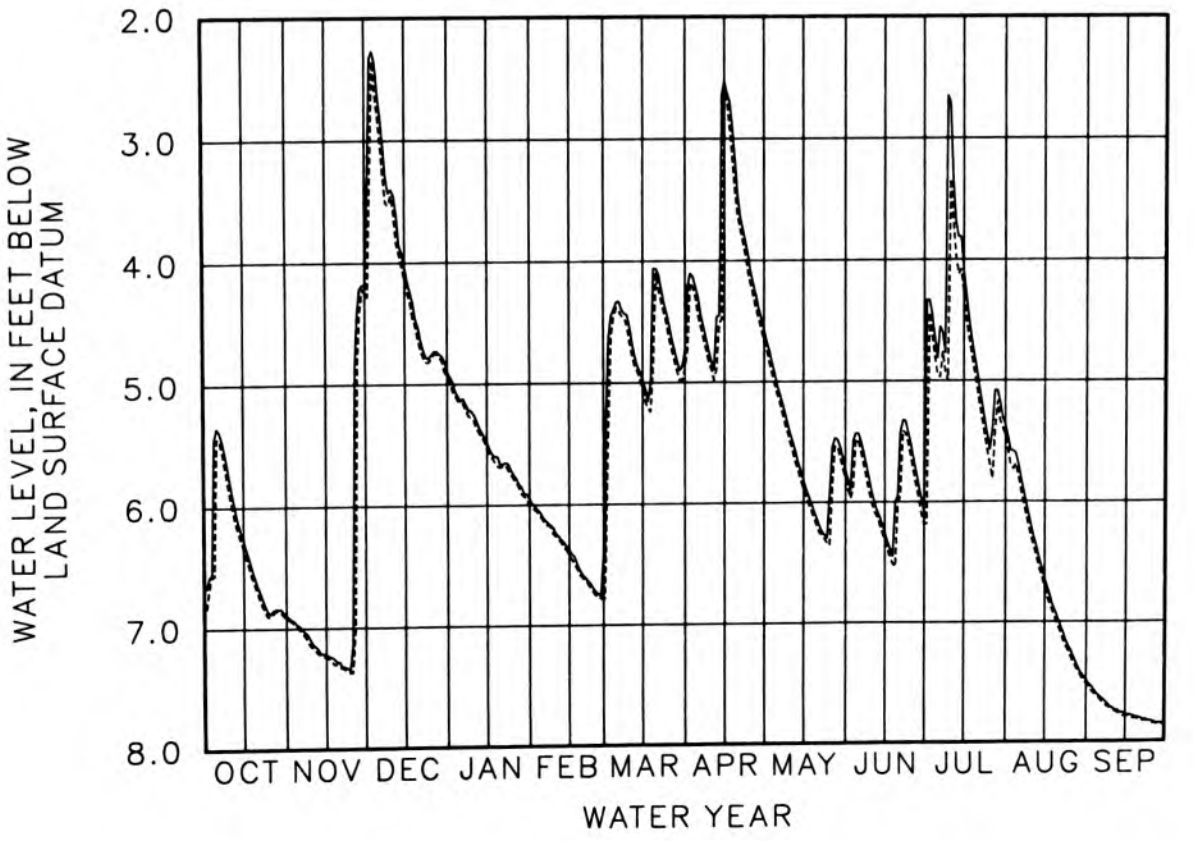
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.35	6.98	2.61	5.14	6.10	4.33	4.30	5.03	5.43	4.81	5.69	7.62
10	5.80	7.13	3.40	5.25	6.24	4.54	4.83	5.43	5.91	2.71	6.22	7.72
15	6.27	7.22	4.03	5.48	6.37	4.98	2.53	5.81	6.25	4.09	6.64	7.78
20	6.64	7.28	4.53	5.67	6.58	4.06	3.46	6.13	5.94	4.91	6.97	7.80
25	6.88	7.14	4.76	5.75	6.72	4.52	4.10	5.91	5.52	5.57	7.24	7.83
EOM	6.89	4.19	4.90	5.95	6.43	4.74	4.57	5.73	6.08	5.36	7.49	7.85

WTR YR 1987 HIGH 2.27 DEC 3

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.44	7.01	2.81	5.15	6.12	4.38	4.45	5.10	5.50	4.95	5.80	7.64
10	5.92	7.16	3.45	5.30	6.26	4.67	4.89	5.50	6.00	3.34	6.31	7.73
15	6.34	7.24	4.14	5.54	6.42	5.05	2.63	5.89	6.32	4.28	6.71	7.79
20	6.69	7.32	4.63	5.69	6.60	4.10	3.63	6.19	6.02	5.04	7.03	7.82
25	6.90	7.37	4.79	5.78	6.75	4.64	4.20	6.36	5.63	5.69	7.29	7.85
EOM	6.91	4.25	4.94	6.01	6.78	4.89	4.67	5.81	6.18	5.46	7.52	7.87

WTR YR 1987 LOW 7.87 SEP 30



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 1986 TO SEPTEMBER 1987

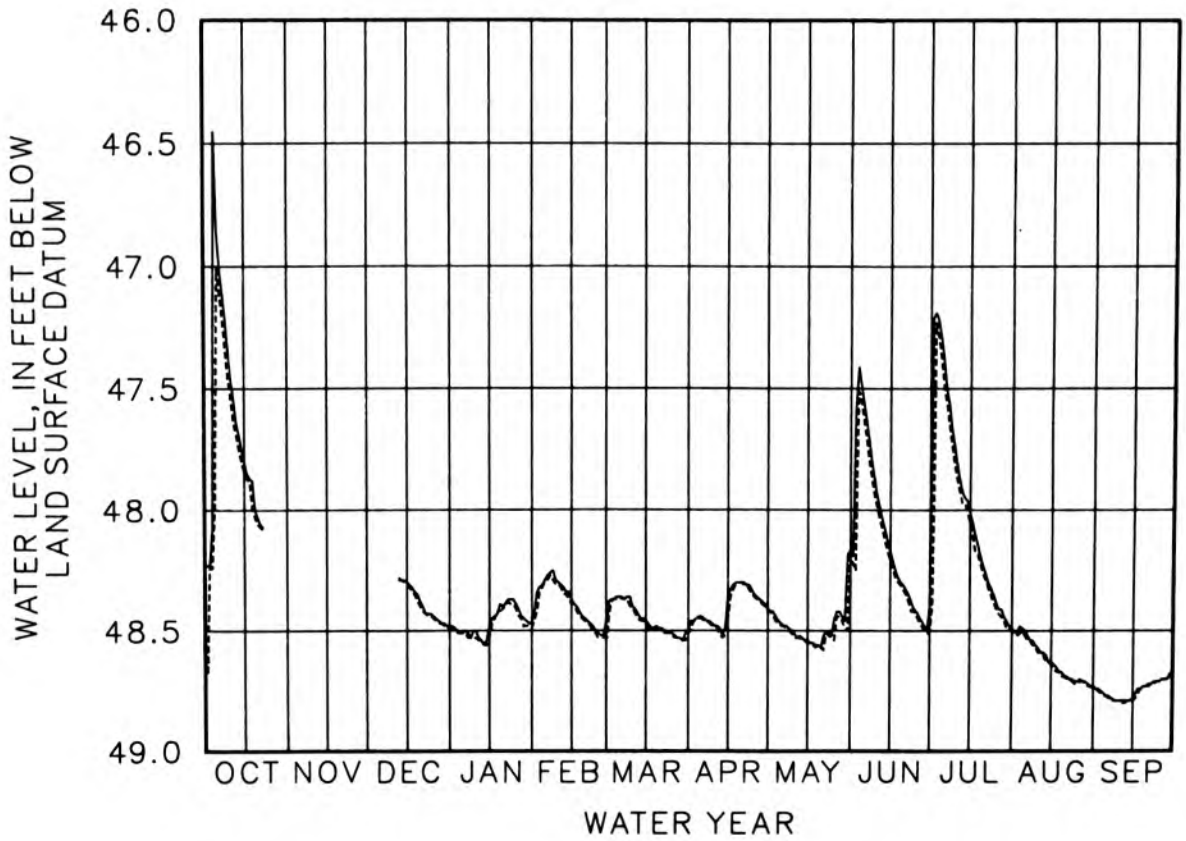
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	46.85		---	48.51	48.29	48.36	48.44	48.47	47.56	47.38	48.50	48.77
10	47.46		---	48.50	48.30	48.40	48.48	48.51	47.94	47.81	48.57	48.79
15	47.80		48.30	48.48	48.37	48.46	48.36	48.54	48.17	48.01	48.63	48.78
20	48.03		48.38	48.40	48.45	48.49	48.30	48.57	48.31	48.23	48.69	48.73
25	---		48.44	48.39	48.51	48.51	48.35	48.45	48.42	48.38	48.71	48.71
EOM	---		48.49	48.47	48.46	48.50	48.41	48.17	48.40	48.49	48.73	48.67

WTR YR 1987 HIGH 46.45 OCT 4

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	47.01		---	48.51	48.30	48.36	48.45	48.48	47.63	47.49	48.52	48.77
10	47.54		---	48.53	48.31	48.41	48.48	48.53	47.99	47.87	48.59	48.79
15	47.84		48.31	48.53	48.39	48.47	48.46	48.55	48.21	48.05	48.64	48.79
20	48.06		48.40	48.41	48.46	48.49	48.30	48.57	48.33	48.26	48.69	48.73
25	---		48.45	48.41	48.53	48.52	48.36	48.54	48.44	48.41	48.72	48.71
EOM	---		48.49	48.49	48.53	48.51	48.42	48.19	48.51	48.50	48.74	48.68

WTR YR 1987 LOW 48.80 SEP 11 AND OTHERS



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 1986 TO SEPTEMBER 1987

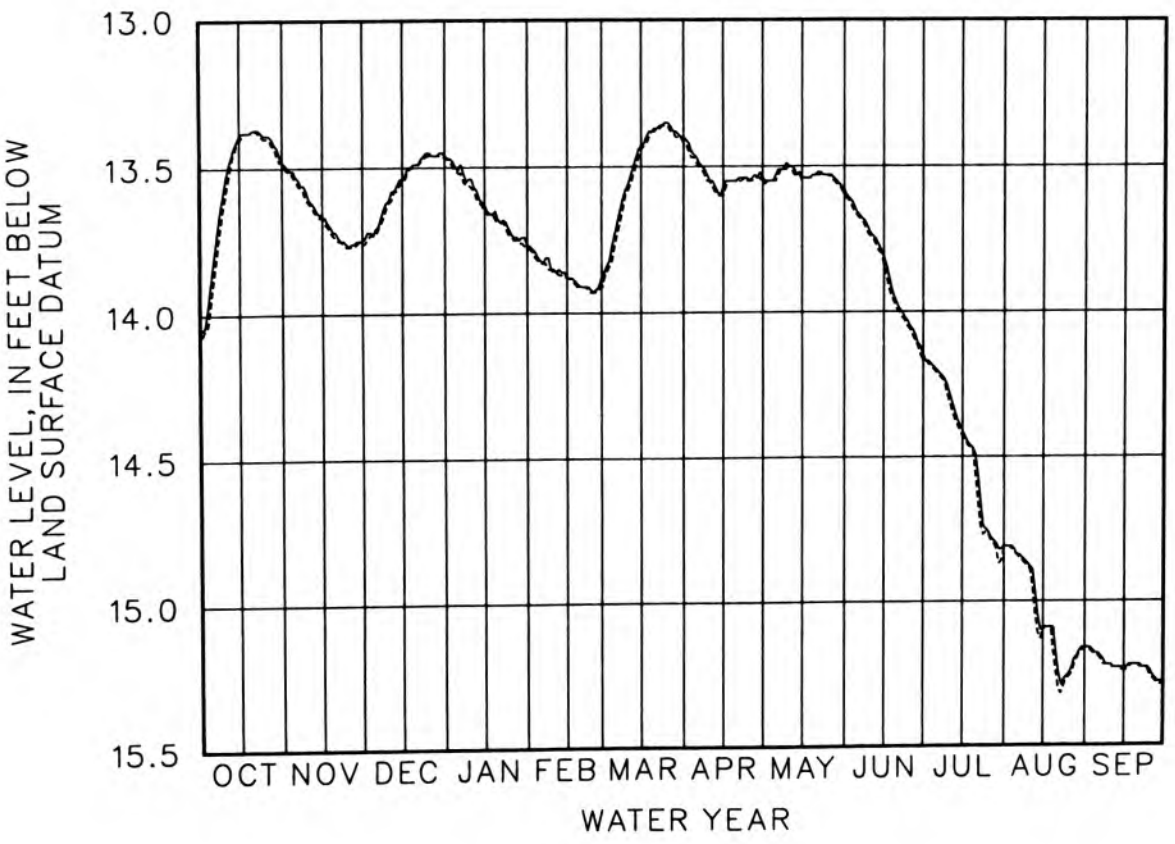
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	13.83	13.53	13.71	13.51	13.82	13.73	13.47	13.53	13.66	14.20	14.84	15.18
10	13.53	13.61	13.61	13.54	13.85	13.56	13.55	13.50	13.73	14.28	14.88	15.22
15	13.39	13.67	13.54	13.63	13.88	13.43	13.57	13.54	13.81	14.41	15.09	15.24
20	13.37	13.72	13.49	13.68	13.91	13.37	13.55	13.53	13.97	14.49	15.18	15.22
25	13.39	13.77	13.45	13.73	13.93	13.35	13.55	13.53	14.05	14.76	15.25	15.24
EOM	13.48	13.75	13.46	13.77	13.88	13.40	13.54	13.58	14.15	14.81	15.16	15.28

WTR YR 1987 HIGH 13.35 MAR 24 AND OTHERS

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	13.90	13.54	13.73	13.52	13.83	13.77	13.49	13.55	13.67	14.21	14.84	15.19
10	13.58	13.62	13.62	13.57	13.86	13.58	13.55	13.50	13.74	14.31	14.89	15.23
15	13.41	13.67	13.54	13.65	13.88	13.44	13.60	13.55	13.84	14.43	15.10	15.24
20	13.38	13.74	13.49	13.69	13.91	13.38	13.55	13.53	13.99	14.56	15.25	15.22
25	13.40	13.77	13.46	13.74	13.93	13.36	13.55	13.53	14.06	14.77	15.26	15.26
EOM	13.48	13.76	13.47	13.78	13.91	13.42	13.56	13.60	14.17	14.82	15.16	15.28

WTR YR 1987 LOW 15.32 AUG 22



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, 5.57 ft below land-surface datum, Jan. 28, 1977.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

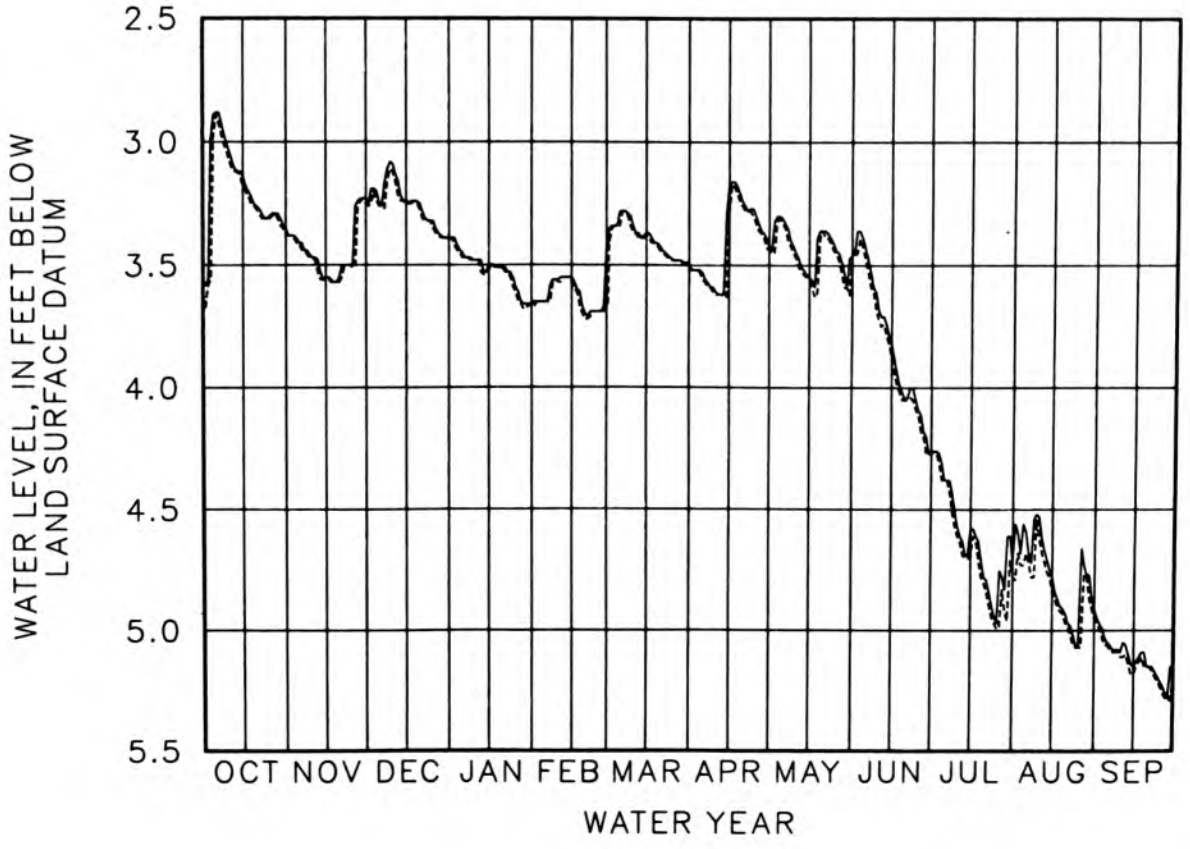
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	2.88	3.41	3.25	3.45	3.65	3.28	3.53	3.31	3.43	4.38	4.59	5.05
10	3.04	3.47	3.09	3.48	3.56	3.34	3.61	3.45	3.68	4.57	4.53	5.09
15	3.14	3.55	3.24	3.50	3.55	3.37	3.18	3.55	3.82	4.58	4.78	5.15
20	3.26	3.55	3.25	3.51	3.70	3.42	3.24	3.36	4.05	4.78	4.93	5.15
25	3.30	3.50	3.32	3.59	3.69	3.48	3.30	3.44	4.09	4.97	5.07	5.21
EOM	3.35	3.23	3.39	3.66	3.43	3.50	3.43	3.46	4.26	4.71	4.91	5.16

WTR YR 1987 HIGH 2.88 OCT 5 AND OTHERS

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	2.89	3.41	3.26	3.47	3.65	3.34	3.56	3.33	3.48	4.38	4.68	5.06
10	3.08	3.47	3.12	3.48	3.57	3.37	3.62	3.47	3.72	4.61	4.62	5.11
15	3.18	3.56	3.25	3.52	3.57	3.38	3.29	3.56	3.88	4.70	4.84	5.18
20	3.27	3.57	3.27	3.51	3.72	3.44	3.26	3.36	4.05	4.80	4.97	5.15
25	3.31	3.51	3.35	3.61	3.69	3.48	3.33	3.45	4.11	4.99	5.07	5.23
EOM	3.38	3.25	3.39	3.67	3.67	3.52	3.44	3.47	4.27	4.78	4.95	5.21

WTR YR 1987 LOW 5.29 SEP 28 AND OTHERS



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, 10.43 ft below land-surface datum, Nov. 10 to Dec. 3, 1978.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

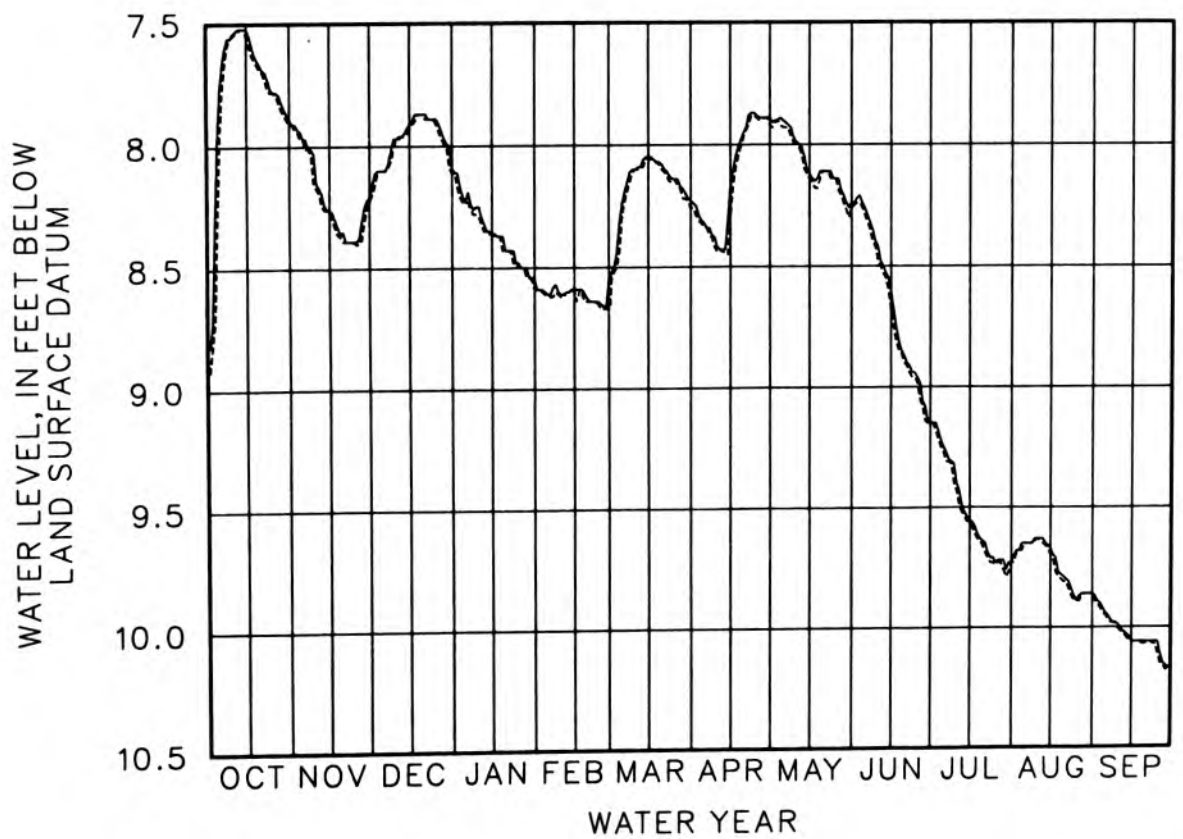
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.78	7.97	8.10	8.23	8.61	8.24	8.32	7.90	8.26	9.25	9.65	9.94
10	7.54	8.15	7.97	8.25	8.61	8.10	8.42	7.99	8.42	9.40	9.63	9.99
15	7.52	8.26	7.91	8.36	8.59	8.05	8.17	8.12	8.60	9.56	9.67	10.06
20	7.67	8.35	7.87	8.43	8.63	8.08	7.95	8.11	8.87	9.64	9.79	10.06
25	7.78	8.39	7.89	8.48	8.65	8.14	7.88	8.14	8.96	9.73	9.89	10.06
EOM	7.89	8.21	8.09	8.55	8.55	8.23	7.89	8.24	9.15	9.73	9.86	10.17

WTR YR 1987 HIGH 7.52 OCT 12 AND OTHERS

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.97	7.97	8.10	8.23	8.61	8.30	8.34	7.93	8.29	9.27	9.65	9.95
10	7.55	8.17	7.97	8.29	8.62	8.10	8.44	8.00	8.48	9.43	9.63	10.01
15	7.55	8.27	7.93	8.36	8.59	8.05	8.30	8.14	8.68	9.56	9.70	10.06
20	7.69	8.39	7.87	8.43	8.64	8.10	7.97	8.11	8.90	9.66	9.81	10.07
25	7.78	8.40	7.91	8.50	8.67	8.14	7.89	8.14	8.98	9.74	9.89	10.11
EOM	7.91	8.22	8.11	8.59	8.67	8.26	7.92	8.26	9.15	9.73	9.87	10.18

WTR YR 1987 LOW 10.18 SEP 28 AND OTHERS



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, 11.95 ft below land-surface datum, Sept. 3, 4, 1985.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

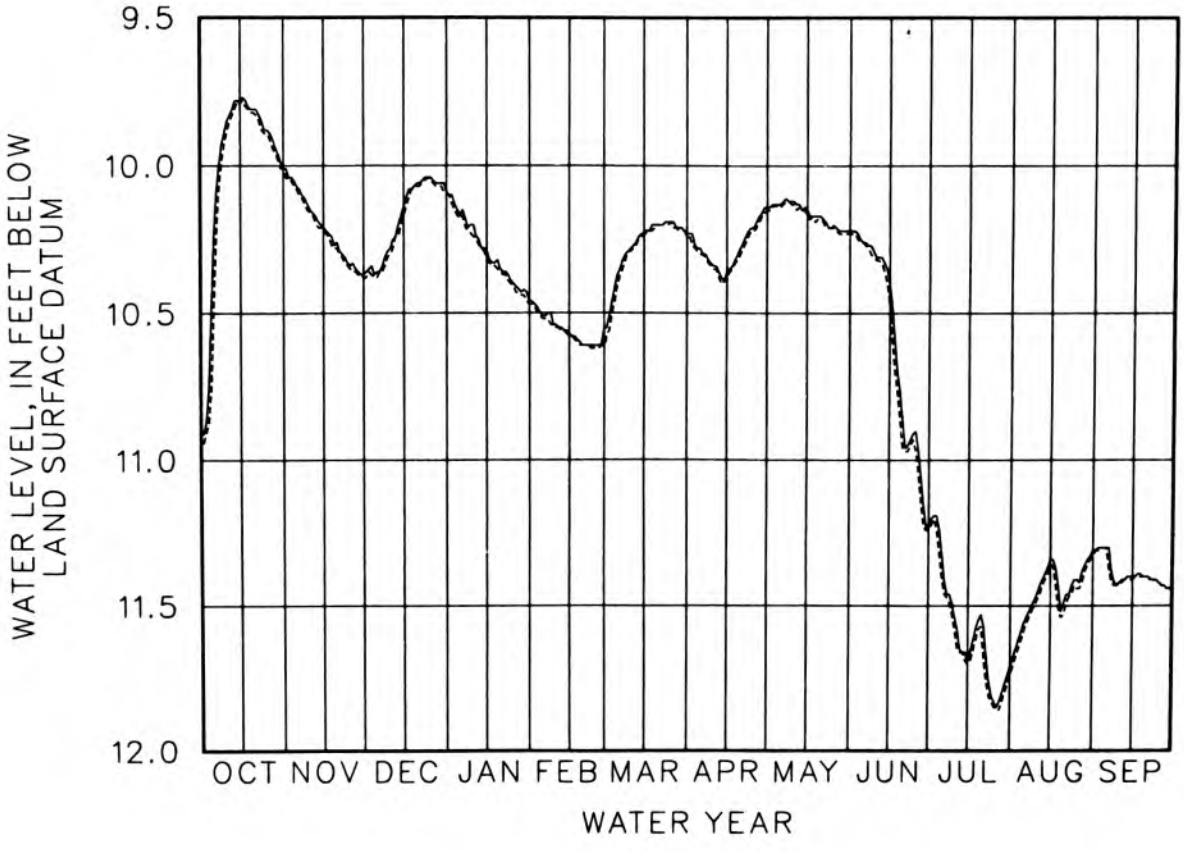
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.24	10.07	10.36	10.17	10.51	10.37	10.28	10.13	10.26	11.32	11.56	11.30
10	9.85	10.15	10.28	10.20	10.54	10.28	10.34	10.12	10.31	11.54	11.46	11.42
15	9.78	10.21	10.14	10.29	10.57	10.23	10.36	10.15	10.40	11.69	11.34	11.40
20	9.81	10.26	10.06	10.35	10.61	10.20	10.28	10.17	10.86	11.53	11.49	11.40
25	9.88	10.34	10.04	10.40	10.61	10.19	10.21	10.20	10.90	11.83	11.41	11.42
EOM	10.01	10.37	10.09	10.46	10.55	10.23	10.14	10.22	11.22	11.71	11.31	11.44

WTR YR 1987 HIGH 9.77 OCT 16

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.48	10.08	10.38	10.18	10.52	10.41	10.30	10.14	10.26	11.40	11.59	11.30
10	9.89	10.16	10.30	10.24	10.55	10.29	10.35	10.13	10.32	11.58	11.48	11.43
15	9.79	10.22	10.17	10.32	10.58	10.23	10.39	10.17	10.47	11.70	11.36	11.41
20	9.82	10.28	10.07	10.36	10.61	10.20	10.30	10.18	10.96	11.57	11.53	11.40
25	9.89	10.35	10.05	10.41	10.62	10.19	10.22	10.21	10.97	11.85	11.44	11.42
EOM	10.01	10.38	10.10	10.47	10.61	10.24	10.15	10.23	11.24	11.74	11.33	11.45

WTR YR 1987 LOW 11.86 JUL 26 AND OTHERS



ELKHART COUNTY

414446086002501. Local number, EH 8.

LOCATION.--Lat 41°44'46", long 86°00'25", in SW¼SE¼SW¼ sec.36, T.38 N., R.4 E., Elkhart County, Hydrologic Unit 04050001, 50 ft north of Bristol Street (County Road 10), 400 ft west of intersection of Bristol Street (10), and Nappanee Street extension, in Elkhart.
Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 5 in., depth 80 ft, cased to 70 ft, screened to 80 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 763.36 ft above National Geodetic Vertical Datum of 1929. Measuring point: "V" notch filed on top of well casing, 2.5 ft above land-surface datum.

PERIOD OF RECORD.--March 1983 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 7.43 ft below land-surface datum, Apr. 10, 1985; lowest, 12.63 ft below land-surface datum, Sept. 28, 1987.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

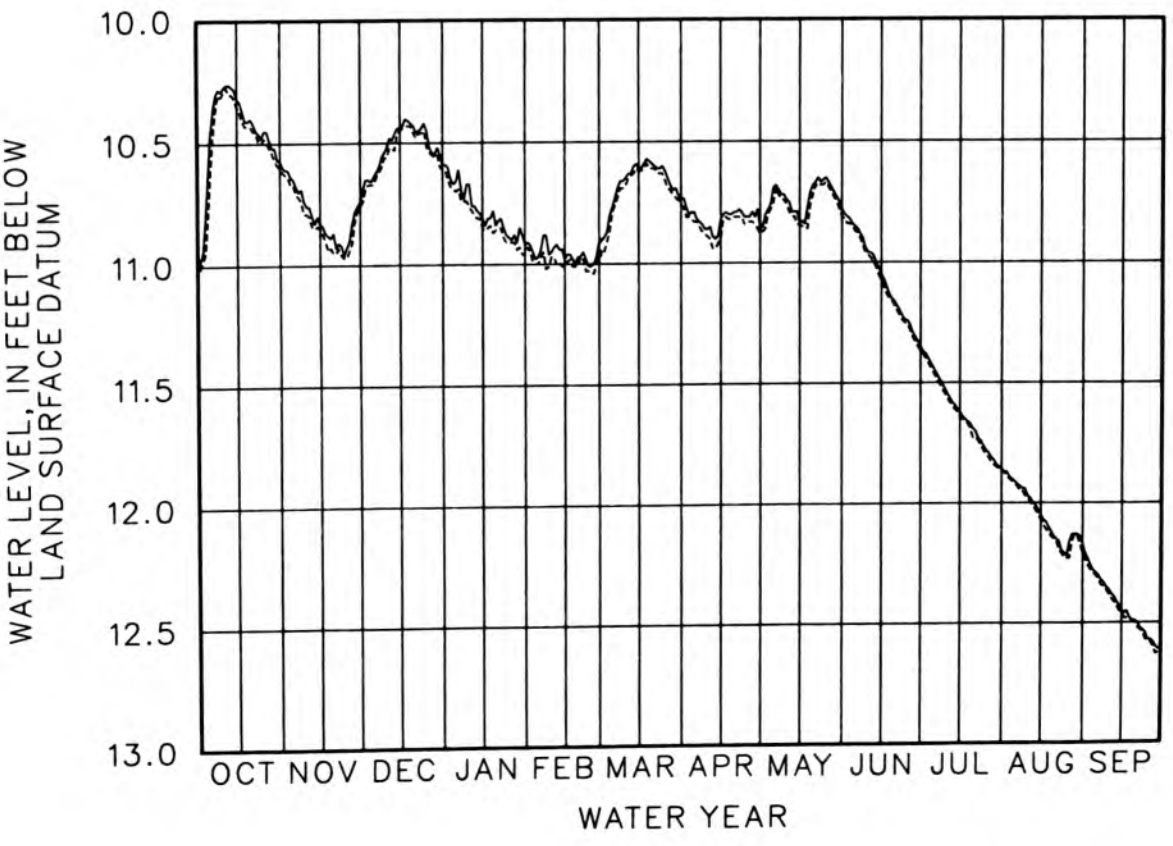
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.46	10.65	10.64	10.66	10.97	10.77	10.79	10.69	10.85	11.44	11.91	12.29
10	10.27	10.76	10.52	10.67	10.95	10.65	10.86	10.74	10.96	11.54	11.97	12.36
15	10.32	10.83	10.44	10.81	10.98	10.61	10.82	10.84	11.05	11.62	12.05	12.45
20	10.40	10.87	10.43	10.84	10.97	10.59	10.79	10.68	11.16	11.69	12.14	12.49
25	10.45	10.93	10.45	10.89	11.01	10.62	10.81	10.65	11.24	11.78	12.22	12.57
EOM	10.57	10.74	10.59	10.92	10.91	10.74	10.86	10.78	11.35	11.86	12.17	12.61

WTR YR 1987 HIGH 10.26 OCT 11 AND OTHERS

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.60	10.67	10.67	10.70	11.00	10.79	10.83	10.76	10.87	11.46	11.92	12.30
10	10.29	10.79	10.56	10.76	10.97	10.68	10.89	10.76	10.97	11.56	11.98	12.38
15	10.35	10.85	10.45	10.85	11.01	10.62	10.90	10.85	11.08	11.64	12.07	12.46
20	10.43	10.95	10.46	10.86	11.01	10.61	10.81	10.72	11.18	11.73	12.15	12.50
25	10.48	10.97	10.52	10.91	11.03	10.66	10.84	10.67	11.26	11.80	12.23	12.57
EOM	10.60	10.76	10.61	10.96	10.98	10.76	10.88	10.81	11.37	11.87	12.21	12.62

WTR YR 1987 LOW 12.63 SEP 28



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, 10.01 ft below land-surface datum, June 3, 4, 1987; lowest, 12.80 ft below land-surface datum, Nov. 24, 25, 1986.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

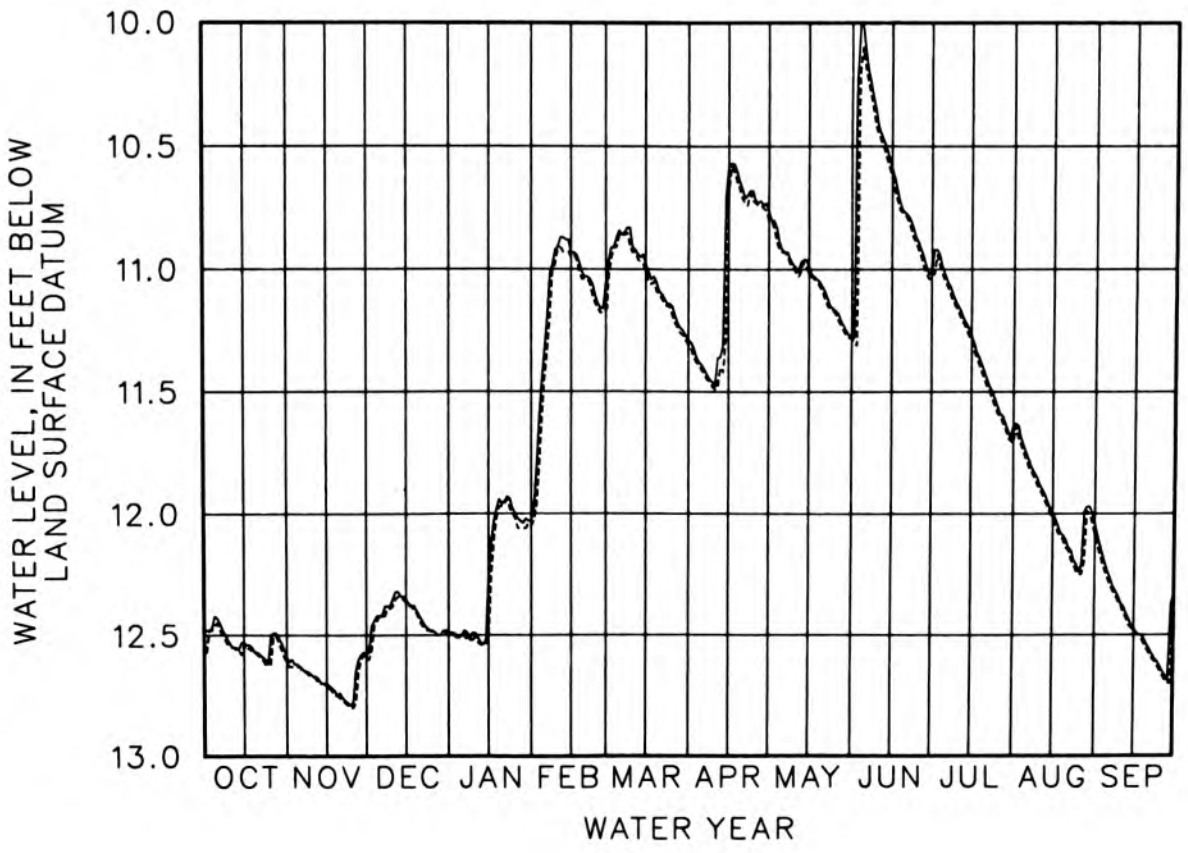
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	12.43	12.63	12.42	12.50	11.33	10.84	11.39	10.92	10.11	11.02	11.75	12.24
10	12.54	12.67	12.35	12.49	10.91	10.91	11.48	10.99	10.42	11.15	11.88	12.37
15	12.53	12.70	12.35	12.27	10.94	10.98	10.58	10.99	10.59	11.27	12.00	12.47
20	12.57	12.74	12.42	11.96	11.03	11.09	10.67	11.07	10.77	11.42	12.11	12.54
25	12.51	12.78	12.48	12.00	11.14	11.15	10.72	11.17	10.89	11.56	12.24	12.63
EOM	12.59	12.58	12.49	12.03	11.05	11.29	10.76	11.27	11.01	11.64	12.04	12.33

WTR YR 1987 HIGH 10.01 JUN 3 AND OTHERS

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	12.45	12.63	12.42	12.51	11.44	10.86	11.41	10.93	10.18	11.05	11.78	12.27
10	12.55	12.67	12.38	12.51	10.92	10.93	11.49	11.01	10.45	11.17	11.90	12.38
15	12.54	12.71	12.37	12.51	10.95	11.01	10.69	11.02	10.63	11.29	12.02	12.49
20	12.58	12.76	12.44	11.97	11.04	11.10	10.71	11.09	10.78	11.45	12.14	12.56
25	12.62	12.80	12.49	12.02	11.16	11.19	10.73	11.18	10.92	11.59	12.25	12.65
EOM	12.61	12.60	12.49	12.05	11.16	11.31	10.80	11.28	11.02	11.71	12.09	12.36

WTR YR 1987 LOW 12.80 NOV 24 AND OTHERS



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 1986 TO SEPTEMBER 1987

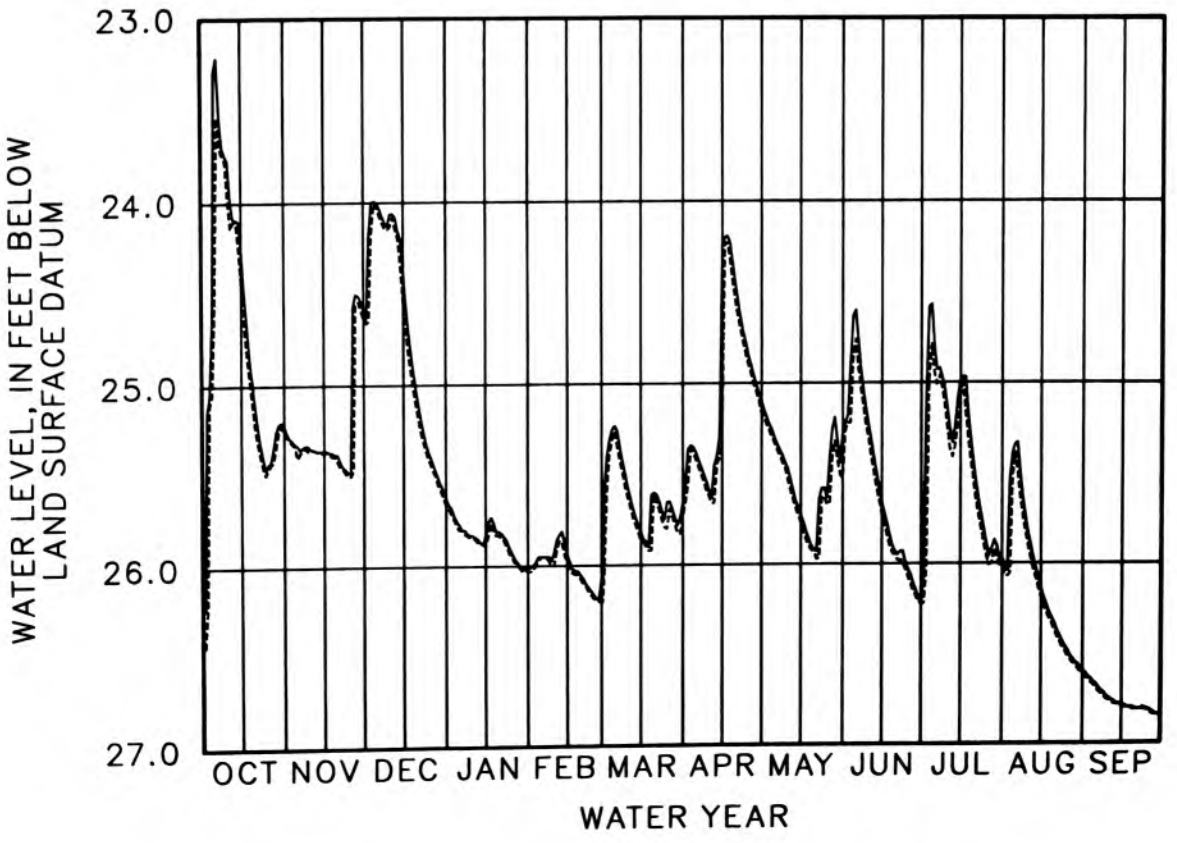
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	23.29	25.33	24.00	25.77	25.95	25.23	25.38	25.30	24.60	24.80	25.34	26.67
10	23.77	25.35	24.06	25.83	25.93	25.57	25.59	25.47	25.24	25.14	25.83	26.75
15	24.25	25.36	24.37	25.83	25.94	25.82	24.24	25.73	25.66	24.98	26.14	26.79
20	25.10	25.38	25.05	25.81	26.05	25.60	24.45	25.92	25.93	25.44	26.33	26.81
25	25.43	25.48	25.39	25.93	26.16	25.65	24.85	25.63	26.03	25.89	26.48	26.81
EOM	25.22	24.59	25.62	26.01	26.07	25.66	25.10	25.28	26.21	25.98	26.60	26.85

WTR YR 1987 HIGH 23.21 OCT 6

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	24.58	25.40	24.03	25.80	25.95	25.26	25.42	25.33	24.76	24.95	25.39	26.69
10	23.98	25.36	24.13	25.84	26.00	25.63	25.62	25.53	25.31	25.25	25.90	26.76
15	24.47	25.36	24.56	25.89	25.98	25.86	25.23	25.77	25.72	25.07	26.19	26.80
20	25.22	25.42	25.14	25.83	26.07	25.61	24.55	25.93	25.95	25.54	26.37	26.81
25	25.46	25.50	25.43	25.95	26.18	25.80	24.90	25.67	26.07	25.96	26.51	26.82
EOM	25.26	24.64	25.66	26.03	26.20	25.74	25.17	25.52	26.22	26.01	26.61	26.85

WTR YR 1987 LOW 26.85 SEP 29 AND OTHERS



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, 12.62 ft below land-surface datum, Oct. 19, 1983.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

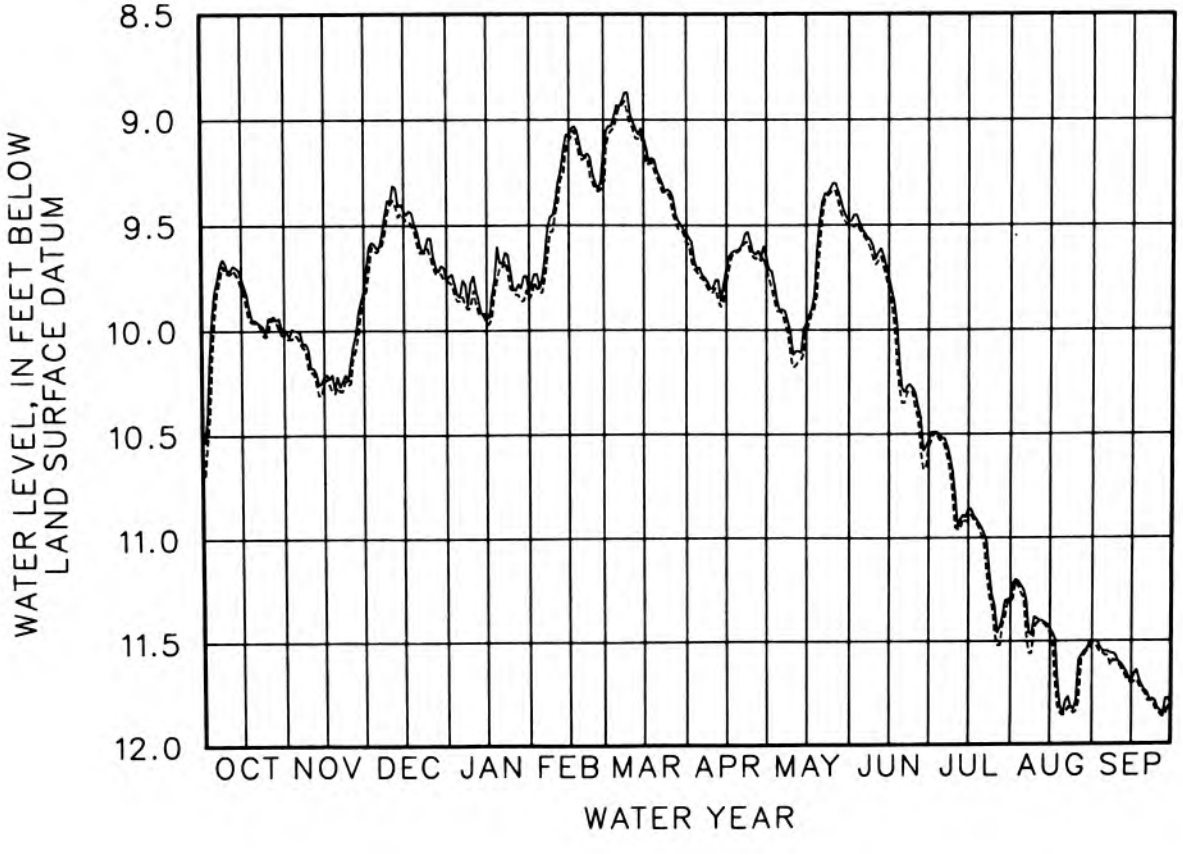
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.81	10.00	9.61	9.84	9.75	8.93	9.70	9.91	9.52	10.52	11.25	11.55
10	9.72	10.18	9.39	9.74	9.39	8.97	9.80	10.12	9.66	10.80	11.39	11.60
15	9.75	10.22	9.43	9.92	9.08	9.08	9.71	9.97	9.75	10.86	11.44	11.70
20	9.95	10.22	9.53	9.68	9.17	9.24	9.61	9.48	10.28	10.95	11.85	11.74
25	9.94	10.15	9.56	9.80	9.30	9.34	9.63	9.30	10.30	11.33	11.79	11.83
EOM	9.99	9.81	9.76	9.82	9.14	9.54	9.65	9.48	10.53	11.29	11.50	11.81

WTR YR 1987 HIGH 8.87 MAR 8 AND OTHERS

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.93	10.03	9.63	9.86	9.82	8.98	9.75	9.91	9.54	10.53	11.29	11.57
10	9.73	10.20	9.40	9.81	9.44	9.02	9.82	10.18	9.69	10.95	11.41	11.61
15	9.80	10.25	9.46	9.97	9.10	9.13	9.78	10.00	9.81	10.92	11.46	11.70
20	9.96	10.27	9.59	9.70	9.19	9.27	9.62	9.62	10.35	10.99	11.86	11.75
25	10.02	10.25	9.65	9.81	9.33	9.37	9.65	9.33	10.38	11.46	11.84	11.84
EOM	10.02	9.85	9.76	9.85	9.29	9.59	9.71	9.50	10.56	11.31	11.51	11.84

WTR YR 1987 LOW 11.87 SEP 27



402322085481901. Local number, GT 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 1986 TO SEPTEMBER 1987

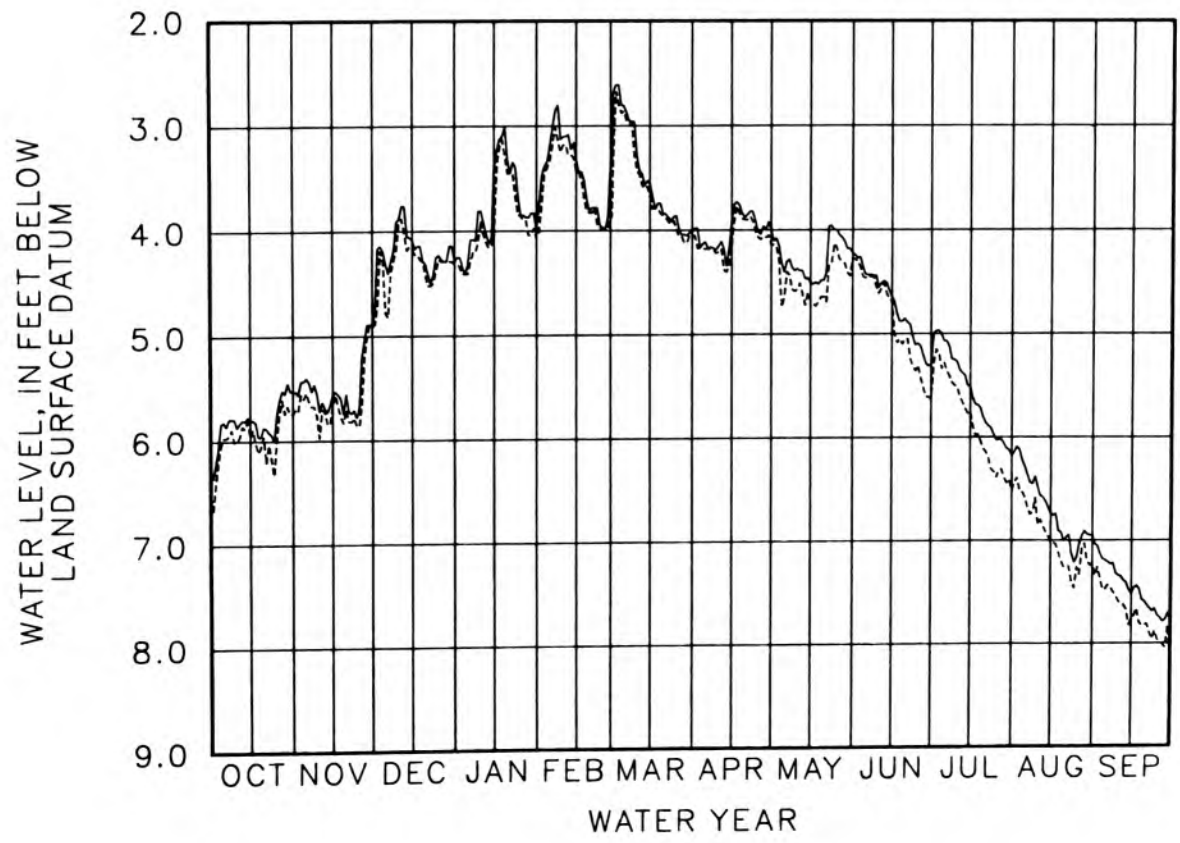
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.82	5.40	4.31	4.32	3.19	2.81	4.11	4.40	4.43	5.07	6.28	7.19
10	5.87	5.72	3.88	3.81	3.10	3.28	4.15	4.37	4.55	5.27	6.48	7.34
15	5.80	5.55	4.08	3.40	3.33	3.55	3.91	4.50	4.64	5.51	6.74	7.52
20	5.87	5.56	4.31	3.32	3.81	3.84	3.88	4.48	4.85	5.81	7.01	7.59
25	5.75	5.69	4.23	3.85	3.97	3.86	4.02	4.00	5.09	6.03	7.16	7.73
EOM	5.53	4.89	4.29	3.99	3.39	4.02	4.00	4.22	5.30	6.18	6.95	7.77

WTR YR 1987 HIGH 2.61 MAR 2 AND OTHERS

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.97	5.54	4.78	4.41	3.34	2.86	4.18	4.65	4.46	5.28	6.58	7.47
10	6.00	5.97	3.91	3.90	3.18	3.43	4.21	4.57	4.61	5.51	6.85	7.59
15	5.96	5.65	4.17	4.03	3.44	3.68	4.15	4.68	4.69	5.75	7.02	7.77
20	5.96	5.70	4.41	3.45	3.83	3.86	3.90	4.64	5.05	6.11	7.26	7.82
25	5.98	5.86	4.27	3.85	3.99	3.99	4.07	4.17	5.31	6.39	7.26	7.96
EOM	5.74	4.89	4.31	4.07	3.87	4.05	4.14	4.27	5.63	6.52	7.23	8.15

WTR YR 1987 LOW 8.15 SEP 30



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, 3.00 ft above land-surface datum.

PERIOD OF RECORD.--August 1987 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 108.43 ft below land-surface datum, Sept. 29, 30, 1987; lowest, 108.75 ft below land-surface datum, Aug. 24, 1987.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

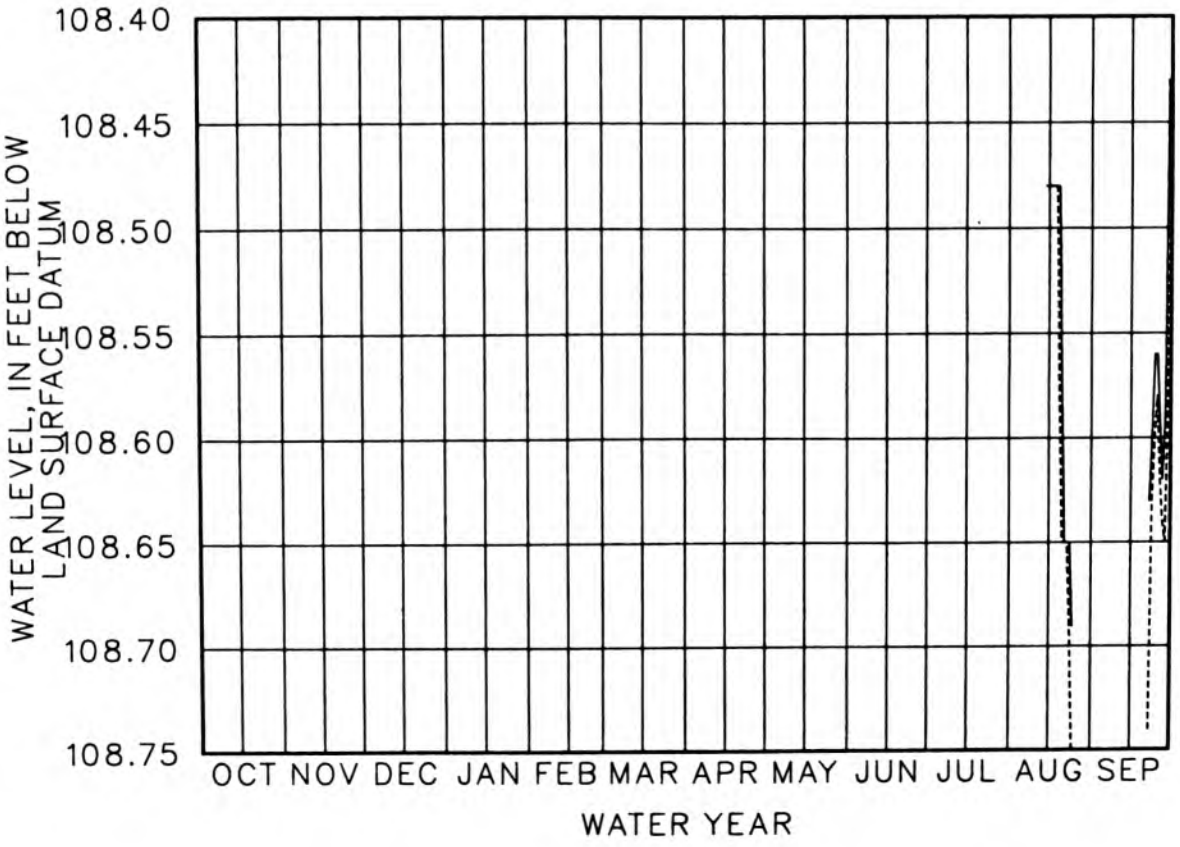
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5											---	---
10											---	---
15											108.48	---
20											108.58	---
25											---	108.56
EOM											---	108.43

WTR YR 1987 HIGH 108.43 SEP 29 AND OTHERS

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5											---	---
10											---	---
15											108.48	---
20											108.65	---
25											---	108.58
EOM											---	108.47

WTR YR 1987 LOW 108.75 AUG 24



403836085374401. Local number, GT 10--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
AUG 14...	1243	108.00	795	7.57	15.0	340	0	72	40	41

DATE	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)
AUG 14...	20	1	2.5	351	91	6.1	532	0.150	0.020	570

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, 11.66 ft below land-surface datum, Sept. 19, 1966.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

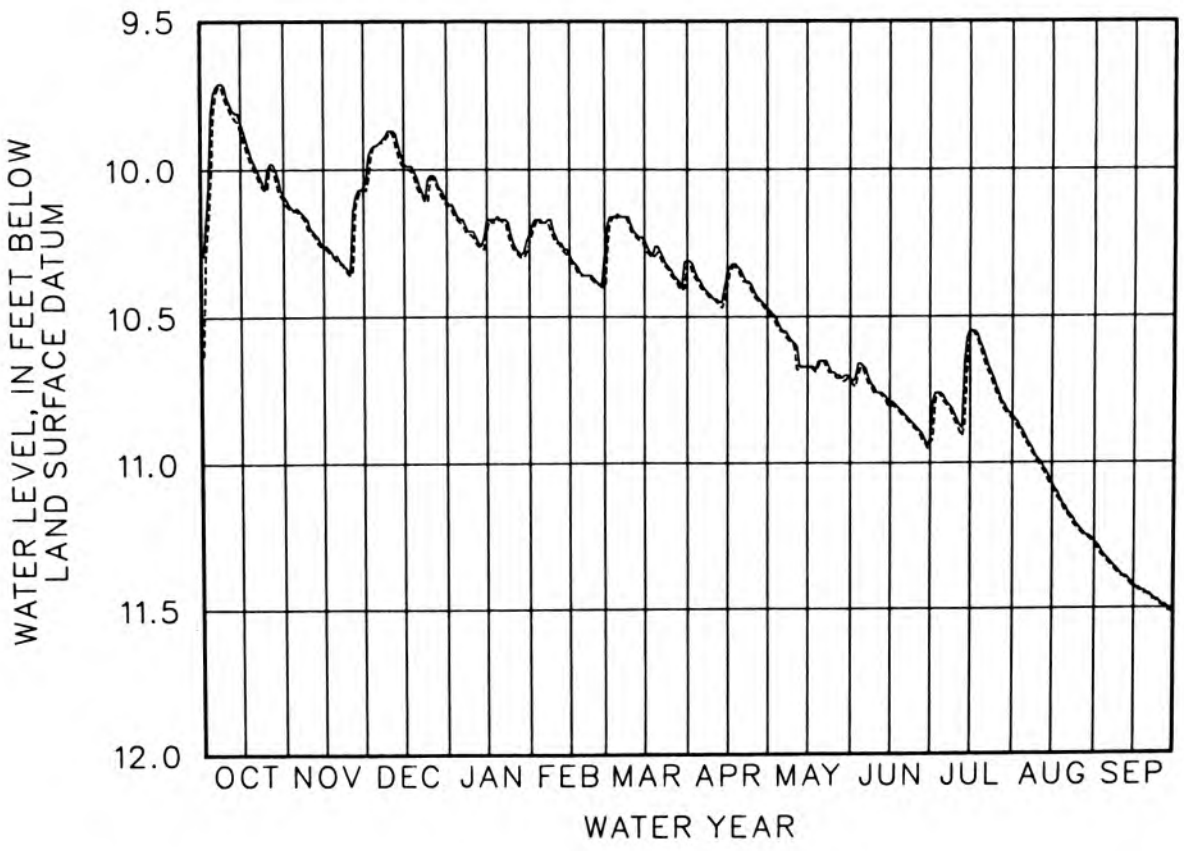
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.74	10.13	9.92	10.17	10.18	10.15	10.38	10.54	10.67	10.77	10.91	11.33
10	9.76	10.20	9.87	10.21	10.23	10.19	10.44	10.59	10.76	10.85	10.99	11.38
15	9.84	10.26	9.98	10.17	10.29	10.24	10.35	10.67	10.80	10.55	11.07	11.42
20	9.98	10.29	10.03	10.17	10.36	10.26	10.34	10.65	10.83	10.61	11.15	11.45
25	10.00	10.35	10.02	10.25	10.38	10.34	10.41	10.69	10.88	10.74	11.22	11.48
EOM	10.09	10.06	10.11	10.22	10.29	10.31	10.47	10.71	10.92	10.84	11.27	11.51

WTR YR 1987 HIGH 9.71 OCT 7 AND OTHERS

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.81	10.14	9.92	10.18	10.18	10.16	10.40	10.55	10.68	10.79	10.93	11.34
10	9.78	10.21	9.87	10.23	10.25	10.21	10.44	10.60	10.76	10.87	11.00	11.39
15	9.87	10.26	9.99	10.22	10.31	10.26	10.40	10.67	10.81	10.57	11.08	11.43
20	10.00	10.31	10.06	10.17	10.36	10.28	10.36	10.65	10.84	10.64	11.17	11.45
25	10.07	10.36	10.03	10.27	10.39	10.36	10.43	10.70	10.89	10.76	11.23	11.49
EOM	10.10	10.07	10.12	10.25	10.39	10.32	10.48	10.72	10.93	10.85	11.28	11.52

WTR YR 1987 LOW 11.52 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, 0.98 ft below land-surface datum, Apr. 2, 1979; lowest, 19.71 ft below land-surface datum, Nov. 5, 1966.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

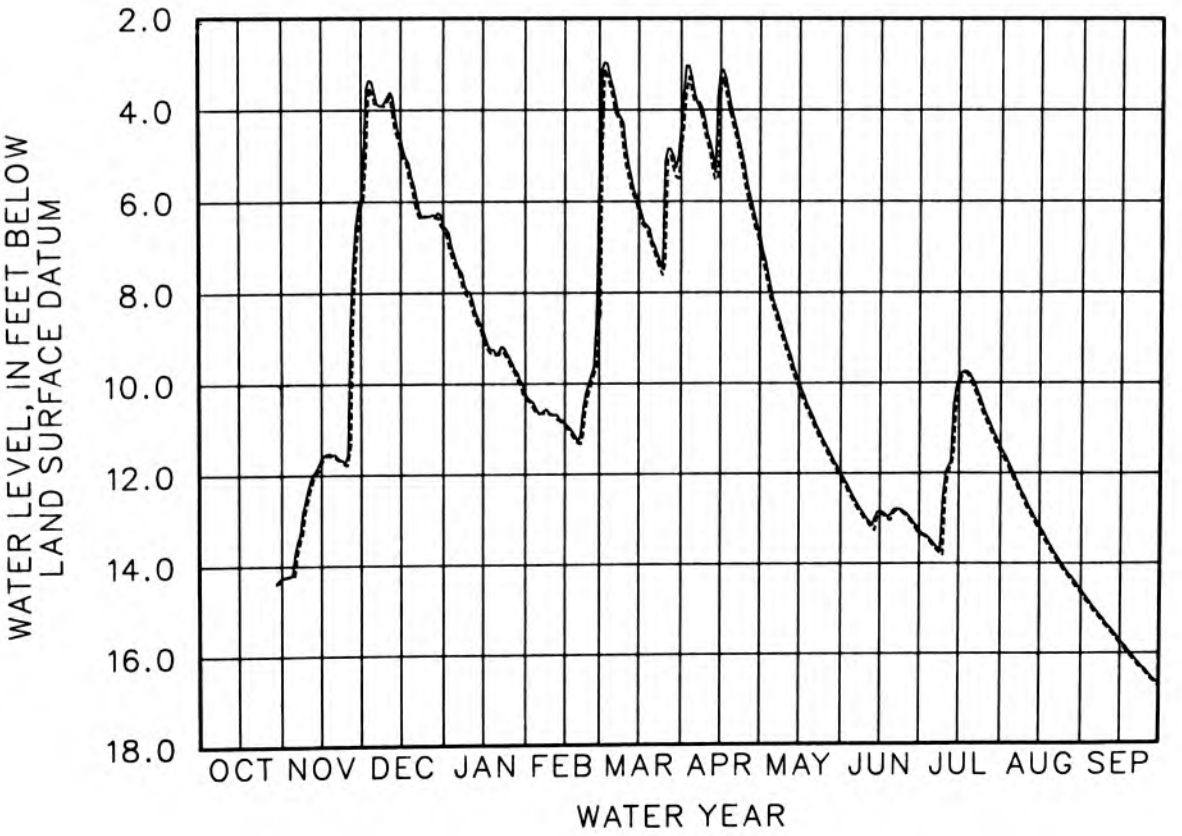
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	13.75	3.63	7.35	10.64	3.50	3.61	8.14	12.54	13.53	12.01	15.00
10	---	12.31	3.70	7.98	10.68	4.84	4.54	9.08	13.01	11.99	12.63	15.37
15	---	11.64	4.65	8.80	10.88	6.06	3.14	9.97	12.86	9.87	13.19	15.72
20	---	11.54	5.65	9.36	11.27	6.86	4.17	10.70	12.82	9.90	13.69	16.07
25	---	11.55	6.32	9.44	9.82	5.13	5.58	11.33	12.89	10.64	14.14	16.38
EOM	14.26	5.93	6.54	10.21	5.46	4.42	6.73	12.01	13.28	11.43	14.60	16.68

WTR YR 1987 HIGH 2.96 MAR 2

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	14.21	3.86	7.50	10.66	3.75	3.83	8.32	12.64	13.60	12.13	15.08
10	---	12.56	3.80	8.17	10.69	5.20	4.73	9.26	13.06	12.47	12.76	15.43
15	---	11.75	4.90	9.00	10.94	6.27	3.65	10.14	12.87	10.11	13.26	15.79
20	---	11.61	5.94	9.37	11.31	6.99	4.40	10.83	12.91	10.02	13.79	16.14
25	---	11.78	6.33	9.55	10.01	7.35	5.84	11.44	12.95	10.77	14.22	16.45
EOM	14.31	6.10	6.60	10.32	8.59	5.02	7.07	12.09	13.35	11.53	14.67	16.77

WTR YR 1987 LOW 16.77 SEP 30



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, 28.00 ft below land-surface datum, January 1977.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

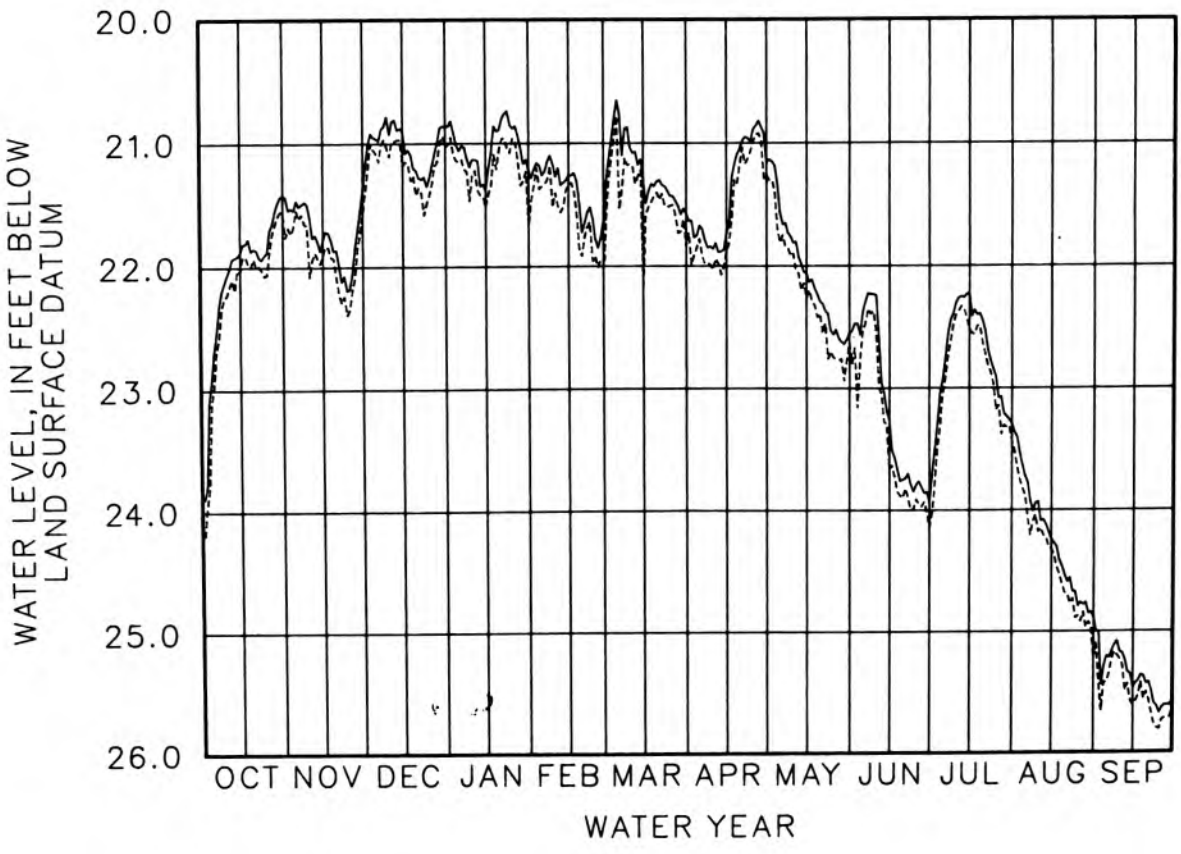
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	22.70	21.46	20.96	21.06	21.26	20.65	21.67	21.56	22.37	22.93	23.72	25.20
10	22.07	21.59	20.93	21.13	21.27	21.04	21.86	21.81	22.24	22.30	23.93	25.17
15	21.88	21.78	20.90	21.38	21.26	21.29	21.74	22.06	23.26	22.22	24.24	25.47
20	21.85	21.86	21.22	20.89	21.73	21.31	21.05	22.29	23.75	22.45	24.53	25.43
25	21.88	22.18	21.28	20.88	21.78	21.43	20.89	22.56	23.79	22.91	24.79	25.68
EOM	21.42	21.37	20.86	21.22	21.63	21.57	21.16	22.55	23.94	23.29	24.89	25.57

WTR YR 1987 HIGH 20.65 MAR 5

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	22.96	21.54	21.08	21.15	21.35	20.78	21.78	21.81	22.53	23.05	23.88	25.42
10	22.23	22.08	21.11	21.25	21.40	21.17	22.03	21.90	22.56	22.40	24.18	25.23
15	22.04	21.91	21.18	21.52	21.34	22.16	21.88	22.26	23.66	22.52	24.32	25.61
20	21.93	22.08	21.42	21.05	21.92	21.40	21.18	22.39	23.90	22.63	24.68	25.50
25	22.06	22.35	21.42	20.96	21.92	21.51	20.99	22.75	23.91	23.18	24.87	25.81
EOM	21.56	21.57	21.03	21.67	21.95	21.84	21.26	22.63	24.14	23.44	25.21	25.65

WTR YR 1987 LOW 25.81 SEP 25



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, 0.95 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 1986 TO SEPTEMBER 1987

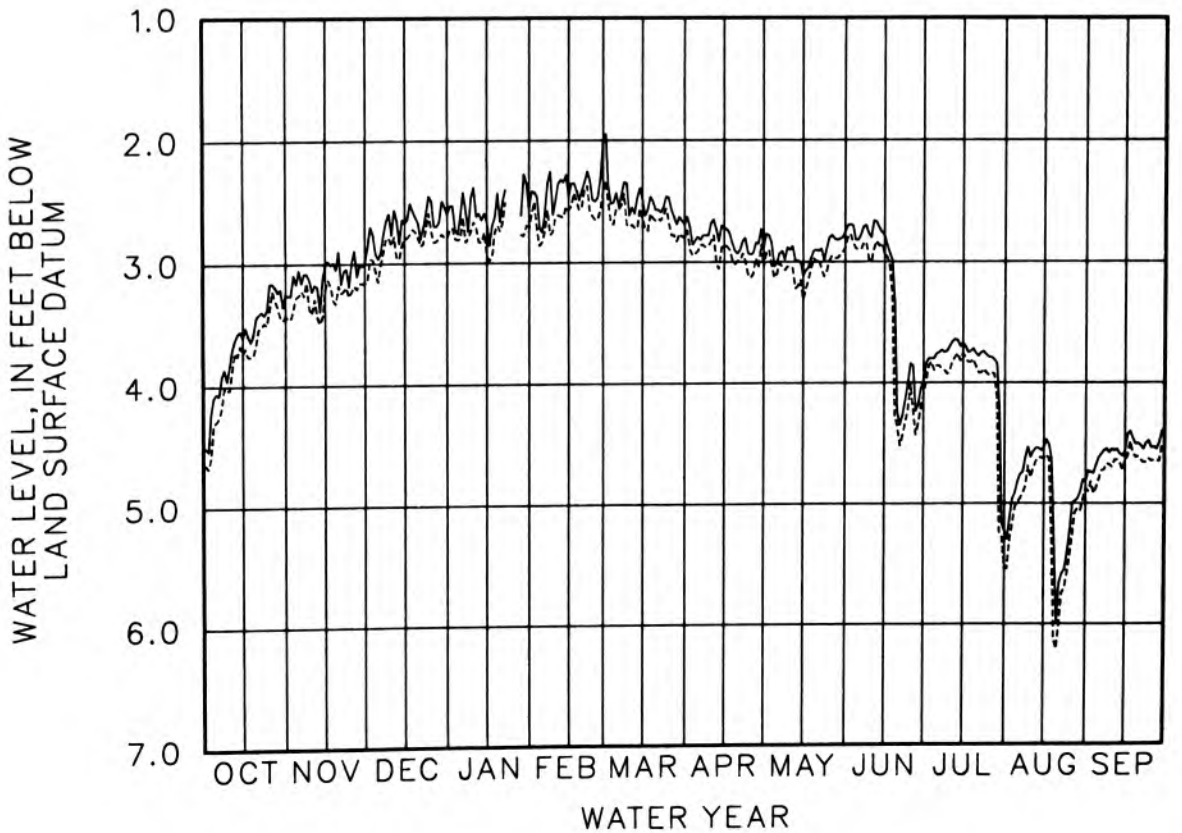
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.06	3.05	2.96	2.62	2.75	2.43	2.79	3.01	2.82	3.76	4.82	4.62
10	3.84	3.23	2.77	2.38	2.50	2.62	2.68	2.90	2.80	3.70	4.62	4.55
15	3.60	3.01	2.67	2.66	2.46	2.48	2.72	3.12	2.78	3.67	4.54	4.57
20	3.44	2.90	2.67	2.66	2.41	2.57	2.93	2.90	4.24	3.76	5.99	4.50
25	3.16	2.99	2.49	---	2.50	2.47	2.94	2.80	3.84	3.79	5.23	4.54
EOM	3.25	2.99	2.60	2.56	1.99	2.69	2.89	2.76	3.99	5.23	4.82	4.43

WTR YR 1987 HIGH 1.95 MAR 1

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.29	3.26	3.15	2.80	2.83	2.56	2.91	3.10	2.90	3.86	4.99	4.80
10	4.03	3.41	2.85	2.66	2.63	2.71	2.83	3.05	3.00	3.90	4.79	4.70
15	3.73	3.21	2.80	2.95	2.57	2.64	2.86	3.31	2.94	3.76	4.63	4.65
20	3.66	3.18	2.79	2.74	2.54	2.66	2.99	3.00	4.36	3.87	6.21	4.61
25	3.38	3.23	2.74	---	2.65	2.67	3.13	2.99	4.01	3.94	5.44	4.65
EOM	3.43	3.16	2.79	2.74	2.42	2.80	3.04	2.89	4.11	5.54	4.88	4.52

WTR YR 1987 LOW 6.21 AUG 20



JASPER COUNTY

410809087580801. Local number, JP 7.

LOCATION.--Lat 41°08'10", long 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, 16.59 ft below land-surface datum, Aug. 14, 1987.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

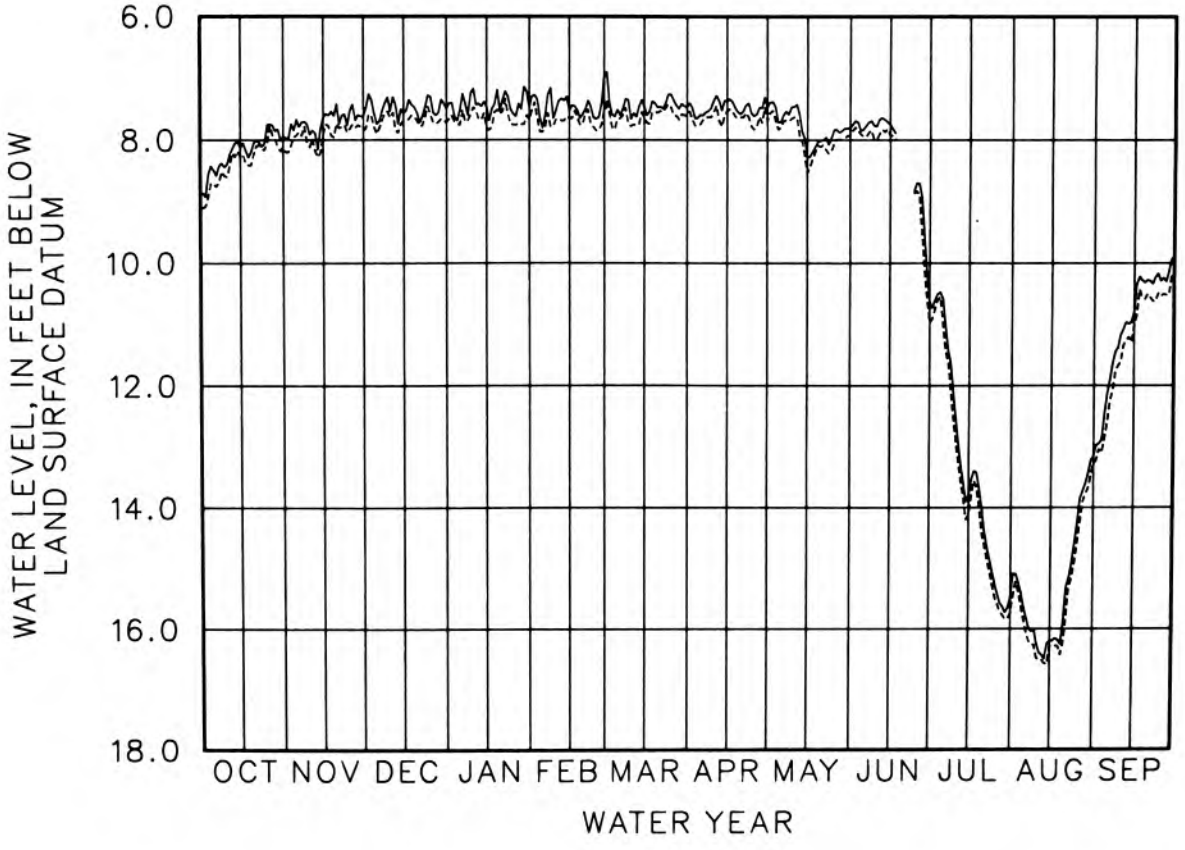
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.49	7.67	7.74	7.52	7.81	7.51	7.59	7.71	7.83	10.57	15.63	12.14
10	8.40	7.92	7.54	7.17	7.53	7.67	7.36	7.46	7.78	12.54	16.24	11.17
15	8.13	7.63	7.57	7.46	7.53	7.45	7.36	8.28	7.75	13.80	16.20	10.80
20	8.05	7.42	7.56	7.53	7.58	7.47	7.58	8.01	---	14.03	15.88	10.27
25	7.75	7.53	7.30	7.58	7.66	7.26	7.61	7.83	8.69	15.26	14.28	10.29
EOM	7.94	7.62	7.50	7.48	6.96	7.47	7.48	7.80	10.62	15.47	13.16	9.98

WTR YR 1987 HIGH 6.90 MAR 1

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.71	7.93	7.90	7.76	7.87	7.66	7.74	7.80	7.94	11.01	15.84	12.61
10	8.60	8.12	7.64	7.47	7.67	7.78	7.55	7.63	7.99	12.92	16.48	11.62
15	8.27	7.91	7.69	7.81	7.65	7.63	7.53	8.54	7.93	14.13	16.29	11.04
20	8.24	7.74	7.69	7.58	7.74	7.56	7.63	8.11	---	14.42	16.26	10.50
25	8.06	7.82	7.59	7.75	7.85	7.47	7.83	8.07	8.83	15.47	14.62	10.54
EOM	8.12	7.84	7.71	7.67	7.54	7.60	7.69	7.93	10.97	15.75	13.28	10.18

WTR YR 1987 LOW 16.59 AUG 14



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 1986 TO SEPTEMBER 1987

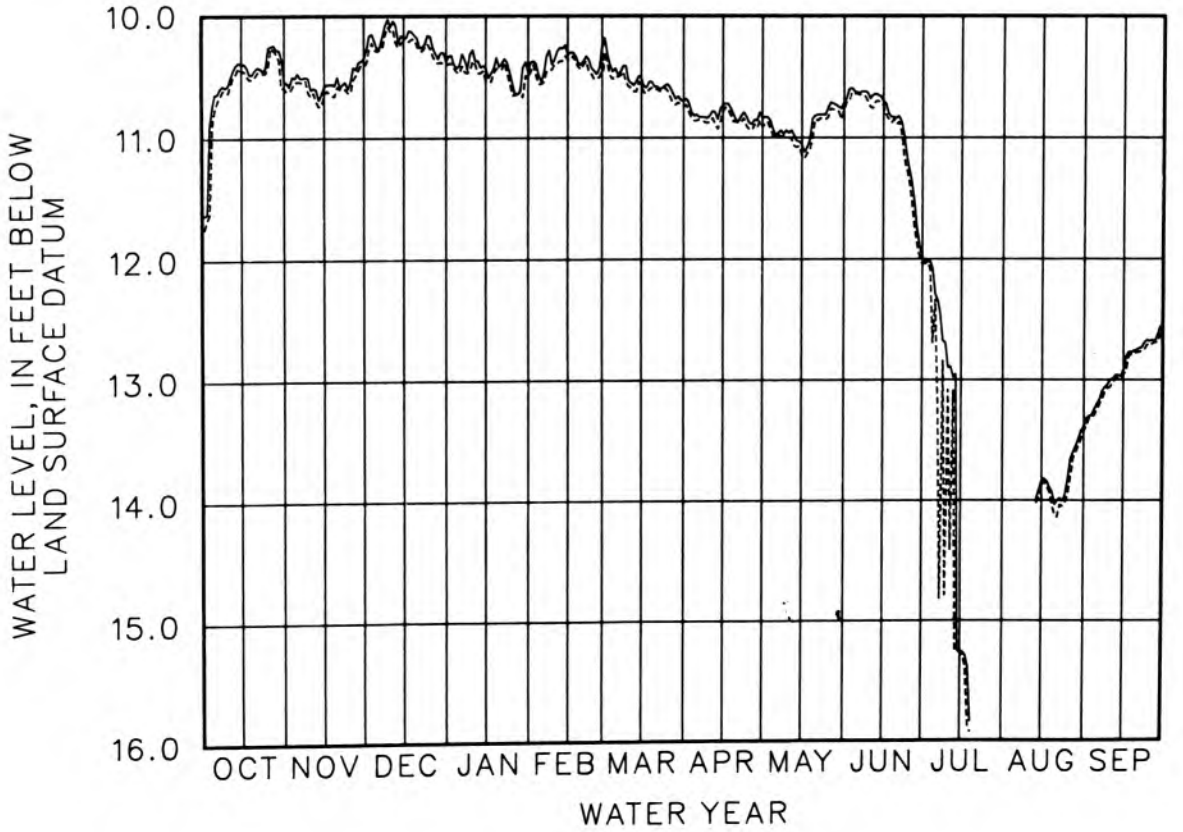
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.64	10.47	10.27	10.41	10.54	10.43	10.81	10.98	10.63	12.29	---	13.20
10	10.57	10.61	10.09	10.28	10.36	10.53	10.82	10.96	10.68	12.90	---	13.00
15	10.40	10.58	10.18	10.42	10.32	10.51	10.73	11.06	10.70	15.26	13.84	12.92
20	10.44	10.50	10.18	10.42	10.40	10.58	10.86	10.82	10.84	---	14.04	12.75
25	10.26	10.54	10.17	10.55	10.45	10.56	10.88	10.75	11.26	---	13.82	12.68
EOM	10.54	10.35	10.37	10.46	10.24	10.70	10.84	10.71	12.00	---	13.39	12.56

WTR YR 1987 HIGH 10.03 DEC 9

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.77	10.54	10.29	10.47	10.56	10.49	10.86	10.99	10.64	12.34	---	13.25
10	10.63	10.66	10.13	10.37	10.40	10.58	10.87	11.00	10.75	13.08	---	13.06
15	10.45	10.66	10.21	10.53	10.36	10.58	10.79	11.15	10.74	15.26	13.90	12.96
20	10.50	10.58	10.25	10.44	10.44	10.61	10.87	10.85	10.89	---	14.12	12.77
25	10.42	10.63	10.27	10.65	10.52	10.62	10.93	10.83	11.37	---	13.95	12.72
EOM	10.59	10.40	10.40	10.51	10.45	10.74	10.91	10.77	12.04	---	13.42	12.57

WTR YR 1987 LOW 15.93 JUL 19



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, 30.25 ft below land-surface datum, July 28, Aug. 12-14, 1983.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

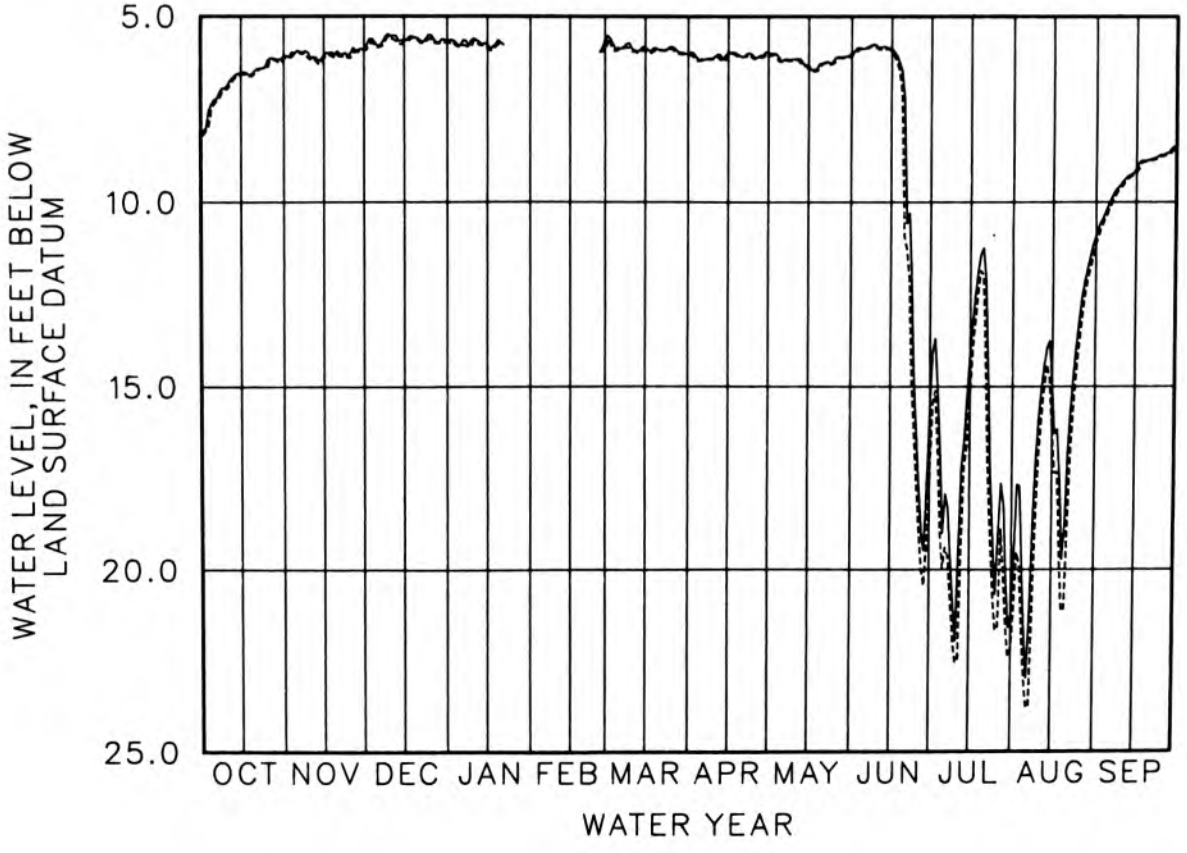
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.25	5.93	5.80	5.78	---	5.84	6.15	6.21	5.86	19.01	21.84	10.02
10	6.85	6.12	5.54	5.60	---	5.87	6.08	6.15	5.83	21.97	15.92	9.44
15	6.54	6.04	5.65	5.75	---	5.84	6.00	6.33	5.87	14.09	14.90	9.12
20	6.48	5.94	5.59	5.71	---	5.90	6.09	6.26	7.20	11.23	18.79	8.85
25	6.18	6.00	5.51	---	---	5.82	6.12	6.11	16.44	20.69	13.18	8.73
EOM	6.07	5.88	5.70	---	5.61	6.01	5.98	5.99	15.55	21.25	10.93	8.50

WTR YR 1987 HIGH 5.48 DEC 9

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.36	6.01	5.85	5.84	---	5.89	6.18	6.23	5.88	19.96	22.95	10.18
10	6.96	6.17	5.62	5.65	---	5.95	6.14	6.17	5.88	22.55	16.95	9.56
15	6.57	6.15	5.67	5.86	---	5.90	6.05	6.44	5.94	15.19	16.17	9.21
20	6.56	6.05	5.65	5.77	---	5.93	6.10	6.28	10.90	11.98	21.07	8.88
25	6.37	6.12	5.61	---	---	5.86	6.15	6.22	17.79	21.65	13.85	8.76
EOM	6.14	5.91	5.72	---	5.85	6.03	6.06	6.07	17.58	22.19	11.14	8.52

WTR YR 1987 LOW 23.79 AUG 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, 51.48 ft below land-surface datum, July 20, 1984.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

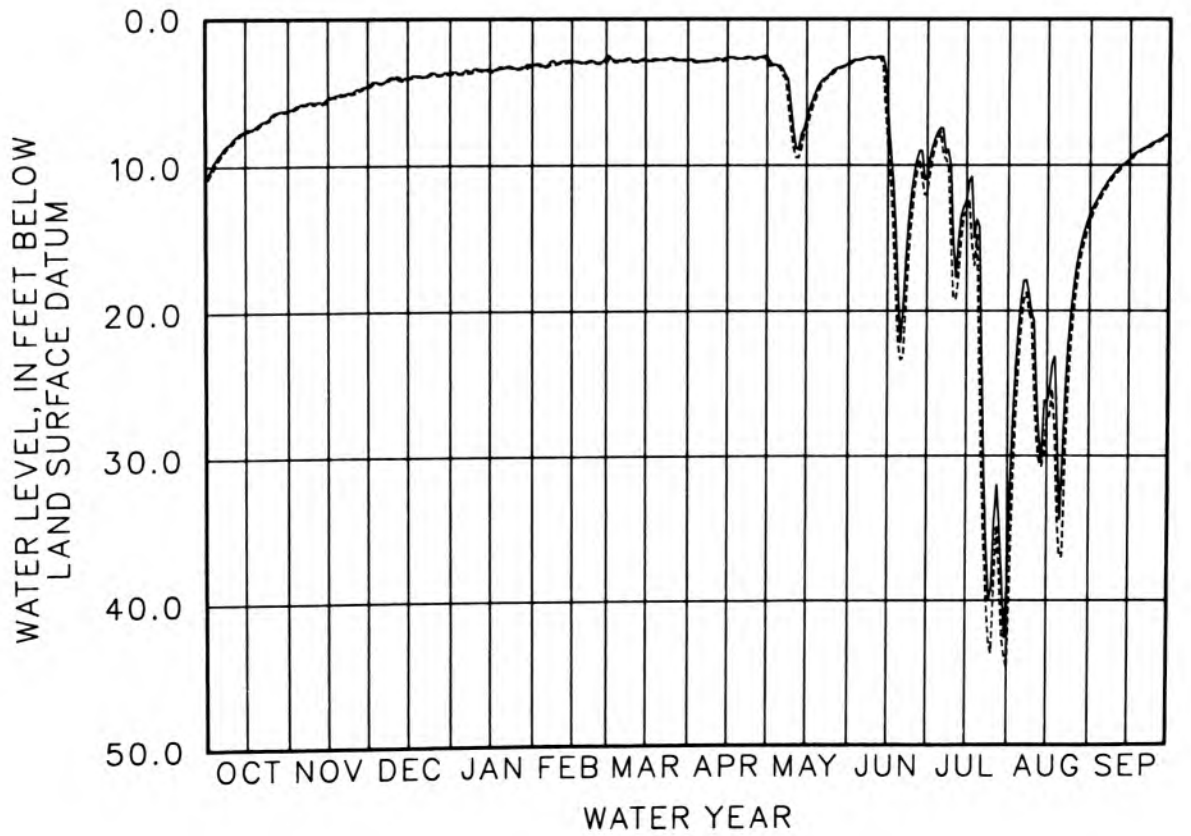
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.28	5.77	4.36	3.63	3.25	2.81	2.88	3.17	2.71	7.43	19.32	11.62
10	8.27	5.67	4.03	3.37	2.99	2.88	2.75	7.54	2.66	15.21	20.67	10.36
15	7.61	5.37	4.01	3.45	2.94	2.75	2.63	6.80	6.10	12.40	26.32	9.57
20	7.14	5.07	3.88	3.36	2.98	2.78	2.71	4.39	22.20	14.20	34.41	8.88
25	6.47	4.87	3.66	3.38	2.99	2.65	2.68	3.51	10.62	39.15	18.40	8.38
EOM	6.16	4.54	3.70	3.19	2.57	2.80	2.57	3.03	10.70	39.14	13.43	7.84

WTR YR 1987 HIGH 2.50 APR 29

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.54	5.90	4.42	3.76	3.31	2.88	2.93	3.40	2.77	7.71	21.24	11.92
10	8.50	5.81	4.07	3.48	3.05	2.94	2.84	8.78	2.74	19.05	25.32	10.60
15	7.68	5.52	4.07	3.60	2.98	2.84	2.70	7.47	8.71	13.15	27.32	9.73
20	7.31	5.17	3.93	3.38	3.06	2.82	2.73	4.69	23.35	22.90	36.98	8.96
25	6.75	5.06	3.79	3.43	3.06	2.74	2.76	3.71	11.90	43.62	20.05	8.49
EOM	6.26	4.63	3.78	3.29	2.88	2.85	2.86	3.12	11.89	44.67	13.87	7.90

WTR YR 1987 LOW 44.67 JUL 31



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 695 ft 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, 49.63 ft below land-surface datum, Aug. 6, 1986.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

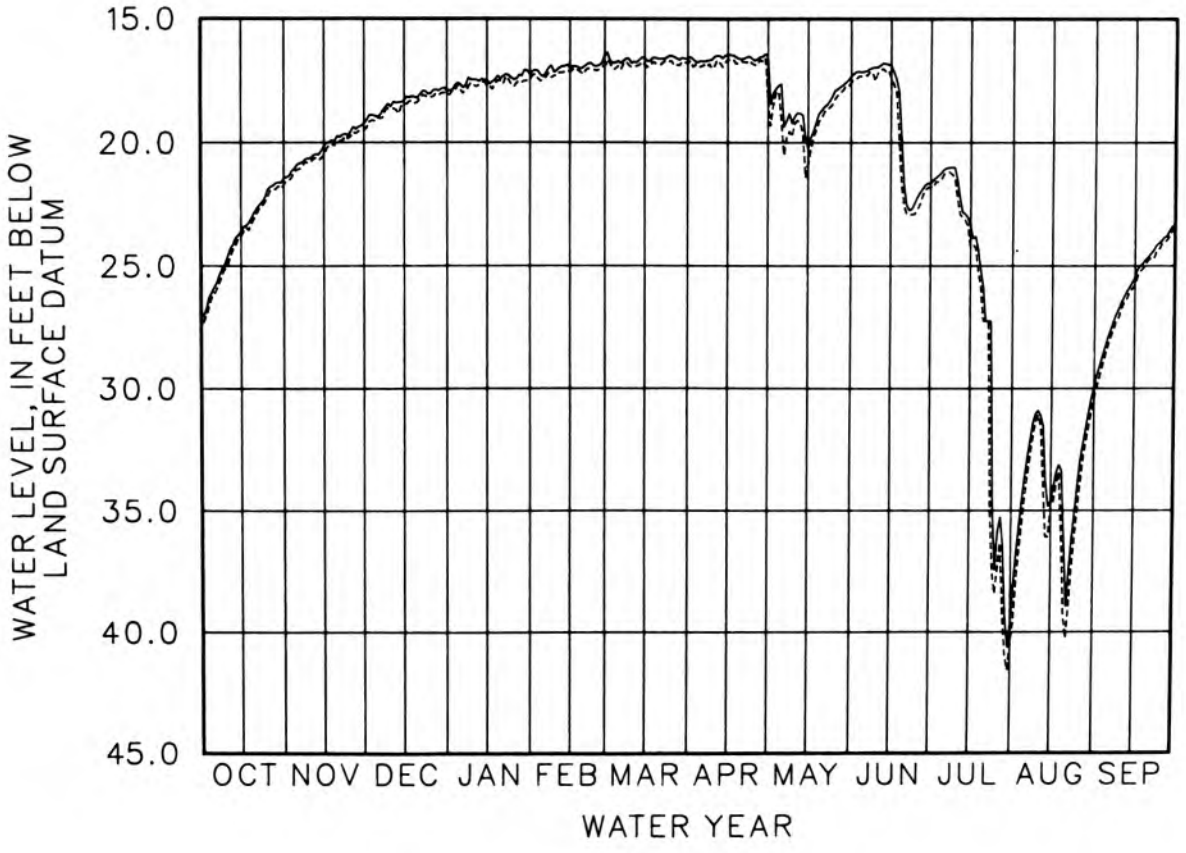
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	25.86	20.88	18.96	17.65	17.33	16.71	16.70	17.63	17.13	21.08	33.68	27.94
10	24.61	20.64	18.55	17.46	17.09	16.80	16.53	18.94	16.96	21.47	30.89	26.50
15	23.62	20.16	18.30	17.48	16.99	16.59	16.45	20.24	16.88	23.38	34.62	25.46
20	22.82	19.72	18.20	17.43	16.96	16.62	16.63	18.70	21.69	25.83	36.33	24.64
25	21.87	19.56	18.01	17.45	16.92	16.49	16.69	17.90	22.21	37.45	33.93	23.98
EOM	21.44	19.23	17.91	17.24	16.46	16.62	16.50	17.32	21.64	39.65	29.95	23.34

WTR YR 1987 HIGH 16.36 MAR 1

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	26.13	21.09	18.99	17.85	17.45	16.91	16.93	19.19	17.25	21.27	34.55	28.28
10	24.96	20.82	18.61	17.68	17.31	16.95	16.90	19.22	17.20	22.22	31.08	26.76
15	23.81	20.54	18.49	17.74	17.14	16.86	16.63	20.87	17.40	24.20	34.80	25.77
20	23.07	19.91	18.36	17.51	17.25	16.79	16.72	19.02	22.55	27.25	39.37	24.76
25	22.20	19.75	18.16	17.75	17.10	16.70	16.86	18.23	22.69	38.41	34.94	24.12
EOM	21.70	19.49	18.00	17.45	16.85	16.80	18.33	17.57	21.79	40.60	30.41	23.48

WTR YR 1987 LOW 41.56 JUL 30



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, 51.90 ft below land-surface datum, Aug. 4, 1984.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

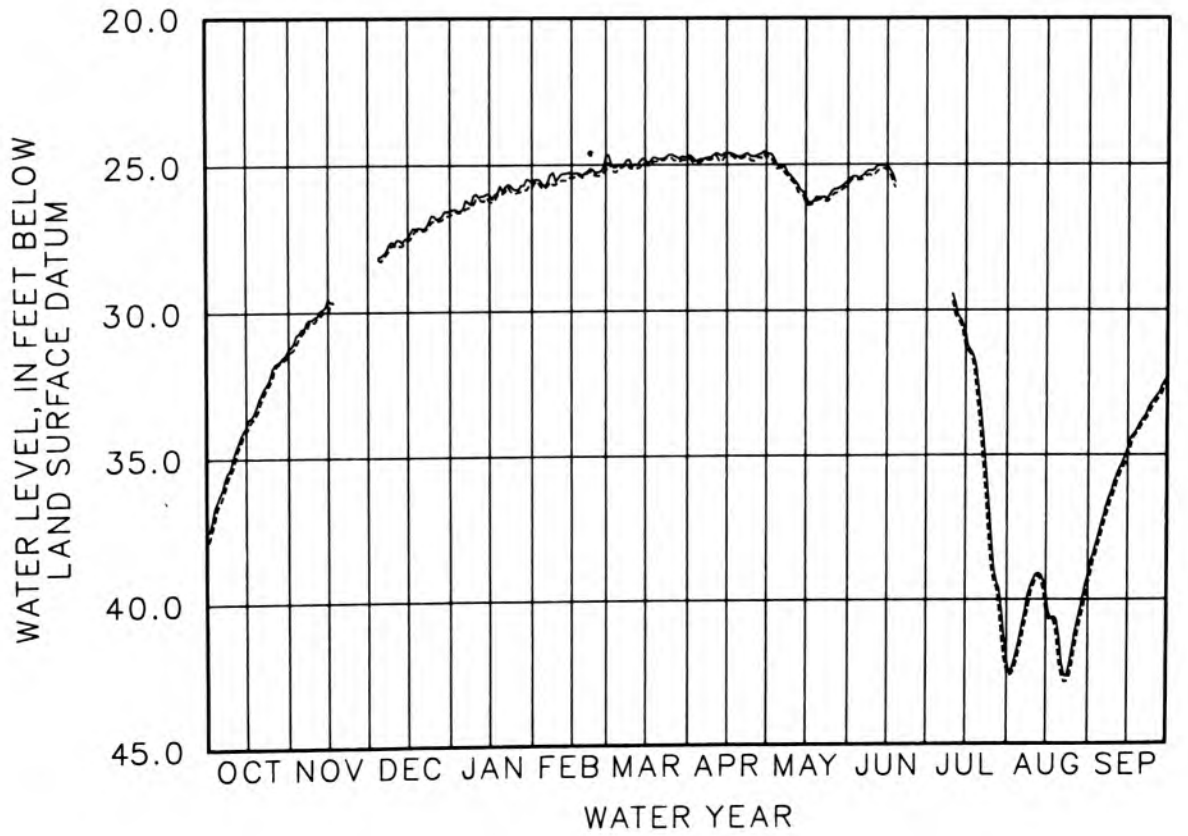
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	36.25	30.56	28.09	26.48	25.72	24.99	24.80	25.06	25.42	---	41.26	37.38
10	35.01	30.15	27.68	25.97	25.44	25.05	24.66	25.46	25.18	29.44	39.32	35.90
15	33.92	29.56	27.48	26.00	25.35	24.83	24.60	26.10	25.05	30.80	39.77	34.79
20	32.93	---	27.14	25.90	25.29	24.81	24.74	26.12	---	32.63	41.32	33.86
25	31.90	---	26.72	25.84	25.25	24.65	24.72	25.90	---	37.89	41.73	33.10
EOM	31.26	---	26.58	25.60	24.69	24.75	24.61	25.56	---	42.10	39.13	32.35

WTR YR 1987 HIGH 24.54 APR 29

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	36.53	30.74	28.27	26.58	25.79	25.11	24.91	25.12	25.53	---	41.66	37.73
10	35.34	30.33	27.74	26.14	25.56	25.13	24.78	25.59	25.36	29.71	39.55	36.24
15	34.07	30.02	27.55	26.23	25.45	24.95	24.69	26.36	25.22	31.25	40.43	35.03
20	33.22	---	27.19	25.97	25.39	24.88	24.79	26.20	---	33.42	42.18	34.02
25	32.22	---	26.90	25.95	25.37	24.77	24.88	26.08	---	38.93	42.24	33.28
EOM	31.45	---	26.73	25.76	25.15	24.84	24.76	25.70	---	42.53	39.46	32.47

WTR YR 1987 LOW 42.87 AUG 22



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, 8.50 below land-surface datum, Oct. 9, 1983.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

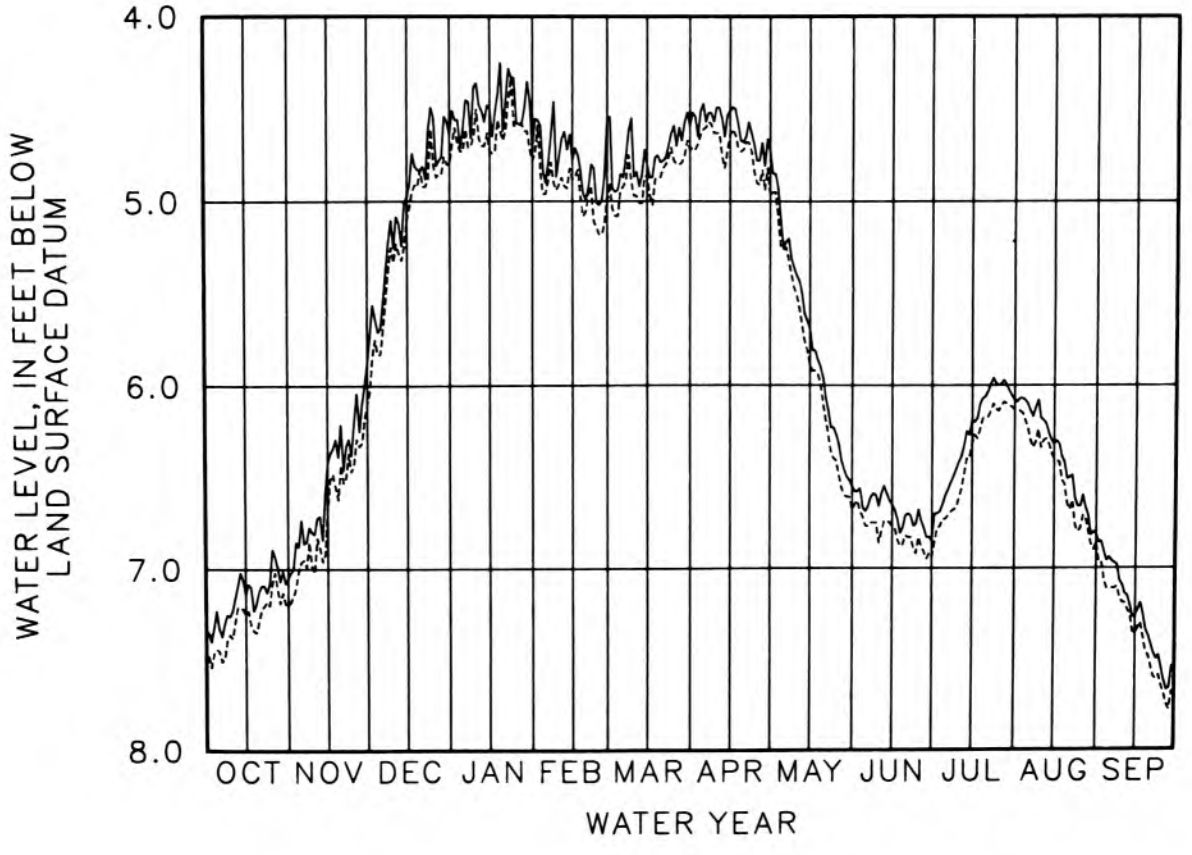
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.33	6.73	5.69	4.61	4.90	4.85	4.47	5.25	6.69	6.60	6.10	6.94
10	7.23	6.81	5.25	4.36	4.76	4.87	4.49	5.40	6.66	6.42	6.18	7.09
15	7.14	6.42	4.97	4.50	4.78	4.80	4.51	5.69	6.65	6.19	6.32	7.26
20	7.12	6.21	4.83	4.62	4.99	4.79	4.68	5.96	6.71	6.06	6.51	7.37
25	6.89	6.20	4.55	4.58	5.02	4.59	4.78	6.27	6.68	6.00	6.66	7.55
EOM	7.05	5.88	4.64	4.72	4.56	4.59	4.73	6.55	6.85	6.08	6.81	7.58

WTR YR 1987 HIGH 4.25 JAN 19

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.45	6.96	5.83	4.73	4.96	4.94	4.61	5.26	6.77	6.73	6.23	7.11
10	7.38	7.02	5.33	4.50	4.91	4.97	4.63	5.51	6.86	6.62	6.34	7.19
15	7.25	6.67	5.10	4.73	4.88	4.86	4.64	5.89	6.77	6.32	6.40	7.36
20	7.28	6.43	4.83	4.67	5.06	4.87	4.72	6.10	6.82	6.18	6.65	7.48
25	7.08	6.43	4.81	4.59	5.18	4.78	4.90	6.41	6.83	6.14	6.78	7.65
EOM	7.20	6.10	4.80	4.78	4.98	4.72	4.97	6.68	6.94	6.13	6.86	7.68

WTR YR 1987 LOW 7.78 SEP 28



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, 40.52 ft below land-surface datum, Sept. 18, 1981.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

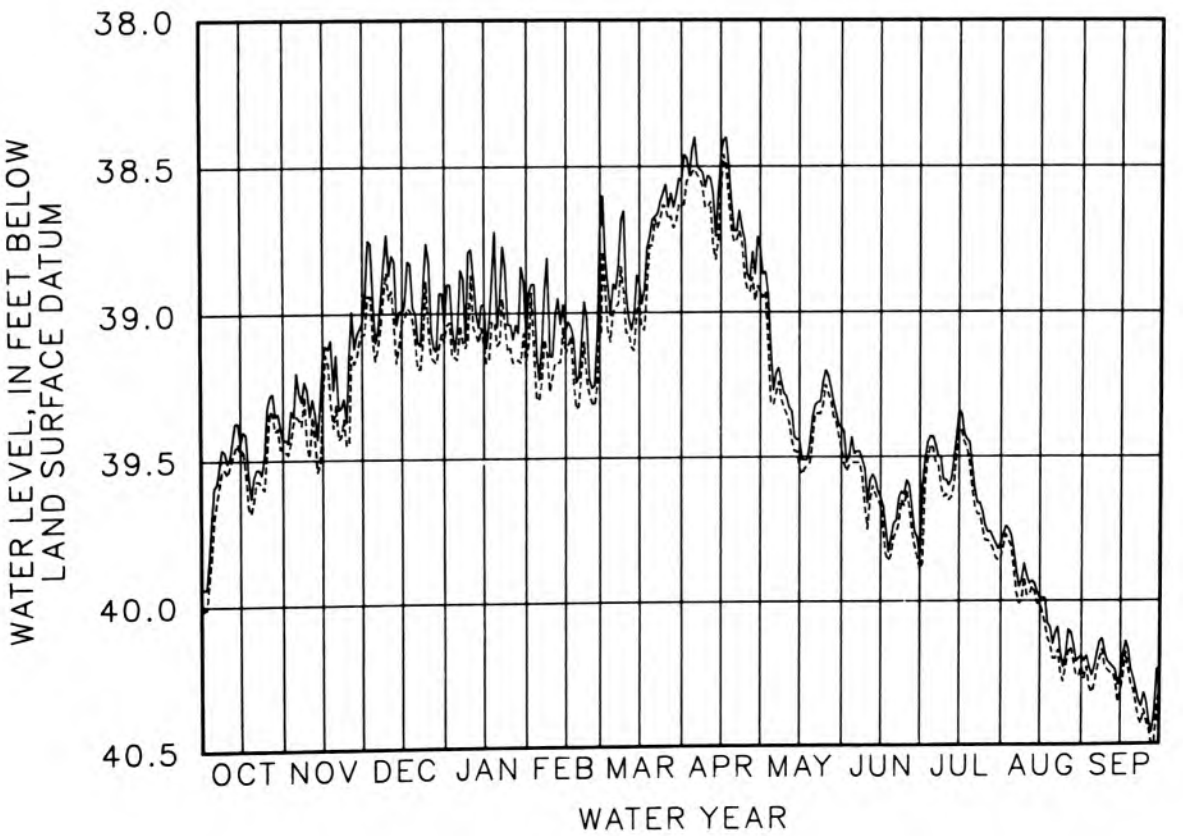
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	39.59	39.20	39.10	39.05	39.23	38.90	38.40	39.27	39.49	39.43	39.82	40.23
10	39.51	39.35	38.87	38.78	39.15	38.94	38.53	39.29	39.66	39.58	39.91	40.21
15	39.44	39.15	39.00	38.97	39.06	38.90	38.46	39.44	39.64	39.34	39.99	40.26
20	39.56	39.14	39.00	39.05	39.22	38.68	38.72	39.36	39.73	39.53	40.15	40.27
25	39.32	39.16	38.82	39.04	39.26	38.56	38.87	39.20	39.58	39.74	40.19	40.35
EOM	39.43	39.03	39.04	39.09	38.70	38.55	38.78	39.40	39.85	39.80	40.19	40.24

WTR YR 1987 HIGH 38.40 APR 5 AND OTHERS

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	39.70	39.35	39.16	39.16	39.30	39.00	38.51	39.32	39.52	39.47	39.89	40.29
10	39.55	39.49	38.95	38.87	39.22	39.07	38.64	39.35	39.75	39.63	39.98	40.24
15	39.48	39.30	39.03	39.11	39.14	38.96	38.59	39.54	39.67	39.42	40.01	40.32
20	39.64	39.31	39.09	39.11	39.32	38.77	38.76	39.45	39.78	39.61	40.20	40.31
25	39.48	39.44	39.06	39.12	39.31	38.64	38.92	39.25	39.62	39.79	40.23	40.42
EOM	39.46	39.07	39.10	39.18	39.08	38.63	38.93	39.47	39.89	39.85	40.23	40.30

WTR YR 1987 LOW 40.50 SEP 27 AND OTHERS



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 1986 TO SEPTEMBER 1987

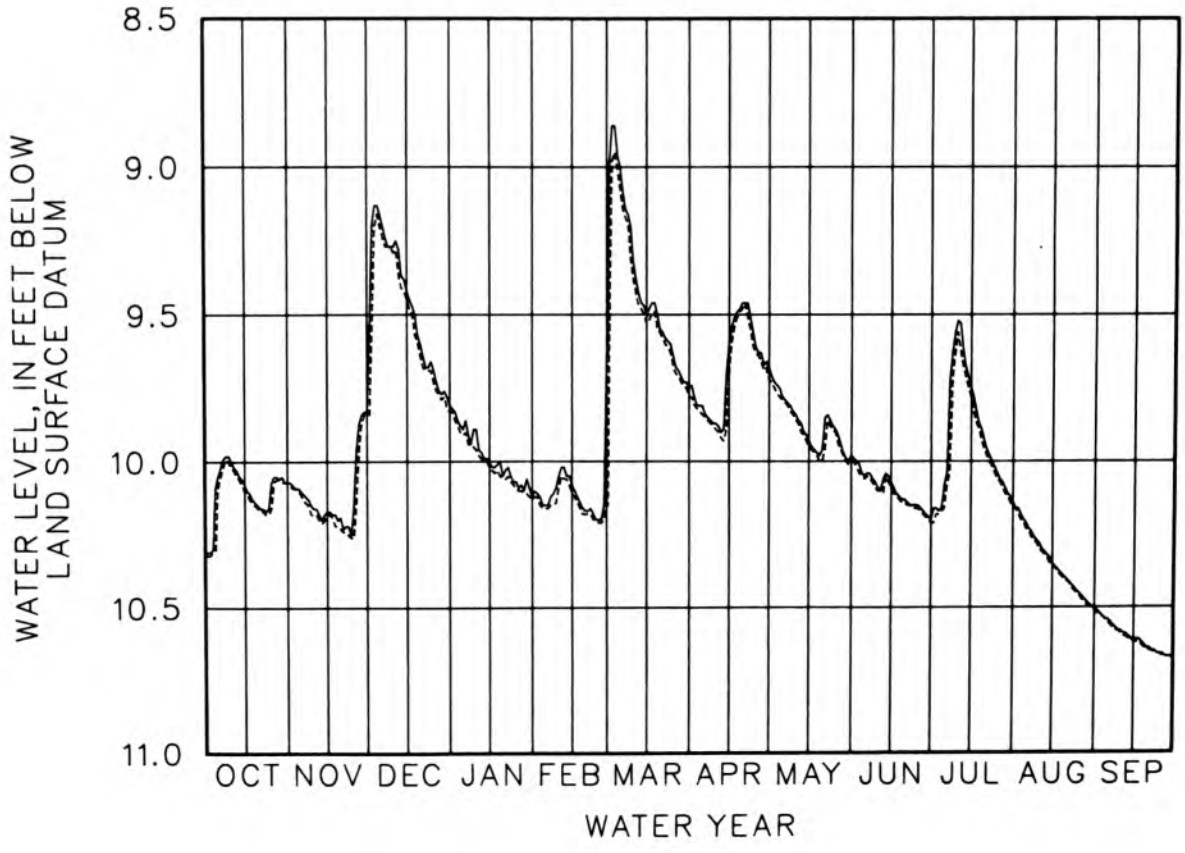
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.05	10.10	9.16	9.89	10.15	9.00	9.81	9.78	10.05	10.08	10.21	10.54
10	10.00	10.16	9.27	9.89	10.05	9.32	9.87	9.84	10.09	9.52	10.28	10.58
15	10.08	10.17	9.42	10.00	10.08	9.50	9.60	9.93	10.07	9.75	10.35	10.61
20	10.15	10.19	9.60	10.05	10.17	9.55	9.46	9.96	10.13	9.93	10.40	10.64
25	10.07	10.15	9.69	10.07	10.20	9.64	9.61	9.89	10.15	10.04	10.45	10.66
EOM	10.07	9.83	9.81	10.12	9.64	9.75	9.68	9.98	10.20	10.14	10.50	10.67

WTR YR 1987 HIGH 8.86 MAR 2 AND OTHERS

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.09	10.11	9.20	9.91	10.16	9.07	9.84	9.79	10.06	10.16	10.23	10.55
10	10.02	10.18	9.29	9.96	10.09	9.38	9.89	9.86	10.10	9.56	10.30	10.59
15	10.10	10.18	9.45	10.02	10.11	9.53	9.70	9.95	10.09	9.78	10.36	10.62
20	10.16	10.23	9.64	10.06	10.18	9.56	9.48	10.00	10.14	9.96	10.41	10.64
25	10.16	10.26	9.73	10.09	10.21	9.68	9.63	9.90	10.16	10.06	10.46	10.66
EOM	10.07	9.84	9.83	10.13	10.15	9.78	9.72	10.00	10.21	10.16	10.51	10.68

WTR YR 1987 LOW 10.68 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.7 E., 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.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

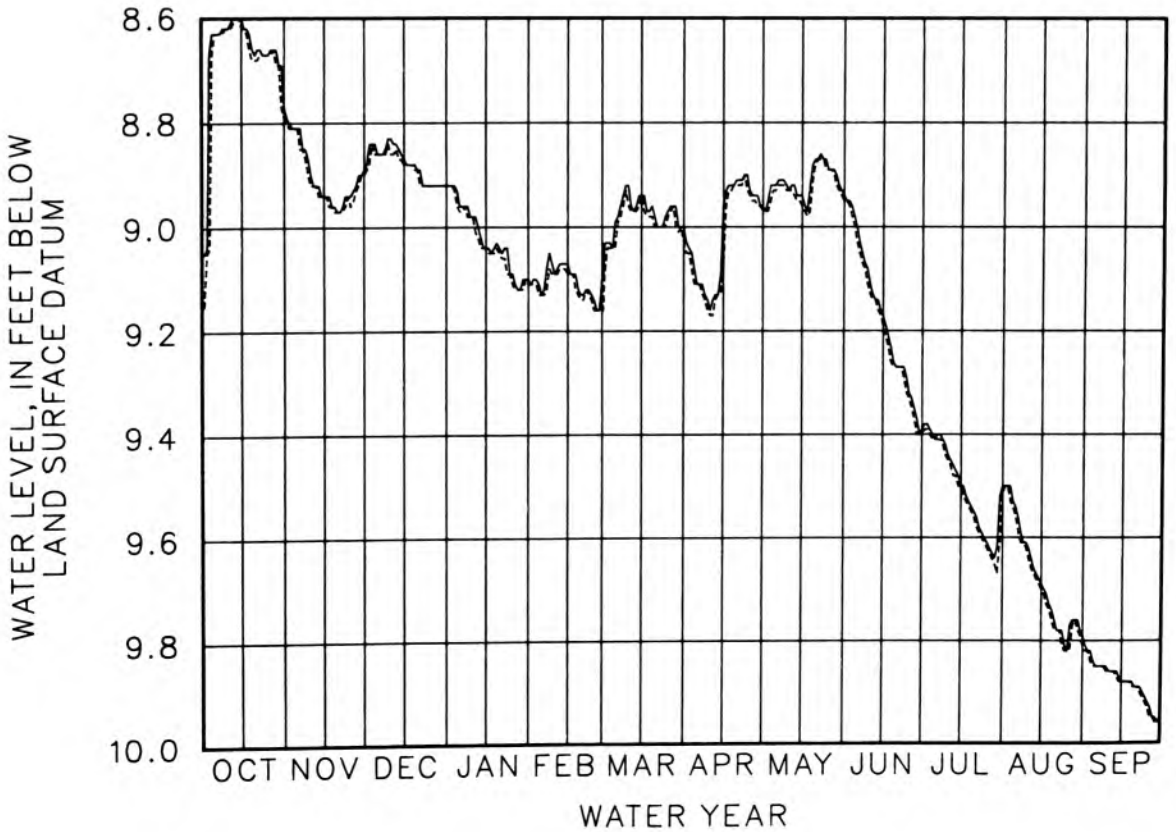
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.63	8.81	8.86	8.96	9.13	8.99	9.11	8.92	9.00	9.41	9.54	9.85
10	8.62	8.90	8.83	8.98	9.09	8.92	9.16	8.93	9.11	9.44	9.62	9.86
15	8.60	8.94	8.87	9.04	9.07	8.94	8.96	8.94	9.17	9.50	9.69	9.88
20	8.67	8.97	8.89	9.04	9.13	8.98	8.91	8.87	9.27	9.55	9.76	9.89
25	8.67	8.94	8.92	9.09	9.14	8.97	8.93	8.89	9.32	9.61	9.82	9.92
EOM	8.77	8.89	8.92	9.10	9.10	9.00	8.96	8.94	9.39	9.50	9.79	9.95

WTR YR 1987 HIGH 8.60 OCT 12 AND OTHERS

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.63	8.81	8.86	8.97	9.13	9.04	9.11	8.93	9.03	9.41	9.56	9.85
10	8.62	8.92	8.86	8.98	9.09	8.96	9.17	8.93	9.13	9.45	9.64	9.86
15	8.62	8.94	8.88	9.04	9.09	8.94	9.08	8.96	9.19	9.50	9.70	9.88
20	8.68	8.97	8.89	9.05	9.14	9.00	8.92	8.88	9.27	9.56	9.78	9.89
25	8.67	8.96	8.92	9.11	9.16	8.98	8.94	8.89	9.33	9.62	9.82	9.93
EOM	8.79	8.90	8.92	9.11	9.16	9.03	8.97	8.95	9.40	9.52	9.81	9.96

WTR YR 1987 LOW 9.96 SEP 28 AND OTHERS



KOSCIUSKO COUNTY

412510085442801. Local number, KO 7.

LOCATION.--Lat 41°25'10", long 85°44'28", in SE¼NE¼NW¼ sec.8, T.34 N., R.7 E., Kosciusko County, Hydrologic Unit 04050001, 20 ft north of the intersection of Chicago Avenue and County Road 530 East in Syracuse. Owner: U.S. Geological Survey.

AQUIFER.--Sand of Pleistocene age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 2 in., depth 23.8 ft, cased to 20.8 ft, screened to 23.8 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, 2.90 ft above land-surface datum.

PERIOD OF RECORD.--November 1978 to July 1987. (Discontinued)

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.86 ft below land-surface datum, Mar. 16, 1982; lowest, 5.63 ft below land-surface datum, Sept. 18, 1983.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

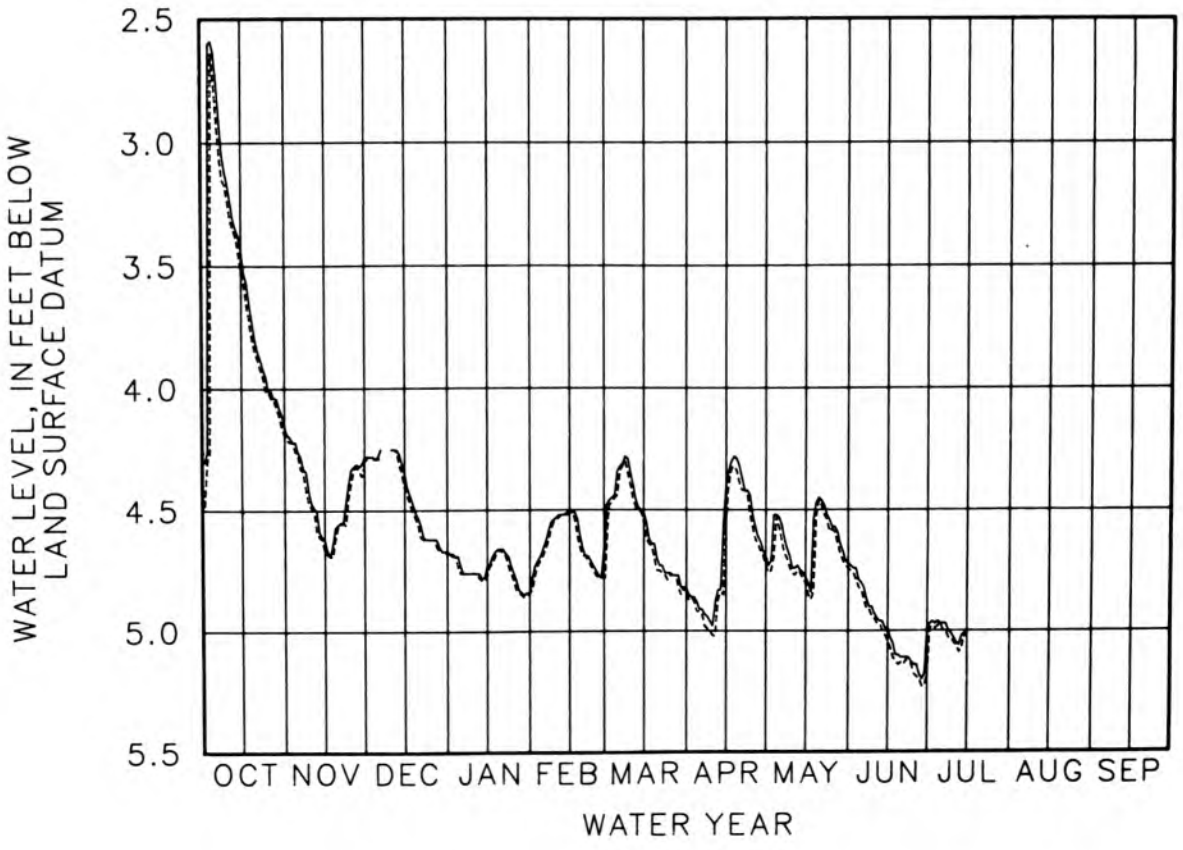
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	2.64	4.26	4.28	4.73	4.66	4.34	4.91	4.53	4.80	4.97		
10	3.17	4.47	4.25	4.76	4.53	4.35	4.98	4.74	4.93	5.03		
15	3.44	4.62	4.35	4.73	4.51	4.51	4.40	4.78	4.99	5.01		
20	3.80	4.56	4.53	4.66	4.66	4.70	4.32	4.45	5.11	---		
25	4.01	4.33	4.62	4.76	4.75	4.76	4.52	4.57	5.14	---		
EOM	4.16	4.28	4.67	4.84	4.66	4.82	4.69	4.72	4.99	---		

WTR YR 1987 HIGH 2.59 OCT 4

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	2.76	4.27	4.29	4.76	4.69	4.44	4.92	4.57	4.83	4.97		
10	3.24	4.49	4.25	4.76	4.54	4.40	5.02	4.76	4.95	5.05		
15	3.53	4.67	4.41	4.77	4.51	4.55	4.54	4.80	5.04	5.02		
20	3.85	4.57	4.56	4.66	4.69	4.75	4.39	4.46	5.13	---		
25	4.01	4.39	4.62	4.79	4.77	4.77	4.57	4.58	5.18	---		
EOM	4.19	4.31	4.68	4.84	4.78	4.85	4.73	4.74	5.18	---		

WTR YR 1987 LOW 5.23 JUN 28 AND OTHERS



412556085513401. Local number, KO 9.

LOCATION.--Lat 41°25'56", long 85°51'34", in SW¼NE¼NW¼ 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, 13.82 ft below land-surface datum, Nov. 27, 28, 1983.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

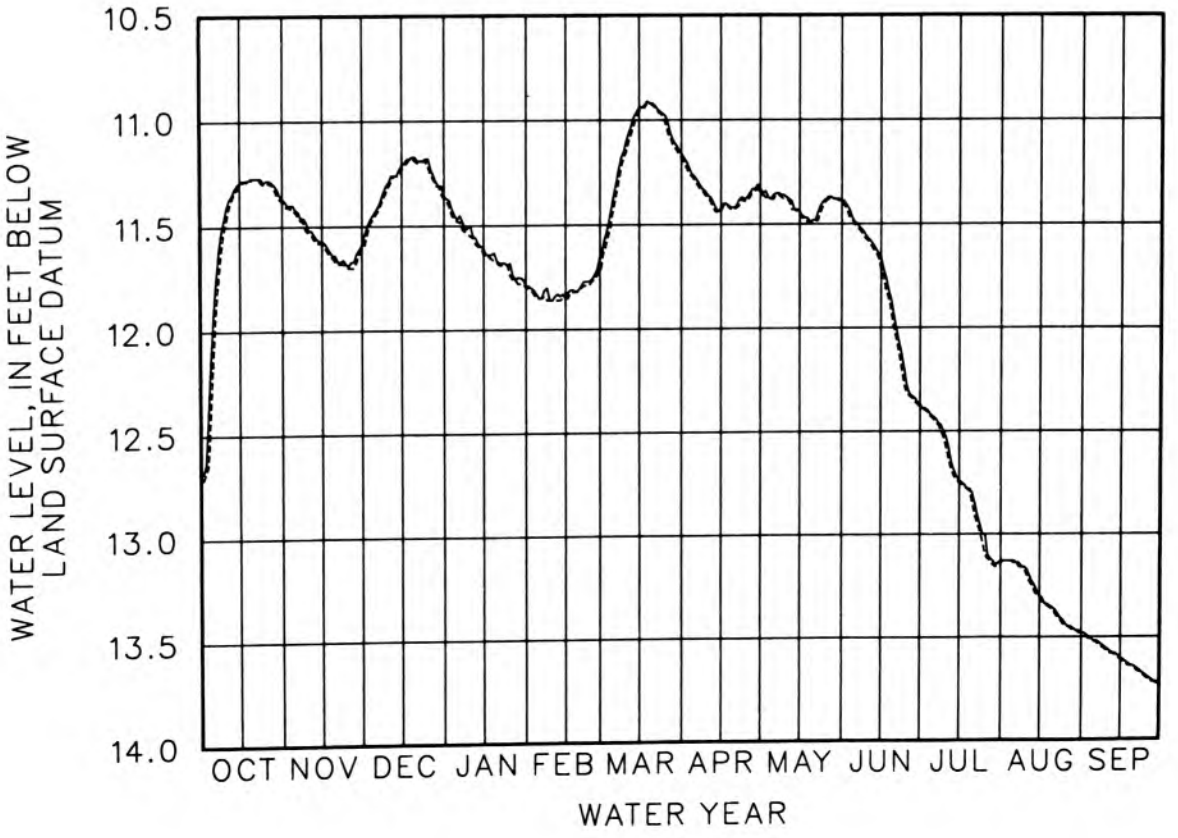
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	11.92	11.42	11.43	11.47	11.85	11.37	11.27	11.36	11.49	12.43	13.13	13.52
10	11.41	11.52	11.29	11.50	11.86	11.10	11.36	11.37	11.57	12.53	13.17	13.56
15	11.29	11.57	11.21	11.61	11.85	10.94	11.42	11.44	11.66	12.74	13.30	13.60
20	11.27	11.64	11.17	11.67	11.81	10.92	11.42	11.48	11.94	12.80	13.36	13.64
25	11.28	11.69	11.18	11.68	11.76	10.98	11.37	11.38	12.28	13.00	13.44	13.69
EOM	11.37	11.59	11.36	11.79	11.65	11.16	11.33	11.39	12.37	13.13	13.48	13.73

WTR YR 1987 HIGH 10.91 MAR 18

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	12.13	11.43	11.45	11.48	11.85	11.43	11.29	11.38	11.50	12.44	13.14	13.52
10	11.47	11.53	11.31	11.55	11.86	11.15	11.37	11.38	11.58	12.58	13.20	13.57
15	11.30	11.58	11.23	11.64	11.85	10.96	11.44	11.46	11.72	12.75	13.31	13.61
20	11.27	11.67	11.19	11.68	11.82	10.93	11.43	11.49	12.00	12.85	13.37	13.65
25	11.30	11.70	11.22	11.74	11.77	11.02	11.39	11.39	12.32	13.10	13.45	13.70
EOM	11.38	11.61	11.37	11.80	11.71	11.18	11.35	11.39	12.38	13.14	13.48	13.74

WTR YR 1987 LOW 13.74 SEP 30



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, 16.03 ft below land-surface datum, Aug. 31, 1984

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

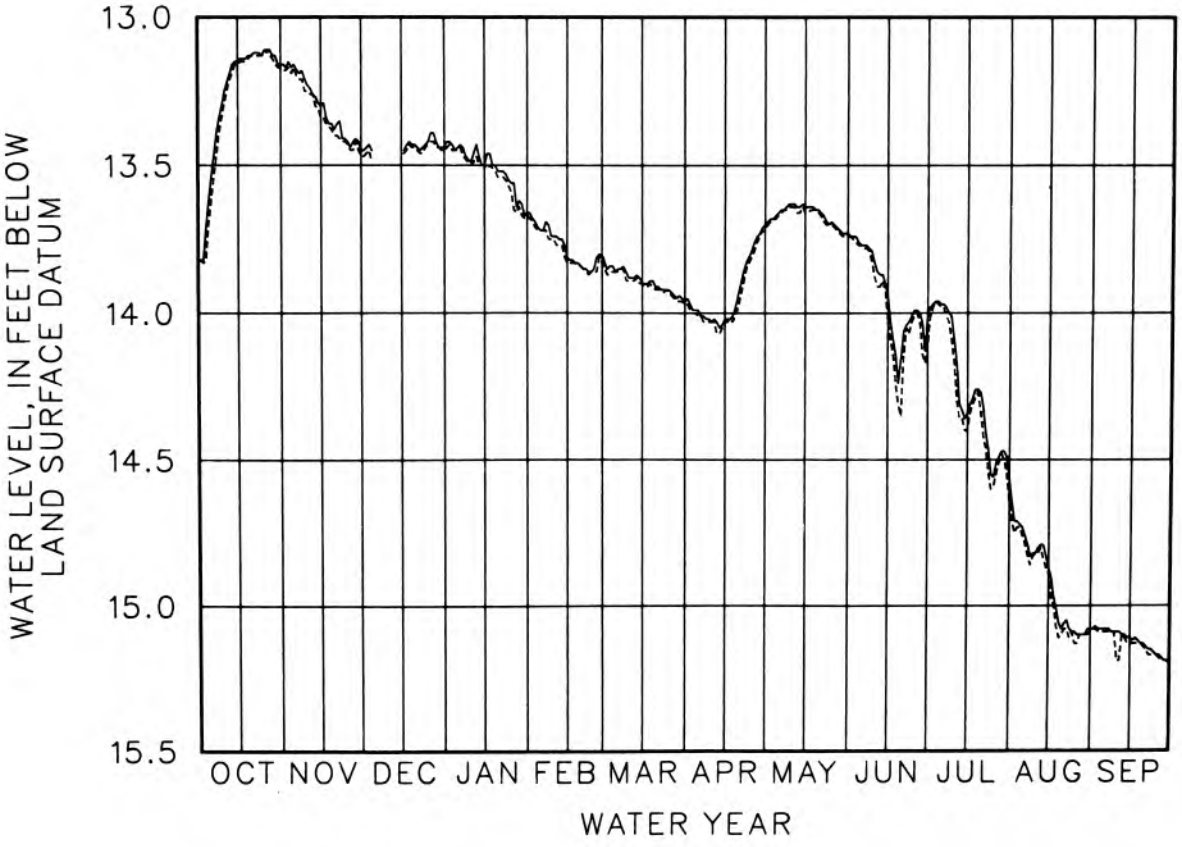
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	13.54	13.16	---	13.44	13.72	13.86	13.99	13.66	13.77	13.97	14.73	15.08
10	13.25	13.23	---	13.49	13.74	13.88	14.03	13.63	13.83	14.09	14.82	15.09
15	13.15	13.30	---	13.50	13.81	13.90	14.02	13.64	13.94	14.34	14.87	15.11
20	13.13	13.38	13.43	13.52	13.84	13.91	13.94	13.65	14.16	14.27	15.08	15.13
25	13.11	13.42	13.42	13.56	13.85	13.92	13.79	13.69	13.99	14.56	15.09	15.17
EOM	13.16	13.45	13.44	13.66	13.81	13.96	13.70	13.73	14.01	14.56	15.08	15.19

WTR YR 1987 HIGH 13.11 OCT 25 AND OTHERS

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	13.62	13.17	---	13.45	13.72	13.86	14.01	13.67	13.77	13.98	14.76	15.09
10	13.29	13.25	---	13.50	13.75	13.89	14.03	13.64	13.88	14.17	14.82	15.19
15	13.16	13.34	---	13.50	13.83	13.90	14.03	13.66	14.03	14.40	14.89	15.13
20	13.13	13.40	13.44	13.54	13.84	13.92	13.98	13.66	14.35	14.34	15.10	15.14
25	13.13	13.43	13.43	13.59	13.86	13.93	13.81	13.70	14.01	14.59	15.13	15.17
EOM	13.17	13.47	13.45	13.67	13.83	13.97	13.72	13.74	14.12	14.64	15.09	15.20

WTR YR 1987 LOW 15.20 SEP 30



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, 8.56 ft below land-surface datum, Nov. 27, 1983.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

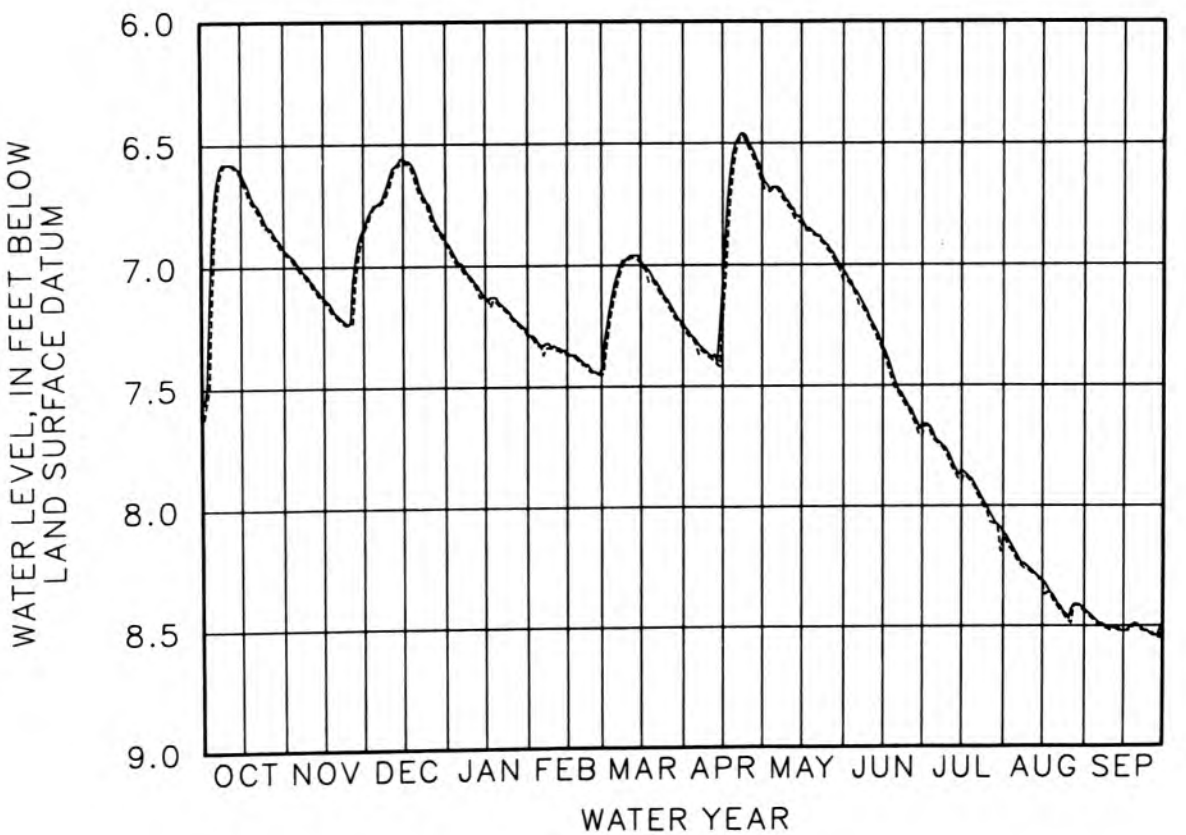
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.73	6.99	6.75	6.99	7.33	7.08	7.31	6.68	7.11	7.72	8.20	8.48
10	6.58	7.06	6.63	7.05	7.33	6.97	7.37	6.74	7.22	7.78	8.26	8.51
15	6.61	7.13	6.56	7.13	7.36	6.98	7.09	6.81	7.34	7.85	8.31	8.52
20	6.74	7.20	6.63	7.15	7.39	7.06	6.50	6.87	7.49	7.91	8.39	8.49
25	6.84	7.23	6.75	7.21	7.44	7.14	6.50	6.92	7.59	8.01	8.47	8.53
EOM	6.93	6.85	6.90	7.28	7.43	7.24	6.63	7.02	7.66	8.11	8.43	8.51

WTR YR 1987 HIGH 6.46 APR 22 AND OTHERS

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.89	7.00	6.75	7.00	7.33	7.13	7.33	6.68	7.13	7.73	8.22	8.49
10	6.58	7.07	6.67	7.07	7.34	6.98	7.38	6.76	7.23	7.80	8.27	8.52
15	6.63	7.14	6.57	7.14	7.37	6.99	7.23	6.83	7.36	7.90	8.32	8.52
20	6.75	7.21	6.67	7.16	7.40	7.07	6.54	6.88	7.52	7.92	8.41	8.50
25	6.84	7.24	6.79	7.22	7.44	7.16	6.52	6.94	7.60	8.03	8.48	8.53
EOM	6.94	6.87	6.91	7.29	7.45	7.26	6.66	7.07	7.71	8.13	8.44	8.51

WTR YR 1987 LOW 8.55 SEP 28 AND OTHERS



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, 16.41 ft below land-surface datum, Aug. 29, 1984.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

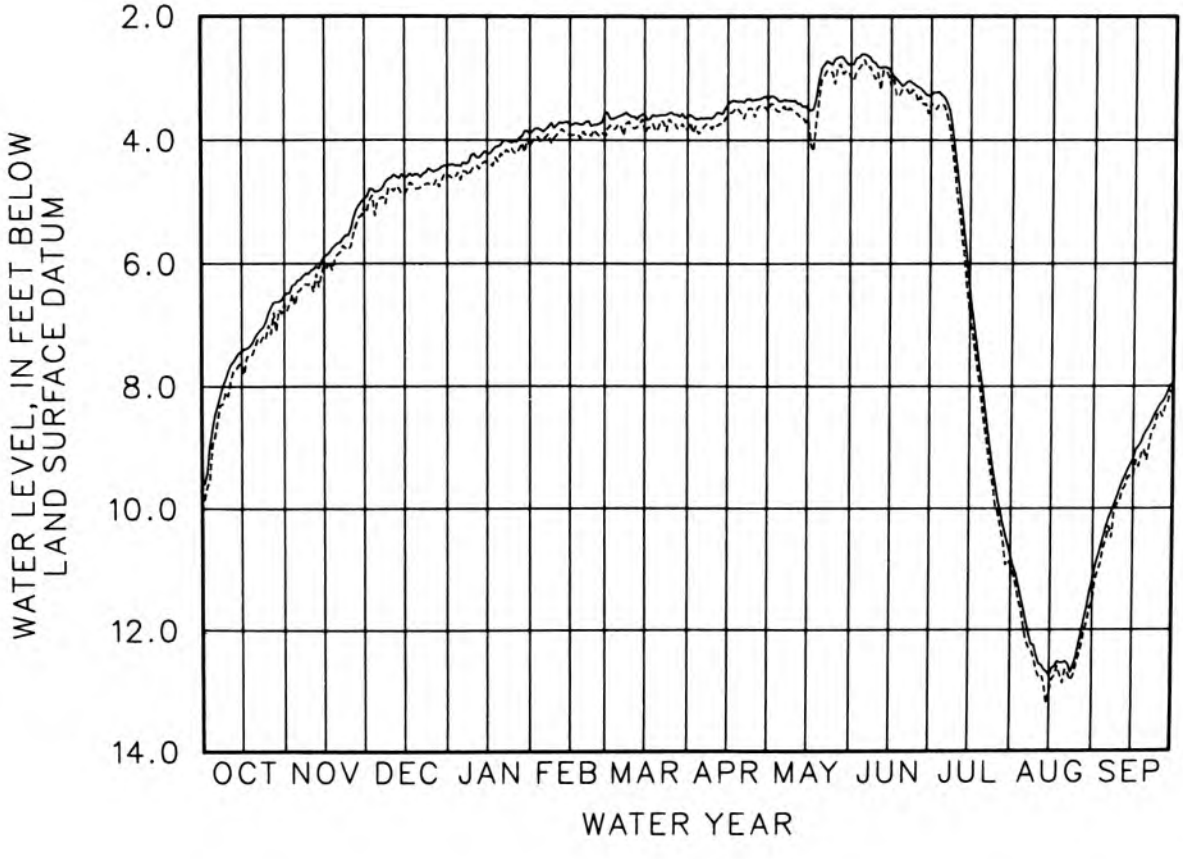
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.46	6.27	4.83	4.42	3.86	3.62	3.64	3.37	2.61	3.31	11.66	10.29
10	7.75	6.11	4.61	4.22	3.76	3.62	3.61	3.36	2.82	4.48	12.43	9.68
15	7.43	5.89	4.61	4.21	3.75	3.59	3.42	3.50	2.90	6.39	12.76	9.19
20	7.20	5.67	4.55	4.08	3.74	3.60	3.37	2.84	3.11	8.05	12.54	8.72
25	6.80	5.43	4.49	4.02	3.75	3.55	3.35	2.69	3.14	9.61	12.44	8.30
EOM	6.52	4.95	4.41	3.90	3.56	3.61	3.33	2.77	3.27	10.79	11.17	7.94

WTR YR 1987 HIGH 2.61 JUN 4 AND OTHERS

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.81	6.46	4.99	4.64	3.97	3.74	3.86	3.51	2.70	3.44	11.95	10.52
10	8.16	6.32	4.77	4.43	3.92	3.78	3.74	3.56	2.91	4.92	12.67	9.89
15	7.63	6.01	4.88	4.36	3.92	3.89	3.60	3.67	3.13	6.80	13.03	9.48
20	7.36	5.85	4.79	4.22	3.86	3.81	3.57	3.03	3.21	8.43	12.88	9.21
25	7.00	5.72	4.74	4.20	3.89	3.71	3.63	3.09	3.38	9.95	12.59	8.41
EOM	6.66	5.05	4.58	4.10	3.92	3.81	3.53	3.00	3.40	10.93	11.53	8.13

WTR YR 1987 LOW 13.22 AUG 14



LAKE COUNTY

413559087270301. 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, 0.30 ft below land-surface datum, May 19, 1987; lowest, 5.15 ft below land-surface datum, Sept. 10, 1986.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

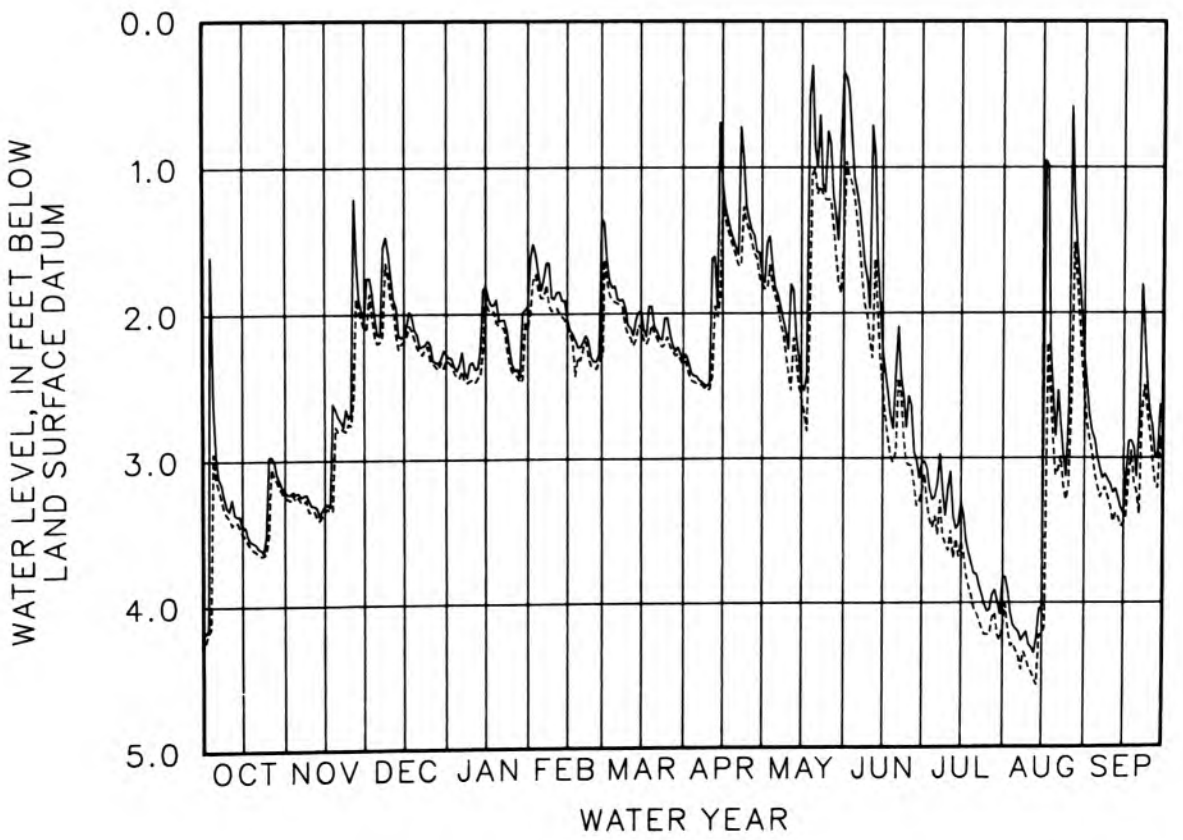
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	2.96	3.22	2.14	2.35	1.84	1.81	2.43	1.82	1.16	3.27	4.18	2.99
10	3.34	3.31	1.75	2.33	1.90	2.08	2.48	2.25	1.97	3.21	4.29	3.18
15	3.46	3.31	2.15	1.81	2.04	1.98	1.10	2.49	2.25	3.31	4.03	3.38
20	3.57	2.70	2.14	2.05	2.23	2.09	1.55	.85	2.42	3.80	2.85	3.13
25	2.97	2.68	2.21	2.35	2.33	2.03	1.35	.75	2.57	4.06	2.67	2.68
EOM	3.21	2.04	2.28	1.95	1.36	2.32	1.75	.35	3.04	3.83	2.30	2.77

WTR YR 1987 HIGH .30 MAY 19

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	3.12	3.25	2.20	2.44	1.89	1.92	2.48	1.88	1.36	3.40	4.33	3.19
10	3.39	3.35	1.91	2.45	1.97	2.14	2.52	2.41	2.19	3.64	4.45	3.33
15	3.50	3.35	2.19	1.89	2.10	2.10	1.27	2.59	2.53	3.58	4.22	3.45
20	3.62	2.80	2.23	2.08	2.32	2.13	1.61	1.01	2.96	4.04	3.12	3.23
25	3.51	2.76	2.32	2.40	2.37	2.16	1.43	1.22	3.05	4.22	3.20	2.82
EOM	3.24	2.10	2.32	2.11	2.29	2.35	1.80	1.53	3.23	4.16	2.55	2.92

WTR YR 1987 LOW 4.57 AUG 13



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 1986 TO SEPTEMBER 1987

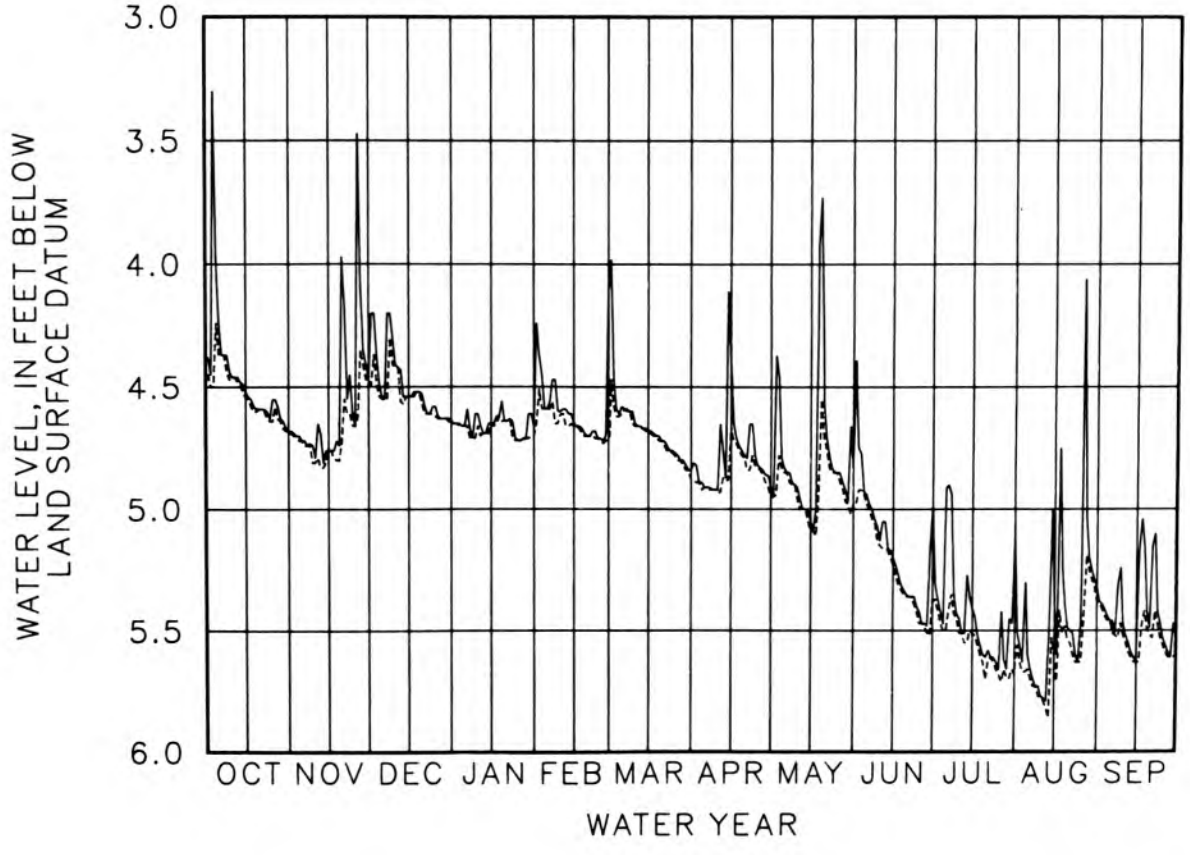
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.24	4.72	4.54	4.66	4.59	4.58	4.91	4.83	4.94	4.91	5.60	5.46
10	4.46	4.79	4.41	4.61	4.60	4.65	4.92	4.91	5.13	5.45	5.77	5.47
15	4.52	4.76	4.54	4.65	4.65	4.68	4.38	5.05	5.20	5.41	5.39	5.63
20	4.59	3.97	4.53	4.64	4.70	4.72	4.78	4.56	5.35	5.61	5.49	5.49
25	4.55	4.66	4.58	4.72	4.71	4.77	4.82	4.85	5.42	5.66	5.47	5.53
EOM	4.68	4.47	4.64	4.66	4.09	4.84	4.91	4.83	4.99	5.12	5.32	5.53

WTR YR 1987 HIGH 3.30 OCT 3

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.37	4.72	4.55	4.66	4.59	4.61	4.91	4.85	4.98	5.50	5.66	5.46
10	4.46	4.81	4.42	4.66	4.61	4.66	4.93	4.96	5.15	5.51	5.78	5.52
15	4.54	4.76	4.54	4.65	4.66	4.68	4.66	5.09	5.23	5.51	5.60	5.63
20	4.59	4.72	4.57	4.64	4.70	4.72	4.79	4.71	5.36	5.70	5.54	5.52
25	4.64	4.66	4.62	4.72	4.72	4.78	4.83	4.85	5.47	5.68	5.63	5.56
EOM	4.68	4.49	4.65	4.70	4.70	4.88	4.95	4.98	5.38	5.68	5.38	5.60

WTR YR 1987 LOW 5.86 AUG 13



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, 8.01 ft below land-surface datum, Dec. 6, 7, 1980, Oct. 17, 18, 1985.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

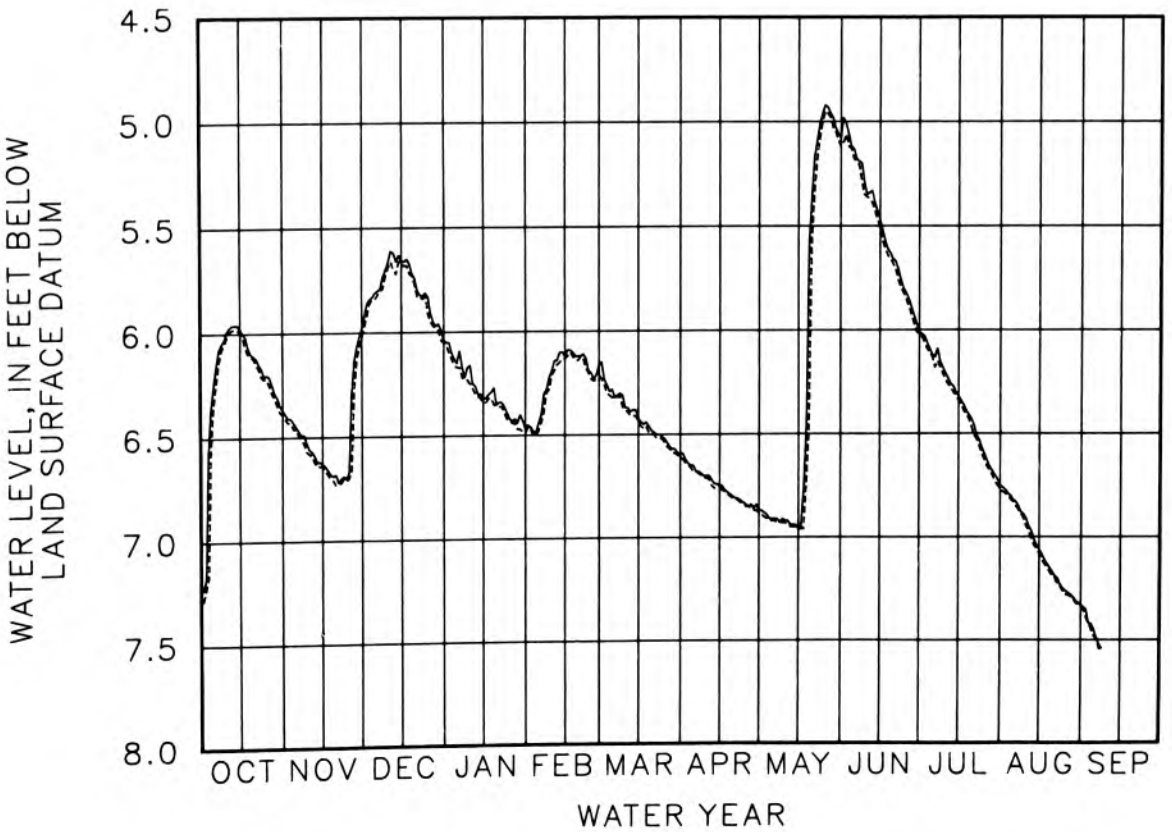
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.26	6.45	5.81	6.15	6.44	6.28	6.65	6.91	5.13	6.12	6.82	7.45
10	5.99	6.56	5.66	6.16	6.19	6.37	6.70	6.92	5.35	6.21	6.91	---
15	5.98	6.63	5.66	6.32	6.12	6.42	6.75	6.96	5.47	6.32	7.06	---
20	6.11	6.68	5.74	6.35	6.12	6.48	6.80	5.36	5.66	6.43	7.17	---
25	6.20	6.67	5.83	6.42	6.20	6.52	6.84	4.92	5.82	6.60	7.26	---
EOM	6.37	5.98	6.04	6.47	6.16	6.60	6.87	5.08	6.01	6.75	7.33	---

WTR YR 1987 HIGH 4.92 MAY 25

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.36	6.46	5.84	6.17	6.48	6.32	6.68	6.92	5.18	6.13	6.83	7.48
10	6.02	6.58	5.69	6.25	6.21	6.38	6.71	6.93	5.36	6.24	6.95	---
15	6.00	6.64	5.67	6.34	6.13	6.44	6.76	6.96	5.52	6.34	7.08	---
20	6.12	6.73	5.77	6.36	6.14	6.49	6.81	5.58	5.68	6.47	7.19	---
25	6.22	6.70	5.91	6.43	6.23	6.54	6.85	4.95	5.85	6.63	7.28	---
EOM	6.39	6.02	6.05	6.49	6.22	6.61	6.88	5.12	6.02	6.77	7.34	---

WTR YR 1987 LOW 7.56 SEP 8



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, 9.56 ft below land-surface datum, Oct. 9, 10, 1985.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

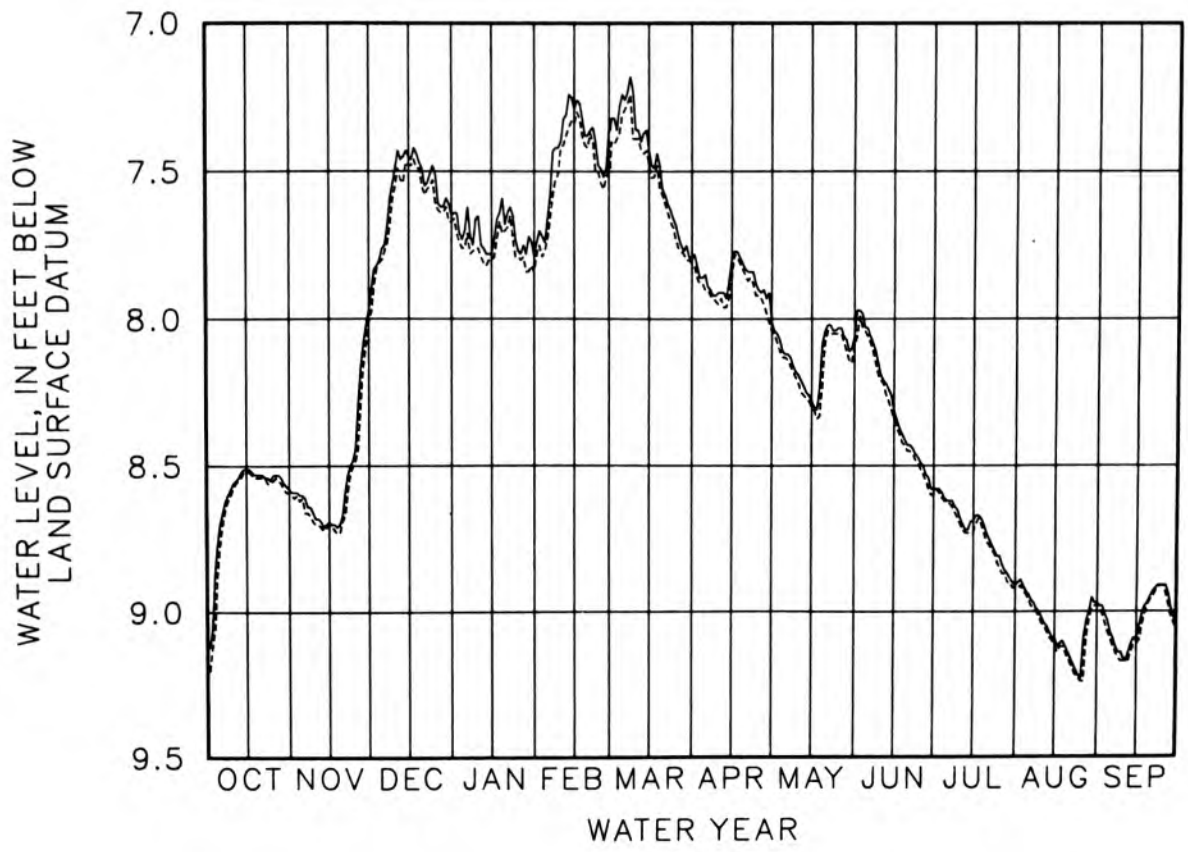
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.70	8.60	7.76	7.70	7.66	7.24	7.85	8.12	8.03	8.62	8.94	9.07
10	8.56	8.68	7.49	7.65	7.40	7.36	7.91	8.19	8.19	8.68	9.02	9.16
15	8.51	8.69	7.45	7.78	7.29	7.43	7.79	8.28	8.31	8.69	9.09	9.10
20	8.53	8.67	7.49	7.68	7.38	7.56	7.83	8.04	8.43	8.73	9.14	8.95
25	8.53	8.44	7.51	7.77	7.49	7.68	7.90	8.03	8.49	8.81	9.23	8.91
EOM	8.58	7.97	7.65	7.79	7.36	7.80	8.01	8.06	8.58	8.91	8.97	9.04

WTR YR 1987 HIGH 7.18 MAR 8

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.77	8.61	7.80	7.76	7.73	7.31	7.90	8.13	8.06	8.63	8.96	9.09
10	8.58	8.70	7.55	7.76	7.42	7.39	7.95	8.22	8.21	8.70	9.04	9.17
15	8.52	8.70	7.48	7.80	7.34	7.48	7.86	8.30	8.34	8.73	9.12	9.11
20	8.54	8.69	7.55	7.70	7.42	7.58	7.85	8.08	8.45	8.76	9.16	8.96
25	8.55	8.48	7.61	7.79	7.54	7.73	7.92	8.05	8.51	8.85	9.24	8.91
EOM	8.59	8.01	7.67	7.84	7.50	7.81	8.04	8.09	8.60	8.92	8.98	9.06

WTR YR 1987 LOW 9.24 AUG 25 AND OTHERS



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, 9.67 ft below land-surface datum, Sept. 30, 1987.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

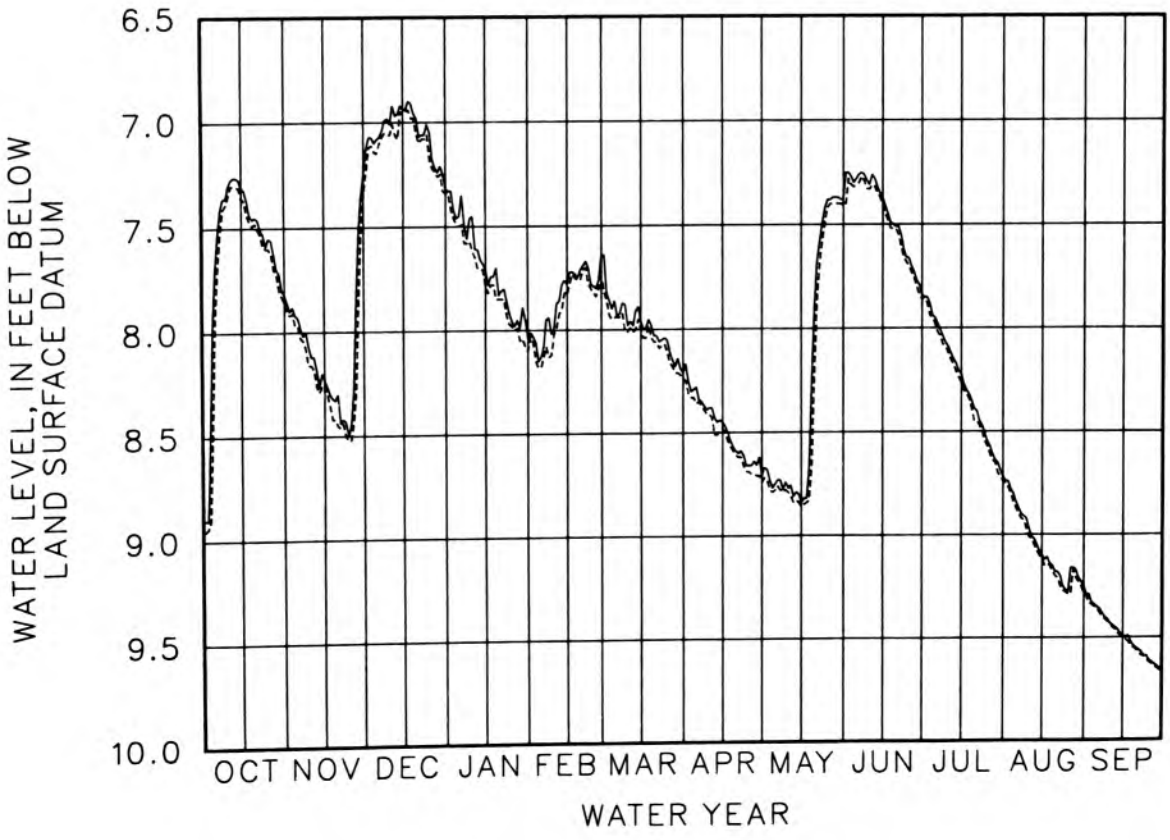
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.71	7.93	7.08	7.45	8.13	7.86	8.28	8.75	7.28	7.95	8.84	9.35
10	7.30	8.12	7.01	7.45	7.99	7.98	8.38	8.77	7.31	8.09	8.97	9.43
15	7.31	8.23	6.94	7.71	7.78	7.96	8.45	8.84	7.37	8.22	9.10	9.49
20	7.45	8.30	6.98	7.83	7.71	8.03	8.59	7.90	7.51	8.39	9.18	9.55
25	7.55	8.45	7.05	7.96	7.79	8.05	8.66	7.38	7.66	8.55	9.28	9.61
EOM	7.82	7.25	7.32	8.04	7.64	8.21	8.71	7.38	7.84	8.72	9.25	9.66

WTR YR 1987 HIGH 6.90 DEC 17

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.96	7.97	7.15	7.50	8.18	7.94	8.36	8.78	7.31	7.98	8.87	9.36
10	7.35	8.16	7.06	7.62	8.02	8.01	8.41	8.79	7.33	8.12	9.01	9.43
15	7.36	8.25	6.96	7.79	7.83	8.00	8.48	8.86	7.41	8.26	9.12	9.50
20	7.48	8.45	7.06	7.85	7.76	8.06	8.61	8.23	7.52	8.45	9.20	9.56
25	7.60	8.52	7.18	7.98	7.82	8.11	8.69	7.42	7.70	8.57	9.29	9.62
EOM	7.86	7.35	7.34	8.10	7.77	8.24	8.74	7.41	7.86	8.74	9.29	9.67

WTR YR 1987 LOW 9.67 SEP 30



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, 21.89 ft below land-surface datum, Sept. 30, 1987.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

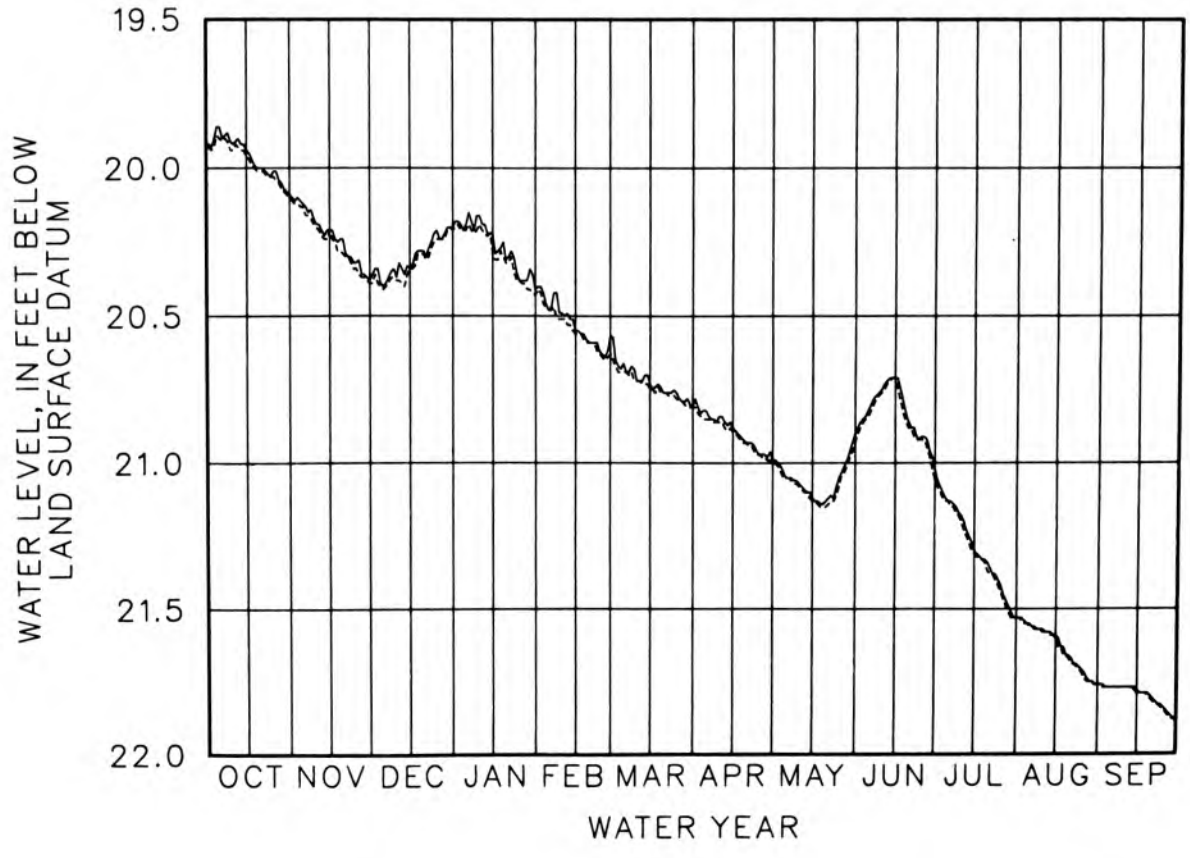
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	19.86	20.12	20.40	20.19	20.48	20.66	20.82	21.05	20.82	21.13	21.55	21.77
10	19.92	20.19	20.37	20.16	20.49	20.72	20.84	21.07	20.75	21.18	21.57	21.77
15	19.94	20.21	20.34	20.22	20.55	20.73	20.88	21.12	20.71	21.30	21.59	21.78
20	20.00	20.24	20.28	20.31	20.59	20.76	20.93	21.13	20.86	21.34	21.66	21.80
25	20.01	20.32	20.21	20.38	20.63	20.76	20.97	21.05	20.91	21.42	21.71	21.84
EOM	20.09	20.38	20.20	20.41	20.57	20.81	20.99	20.90	21.02	21.53	21.76	21.88

WTR YR 1987 HIGH 19.86 OCT 4 AND OTHERS

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	19.90	20.13	20.41	20.21	20.48	20.69	20.85	21.05	20.84	21.13	21.56	21.77
10	19.94	20.20	20.38	20.19	20.51	20.72	20.86	21.08	20.76	21.20	21.58	21.77
15	19.96	20.21	20.34	20.29	20.56	20.75	20.89	21.13	20.71	21.31	21.60	21.79
20	20.01	20.29	20.29	20.32	20.59	20.76	20.93	21.15	20.88	21.37	21.67	21.81
25	20.03	20.34	20.24	20.38	20.64	20.78	20.97	21.08	20.92	21.44	21.72	21.85
EOM	20.10	20.39	20.21	20.43	20.63	20.81	21.00	20.93	21.06	21.53	21.76	21.89

WTR YR 1987 LOW 21.89 SEP 30



395218086082701. Local number, MA 32.

LOCATION.--Lat 39°52'18", long 86°08'27", in NE¼SW¼SW¼ sec.36, T.17 N., R.3 E., Marion County, Hydrologic Unit 05120201, at Indianapolis Water Company station on Westfield Boulevard in Broad Ripple, City of Indianapolis. Owner: Indianapolis Water Company.

AQUIFER.--Limestone of Devonian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 10 in., depth 308 ft, cased to 60 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 719.78 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of floor of shelter, 3.15 ft above land-surface datum.

REMARKS.--Water level affected by earthquakes.

PERIOD OF RECORD.--May 1958 to August 1971, January 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 5.85 ft below land-surface datum, June 17, 1958; lowest, 15.15 ft below land-surface datum, Oct. 5, 1965.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

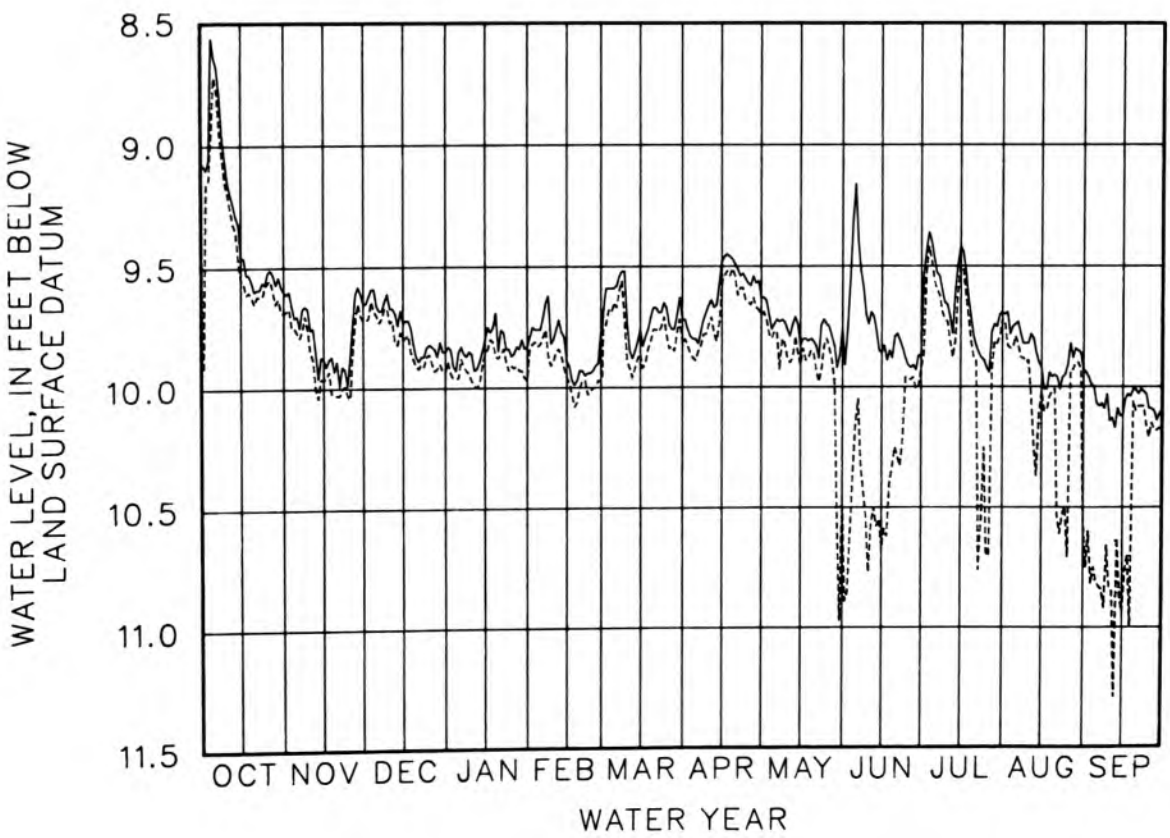
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.64	9.70	9.66	9.85	9.76	9.59	9.80	9.74	9.16	9.47	9.74	10.07
10	9.15	9.76	9.67	9.86	9.80	9.73	9.66	9.76	9.74	9.66	9.82	10.14
15	9.46	9.88	9.73	9.80	9.89	9.76	9.48	9.83	9.86	9.42	9.92	10.12
20	9.60	9.89	9.87	9.85	9.93	9.67	9.49	9.81	9.79	9.79	9.95	10.01
25	9.52	9.88	9.82	9.87	9.93	9.67	9.57	9.74	9.91	9.92	9.91	10.09
EOM	9.60	9.65	9.85	9.83	9.77	9.72	9.63	9.76	9.87	9.69	9.93	10.10

WTR YR 1987 HIGH 8.56 OCT 4

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.72	9.77	9.70	9.96	9.82	9.65	9.89	9.77	10.15	9.56	9.79	10.81
10	9.20	9.85	9.73	9.97	9.89	9.89	9.74	9.88	10.77	9.73	9.89	10.84
15	9.55	9.96	9.80	9.86	9.96	9.86	9.57	9.91	10.67	9.50	10.02	10.94
20	9.65	10.03	9.91	9.88	10.00	9.76	9.54	9.86	10.25	9.88	10.01	10.10
25	9.56	10.04	9.86	9.91	10.00	9.78	9.65	9.80	9.97	10.70	10.71	10.21
EOM	9.69	9.72	9.93	9.97	9.97	9.82	9.70	10.46	9.92	9.72	10.56	10.18

WTR YR 1987 LOW 11.29 SEP 12



MARION COUNTY

395259086030101. Local number, MA 33.

LOCATION.--Lat 39°52'59", long 86°03'01", in NW¼NW¼NW¼ sec.35, T.17 N., R.4 E., Marion County, Hydrologic Unit 05120201, in the northwest corner of Skiles Test Elementary School property, 150 ft south of the intersection of Johnson Road and East 71st Street, 0.3 mi west of Shadeland Avenue, and 1.5 mi south of Castleton. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 6 in., depth 94 ft, cased to 89 ft, screened to 94 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 812.20 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of floor of shelter, 3.90 ft above land-surface datum.

PERIOD OF RECORD.--May 1978 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 71.75 ft below land-surface datum, Apr. 15, 1980; lowest, 75.29 ft below land-surface datum, Dec. 17, 1983.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

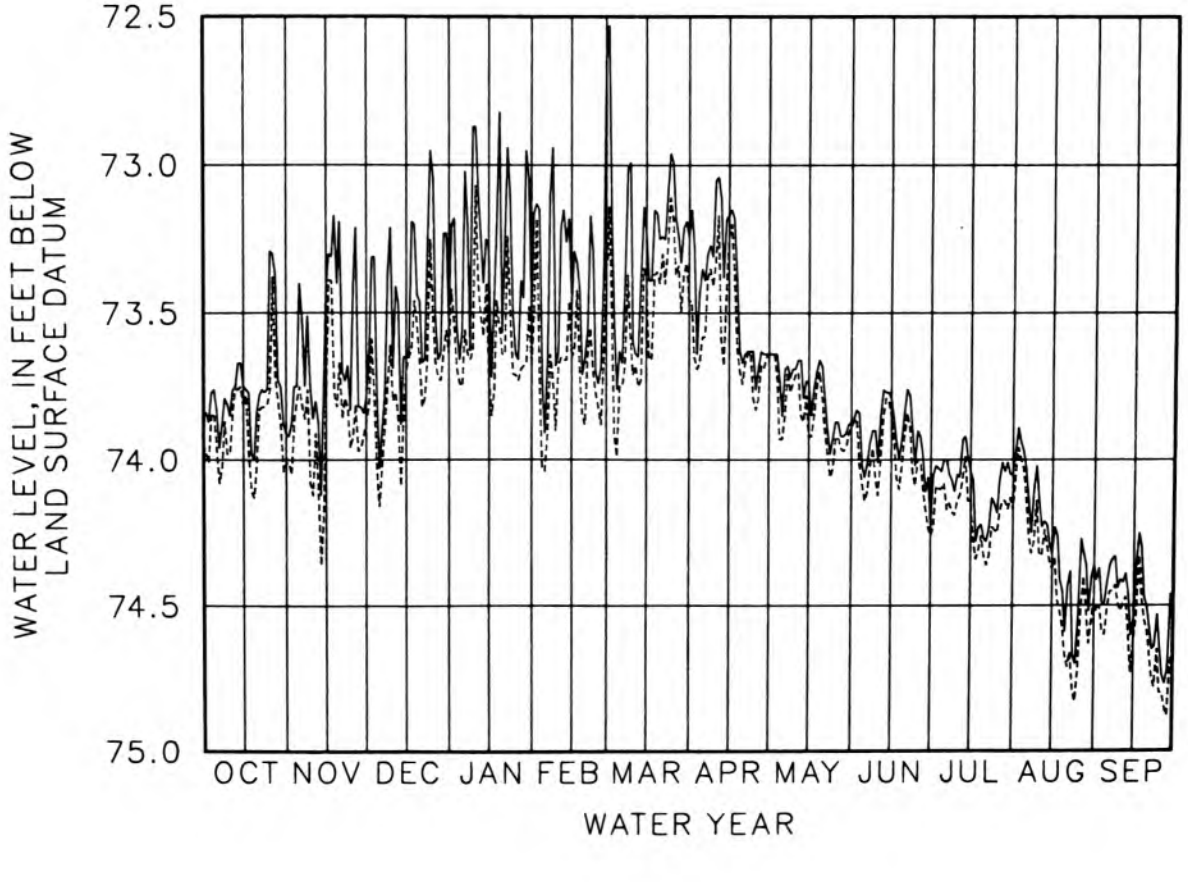
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	73.83	73.40	74.03	73.57	73.91	73.63	73.35	73.85	74.06	74.00	74.03	74.42
10	73.85	73.86	73.69	72.87	73.64	73.60	73.05	73.69	74.01	74.05	74.14	74.41
15	73.75	73.41	73.65	73.27	73.47	73.23	73.17	73.74	73.79	74.04	74.32	74.55
20	73.84	73.19	73.46	73.57	73.66	73.25	73.67	73.68	73.84	74.27	74.59	74.50
25	73.29	73.42	73.04	73.64	73.74	72.99	73.76	73.87	73.90	74.18	74.54	74.64
EOM	73.91	73.79	73.53	73.50	72.63	73.24	73.64	73.87	74.22	74.05	74.36	74.50

WTR YR 1987 HIGH 72.53 MAR 1

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	73.96	73.75	74.16	73.75	74.04	73.75	73.58	73.93	74.14	74.08	74.14	74.51
10	73.98	74.12	73.80	73.07	73.68	73.71	73.33	73.71	74.12	74.14	74.32	74.52
15	73.82	73.77	73.70	73.73	73.65	73.38	73.24	73.92	73.85	74.14	74.37	74.62
20	74.01	73.67	73.66	73.64	73.88	73.40	73.74	73.79	73.92	74.33	74.67	74.58
25	73.76	73.92	73.50	73.71	73.82	73.18	73.83	73.93	74.00	74.25	74.72	74.80
EOM	74.01	73.87	73.64	73.68	73.32	73.46	73.64	73.89	74.26	74.17	74.48	74.65

WTR YR 1987 LOW 74.88 SEP 28



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, 4.27 ft below land-surface datum, July 11, 1986; lowest, 8.19 ft below land-surface datum, Sept. 30, 1987.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

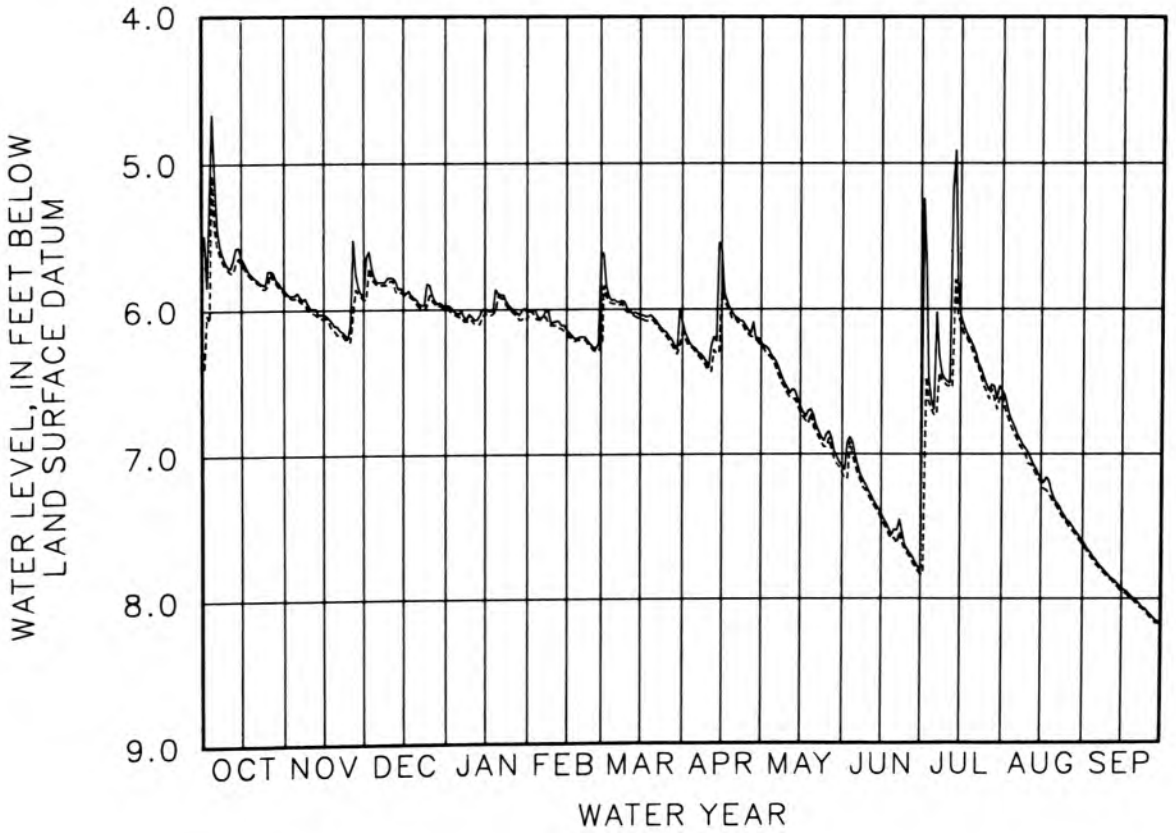
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.09	5.88	5.81	6.03	6.06	5.93	6.27	6.34	7.01	6.69	6.82	7.73
10	5.70	5.99	5.78	6.05	6.09	6.00	6.40	6.54	7.25	6.50	6.99	7.84
15	5.64	6.03	5.88	5.99	6.14	6.04	5.58	6.67	7.41	6.04	7.17	7.93
20	5.78	6.11	5.93	5.89	6.19	6.06	6.05	6.73	7.52	6.26	7.31	8.00
25	5.73	6.10	5.83	5.99	6.26	6.16	6.14	6.86	7.66	6.52	7.46	8.09
EOM	5.86	5.90	5.98	6.02	5.61	6.08	6.23	7.08	7.81	6.56	7.60	8.17

WTR YR 1987 HIGH 4.66 OCT 4

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.44	5.91	5.83	6.05	6.07	5.96	6.30	6.37	7.08	6.73	6.87	7.76
10	5.72	6.01	5.80	6.07	6.11	6.02	6.42	6.58	7.28	6.53	7.07	7.86
15	5.68	6.05	5.89	6.02	6.17	6.07	5.88	6.71	7.45	6.10	7.20	7.95
20	5.79	6.17	5.96	5.91	6.21	6.08	6.06	6.80	7.58	6.31	7.34	8.02
25	5.83	6.22	5.90	6.01	6.28	6.19	6.17	6.95	7.69	6.57	7.48	8.11
EOM	5.88	5.93	6.00	6.07	6.24	6.16	6.26	7.13	7.83	6.59	7.63	8.19

WTR YR 1987 LOW 8.19 SEP 30



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, 36.50 ft below land-surface datum, Sept. 27, 1987; lowest, 36.95 ft below land-surface datum, Sept. 25, 1987.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

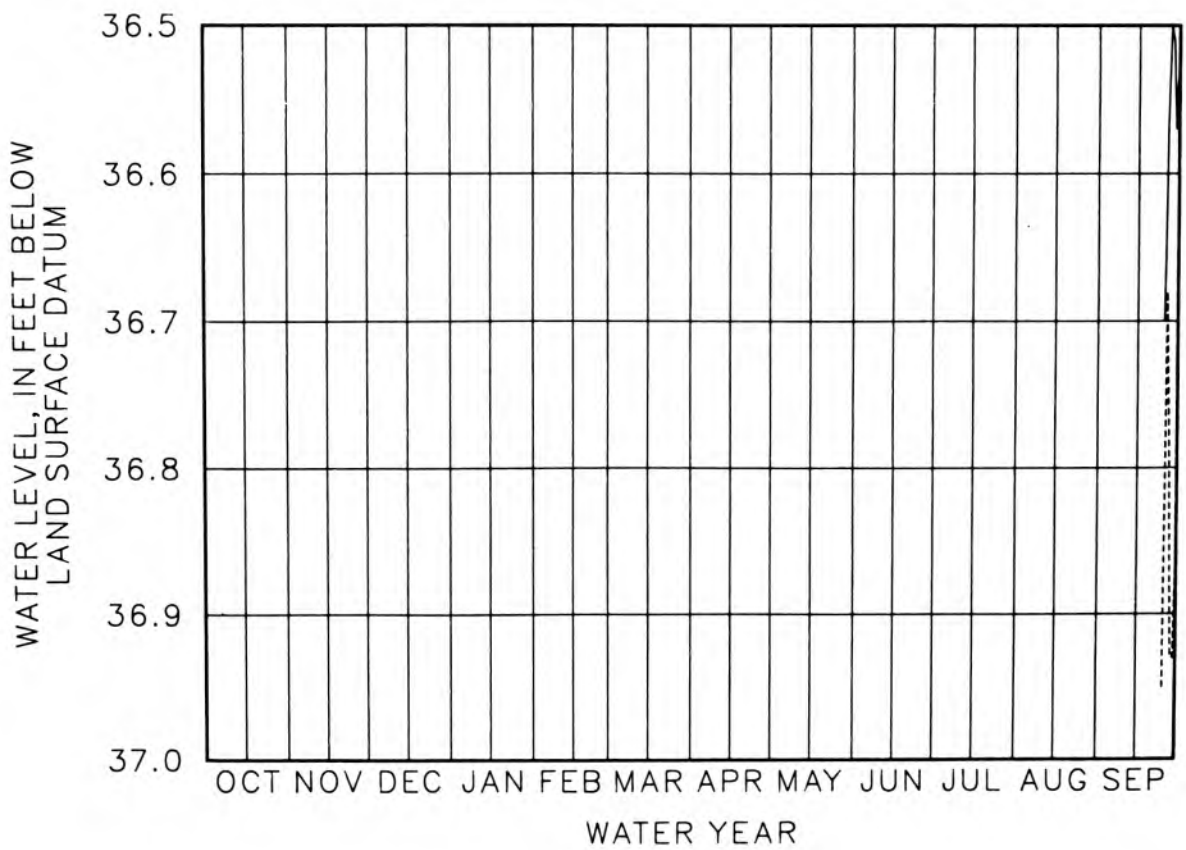
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5												---
10												---
15												---
20												---
25												36.70
EOM												36.52

WTR YR 1987 HIGH 36.50 SEP 27

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5												---
10												---
15												---
20												---
25												36.95
EOM												36.85

WTR YR 1987 LOW 36.95 SEP 25



394632086092701. Local number, MA 35--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
SEP 22...	1715	39.48	1310	6.74	16.0	0.5	540	170	140	46	81

DATE	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)
SEP 22...	25	2	2.2	367	160	120	859	2.00	<0.010	19

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, 33.03 ft below land-surface datum, Sept. 30, 1987; lowest, 33.12 ft below land-surface datum, Sept. 24, 25, 1987.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

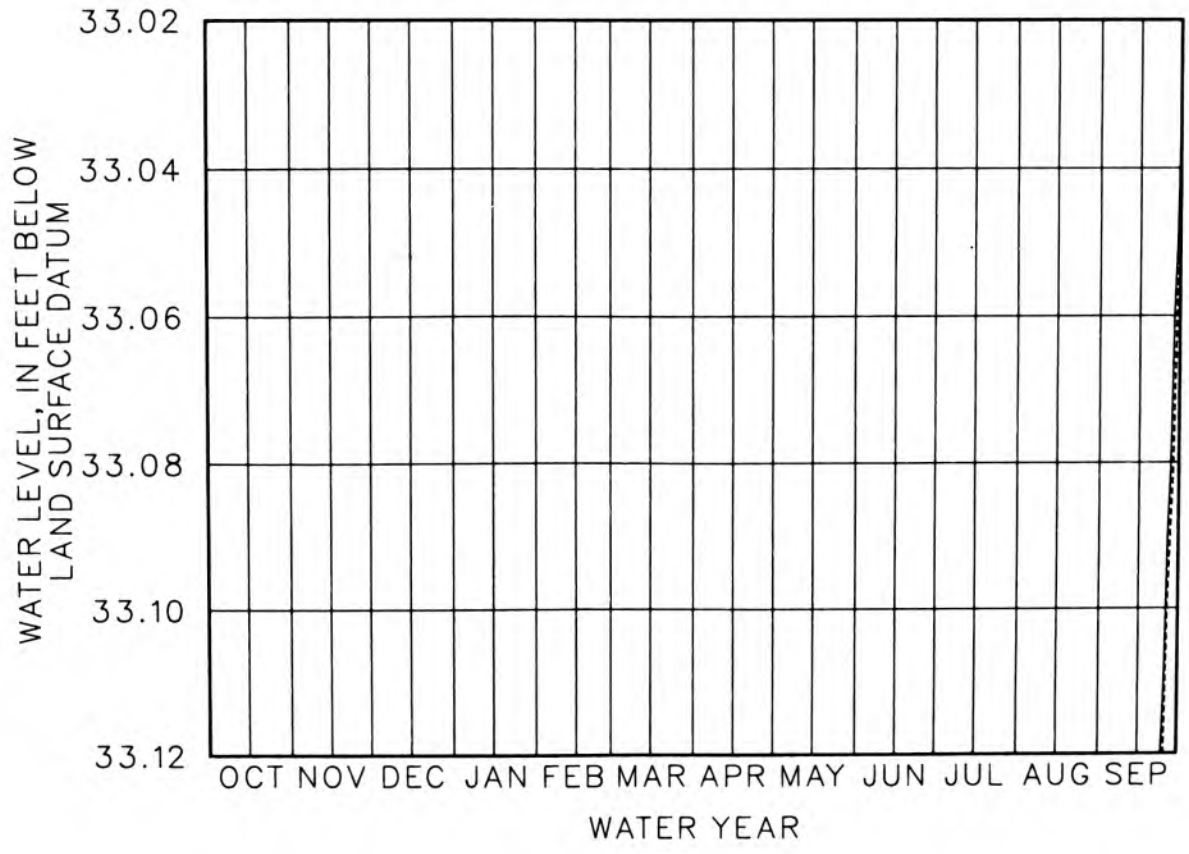
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5												---
10												---
15												---
20												---
25												33.11
EOM												33.03

WTR YR 1987 HIGH 33.03 SEP 30

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5												---
10												---
15												---
20												---
25												33.12
EOM												33.04

WTR YR 1987 LOW 33.12 SEP 24 AND OTHERS



394626086100201. Local number, MA 36--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	HARD-NESS (MG/L AS CACO3)	HARD-NESS NONCARB WH WAT TOT FLD MG/L AS CACO3	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
SEP 23...	1415	35.60	1190	7.21	14.0	0.2	510	180	140	39	65

DATE	PERCENT SODIUM	SODIUM AD-SORP-TION RATIO	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY WH WAT TOTAL FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	SOLIDS, RESIDUE AT 105 DEG. C, TOTAL (MG/L)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P)	IRON, DIS-SOLVED (UG/L AS FE)
SEP 23...	22	1	1.6	326	160	110	790	<0.100	<0.010	860

MARTIN COUNTY

383659086545901. Local number, MT 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: Joseph 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, 2.8 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 1986 TO SEPTEMBER 1987

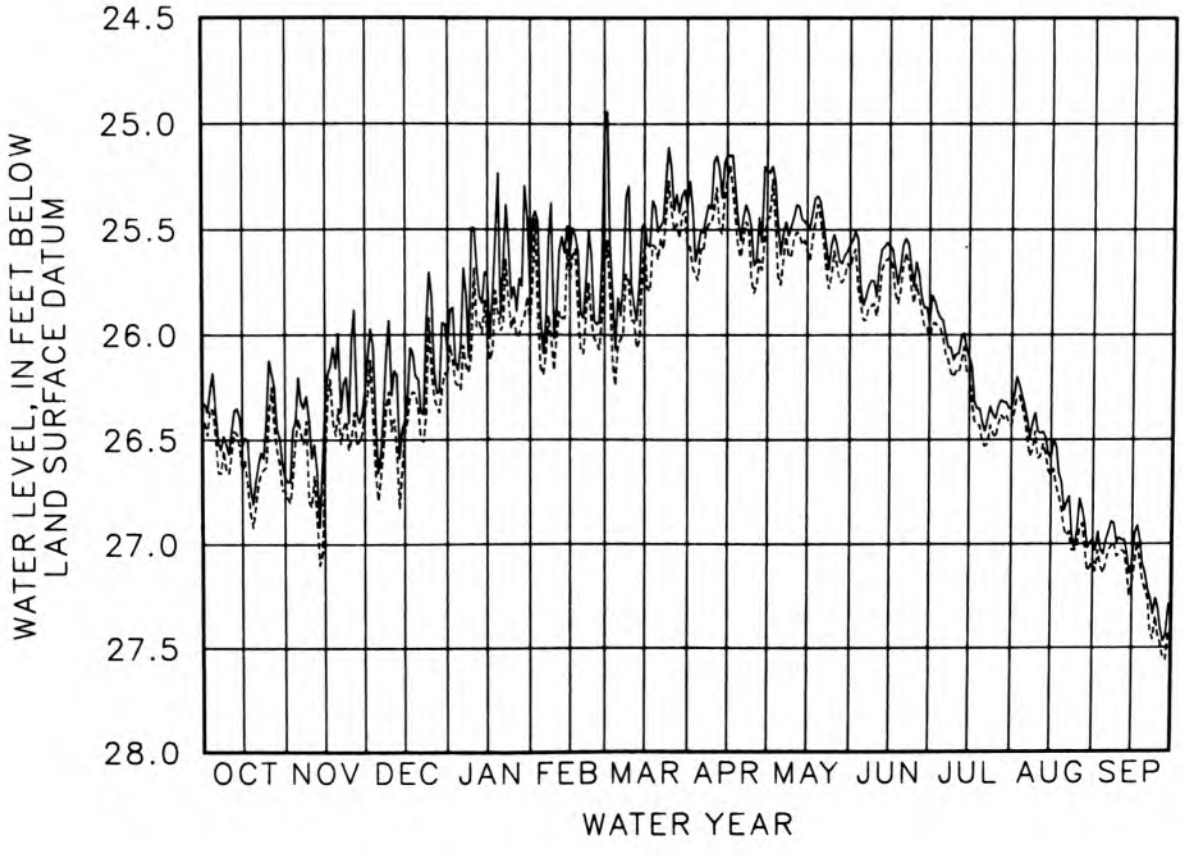
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	26.36	26.20	26.66	26.06	26.09	25.82	25.51	25.62	25.86	25.93	26.34	26.98
10	26.57	26.59	26.29	25.49	25.88	25.76	25.18	25.44	25.82	26.09	26.46	26.97
15	26.53	26.33	26.41	25.72	25.61	25.47	25.15	25.48	25.58	26.11	26.59	27.10
20	26.70	25.99	26.21	25.92	25.92	25.51	25.55	25.37	25.57	26.42	26.84	27.14
25	26.12	26.03	25.82	25.77	25.95	25.20	25.67	25.52	25.65	26.40	26.94	27.31
EOM	26.68	26.27	26.07	25.77	25.01	25.39	25.22	25.57	25.95	26.35	26.98	27.33

WTR YR 1987 HIGH 24.94 MAR 1

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	26.48	26.40	26.79	26.26	26.19	26.05	25.59	25.76	25.93	26.01	26.40	27.09
10	26.66	26.82	26.46	25.68	26.01	25.93	25.41	25.54	25.91	26.17	26.59	27.05
15	26.65	26.61	26.47	26.02	25.74	25.56	25.25	25.60	25.63	26.19	26.67	27.19
20	26.82	26.35	26.36	25.98	26.09	25.64	25.63	25.45	25.68	26.51	26.92	27.22
25	26.38	26.49	26.17	25.91	26.04	25.41	25.80	25.60	25.76	26.49	27.02	27.44
EOM	26.74	26.36	26.20	25.94	25.63	25.58	25.45	25.68	26.03	26.43	27.07	27.45

WTR YR 1987 LOW 27.56 SEP 28



400247086482101. 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, 32.06 ft below land-surface datum, June 4, 1977.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

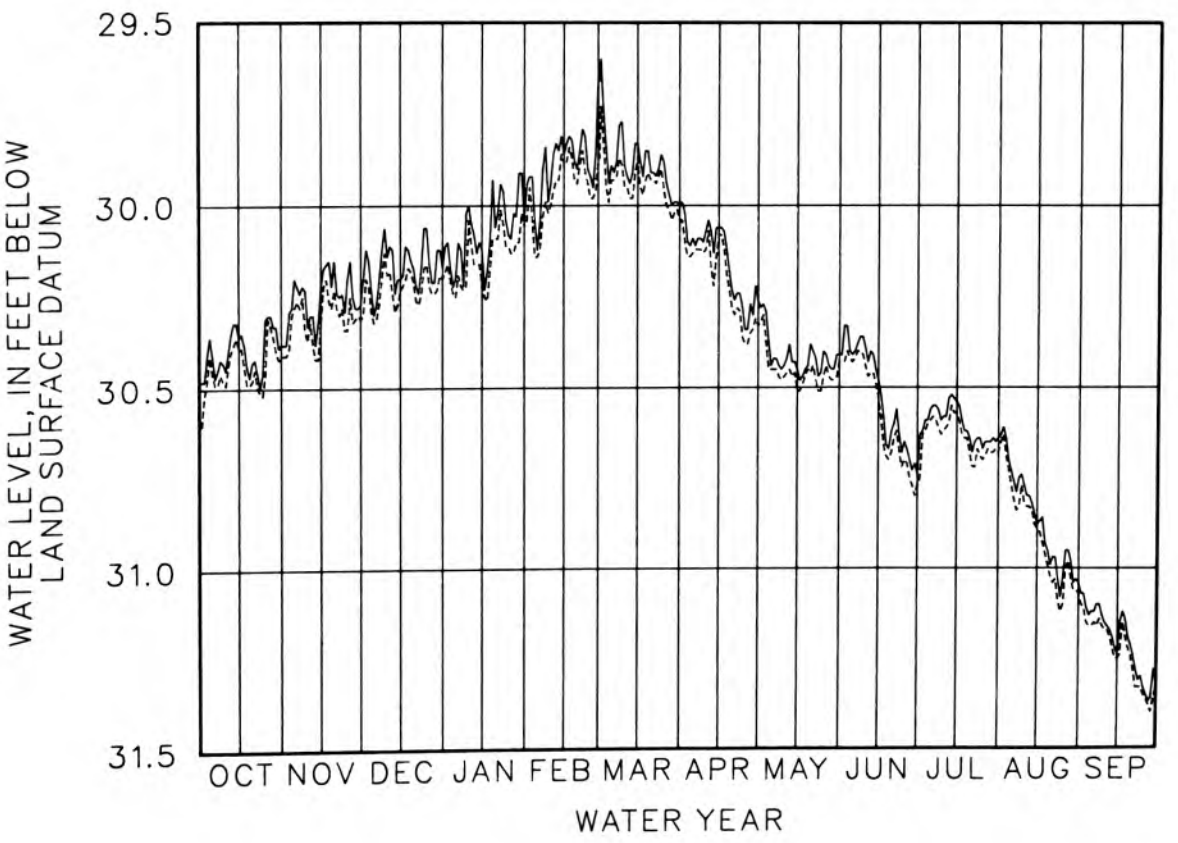
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	30.41	30.20	30.30	30.20	30.12	29.89	30.09	30.44	30.41	30.56	30.73	31.12
10	30.45	30.33	30.14	30.00	29.94	29.89	30.07	30.44	30.39	30.58	30.77	31.15
15	30.36	30.22	30.20	30.12	29.86	29.83	30.06	30.45	30.48	30.54	30.88	31.24
20	30.43	30.15	30.17	30.06	29.90	29.91	30.23	30.38	30.62	30.64	30.99	31.21
25	30.31	30.20	30.06	30.08	29.92	29.88	30.34	30.40	30.65	30.67	31.02	31.33
EOM	30.38	30.27	30.17	30.04	29.66	30.00	30.26	30.41	30.74	30.64	31.04	31.29

WTR YR 1987 HIGH 29.60 MAR 1

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	30.46	30.28	30.32	30.25	30.14	29.93	30.13	30.45	30.43	30.59	30.77	31.16
10	30.49	30.37	30.19	30.04	30.00	29.95	30.12	30.47	30.44	30.62	30.82	31.17
15	30.39	30.32	30.23	30.22	29.89	29.87	30.08	30.51	30.53	30.57	30.89	31.25
20	30.48	30.23	30.21	30.09	29.94	29.93	30.28	30.46	30.68	30.68	31.02	31.24
25	30.46	30.34	30.16	30.11	29.98	29.96	30.38	30.47	30.70	30.70	31.10	31.35
EOM	30.42	30.31	30.20	30.06	29.87	30.04	30.33	30.43	30.77	30.68	31.07	31.33

WTR YR 1987 LOW 31.40 SEP 28



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, 15.65 ft below land-surface datum, Nov. 9, 1983.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

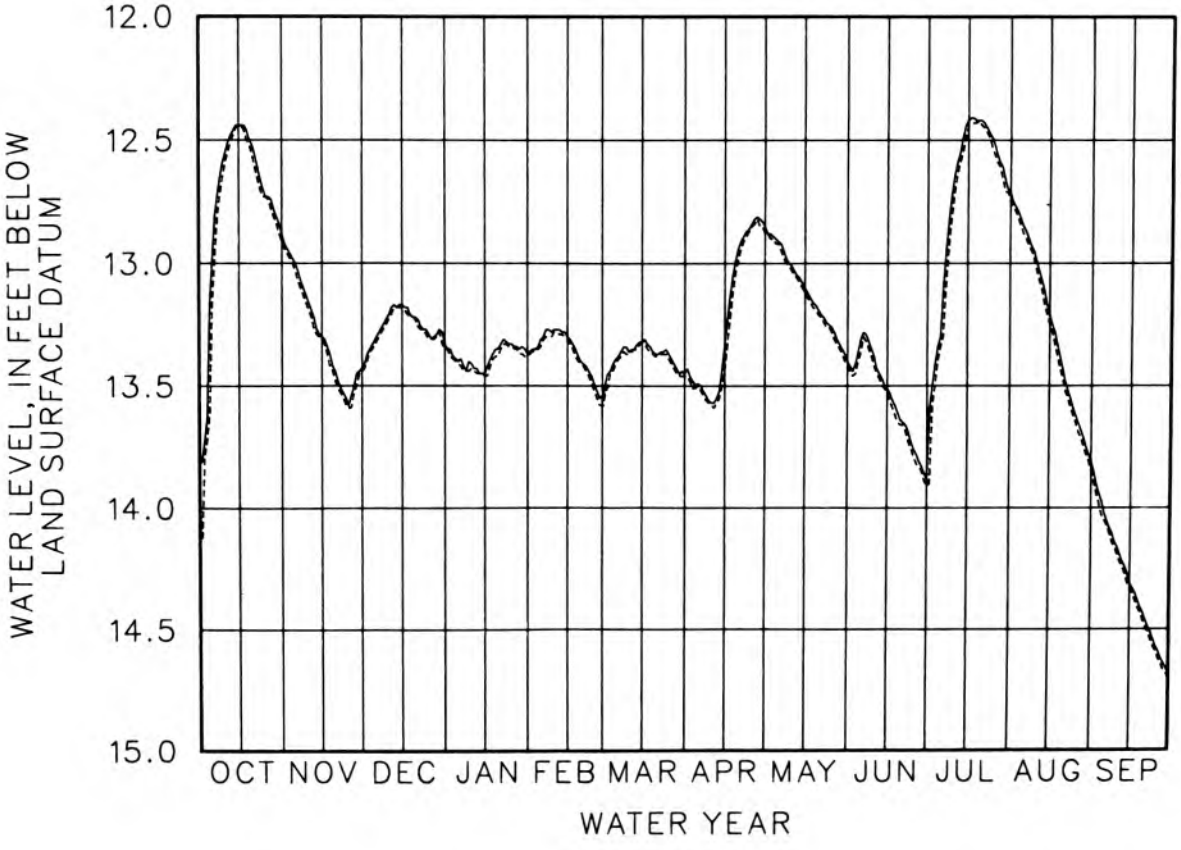
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	12.99	13.00	13.31	13.40	13.31	13.39	13.49	12.91	13.31	13.30	12.85	14.02
10	12.55	13.16	13.21	13.41	13.27	13.36	13.57	13.01	13.38	12.64	12.99	14.16
15	12.44	13.30	13.17	13.45	13.30	13.32	13.33	13.10	13.51	12.42	13.21	14.31
20	12.52	13.44	13.22	13.35	13.40	13.37	12.94	13.19	13.64	12.42	13.43	14.43
25	12.73	13.58	13.29	13.33	13.49	13.37	12.84	13.26	13.76	12.52	13.62	14.57
EOM	12.88	13.43	13.33	13.37	13.54	13.45	12.85	13.40	13.88	12.71	13.81	14.68

WTR YR 1987 HIGH 12.41 JUL 16 AND OTHERS

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	13.16	13.03	13.33	13.41	13.34	13.41	13.50	12.92	13.36	13.34	12.88	14.05
10	12.59	13.19	13.23	13.43	13.28	13.37	13.58	13.03	13.42	12.71	13.03	14.19
15	12.44	13.31	13.18	13.46	13.31	13.32	13.43	13.12	13.53	12.44	13.25	14.33
20	12.56	13.48	13.23	13.38	13.41	13.38	12.99	13.21	13.66	12.44	13.47	14.46
25	12.73	13.59	13.31	13.34	13.52	13.39	12.85	13.28	13.79	12.56	13.65	14.59
EOM	12.91	13.44	13.35	13.38	13.58	13.46	12.88	13.42	13.91	12.75	13.85	14.71

WTR YR 1987 LOW 14.71 SEP 30



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, 17.09 ft below land-surface datum, Oct. 30, 31, 1984.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

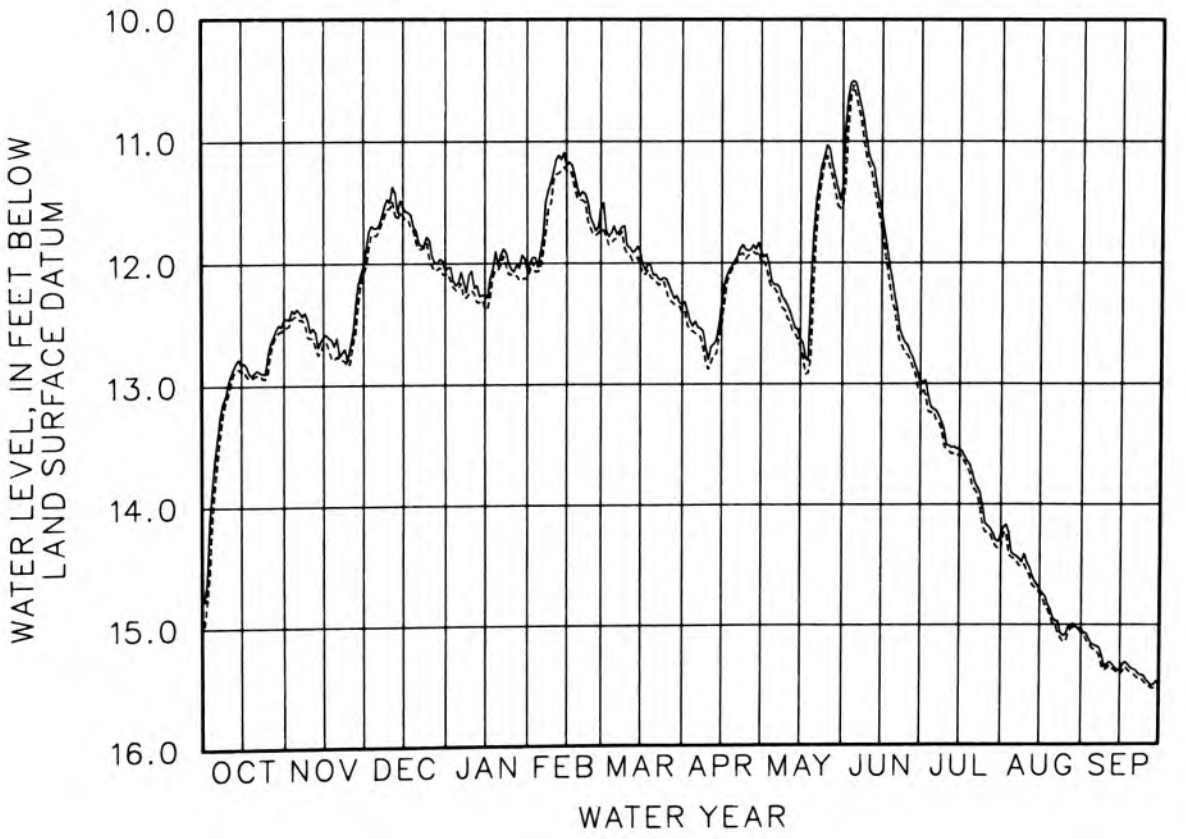
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	13.61	12.37	11.71	12.16	11.91	11.69	12.48	12.18	10.52	13.21	14.42	15.17
10	12.99	12.56	11.50	12.06	11.25	11.86	12.80	12.35	11.11	13.51	14.48	15.33
15	12.83	12.60	11.54	12.26	11.20	11.91	12.34	12.63	11.60	13.54	14.71	15.38
20	12.89	12.61	11.73	12.02	11.45	12.10	11.98	11.75	12.27	13.74	14.94	15.37
25	12.74	12.69	11.81	12.05	11.67	12.13	11.90	11.03	12.68	14.16	15.08	15.46
EOM	12.45	12.02	12.06	12.07	11.54	12.34	11.91	11.38	13.01	14.25	15.03	15.51

WTR YR 1987 HIGH 10.50 JUN 4

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	13.83	12.43	11.77	12.21	12.04	11.80	12.58	12.21	10.63	13.23	14.45	15.21
10	13.08	12.61	11.55	12.22	11.32	11.92	12.88	12.46	11.19	13.55	14.55	15.36
15	12.88	12.65	11.61	12.37	11.24	12.02	12.51	12.70	11.74	13.58	14.74	15.41
20	12.92	12.76	11.83	12.05	11.48	12.13	12.01	12.15	12.39	13.86	14.99	15.41
25	12.89	12.82	11.96	12.09	11.76	12.23	11.94	11.12	12.76	14.23	15.14	15.50
EOM	12.53	12.09	12.09	12.13	11.72	12.41	12.00	11.54	13.09	14.37	15.07	15.55

WTR YR 1987 LOW 15.55 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, 85.51 ft below land-surface datum, Aug. 29, 1986.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

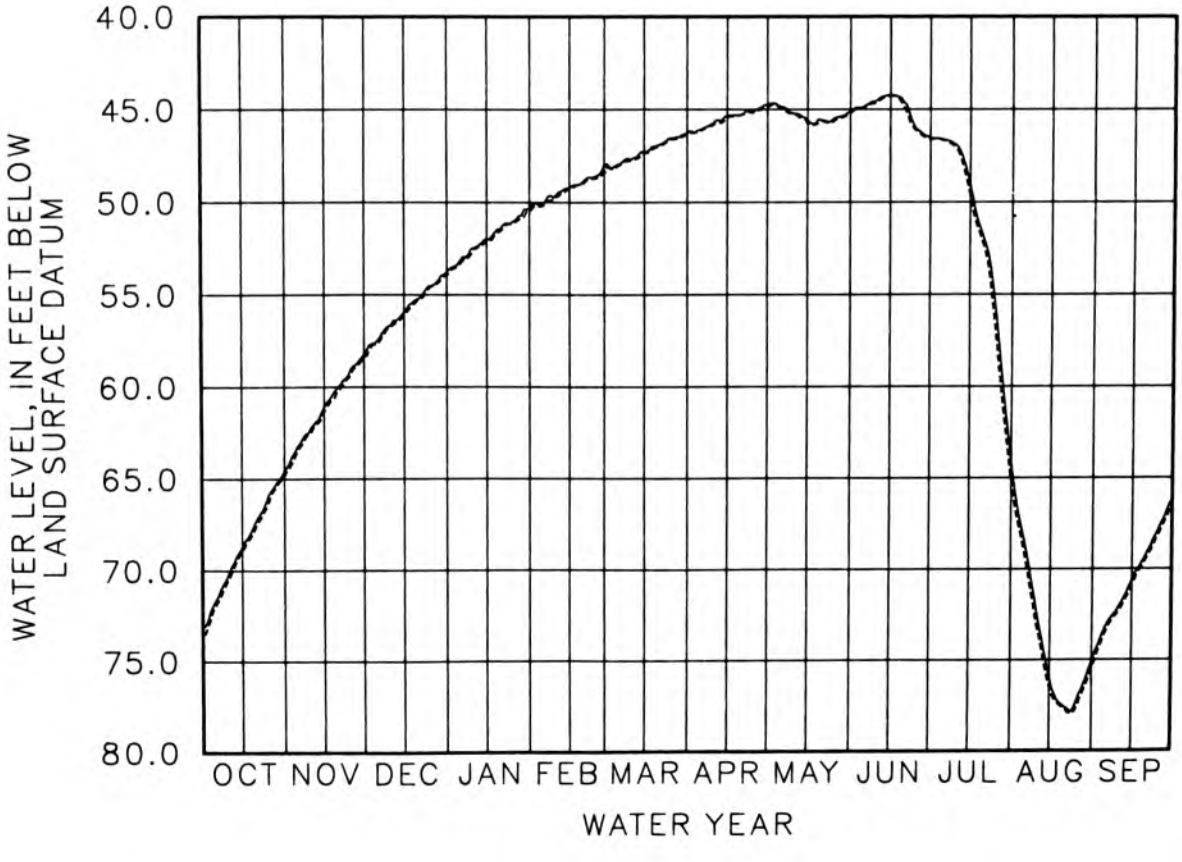
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	71.64	63.23	57.48	53.15	50.09	47.96	46.08	44.85	44.85	46.63	68.34	73.18
10	70.15	62.22	56.65	52.45	49.61	47.70	45.69	45.22	44.51	46.95	72.43	72.10
15	68.73	61.09	55.93	52.01	49.23	47.26	45.34	45.58	44.22	49.03	76.02	70.62
20	67.36	60.04	55.23	51.44	48.87	46.93	45.28	45.56	44.60	51.82	77.52	69.27
25	65.85	59.03	54.51	51.01	48.58	46.53	45.06	45.46	46.07	55.96	77.37	67.77
EOM	64.55	58.25	53.77	50.33	47.99	46.27	44.80	45.10	46.52	64.13	75.10	66.19

WTR YR 1987 HIGH 44.22 JUN 14 AND OTHERS

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	71.93	63.53	57.69	53.35	50.19	48.03	46.13	44.87	44.92	46.68	69.05	73.51
10	70.48	62.50	56.76	52.50	49.72	47.76	45.82	45.29	44.63	47.13	73.19	72.37
15	68.96	61.38	56.12	52.11	49.32	47.34	45.43	45.76	44.30	49.68	76.56	70.93
20	67.68	60.22	55.31	51.56	49.01	47.01	45.30	45.61	44.85	52.23	77.63	69.53
25	66.27	59.37	54.55	51.14	48.69	46.59	45.16	45.61	46.17	57.33	77.72	68.09
EOM	64.84	58.42	53.95	50.51	48.35	46.34	44.89	45.19	46.61	65.18	75.46	66.43

WTR YR 1987 LOW 77.98 AUG 23



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, 94.14 ft below land-surface datum, July 30, 1985.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

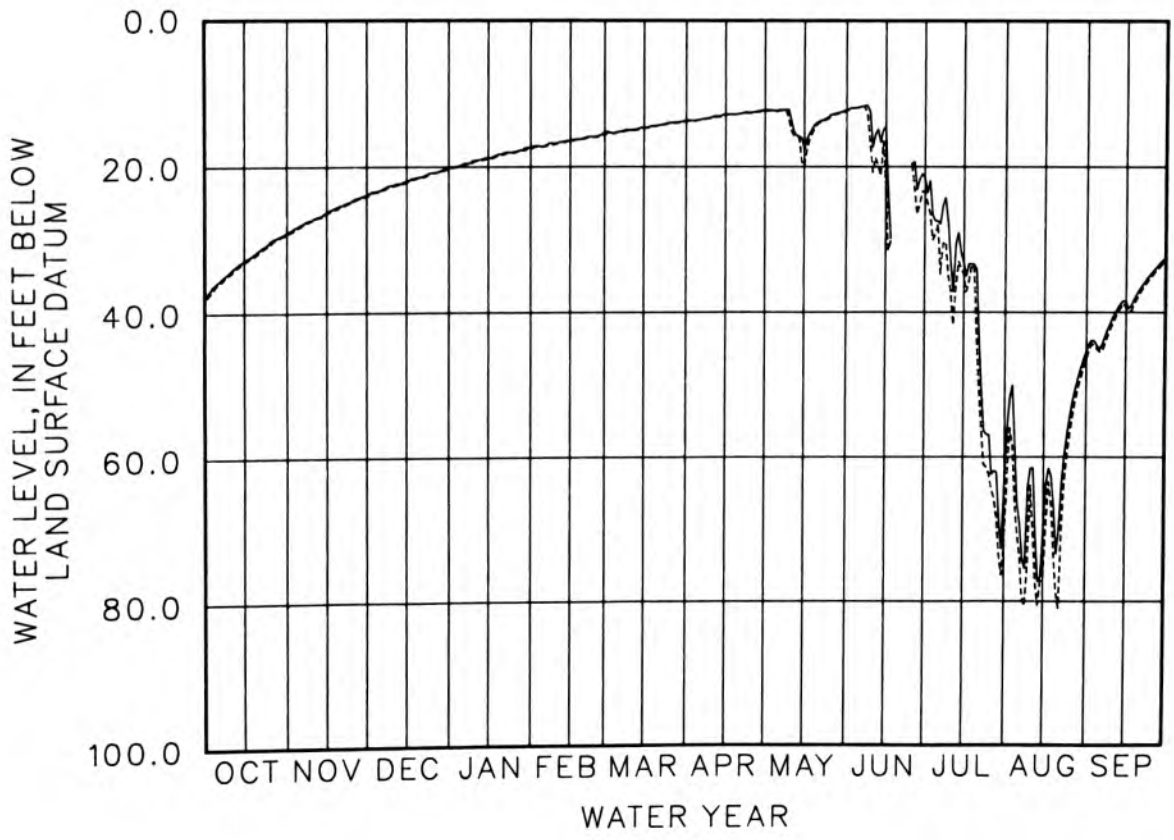
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	35.72	27.89	23.22	19.69	17.17	15.22	13.56	12.30	11.83	27.45	66.52	45.09
10	34.15	27.06	22.52	19.11	16.72	15.00	13.19	13.55	17.37	33.07	61.51	40.72
15	32.74	26.13	21.95	18.76	16.40	14.62	12.84	17.69	14.55	33.19	70.31	38.54
20	31.47	25.28	21.40	18.28	16.10	14.32	12.75	13.91	---	34.01	73.47	36.95
25	30.05	24.48	20.79	17.93	15.83	13.95	12.54	12.89	19.57	56.96	54.16	34.46
EOM	28.96	23.84	20.19	17.36	15.25	13.73	12.31	12.23	21.45	63.99	45.42	32.47

WTR YR 1987 HIGH 11.59 JUN 8

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	36.02	28.16	23.38	19.88	17.26	15.28	13.59	12.37	11.90	27.82	70.56	45.45
10	34.51	27.30	22.60	19.16	16.82	15.06	13.31	15.11	20.77	37.09	63.93	41.55
15	32.96	26.38	22.08	18.88	16.49	14.69	12.92	19.93	22.93	34.78	76.66	39.40
20	31.77	25.44	21.47	18.38	16.21	14.40	12.78	14.16	---	43.19	78.73	37.53
25	30.45	24.77	20.84	18.04	15.91	14.01	12.64	13.21	19.84	62.36	56.47	34.90
EOM	29.20	24.00	20.36	17.52	15.60	13.79	12.40	12.35	23.48	72.52	46.41	32.77

WTR YR 1987 LOW 80.96 AUG 21



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, 14.41 ft below land-surface datum, Oct. 17-19, 1985.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

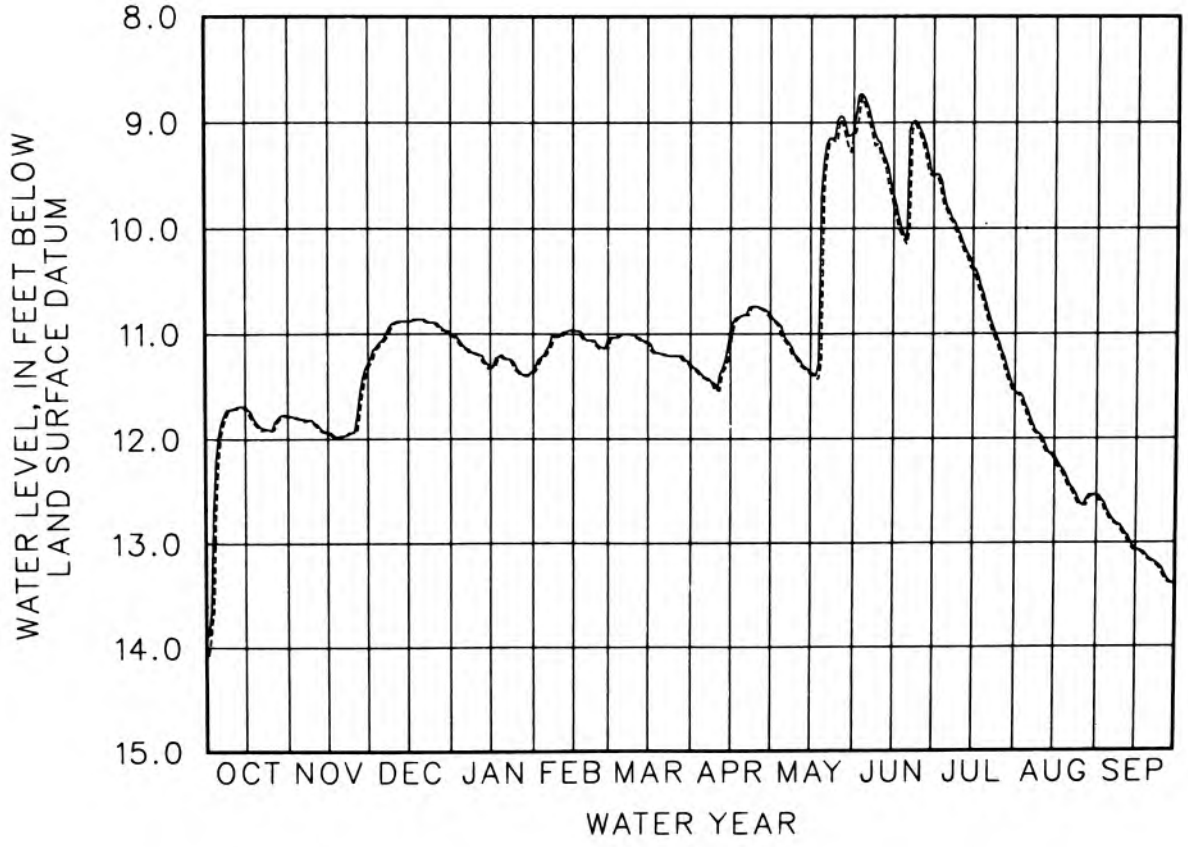
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	11.97	11.81	11.07	11.12	11.15	11.00	11.41	11.02	8.82	9.80	11.73	12.73
10	11.71	11.85	10.89	11.19	11.02	11.01	11.53	11.22	9.19	10.05	11.97	12.87
15	11.69	11.94	10.88	11.32	10.96	11.08	10.97	11.37	9.68	10.37	12.16	13.07
20	11.87	11.97	10.86	11.22	11.06	11.19	10.82	9.36	10.11	10.72	12.39	13.15
25	11.92	11.93	10.89	11.34	11.12	11.21	10.74	8.98	9.06	11.09	12.63	13.25
EOM	11.78	11.28	11.00	11.35	11.05	11.28	10.82	9.09	9.49	11.55	12.54	13.40

WTR YR 1987 HIGH 8.73 JUN 3

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	12.19	11.81	11.09	11.14	11.20	11.01	11.42	11.06	8.90	9.83	11.81	12.77
10	11.72	11.86	10.90	11.20	11.03	11.03	11.54	11.25	9.29	10.11	12.02	12.91
15	11.72	11.94	10.88	11.32	10.97	11.09	11.12	11.38	9.78	10.39	12.21	13.07
20	11.89	11.98	10.86	11.24	11.06	11.19	10.82	9.67	10.15	10.81	12.45	13.17
25	11.92	11.94	10.90	11.36	11.15	11.21	10.75	9.18	9.12	11.17	12.64	13.30
EOM	11.78	11.33	11.02	11.37	11.13	11.32	10.86	9.11	9.50	11.57	12.55	13.43

WTR YR 1987 LOW 14.07 OCT 1



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, 6.43 ft below land-surface datum, Oct. 18-21, 1984.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

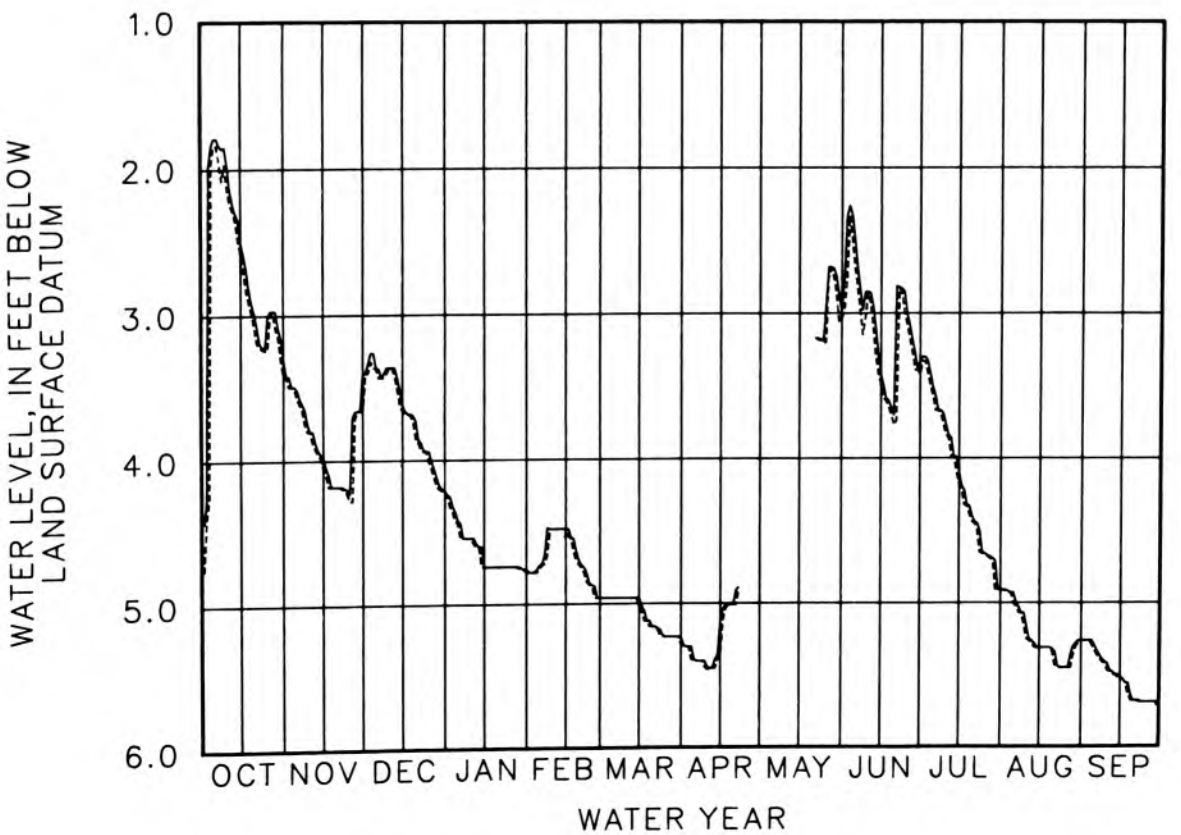
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	1.79	3.51	3.36	4.42	4.73	4.96	5.39	---	2.49	3.51	4.93	5.29
10	1.97	3.80	3.36	4.54	4.48	4.96	5.44	---	2.85	3.77	5.16	5.42
15	2.50	3.98	3.62	4.74	4.48	4.96	5.13	---	3.42	4.09	5.31	5.52
20	2.98	4.18	3.73	4.74	4.70	5.16	5.01	---	3.70	4.40	5.32	5.68
25	3.01	4.23	3.94	4.74	4.87	5.23	---	2.96	3.00	4.66	5.45	5.69
EOM	3.30	3.40	4.21	4.76	4.96	5.23	---	2.99	3.33	4.91	5.26	5.71

WTR YR 1987 HIGH 1.79 OCT 5 AND OTHERS

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	1.84	3.57	3.37	4.44	4.76	4.96	5.40	---	2.69	3.57	5.00	5.33
10	2.14	3.80	3.36	4.54	4.48	4.96	5.46	---	2.86	3.84	5.25	5.47
15	2.58	4.05	3.66	4.74	4.48	5.02	5.35	---	3.50	4.19	5.31	5.53
20	3.08	4.18	3.86	4.74	4.73	5.16	5.01	---	3.77	4.44	5.34	5.68
25	3.24	4.28	4.01	4.74	4.88	5.23	---	3.20	3.08	4.67	5.45	5.69
EOM	3.42	3.65	4.24	4.78	4.96	5.29	---	3.03	3.42	4.91	5.26	5.72

WTR YR 1987 LOW 5.72 SEP 30



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 760 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, 83.41 ft below land-surface datum, July 25, 1985.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

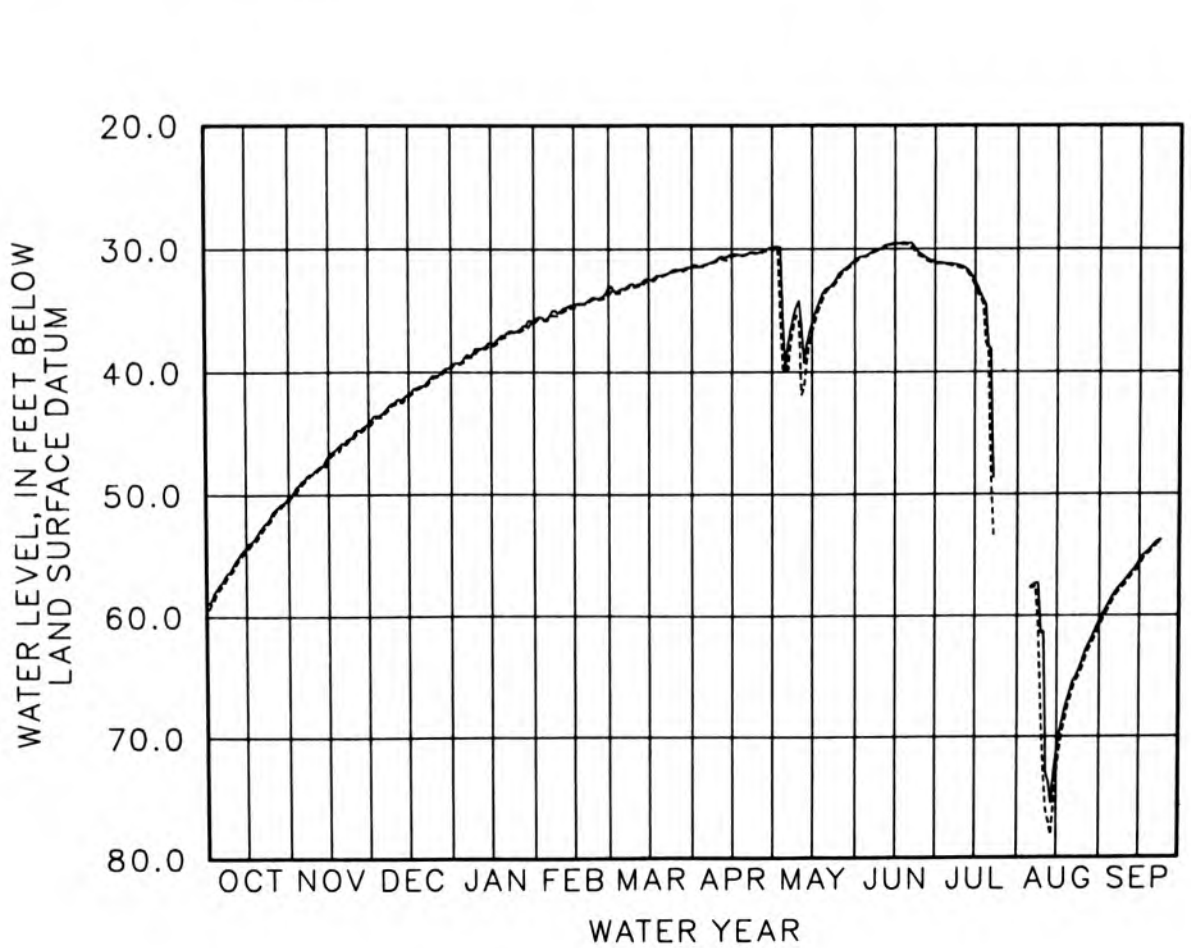
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	57.38	48.91	43.44	38.79	35.65	33.21	31.26	39.73	30.45	31.19	57.64	58.36
10	55.84	48.03	42.48	38.07	35.05	32.98	30.76	34.21	29.97	31.39	61.26	56.97
15	54.34	46.84	41.81	37.64	34.62	32.45	30.47	36.03	29.56	32.63	71.21	55.54
20	52.97	45.83	41.14	37.06	34.24	32.12	30.43	33.26	29.53	37.90	66.17	54.28
25	51.42	44.89	40.30	36.61	33.94	31.66	30.28	32.03	30.45	---	63.43	---
EOM	50.20	44.23	39.45	35.83	33.09	31.44	29.96	30.93	31.10	---	60.47	---

WTR YR 1987 HIGH 29.49 JUN 21

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	57.71	49.24	43.71	39.16	35.81	33.30	31.30	40.06	30.53	31.28	57.70	58.73
10	56.27	48.33	42.67	38.21	35.19	33.08	30.96	35.87	30.08	31.58	72.85	57.32
15	54.59	47.18	42.00	37.85	34.77	32.57	30.59	36.76	29.57	33.04	72.98	55.85
20	53.37	46.06	41.19	37.19	34.43	32.22	30.51	33.55	29.67	38.17	66.87	54.51
25	51.90	45.30	40.42	36.79	34.08	31.78	30.41	32.40	30.62	---	64.05	---
EOM	50.54	44.44	39.69	36.10	33.63	31.52	30.13	31.09	31.22	---	60.87	---

WTR YR 1987 LOW 78.19 AUG 13



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, 1.5 mi west of the intersection of U.S. Highway 41 and State Highway 10, then north 0.5 mi on county road leading to the entrance of the La Salle State Fish and Wildlife Area, then 0.2 mi to the wildlife area parking lot. Well is located 100 ft south of the parking lot and 75 ft west of the road. 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 ft above National Geodetic Vertical Datum of 1929, from topographic map. 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, 7.30 ft below land-surface datum, June 8, 12, 1987; lowest, 28.69 ft below land-surface datum, Aug. 24, 1986.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

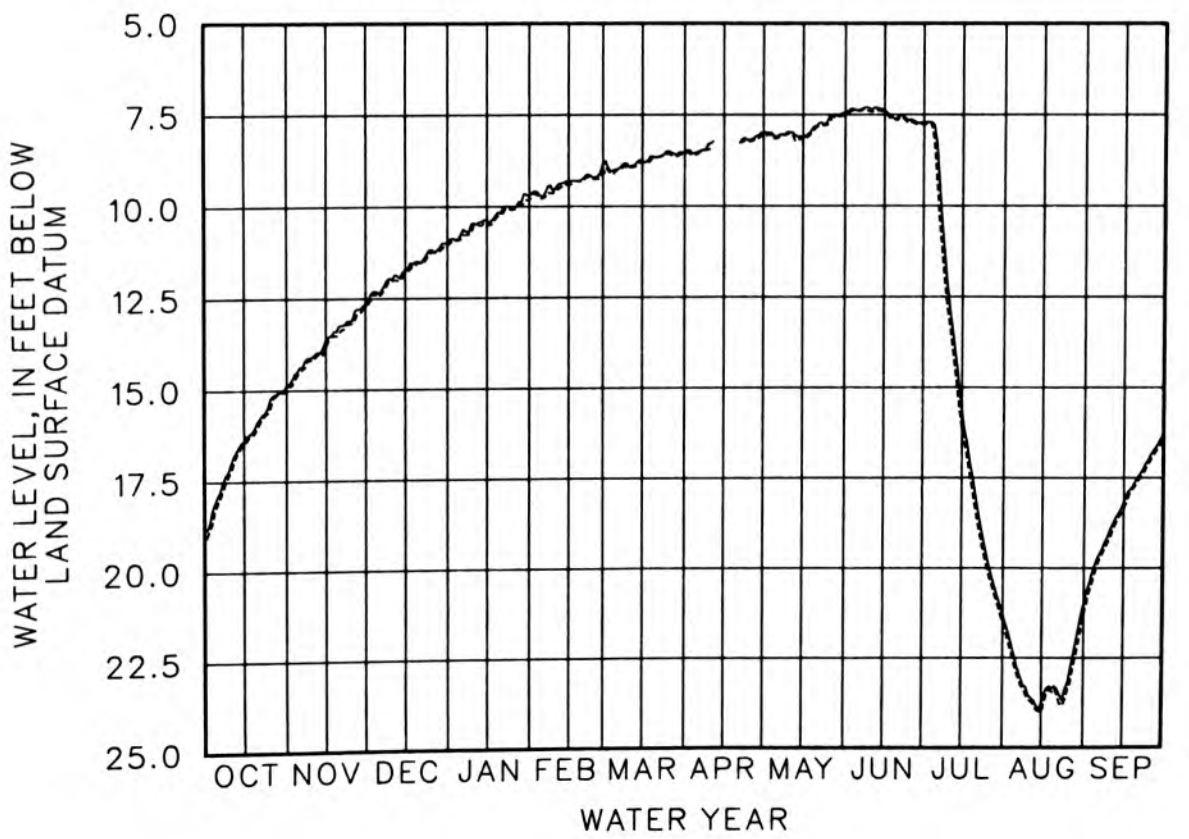
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	17.90	14.37	12.36	10.77	9.75	8.99	8.52	8.10	7.37	8.23	22.58	19.73
10	17.02	14.08	11.99	10.44	9.50	8.93	8.27	7.97	7.36	12.63	23.54	18.90
15	16.38	13.63	11.73	10.38	9.38	8.76	---	8.12	7.37	15.64	23.78	18.19
20	15.87	13.23	11.49	10.18	9.26	8.66	---	7.81	7.56	17.82	23.28	17.52
25	15.20	13.09	11.17	10.03	9.20	8.49	8.18	7.55	7.63	19.76	23.21	16.90
EOM	14.87	12.63	10.96	9.73	8.81	8.52	8.01	7.44	7.74	21.29	20.99	16.32

WTR YR 1987 HIGH 7.30 JUN 8 AND OTHERS

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	18.11	14.52	12.45	10.89	9.78	9.02	8.56	8.15	7.40	9.16	22.84	19.91
10	17.24	14.19	12.02	10.51	9.57	8.95	8.43	8.02	7.42	13.18	23.67	19.11
15	16.46	13.81	11.80	10.49	9.41	8.80	---	8.20	7.47	16.13	24.01	18.35
20	16.05	13.43	11.51	10.22	9.32	8.67	---	7.84	7.65	18.25	23.35	17.63
25	15.47	13.17	11.23	10.08	9.25	8.56	8.23	7.71	7.69	20.06	23.39	17.03
EOM	15.02	12.70	11.05	9.83	9.09	8.55	8.10	7.47	7.77	21.52	21.28	16.40

WTR YR 1987 LOW 24.01 AUG 15



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 State Park, and 5.0 mi south of Albion.
Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled water-table 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 1986 TO SEPTEMBER 1987

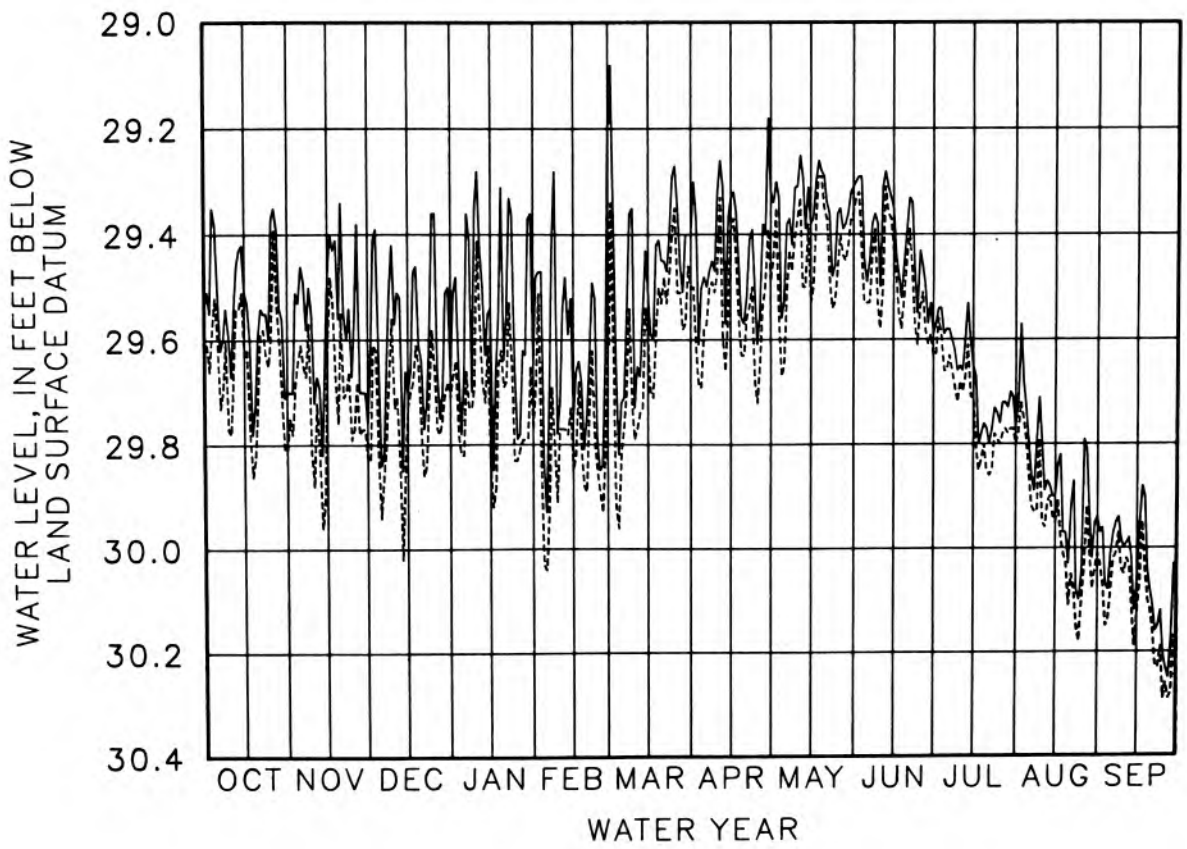
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	29.51	29.46	29.84	29.68	29.93	29.72	29.48	29.53	29.49	29.58	29.79	30.01
10	29.67	29.72	29.57	29.28	29.72	29.73	29.32	29.31	29.50	29.65	29.79	30.00
15	29.51	29.48	29.70	29.54	29.75	29.51	29.33	29.38	29.35	29.65	29.90	30.07
20	29.60	29.34	29.64	29.64	29.75	29.45	29.57	29.29	29.39	29.77	30.03	30.08
25	29.37	29.56	29.36	29.79	29.85	29.27	29.61	29.36	29.43	29.76	30.05	30.20
EOM	29.70	29.76	29.67	29.65	29.19	29.40	29.32	29.31	29.59	29.77	29.94	30.06

WTR YR 1987 HIGH 29.08 MAR 1

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	29.60	29.61	29.94	29.82	30.04	29.82	29.58	29.65	29.53	29.66	29.86	30.08
10	29.78	29.88	29.73	29.41	29.77	29.79	29.47	29.37	29.58	29.68	29.95	30.05
15	29.63	29.62	29.73	29.84	29.85	29.59	29.39	29.53	29.43	29.71	29.95	30.13
20	29.73	29.55	29.77	29.69	29.89	29.53	29.63	29.35	29.45	29.85	30.11	30.12
25	29.59	29.77	29.66	29.83	29.89	29.35	29.72	29.47	29.54	29.80	30.10	30.29
EOM	29.81	29.83	29.71	29.77	29.61	29.50	29.49	29.36	29.63	29.80	30.01	30.18

WTR YR 1987 LOW 30.29 SEP 25 AND OTHERS



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 1986 TO SEPTEMBER 1987

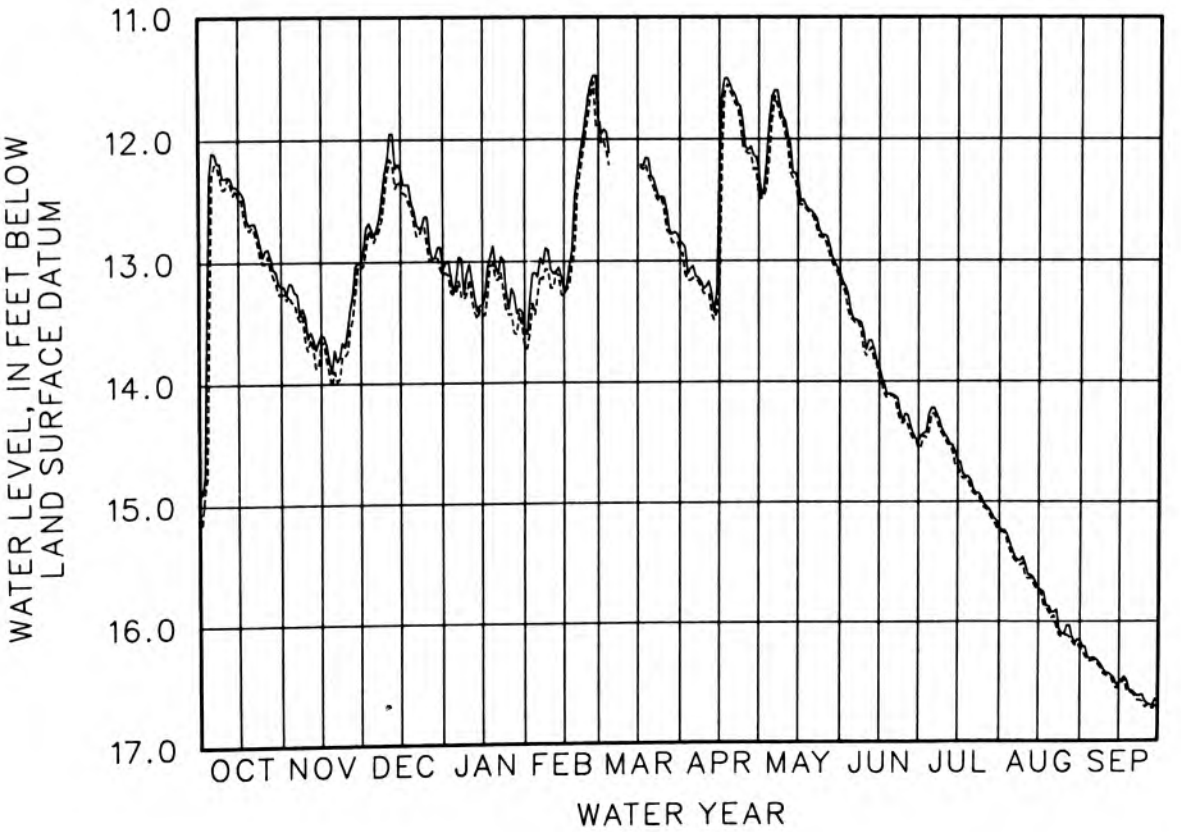
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	12.10	13.25	12.79	13.16	13.13	---	13.04	11.65	13.48	14.22	15.40	16.30
10	12.31	13.63	12.17	13.02	13.07	---	13.21	11.85	13.74	14.44	15.52	16.43
15	12.40	13.60	12.25	13.36	13.24	---	12.22	12.34	13.87	14.66	15.72	16.51
20	12.68	13.72	12.58	13.04	12.29	12.30	11.61	12.59	14.11	14.82	15.92	16.58
25	12.90	13.57	12.63	13.39	11.54	12.48	12.07	12.79	14.27	15.02	16.10	16.67
EOM	13.20	13.01	13.07	13.56	11.86	12.84	12.24	13.10	14.50	15.22	16.15	16.67

WTR YR 1987 HIGH 11.48 FEB 26 AND OTHERS

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	12.30	13.33	12.84	13.26	13.28	---	13.14	11.83	13.49	14.27	15.46	16.32
10	12.40	13.73	12.27	13.15	13.22	---	13.27	11.96	13.79	14.47	15.63	16.45
15	12.48	13.65	12.37	13.44	13.27	---	13.24	12.52	13.97	14.70	15.74	16.53
20	12.71	13.90	12.69	13.15	12.46	12.35	11.65	12.62	14.12	14.90	15.97	16.60
25	13.01	13.74	12.88	13.44	11.65	12.58	12.10	12.81	14.32	15.05	16.12	16.72
EOM	13.26	13.04	13.11	13.71	11.90	12.93	12.47	13.17	14.56	15.25	16.22	16.73

WTR YR 1987 LOW 16.73 SEP 28 AND OTHERS



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, 16.40 ft below land-surface datum, Oct. 17, 18, 1984.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

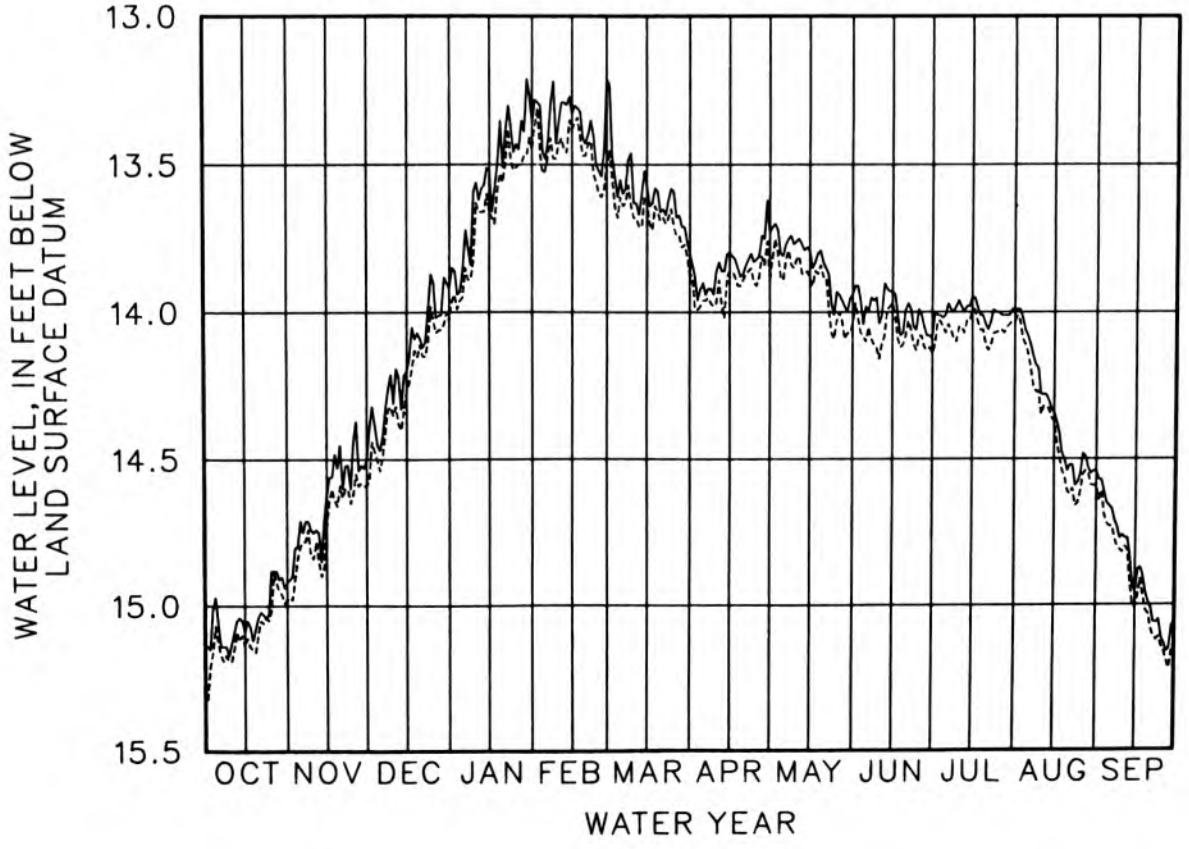
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	15.06	14.71	14.47	13.86	13.48	13.55	13.90	13.81	13.98	14.01	14.08	14.66
10	15.13	14.75	14.31	13.56	13.36	13.63	13.86	13.76	14.04	13.96	14.28	14.76
15	15.09	14.62	14.20	13.52	13.33	13.57	13.80	13.79	13.93	13.95	14.34	14.96
20	15.04	14.45	14.09	13.51	13.43	13.66	13.87	13.83	13.99	14.04	14.54	14.99
25	14.88	14.44	13.90	13.43	13.52	13.59	13.82	13.93	13.99	14.00	14.55	15.11
EOM	14.92	14.50	13.92	13.36	13.22	13.80	13.73	13.94	14.09	13.99	14.54	15.08

WTR YR 1987 HIGH 13.21 JAN 29

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	15.13	14.80	14.54	13.95	13.52	13.61	13.96	13.89	14.10	14.07	14.14	14.73
10	15.19	14.84	14.35	13.63	13.43	13.68	13.97	13.82	14.16	14.05	14.35	14.82
15	15.14	14.73	14.27	13.66	13.38	13.62	13.86	13.89	13.97	14.00	14.37	15.01
20	15.10	14.59	14.11	13.56	13.47	13.69	13.89	13.88	14.08	14.11	14.61	15.03
25	15.02	14.62	14.03	13.51	13.60	13.71	13.91	14.03	14.08	14.06	14.61	15.14
EOM	14.98	14.59	14.03	13.45	13.49	13.87	13.89	14.04	14.14	14.03	14.59	15.13

WTR YR 1987 LOW 15.32 OCT 1



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 54 ft, 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, 21.25 ft below land-surface datum, Feb. 15-20, 1977.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

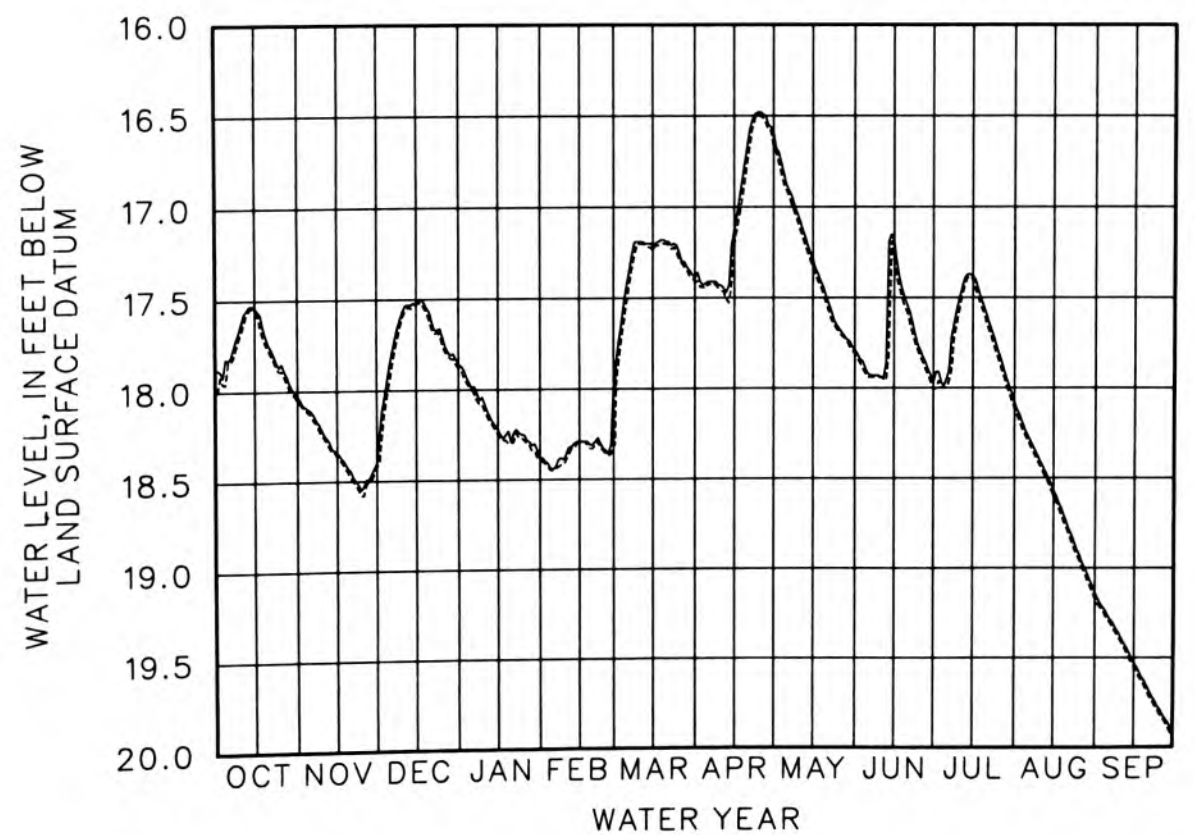
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	17.83	18.11	17.85	17.99	18.44	17.43	17.41	16.88	17.92	17.95	18.26	19.27
10	17.62	18.24	17.56	18.08	18.36	17.19	17.43	17.07	17.94	17.50	18.41	19.39
15	17.54	18.34	17.52	18.22	18.29	17.21	17.13	17.29	17.19	17.38	18.57	19.53
20	17.74	18.44	17.57	18.29	18.31	17.19	16.67	17.49	17.54	17.58	18.75	19.66
25	17.85	18.53	17.71	18.25	18.34	17.25	16.48	17.67	17.79	17.81	18.93	19.79
EOM	18.03	18.40	17.86	18.38	17.99	17.39	16.59	17.79	17.97	18.08	19.14	19.92

WTR YR 1987 HIGH 16.48 APR 24 AND OTHERS

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	17.84	18.13	17.94	18.00	18.45	17.52	17.42	16.91	17.94	18.00	18.29	19.29
10	17.67	18.26	17.59	18.12	18.39	17.20	17.46	17.12	17.94	17.56	18.44	19.41
15	17.56	18.36	17.52	18.25	18.29	17.24	17.20	17.34	17.30	17.40	18.60	19.55
20	17.77	18.48	17.62	18.30	18.33	17.20	16.76	17.53	17.58	17.63	18.78	19.69
25	17.89	18.58	17.76	18.28	18.36	17.29	16.50	17.69	17.83	17.85	18.96	19.82
EOM	18.05	18.42	17.88	18.39	18.31	17.41	16.68	17.81	18.01	18.11	19.17	19.94

WTR YR 1987 LOW 19.94 SEP 30



380638087471901. Local number, PY 4.

LOCATION.--Lat 38°06'38", long 87°47'19", in NW¼NW¼NW¼ sec.8, T.5 S., R.12 W., Posey County, Hydrologic Unit 05120113, 0.6 mi north of Wadesville.
Owner: U.S. Geological Survey.

AQUIFER.--Sandstone of Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 280 ft, cased to 200 ft, open hole.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 458 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of floor of shelter, 2.00 ft above land-surface datum.

REMARKS.--Water level affected by pumpage from feed lot. Low water levels between Oct. 1 and Apr. 1 were lost because of equipment malfunction.

PERIOD OF RECORD.--November 1977 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 112.99 ft below land-surface datum, Apr. 2, 1979; lowest, 142.84 ft below land-surface datum, Aug. 13, 1987.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

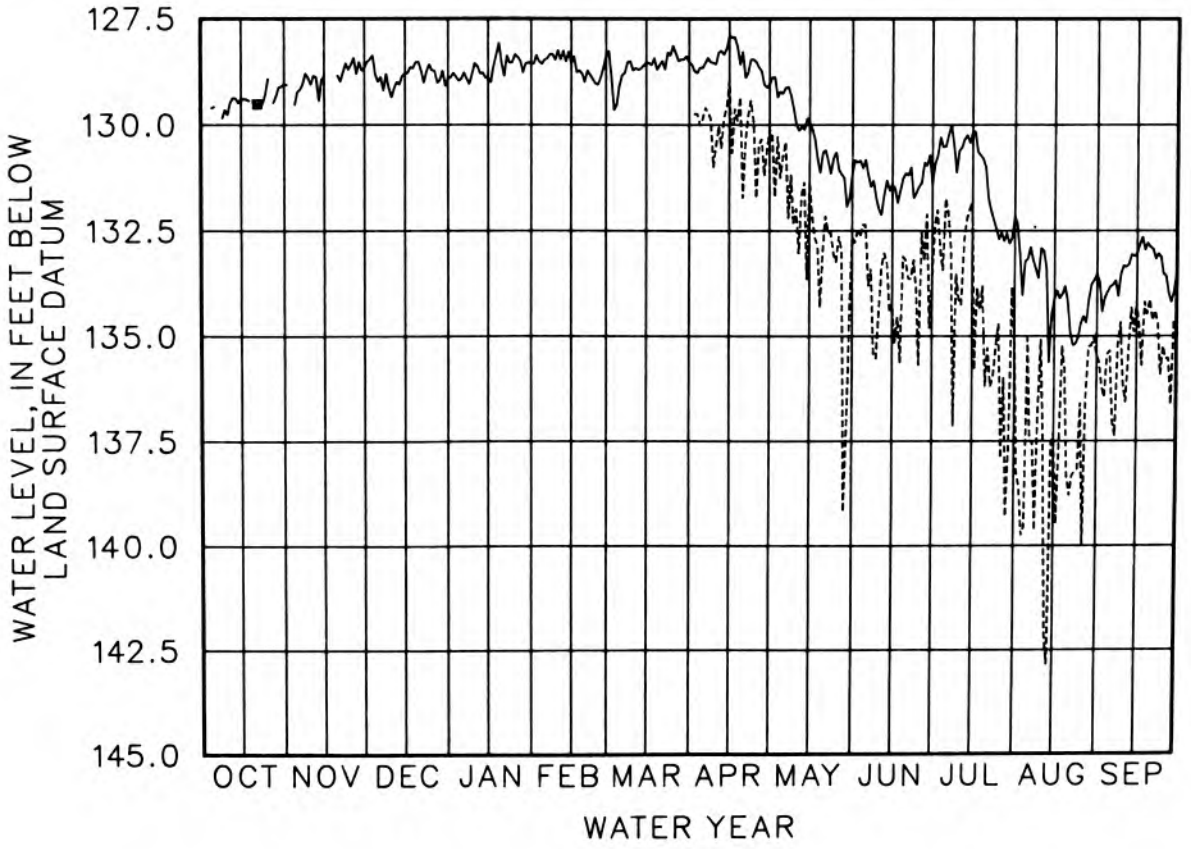
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	129.57	129.22	128.99	128.92	128.46	129.07	128.66	129.27	130.82	130.51	133.17	133.82
10	129.77	129.05	129.36	128.55	128.24	128.72	128.58	129.99	131.99	130.61	132.91	133.32
15	129.40	128.86	128.80	128.88	128.55	128.54	127.92	129.96	131.41	130.18	134.13	133.05
20	---	128.84	128.52	128.55	128.99	128.59	128.28	130.64	131.14	131.00	134.18	132.88
25	128.92	128.58	128.73	128.34	129.06	128.14	128.52	130.64	131.45	132.70	134.68	133.53
EOM	129.04	128.66	128.92	128.56	128.34	128.54	129.06	131.18	131.41	132.16	133.53	133.47

WTR YR 1987 HIGH 127.92 APR 15

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5							129.86	130.74	132.35	131.73	135.05	135.35
10							130.52	131.98	134.43	134.12	135.08	136.15
15							128.96	131.34	134.24	131.81	137.31	134.20
20							131.72	133.02	133.18	136.20	138.34	134.13
25							131.73	133.24	135.69	134.71	136.59	135.24
EOM							130.10	132.66	133.77	134.99	135.45	134.86

WTR YR 1987 LOW 142.84 AUG 13



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, 22.74 ft below land-surface datum, Oct. 16, 17, 1985.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

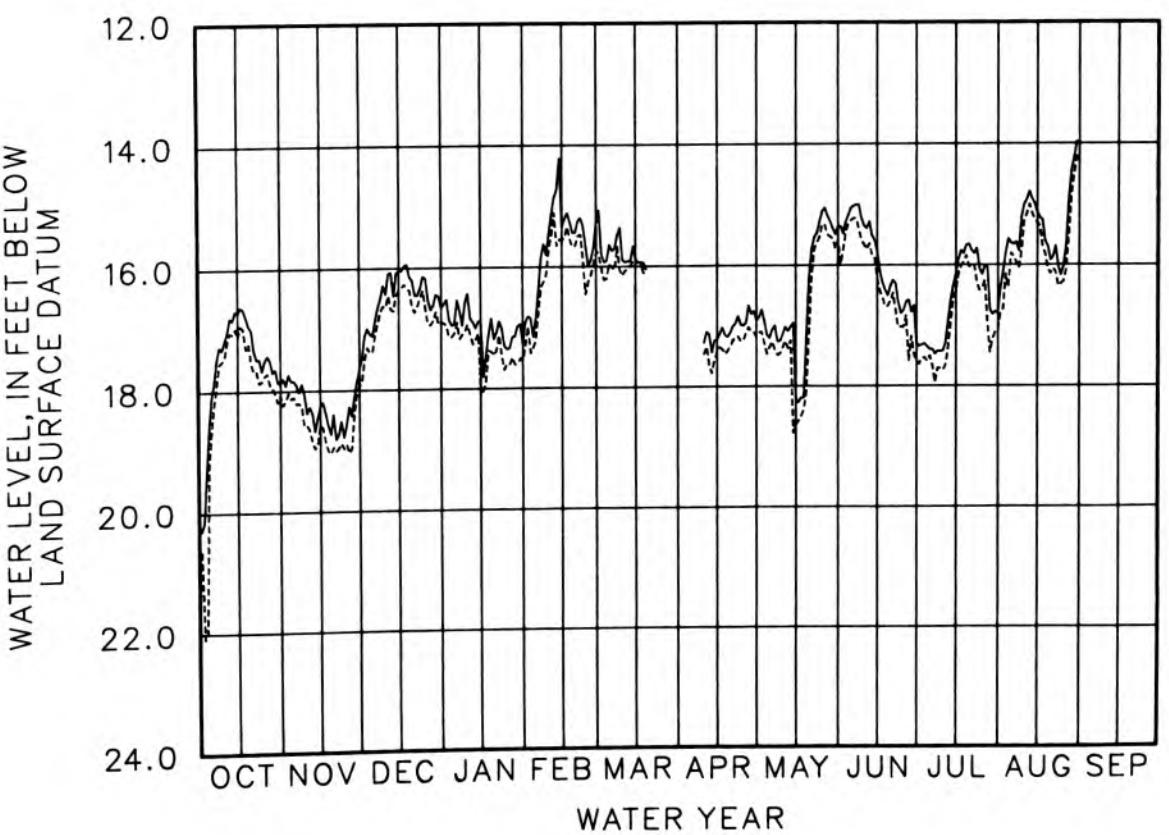
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	18.12	17.84	17.11	16.93	16.86	15.64	---	17.20	15.05	17.40	15.64	
10	17.17	18.37	16.42	16.43	15.46	15.90	17.27	17.14	15.35	17.42	15.00	
15	16.72	18.26	16.05	16.88	15.35	15.87	17.22	18.22	15.77	16.14	15.13	
20	16.99	18.39	16.20	17.18	15.44	---	17.11	16.23	16.34	15.65	15.92	
25	17.50	18.57	16.17	17.35	15.99	---	16.99	15.11	16.75	16.16	16.02	
EOM	17.87	17.65	16.66	17.28	15.26	---	16.90	15.36	17.31	16.80	---	

WTR YR 1987 HIGH 13.97 AUG 30

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	18.68	18.10	17.37	17.08	17.21	15.96	---	17.35	15.26	17.50	15.80	
10	17.45	18.57	16.64	16.94	15.74	16.15	17.46	17.35	15.66	17.74	15.28	
15	17.11	18.56	16.36	18.11	15.56	15.94	17.43	18.63	16.23	16.43	15.31	
20	17.55	18.93	16.63	17.45	15.66	---	17.33	17.17	16.59	16.03	16.15	
25	17.75	18.89	16.67	17.59	16.25	---	17.24	15.32	17.03	16.37	16.27	
EOM	18.07	17.92	16.90	17.53	15.76	---	17.18	15.59	17.61	17.08	---	

WTR YR 1987 LOW 22.09 OCT 2



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, 11.66 ft below land-surface datum, Dec. 2, 1978.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

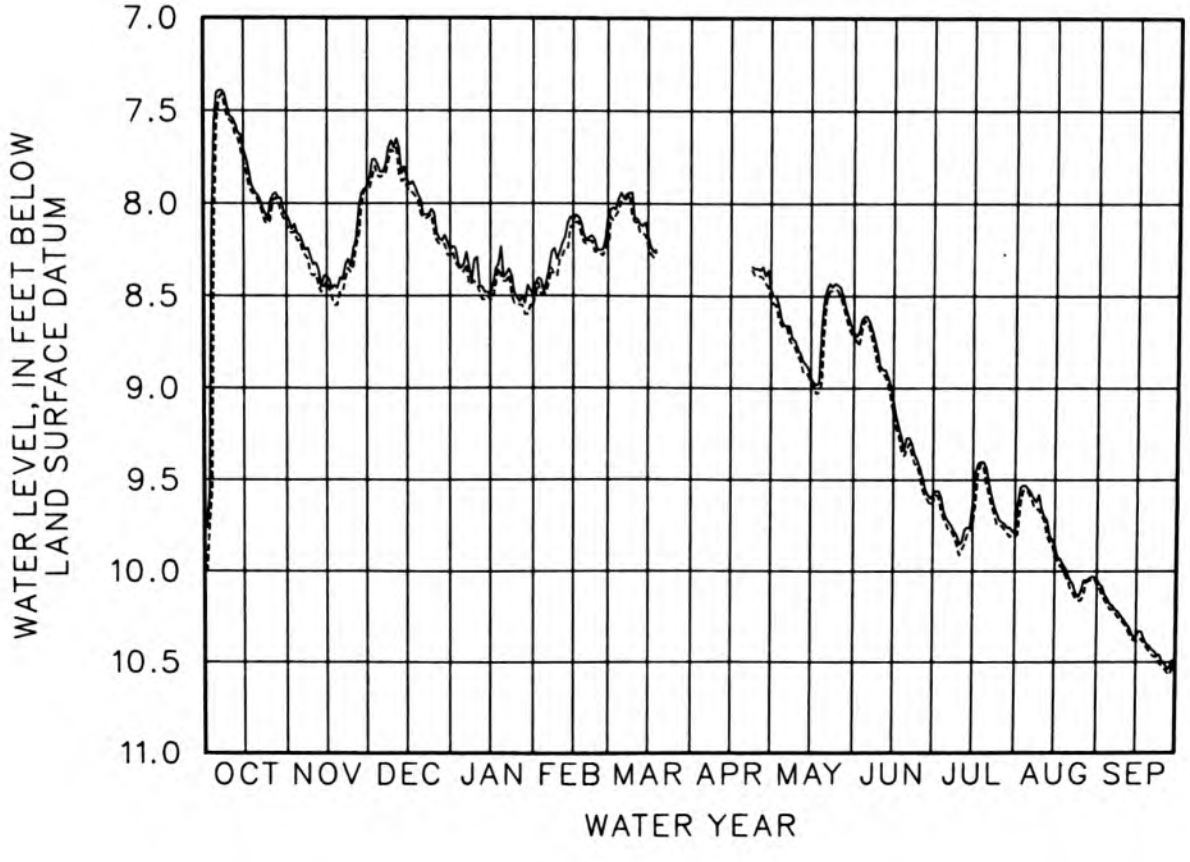
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.40	8.17	7.83	8.33	8.42	7.94	---	8.66	8.61	9.71	9.55	10.18
10	7.53	8.33	7.70	8.29	8.26	8.08	---	8.78	8.88	9.85	9.66	10.26
15	7.71	8.39	7.87	8.49	8.09	8.17	---	8.94	9.06	9.62	9.85	10.36
20	7.95	8.40	7.98	8.40	8.20	---	---	8.52	9.27	9.43	10.02	10.41
25	7.98	8.24	8.05	8.51	8.25	---	8.35	8.44	9.43	9.72	10.11	10.50
EOM	8.06	7.91	8.25	8.49	8.07	---	8.46	8.69	9.58	9.79	10.04	10.51

WTR YR 1987 HIGH 7.39 OCT 6 AND OTHERS

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.56	8.20	7.86	8.37	8.48	7.98	---	8.67	8.64	9.74	9.57	10.21
10	7.55	8.39	7.72	8.44	8.30	8.10	---	8.82	8.91	9.91	9.70	10.28
15	7.77	8.42	7.91	8.52	8.13	8.23	---	8.98	9.14	9.76	9.92	10.38
20	7.97	8.48	8.05	8.42	8.22	---	---	8.67	9.34	9.52	10.05	10.44
25	8.09	8.34	8.16	8.54	8.27	---	8.39	8.47	9.48	9.75	10.16	10.52
EOM	8.10	7.93	8.28	8.56	8.21	---	8.52	8.73	9.62	9.80	10.07	10.53

WTR YR 1987 LOW 10.57 SEP 28



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.

AQUIPER.--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, 3.80 ft below land-surface datum, May 20, 1987; lowest, 10.94 ft below land-surface datum, Sept. 26, 1986.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

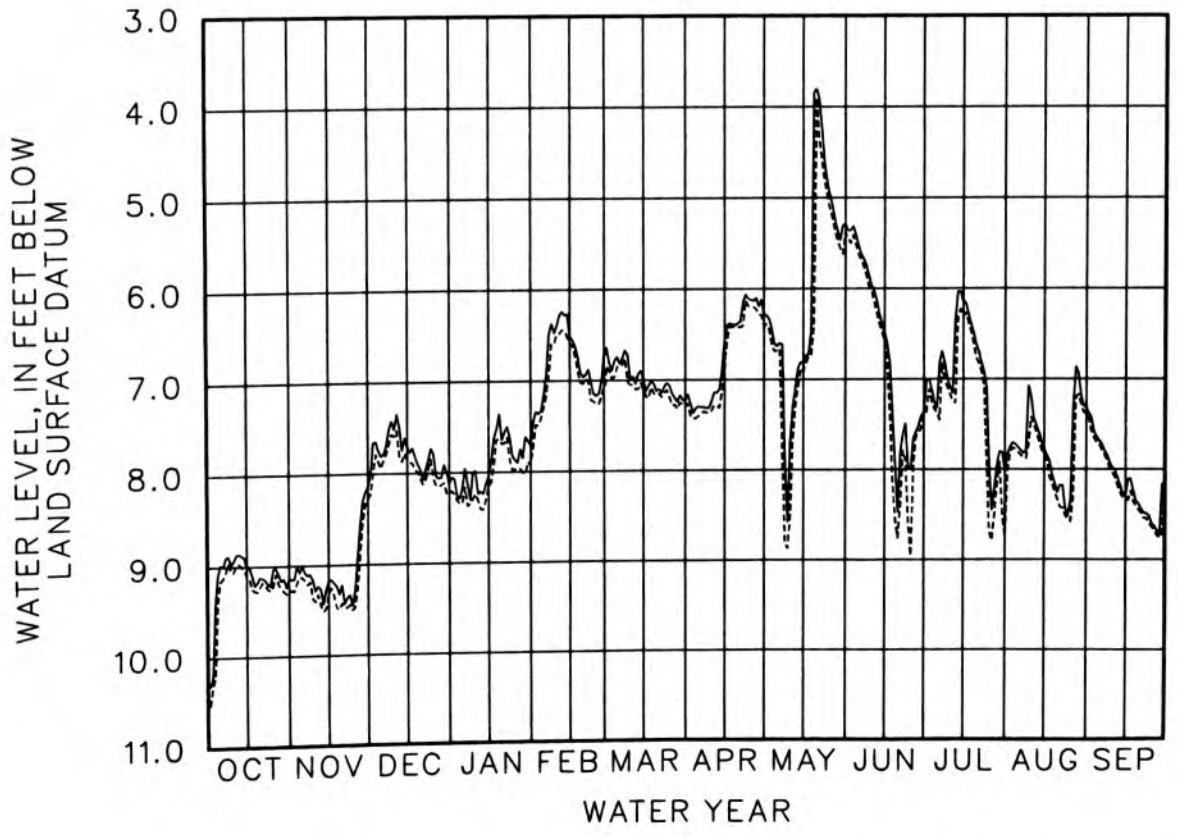
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.98	9.00	7.81	8.16	7.15	6.74	7.29	6.63	5.52	7.32	7.75	7.68
10	8.94	9.28	7.52	7.98	6.40	6.98	7.24	7.69	5.96	7.09	7.19	7.98
15	9.01	9.17	7.72	8.04	6.52	6.99	6.56	6.82	6.48	6.15	7.77	8.29
20	9.12	9.22	7.96	7.65	6.96	7.12	6.38	3.80	8.47	6.62	8.26	8.38
25	9.03	9.28	7.79	7.87	7.17	7.06	6.12	4.96	8.00	7.94	8.35	8.60
EOM	9.14	8.14	8.12	7.71	6.71	7.23	6.30	5.29	7.37	8.03	7.31	8.16

WTR YR 1987 HIGH 3.80 MAY 20

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.16	9.13	7.94	8.33	7.30	6.85	7.40	6.68	5.62	7.37	7.81	7.72
10	9.06	9.40	7.59	8.24	6.49	7.05	7.34	8.52	6.03	7.17	7.42	8.03
15	9.11	9.31	7.85	8.15	6.59	7.11	6.88	6.91	6.60	6.31	7.84	8.33
20	9.23	9.42	8.06	7.69	7.04	7.16	6.42	3.90	8.76	6.77	8.33	8.45
25	9.22	9.47	8.06	7.97	7.26	7.19	6.20	5.11	8.96	8.69	8.58	8.64
EOM	9.28	8.27	8.23	7.93	7.06	7.29	6.41	5.38	7.41	8.74	7.38	8.25

WTR YR 1987 LOW 10.52 OCT 1



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, 15.00 ft below land-surface datum, Feb. 10, 1977.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

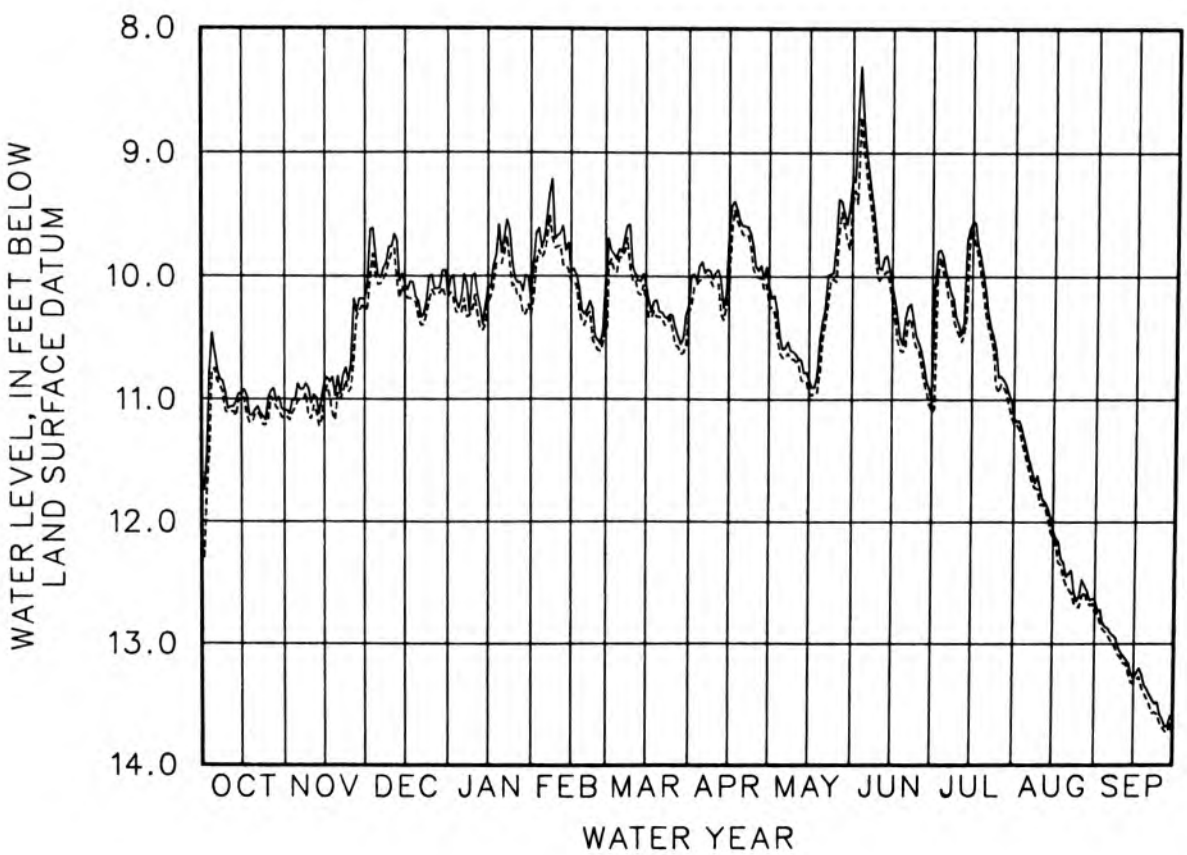
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.61	10.87	10.00	10.19	9.70	9.78	9.88	10.59	8.96	9.96	11.42	12.87
10	11.08	11.03	9.76	9.98	9.67	9.92	9.97	10.63	9.93	10.39	11.73	13.07
15	10.96	10.85	10.07	10.09	9.96	10.07	9.63	10.84	10.07	9.56	12.07	13.28
20	11.09	10.81	10.20	9.81	10.31	10.29	9.59	10.36	10.34	10.11	12.45	13.37
25	10.98	10.69	9.99	10.02	10.52	10.32	9.92	9.73	10.53	10.82	12.61	13.58
EOM	11.09	10.19	10.14	10.19	9.99	10.24	10.07	9.23	11.02	11.15	12.63	13.63

WTR YR 1987 HIGH 8.30 JUN 3

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.75	11.01	10.07	10.30	9.81	9.85	10.02	10.66	9.13	10.04	11.51	12.93
10	11.11	11.16	9.81	10.15	9.76	10.04	10.07	10.69	10.03	10.47	11.86	13.11
15	11.02	10.96	10.14	10.21	10.05	10.19	10.12	10.96	10.20	9.61	12.13	13.32
20	11.13	10.95	10.33	9.90	10.40	10.33	9.66	10.50	10.56	10.29	12.51	13.45
25	11.16	10.91	10.11	10.07	10.60	10.44	9.98	10.04	10.60	10.94	12.70	13.65
EOM	11.15	10.27	10.17	10.31	10.42	10.30	10.25	9.41	11.10	11.20	12.74	13.75

WTR YR 1987 LOW 13.75 SEP 30



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 current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.50 ft below land-surface datum, Mar. 20, 1982; lowest, 9.73 ft below land-surface datum, Dec. 9-12, 1983.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

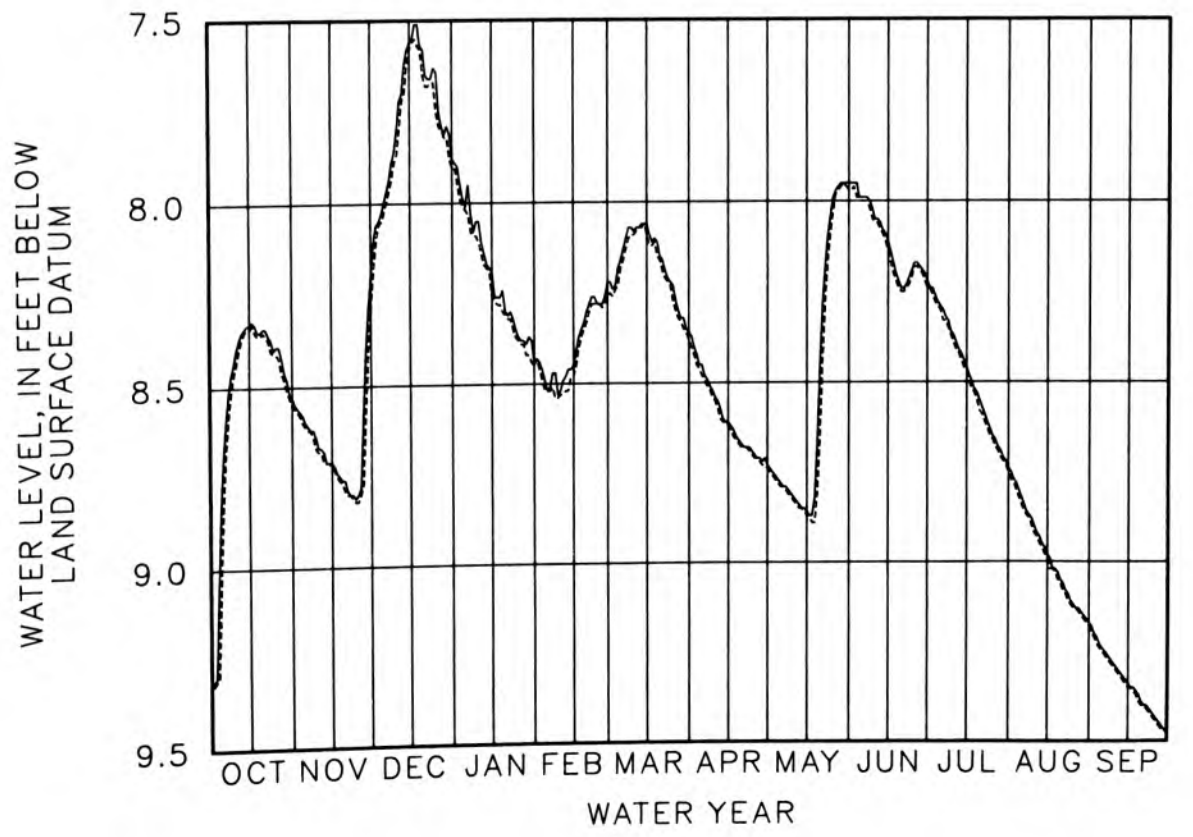
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.70	8.60	8.00	8.01	8.52	8.16	8.45	8.78	7.99	8.29	8.82	9.24
10	8.40	8.67	7.80	8.05	8.52	8.08	8.54	8.82	8.05	8.37	8.90	9.29
15	8.33	8.71	7.56	8.19	8.45	8.06	8.61	8.86	8.11	8.46	8.98	9.34
20	8.34	8.76	7.58	8.30	8.30	8.15	8.67	8.45	8.24	8.55	9.05	9.39
25	8.39	8.80	7.64	8.37	8.28	8.23	8.70	7.99	8.17	8.65	9.12	9.43
EOM	8.53	8.20	7.88	8.44	8.22	8.36	8.73	7.95	8.22	8.74	9.17	9.47

WTR YR 1987 HIGH 7.51 DEC 17 AND OTHERS

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.83	8.61	8.03	8.02	8.52	8.18	8.48	8.79	8.00	8.30	8.84	9.25
10	8.44	8.68	7.87	8.11	8.53	8.09	8.55	8.83	8.06	8.39	8.92	9.30
15	8.34	8.72	7.58	8.26	8.48	8.09	8.62	8.87	8.14	8.47	8.99	9.35
20	8.35	8.79	7.65	8.31	8.33	8.16	8.68	8.65	8.25	8.58	9.06	9.40
25	8.41	8.82	7.75	8.38	8.28	8.27	8.71	8.03	8.18	8.66	9.13	9.44
EOM	8.55	8.29	7.90	8.45	8.26	8.38	8.74	7.97	8.24	8.75	9.18	9.48

WTR YR 1987 LOW 9.48 SEP 30



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, 11.43 ft below land-surface datum, Sept. 7-10, 1987.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

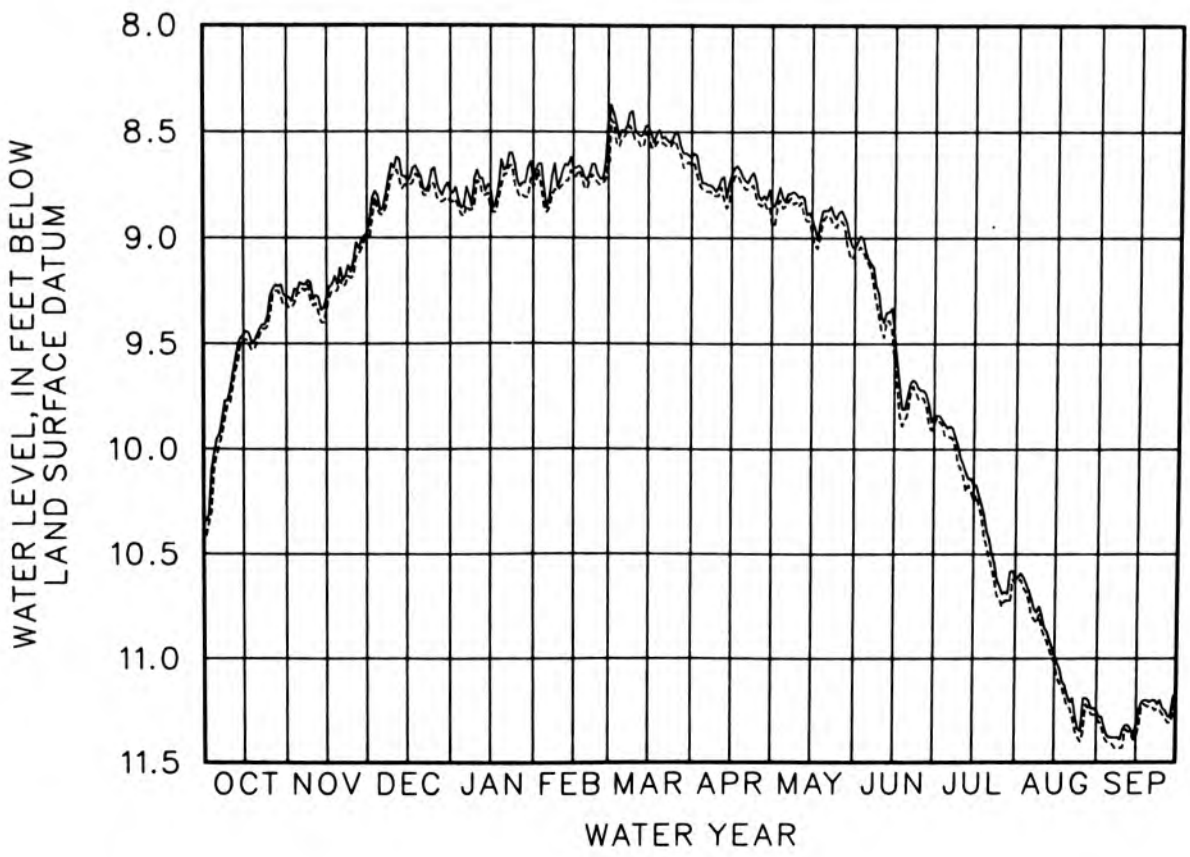
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.95	9.21	8.87	8.85	8.86	8.49	8.74	8.83	9.10	9.90	10.67	11.38
10	9.72	9.29	8.67	8.68	8.73	8.49	8.76	8.81	9.37	10.04	10.79	11.34
15	9.46	9.28	8.73	8.76	8.67	8.47	8.70	8.91	9.44	10.17	10.98	11.32
20	9.46	9.14	8.71	8.68	8.73	8.53	8.73	8.87	9.75	10.39	11.18	11.21
25	9.27	9.11	8.67	8.73	8.72	8.50	8.80	8.88	9.72	10.65	11.35	11.24
EOM	9.28	8.98	8.78	8.73	8.44	8.62	8.85	9.05	9.85	10.62	11.25	11.17

WTR YR 1987 HIGH 8.37 MAR 1

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.03	9.26	8.89	8.90	8.88	8.53	8.78	8.85	9.12	9.94	10.72	11.41
10	9.78	9.32	8.70	8.73	8.76	8.54	8.80	8.85	9.44	10.09	10.86	11.43
15	9.49	9.34	8.75	8.86	8.71	8.52	8.75	8.98	9.58	10.25	11.02	11.38
20	9.50	9.20	8.76	8.70	8.77	8.55	8.77	8.90	9.83	10.46	11.23	11.23
25	9.36	9.18	8.75	8.78	8.75	8.54	8.84	8.92	9.75	10.71	11.40	11.27
EOM	9.31	9.01	8.83	8.76	8.64	8.66	8.94	9.07	9.88	10.64	11.29	11.20

WTR YR 1987 LOW 11.43 SEP 7 AND OTHERS



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 1986 TO SEPTEMBER 1987

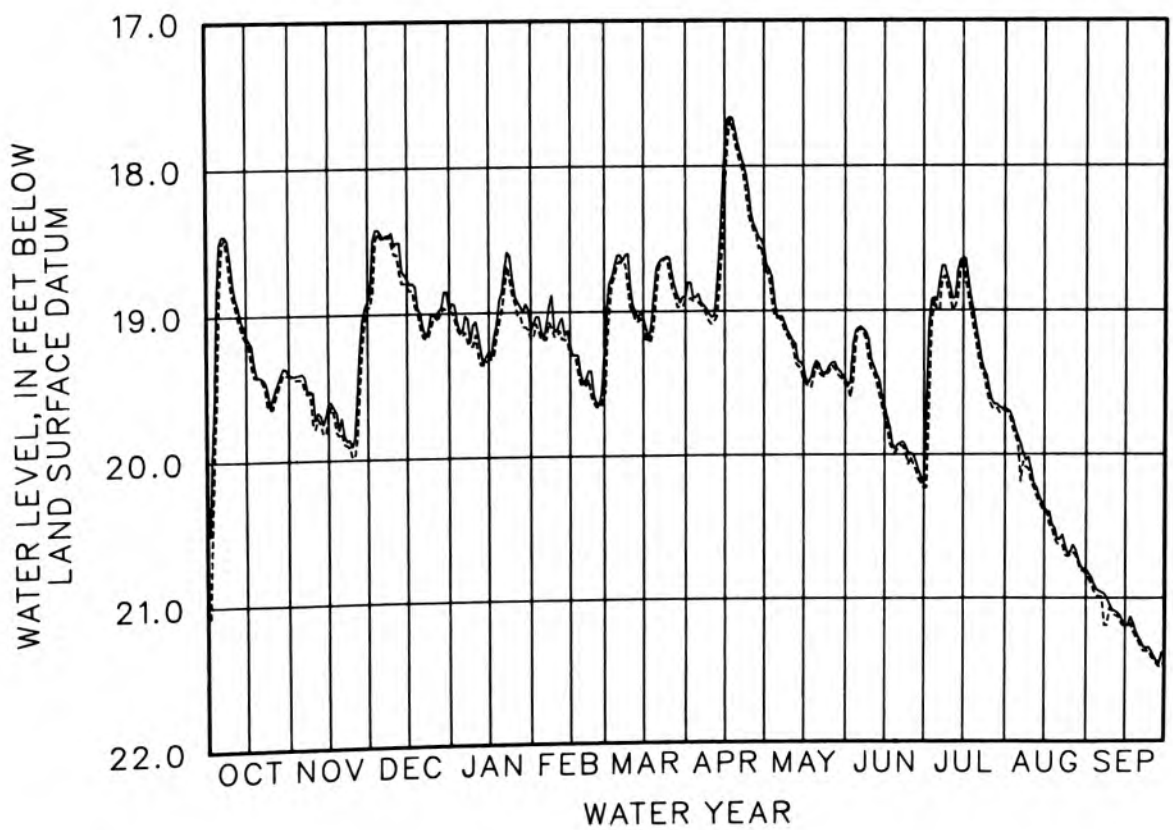
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	18.50	19.40	18.45	19.13	19.19	18.61	18.88	19.04	19.12	18.93	19.87	20.95
10	18.78	19.72	18.53	19.06	19.13	18.83	19.04	19.17	19.34	18.83	20.10	21.08
15	19.14	19.61	18.76	19.27	19.23	19.04	17.85	19.38	19.66	18.64	20.37	21.19
20	19.42	19.71	19.00	18.86	19.50	18.70	17.85	19.35	19.93	19.12	20.59	21.27
25	19.56	19.85	19.01	18.89	19.63	18.63	18.32	19.38	19.99	19.55	20.68	21.37
EOM	19.41	18.91	18.98	19.13	19.30	18.90	18.55	19.48	20.20	19.68	20.80	21.38

WTR YR 1987 HIGH 17.66 APR 17

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	18.80	19.44	18.48	19.16	19.19	18.67	18.94	19.05	19.13	19.00	19.92	20.99
10	18.88	19.78	18.59	19.15	19.17	18.97	19.09	19.21	19.41	18.92	20.20	21.09
15	19.17	19.69	18.81	19.32	19.30	19.10	18.19	19.49	19.74	18.65	20.40	21.19
20	19.44	19.81	19.09	18.98	19.51	18.88	17.92	19.38	19.96	19.22	20.62	21.30
25	19.64	19.98	19.04	18.93	19.66	18.75	18.40	19.42	20.02	19.63	20.70	21.41
EOM	19.41	18.95	18.99	19.18	19.56	18.92	18.69	19.51	20.23	19.69	20.83	21.46

WTR YR 1987 LOW 21.48 SEP 28



STARKE COUNTY

411342086365601. 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.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

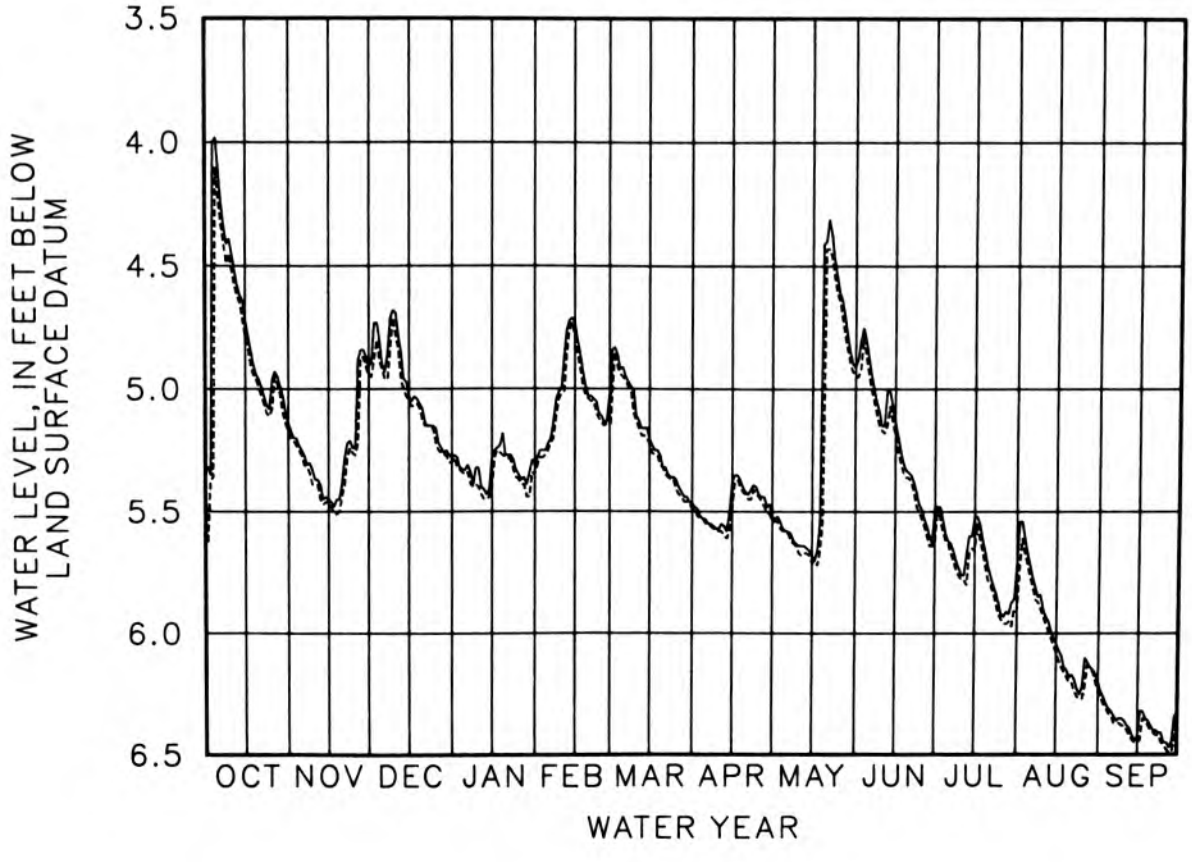
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.11	5.25	4.90	5.33	5.22	4.91	5.53	5.58	4.87	5.62	5.72	6.32
10	4.45	5.37	4.69	5.32	5.00	5.11	5.57	5.64	5.15	5.76	5.90	6.36
15	4.72	5.45	5.03	5.28	4.73	5.20	5.38	5.68	5.13	5.52	6.04	6.43
20	4.96	5.39	5.08	5.27	5.03	5.32	5.42	4.40	5.34	5.72	6.18	6.38
25	4.96	5.24	5.16	5.35	5.11	5.37	5.43	4.61	5.49	5.92	6.22	6.45
EOM	5.14	4.91	5.28	5.31	5.02	5.47	5.52	4.91	5.48	5.72	6.20	6.35

WTR YR 1987 HIGH 3.98 OCT 4

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.23	5.27	4.92	5.35	5.25	4.95	5.55	5.58	4.94	5.63	5.77	6.34
10	4.52	5.39	4.78	5.40	5.02	5.13	5.58	5.67	5.17	5.78	5.93	6.38
15	4.78	5.46	5.05	5.40	4.79	5.23	5.49	5.71	5.19	5.66	6.08	6.45
20	4.99	5.44	5.13	5.28	5.04	5.32	5.43	4.43	5.36	5.78	6.20	6.40
25	5.08	5.27	5.22	5.37	5.14	5.41	5.44	4.64	5.53	5.94	6.27	6.46
EOM	5.17	4.95	5.30	5.35	5.14	5.49	5.54	4.95	5.63	5.91	6.24	6.37

WTR YR 1987 LOW 6.49 SEP 27 AND OTHERS



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, 16.04 ft below land-surface datum, Aug. 26, 1986; lowest, 18.35 ft below land-surface datum, Sept. 30, 1987.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

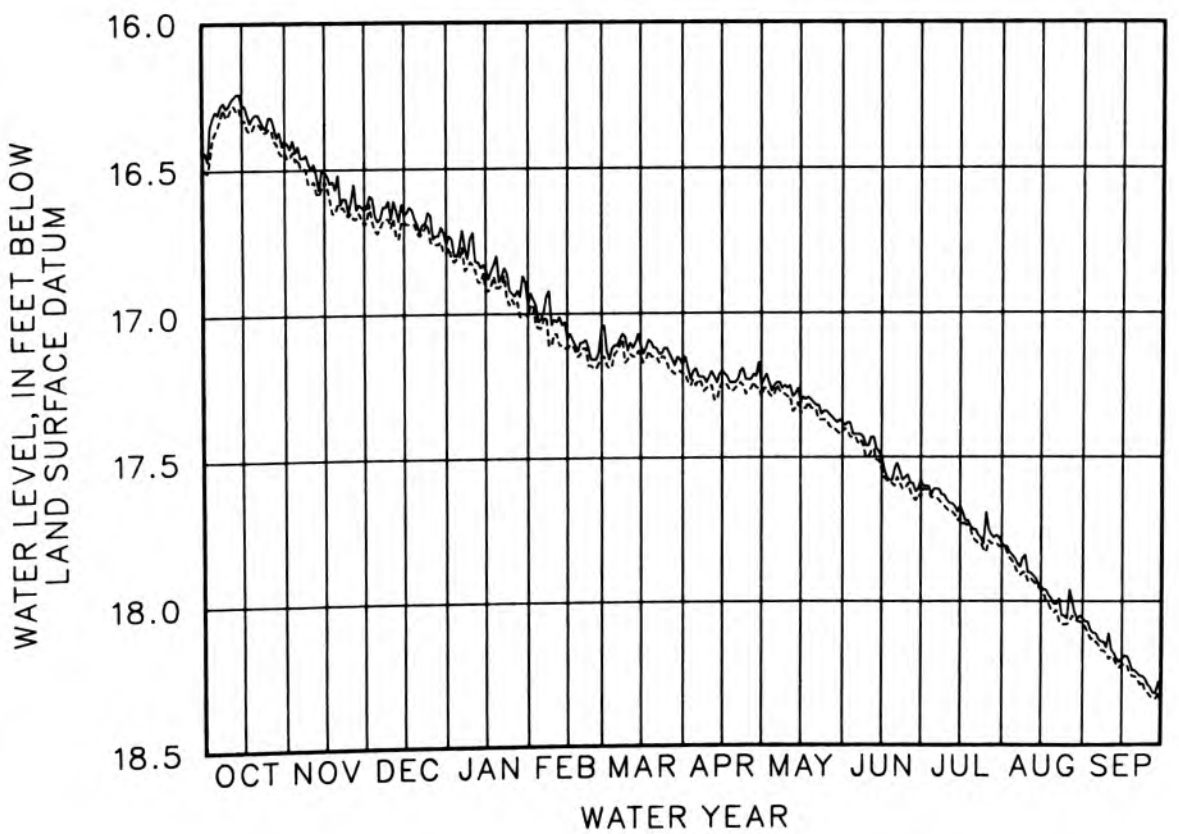
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	16.30	16.42	16.68	16.77	17.02	17.11	17.19	17.25	17.42	17.61	17.85	18.11
10	16.28	16.50	16.67	16.72	17.02	17.13	17.22	17.26	17.46	17.65	17.90	18.11
15	16.28	16.51	16.66	16.85	17.09	17.11	17.20	17.31	17.50	17.67	17.95	18.20
20	16.31	16.52	16.69	16.89	17.10	17.12	17.24	17.31	17.54	17.75	18.01	18.24
25	16.32	16.61	16.66	16.93	17.16	17.12	17.23	17.34	17.56	17.69	18.06	18.29
EOM	16.40	16.64	16.76	16.97	17.05	17.18	17.25	17.38	17.58	17.80	18.06	18.32

WTR YR 1987 HIGH 16.24 OCT 13 AND OTHERS

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	16.37	16.46	16.72	16.81	17.05	17.14	17.25	17.28	17.43	17.64	17.88	18.14
10	16.31	16.55	16.70	16.83	17.07	17.16	17.25	17.29	17.50	17.68	17.93	18.20
15	16.33	16.54	16.68	16.92	17.12	17.15	17.24	17.35	17.54	17.71	17.96	18.22
20	16.34	16.62	16.72	16.91	17.14	17.15	17.26	17.33	17.60	17.78	18.04	18.26
25	16.36	16.65	16.75	16.95	17.19	17.17	17.27	17.37	17.59	17.83	18.08	18.32
EOM	16.44	16.69	16.79	17.01	17.15	17.21	17.29	17.41	17.64	17.81	18.08	18.35

WTR YR 1987 LOW 18.35 SEP 30



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, 35.39 ft below land-surface datum, Sept. 27, 28, 1987.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

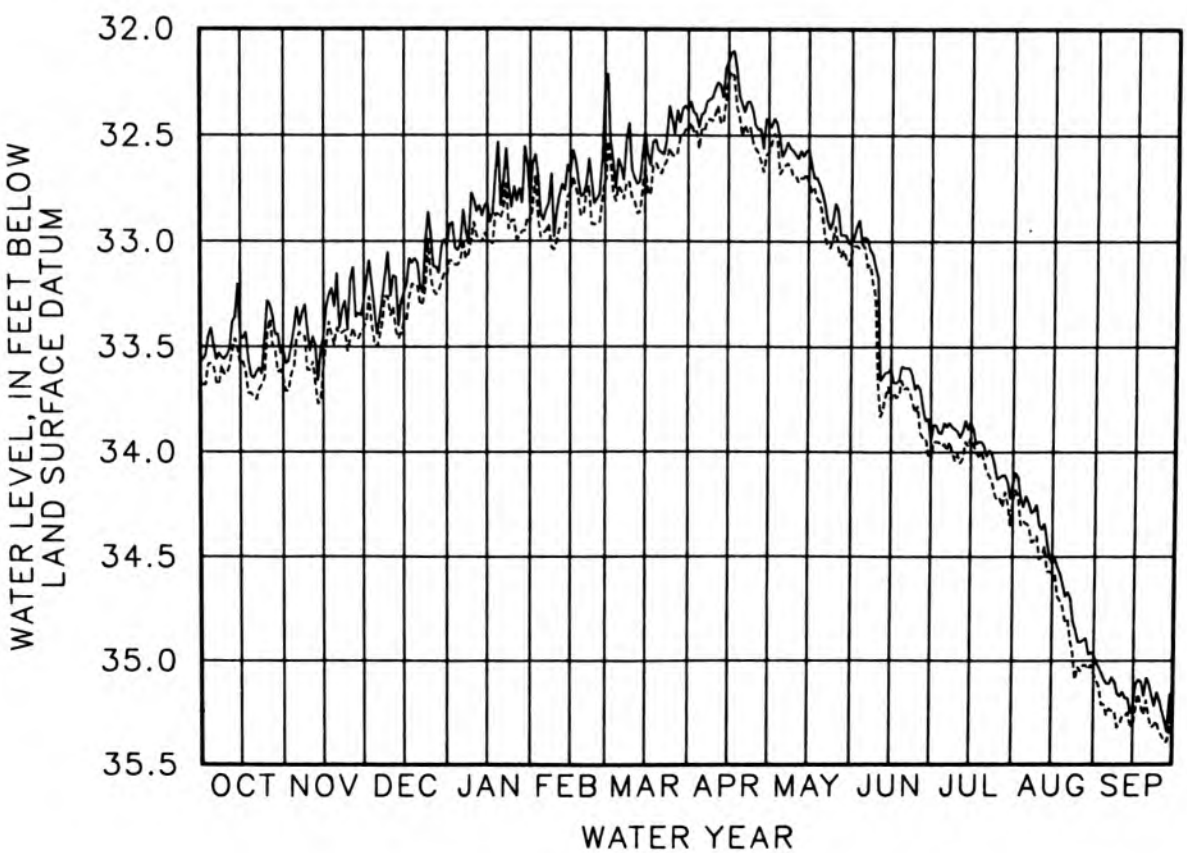
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	33.49	33.31	33.44	33.01	32.90	32.61	32.40	32.60	32.98	33.86	34.21	35.11
10	33.54	33.52	33.26	32.80	32.86	32.66	32.28	32.59	33.17	33.90	34.35	35.17
15	33.45	33.45	33.24	32.82	32.67	32.48	32.15	32.57	33.60	33.86	34.53	35.22
20	33.65	33.15	33.10	32.83	32.78	32.57	32.35	32.77	33.60	33.97	34.69	35.08
25	33.28	33.18	32.97	32.74	32.80	32.42	32.45	32.82	33.68	34.13	34.91	35.19
EOM	33.51	33.28	33.02	32.82	32.27	32.38	32.44	33.00	33.95	34.15	34.97	35.16

WTR YR 1987 HIGH 32.10 APR 17

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	33.59	33.46	33.50	33.09	32.96	32.74	32.47	32.66	33.03	33.96	34.34	35.26
10	33.63	33.61	33.35	32.91	33.00	32.79	32.40	32.69	33.66	34.01	34.51	35.31
15	33.58	33.60	33.38	32.98	32.77	32.64	32.23	32.72	33.75	33.93	34.58	35.31
20	33.74	33.41	33.21	32.89	32.87	32.66	32.50	32.87	33.70	34.04	34.81	35.19
25	33.44	33.46	33.17	32.90	32.92	32.59	32.56	32.93	33.78	34.23	35.03	35.34
EOM	33.65	33.41	33.16	32.91	32.71	32.48	32.58	33.06	34.04	34.23	35.06	35.24

WTR YR 1987 LOW 35.39 SEP 27 AND OTHERS



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, 0.5 mi north of Darmstadt on north side of Salem United Church of Christ.
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, 20.70 ft below land-surface datum, June 15, 16, 1986(correction); lowest, 23.86 ft below land-surface datum, Sept. 26, 1987.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

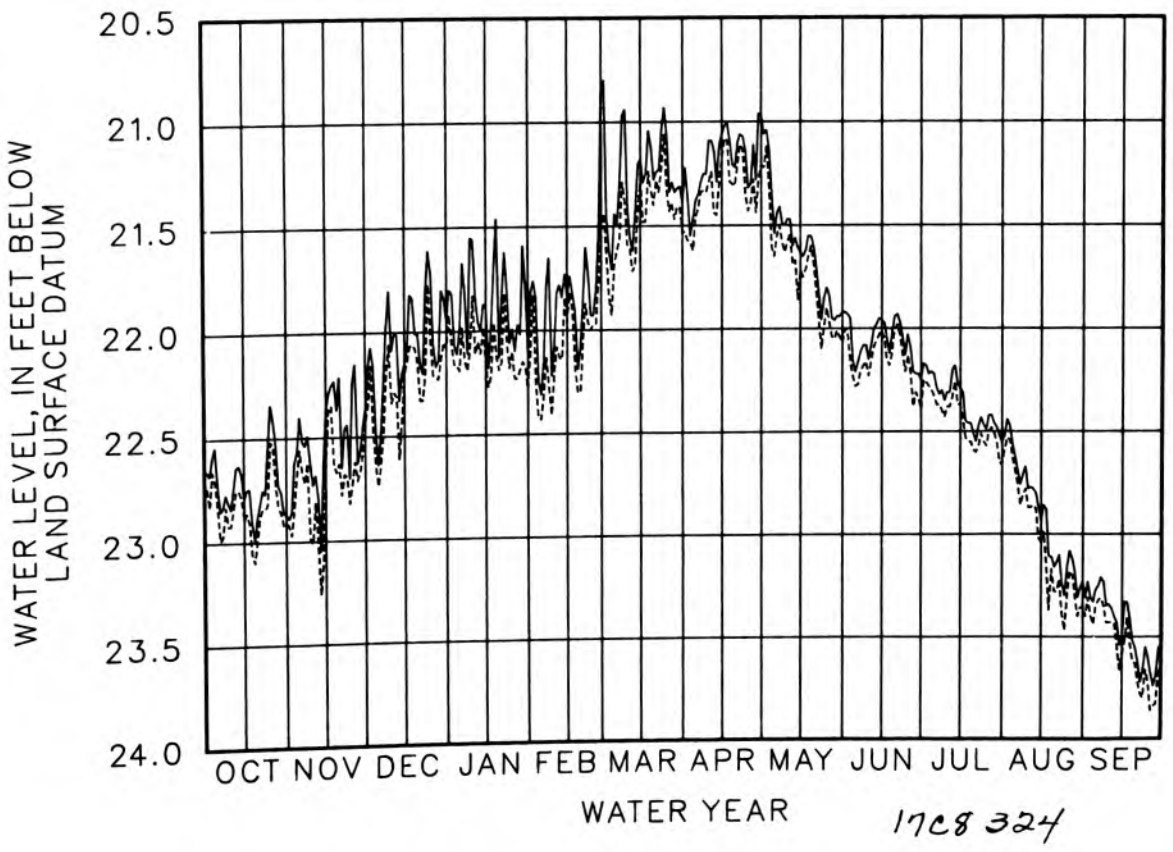
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	22.72	22.40	22.64	21.99	22.31	21.44	21.38	21.54	22.21	22.22	22.62	23.27
10	22.84	22.73	22.09	21.56	22.09	21.40	21.09	21.47	22.15	22.31	22.78	23.34
15	22.79	22.37	22.15	21.89	21.84	21.18	21.06	21.63	21.96	22.29	22.93	23.50
20	22.88	22.21	22.01	22.13	22.09	21.28	21.22	21.60	21.94	22.51	23.16	23.55
25	22.34	22.24	21.72	21.99	21.93	21.06	21.32	21.80	22.03	22.49	23.16	23.60
EOM	22.87	22.36	21.95	22.11	20.83	21.39	20.97	21.92	22.25	22.55	23.23	23.61

WTR YR 1987 HIGH 20.80 MAR 1

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	22.84	22.56	22.74	22.19	22.43	21.69	21.46	21.65	22.28	22.33	22.69	23.35
10	22.92	23.01	22.34	21.83	22.21	21.59	21.29	21.58	22.23	22.38	22.87	23.43
15	22.89	22.63	22.20	22.17	21.96	21.28	21.18	21.72	22.01	22.37	23.04	23.59
20	22.99	22.63	22.15	22.19	22.30	21.40	21.31	21.69	22.01	22.59	23.28	23.63
25	22.52	22.73	22.05	22.10	21.97	21.33	21.43	21.90	22.13	22.57	23.31	23.72
EOM	22.91	22.44	22.08	22.28	21.51	21.53	21.21	22.07	22.39	22.66	23.35	23.71

WTR YR 1987 LOW 23.86 SEP 26



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 1986 TO SEPTEMBER 1987

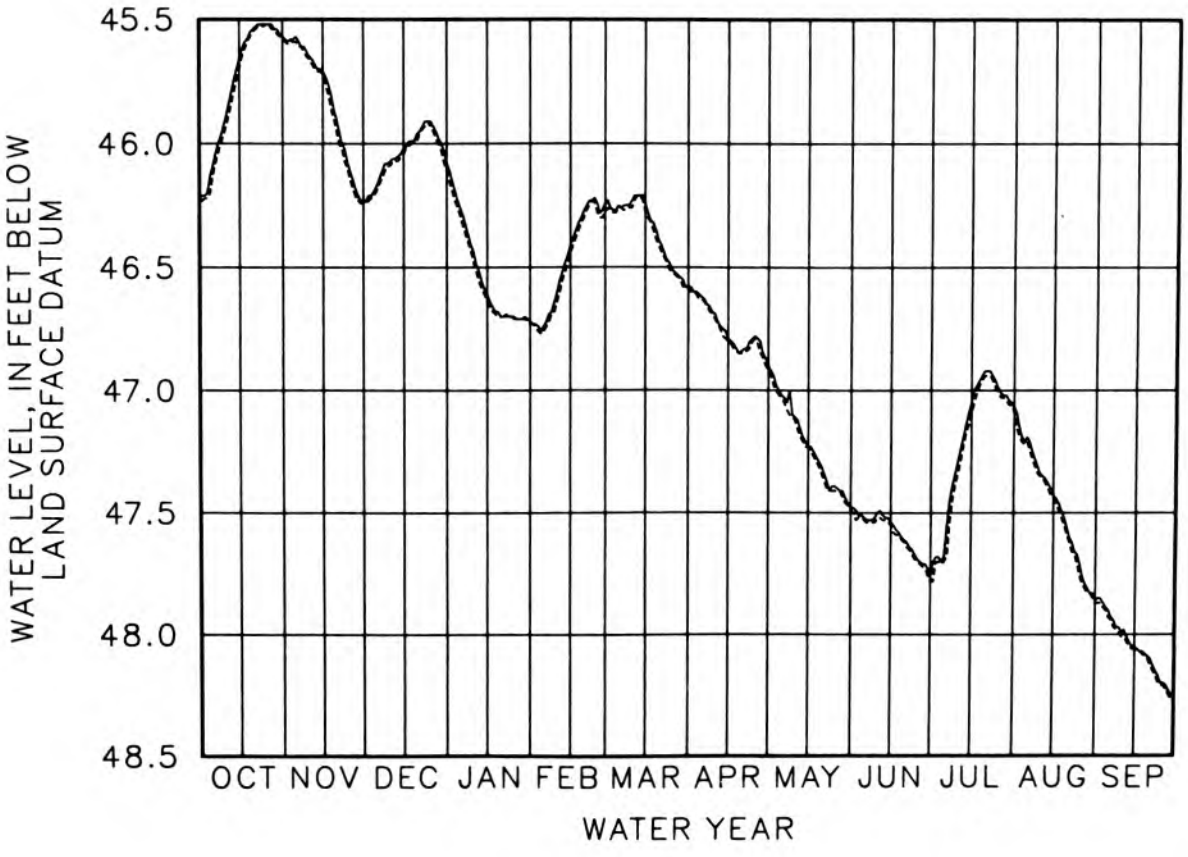
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	46.09	45.57	46.17	46.26	46.74	46.25	46.62	47.02	47.52	47.68	47.19	47.90
10	45.89	45.65	46.07	46.44	46.60	46.23	46.69	47.11	47.50	47.29	47.34	47.99
15	45.66	45.71	46.02	46.61	46.41	46.24	46.79	47.23	47.54	47.05	47.43	48.05
20	45.54	45.90	45.96	46.70	46.27	46.39	46.84	47.31	47.61	46.92	47.56	48.09
25	45.52	46.11	45.91	46.70	46.24	46.51	46.78	47.39	47.69	46.99	47.71	48.20
EOM	45.57	46.24	46.08	46.72	46.24	46.58	46.90	47.48	47.76	47.07	47.86	48.26

WTR YR 1987 HIGH 45.52 OCT 22 AND OTHERS

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	46.13	45.59	46.19	46.29	46.76	46.26	46.63	47.03	47.53	47.70	47.21	47.93
10	45.93	45.66	46.09	46.48	46.64	46.26	46.71	47.12	47.52	47.34	47.35	48.01
15	45.70	45.72	46.04	46.64	46.44	46.28	46.80	47.23	47.55	47.09	47.44	48.06
20	45.55	45.95	45.99	46.70	46.30	46.41	46.85	47.34	47.62	46.94	47.59	48.10
25	45.52	46.14	45.93	46.71	46.28	46.52	46.79	47.41	47.70	47.01	47.76	48.21
EOM	45.58	46.24	46.11	46.73	46.27	46.58	46.92	47.49	47.78	47.09	47.87	48.27

WTR YR 1987 LOW 48.27 SEP 29 AND OTHERS



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 water-table 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, 45.17 ft below land-surface datum, Mar. 1, 1987; lowest, 47.11 ft below land-surface datum, Sept. 28, 1987.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

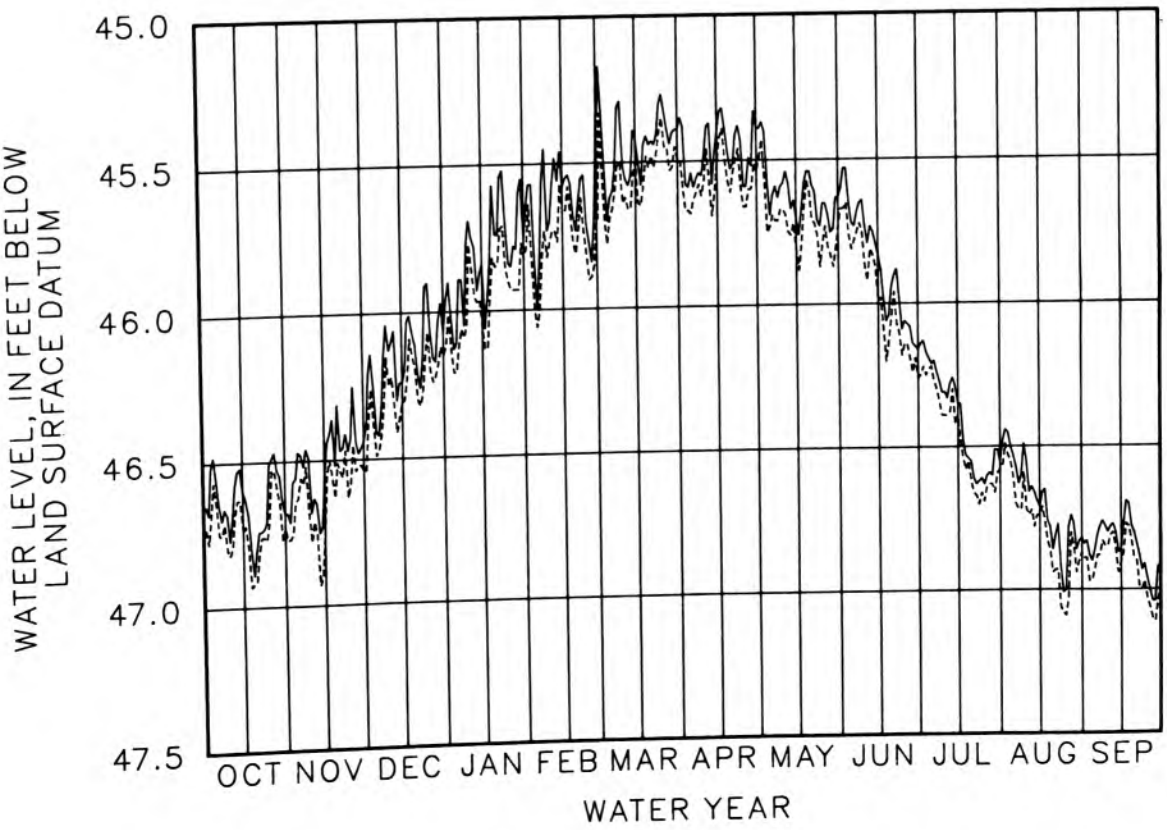
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	46.56	46.47	46.41	46.11	46.00	45.62	45.54	45.69	45.72	46.21	46.53	46.86
10	46.77	46.68	46.13	45.69	45.70	45.51	45.48	45.58	45.73	46.31	46.55	46.80
15	46.60	46.56	46.24	45.84	45.58	45.42	45.40	45.70	45.83	46.35	46.71	46.86
20	46.81	46.31	46.11	45.74	45.73	45.44	45.53	45.54	45.94	46.55	46.86	46.80
25	46.51	46.43	45.90	45.84	45.77	45.27	45.59	45.65	46.06	46.63	47.00	46.96
EOM	46.68	46.44	46.07	45.76	45.33	45.39	45.39	45.63	46.16	46.55	46.82	46.92

WTR YR 1987 HIGH 45.17 MAR 1

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	46.64	46.63	46.49	46.21	46.06	45.69	45.68	45.73	45.81	46.22	46.61	46.93
10	46.82	46.78	46.25	45.77	45.77	45.64	45.57	45.67	45.87	46.39	46.72	46.85
15	46.74	46.74	46.31	46.05	45.67	45.50	45.50	45.81	45.99	46.39	46.74	46.91
20	46.91	46.51	46.19	45.85	45.81	45.52	45.61	45.61	46.05	46.62	46.94	46.89
25	46.71	46.58	46.07	45.90	45.90	45.35	45.66	45.79	46.14	46.69	47.09	47.03
EOM	46.73	46.54	46.15	45.82	45.69	45.49	45.54	45.73	46.26	46.58	46.87	46.99

WTR YR 1987 LOW 47.11 SEP 28



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 Curtis Joseph Hart's property, 4.2 mi north of Booneville on State Highway 61. 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, 9.51 ft below land-surface datum, June 20-23, 1986; lowest, 16.35 ft below land-surface datum, Sept. 28, 1987.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

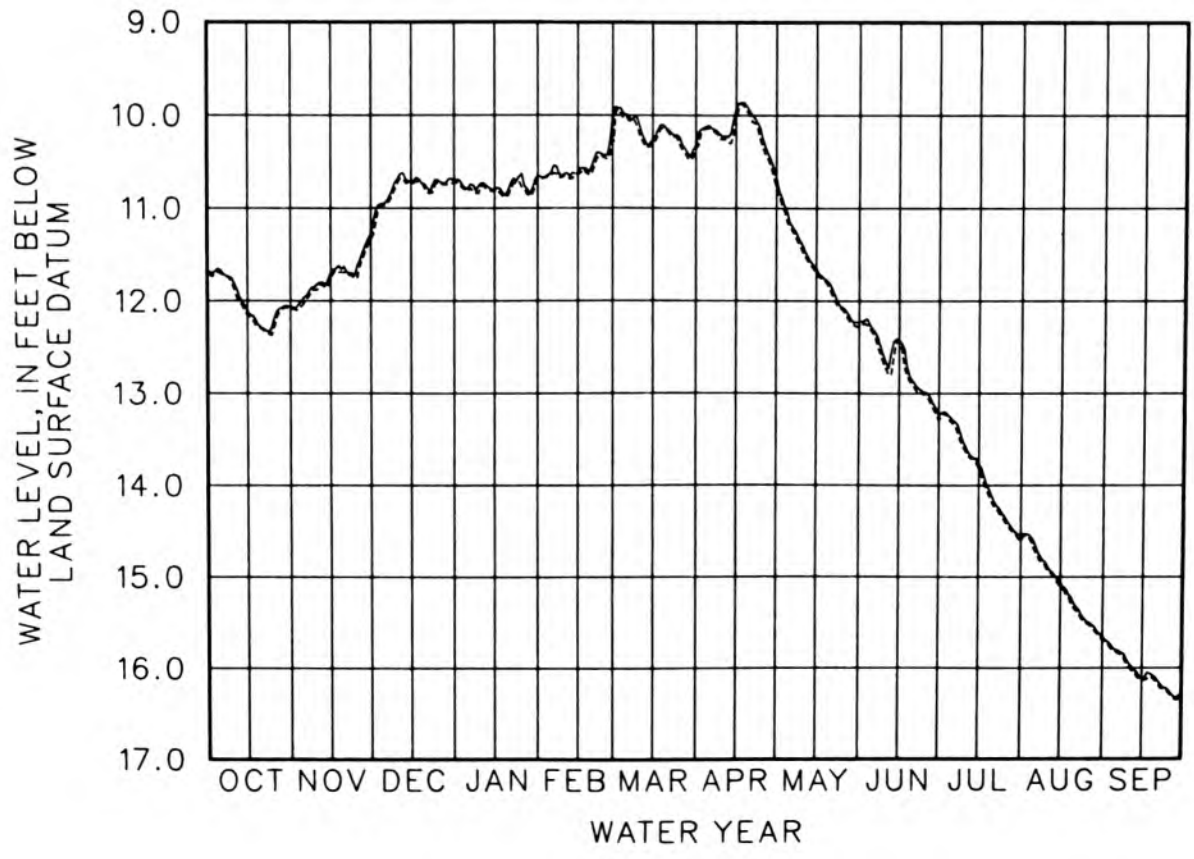
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	11.67	11.96	10.95	10.79	10.62	9.99	10.11	11.15	12.30	13.29	14.62	15.80
10	11.81	11.82	10.68	10.73	10.63	10.11	10.23	11.41	12.66	13.58	14.88	15.95
15	12.11	11.70	10.71	10.80	10.62	10.26	9.92	11.65	12.42	13.77	15.07	16.12
20	12.29	11.63	10.74	10.81	10.56	10.14	9.95	11.81	12.86	14.12	15.29	16.10
25	12.18	11.62	10.70	10.63	10.43	10.24	10.26	12.07	12.99	14.35	15.49	16.24
EOM	12.06	11.28	10.72	10.65	10.01	10.32	10.67	12.23	13.24	14.54	15.65	16.32

WTR YR 1987 HIGH 9.86 APR 17 AND OTHERS

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	11.70	12.03	10.97	10.82	10.64	10.01	10.14	11.20	12.34	13.32	14.70	15.82
10	11.87	11.88	10.72	10.76	10.65	10.21	10.26	11.48	12.73	13.63	14.93	15.98
15	12.16	11.77	10.73	10.81	10.64	10.33	10.04	11.70	12.45	13.81	15.11	16.14
20	12.30	11.69	10.78	10.86	10.63	10.16	10.00	11.87	12.90	14.19	15.34	16.14
25	12.28	11.75	10.72	10.77	10.46	10.32	10.35	12.10	13.01	14.40	15.51	16.27
EOM	12.08	11.33	10.73	10.68	10.28	10.36	10.80	12.26	13.29	14.61	15.69	16.34

WTR YR 1987 LOW 16.35 SEP 28



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 1986 TO SEPTEMBER 1987

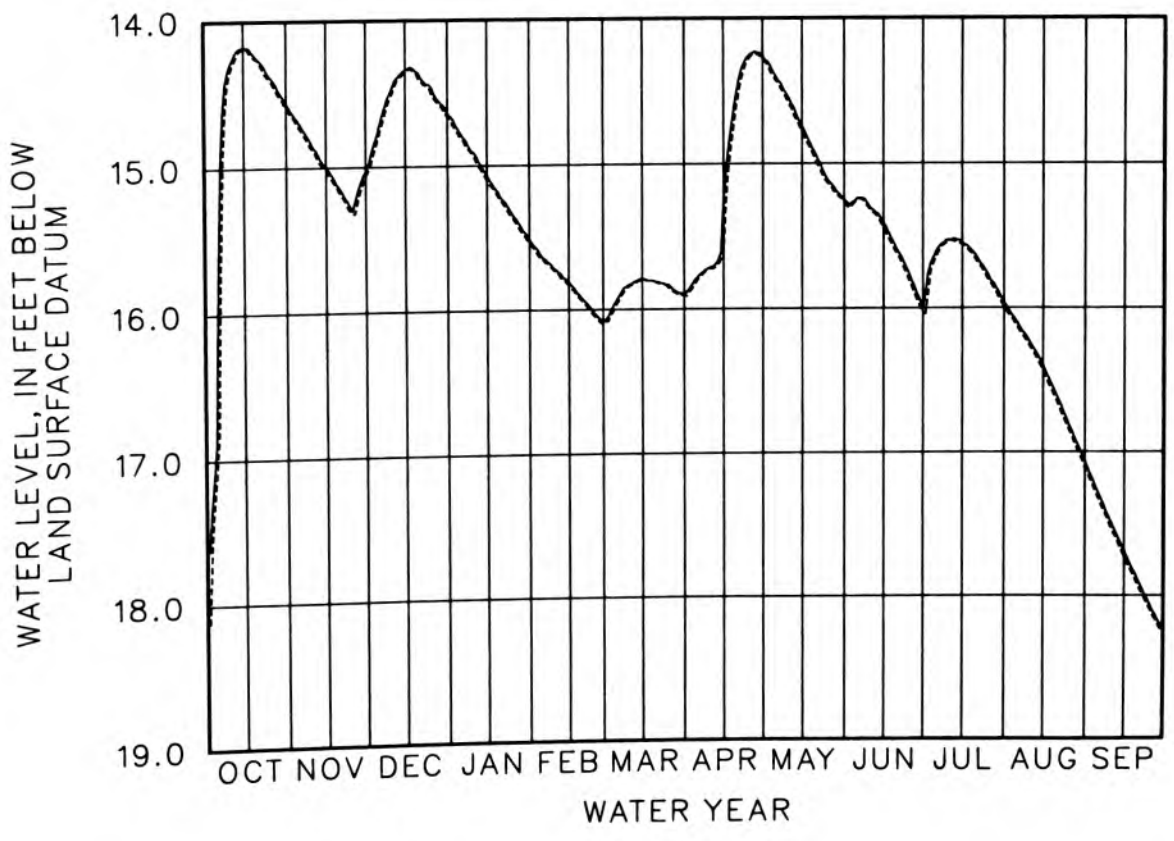
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	15.80	14.70	14.73	14.78	15.64	15.94	15.78	14.40	15.24	15.61	16.10	17.28
10	14.29	14.86	14.46	14.91	15.72	15.83	15.71	14.55	15.31	15.53	16.24	17.49
15	14.18	15.00	14.34	15.07	15.81	15.79	15.25	14.74	15.41	15.55	16.40	17.69
20	14.25	15.14	14.36	15.22	15.92	15.81	14.50	14.93	15.59	15.63	16.60	17.88
25	14.38	15.30	14.46	15.35	16.03	15.83	14.25	15.12	15.77	15.77	16.82	18.07
EOM	14.56	15.03	14.64	15.51	16.08	15.90	14.26	15.25	15.99	15.96	17.06	18.24

WTR YR 1987 HIGH 14.18 OCT 14 AND OTHERS

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	16.87	14.73	14.79	14.81	15.65	15.97	15.80	14.43	15.26	15.65	16.13	17.32
10	14.34	14.88	14.50	14.94	15.74	15.84	15.72	14.59	15.32	15.53	16.27	17.53
15	14.19	15.02	14.35	15.10	15.83	15.79	15.61	14.78	15.44	15.56	16.44	17.73
20	14.26	15.17	14.40	15.24	15.94	15.81	14.60	14.97	15.62	15.66	16.64	17.92
25	14.40	15.32	14.51	15.37	16.05	15.85	14.27	15.14	15.82	15.81	16.85	18.10
EOM	14.59	15.06	14.66	15.54	16.10	15.91	14.29	15.27	16.03	15.99	17.11	18.27

WTR YR 1987 LOW 18.27 SEP 30



WELLS COUNTY

404331085064701. Local number, WL 4.

LOCATION.--Lat 40°43'31", long 85°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, 24.49 ft below land-surface datum, Oct. 8, 1985.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

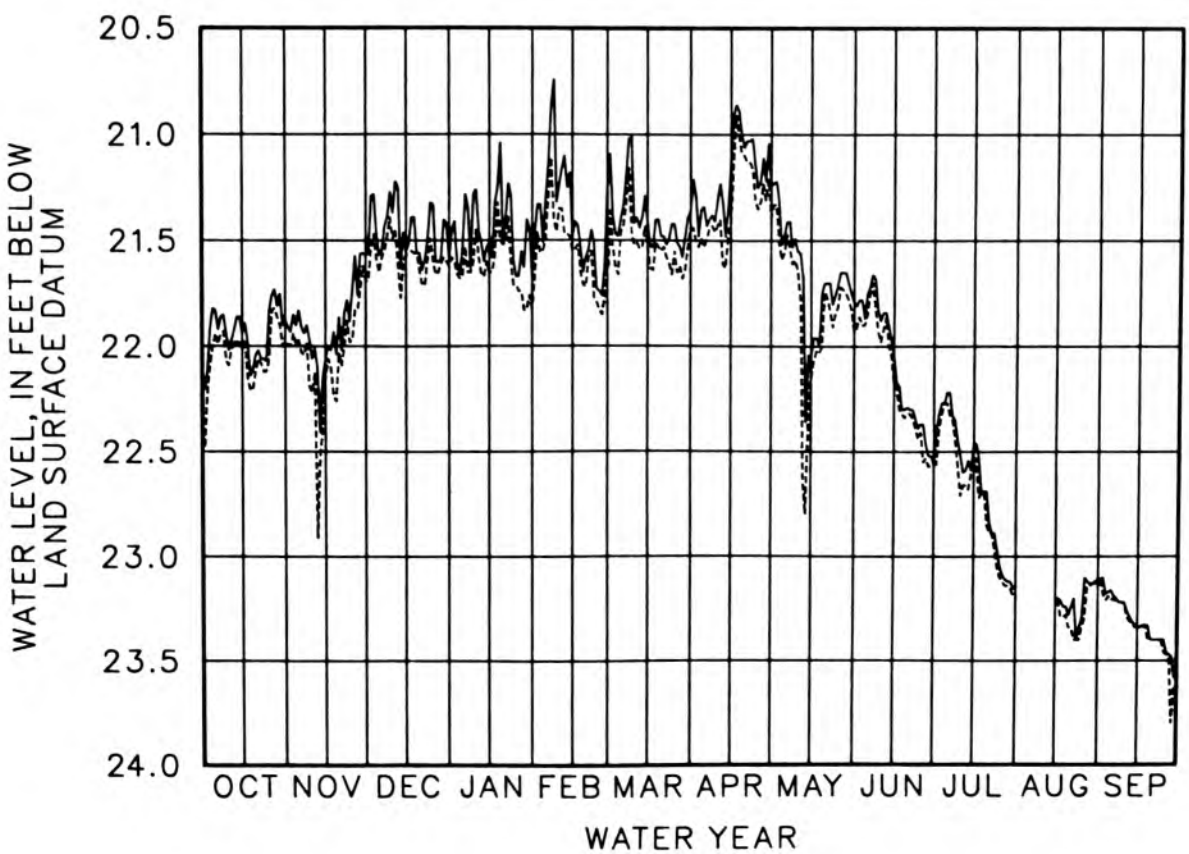
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	21.83	21.83	21.57	21.54	21.30	21.40	21.34	21.48	21.75	22.22	---	23.16
10	22.02	22.06	21.37	21.26	21.24	21.42	21.31	21.55	21.88	22.52	---	23.22
15	21.94	22.06	21.55	21.51	21.48	21.41	21.14	22.05	22.04	22.46	---	23.34
20	22.04	21.86	21.56	21.51	21.58	21.48	21.06	21.70	22.29	22.69	23.28	23.40
25	21.83	21.73	21.33	21.67	21.74	21.42	21.25	21.71	22.37	23.05	23.30	23.40
EOM	21.88	21.57	21.59	21.67	21.23	21.36	21.24	21.79	22.56	---	23.11	23.59

WTR YR 1987 HIGH 20.74 FEB 8

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	21.94	21.97	21.65	21.67	21.49	21.46	21.53	21.56	21.85	22.27	---	23.21
10	22.09	22.22	21.49	21.45	21.35	21.52	21.43	21.64	21.98	22.71	---	23.22
15	22.02	22.15	21.57	21.65	21.55	21.53	21.42	22.15	22.18	22.59	---	23.34
20	22.12	22.03	21.64	21.52	21.72	21.55	21.10	21.74	22.32	22.85	23.34	23.40
25	22.06	21.97	21.60	21.71	21.83	21.55	21.35	21.81	22.41	23.10	23.34	23.46
EOM	21.98	21.69	21.62	21.82	21.62	21.44	21.39	21.93	22.56	---	23.12	23.61

WTR YR 1987 LOW 23.80 SEP 28



WHITE COUNTY

404914086403001. Local number, WT 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, 4.25 mi north of Idaville and in the southwest corner of the Pious Chapel property. 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 (revised).

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.70 ft below land-surface datum, July 17, 1986; lowest, 8.68 ft below land-surface datum, Aug. 7, 1986.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

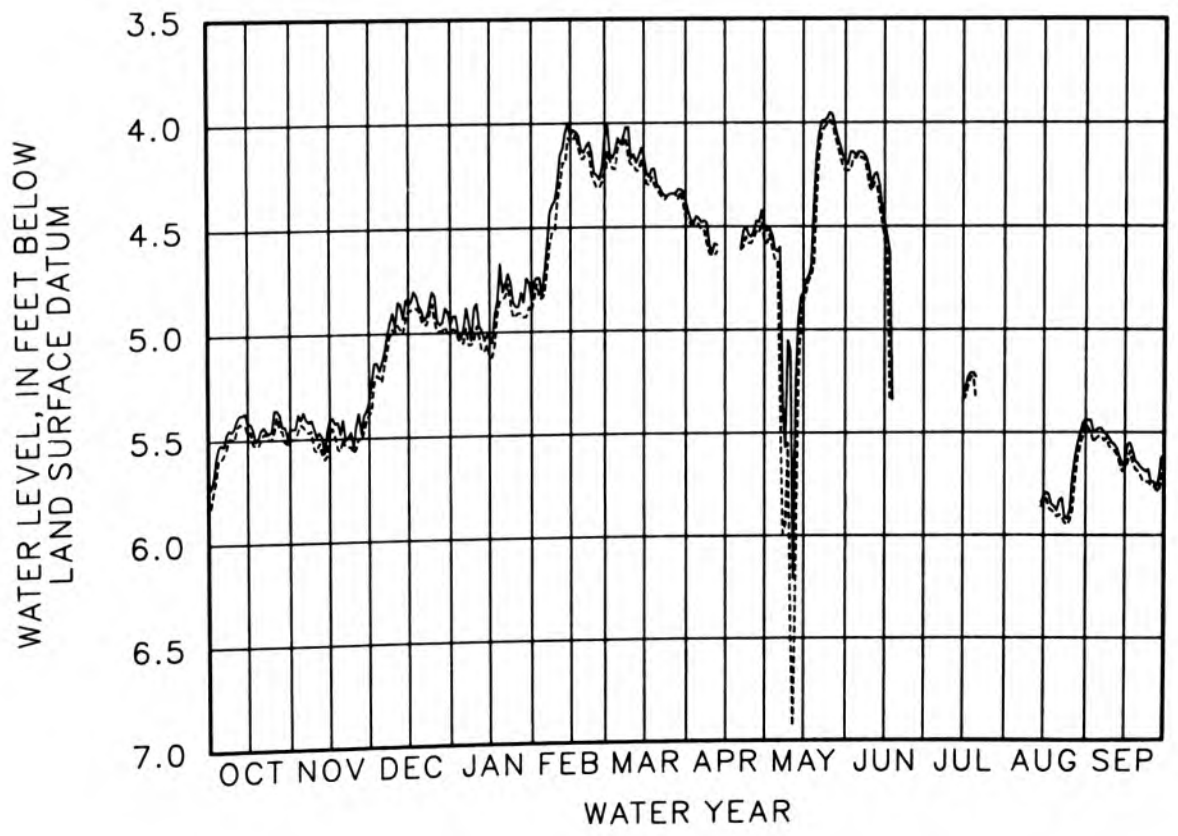
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.52	5.37	5.14	4.98	4.72	4.07	4.46	4.62	4.14	---	---	5.48
10	5.44	5.49	4.97	4.86	4.28	4.17	4.63	5.10	4.30	---	---	5.55
15	5.42	5.41	4.86	5.03	4.06	4.16	---	4.82	4.48	5.33	5.81	5.64
20	5.45	5.41	4.89	4.81	4.14	4.30	---	4.15	---	5.23	5.88	5.65
25	5.36	5.44	4.82	4.88	4.25	4.34	4.55	3.95	---	---	5.88	5.74
EOM	5.45	5.33	4.96	4.84	4.05	4.38	4.49	4.19	---	---	5.44	5.62

WTR YR 1987 HIGH 3.95 MAY 25

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.59	5.44	5.23	5.05	4.82	4.12	4.49	4.66	4.15	---	---	5.52
10	5.50	5.56	4.99	4.97	4.37	4.20	4.64	6.47	4.33	---	---	5.58
15	5.47	5.47	4.89	5.12	4.09	4.23	---	4.86	4.56	5.34	5.84	5.67
20	5.50	5.50	4.94	4.84	4.17	4.32	---	4.37	---	5.34	5.91	5.69
25	5.46	5.55	4.94	4.92	4.31	4.34	4.58	3.99	---	---	5.93	5.76
EOM	5.50	5.39	5.00	4.90	4.23	4.46	4.58	4.23	---	---	5.46	5.65

WTR YR 1987 LOW 6.93 MAY 11



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, 52.67 ft below land-surface datum, Mar. 15, 1979.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

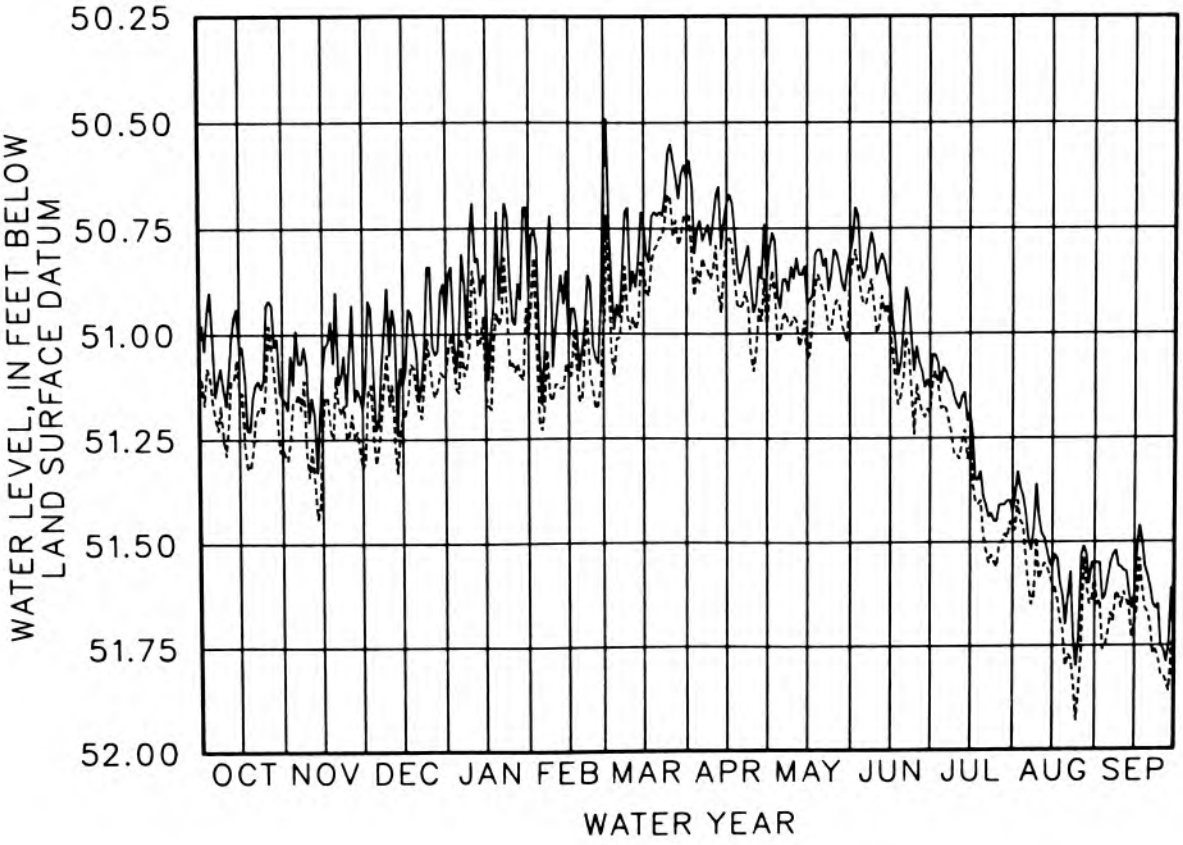
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	51.01	50.99	51.23	51.01	51.17	50.93	50.73	50.94	50.87	51.08	51.43	51.59
10	51.17	51.21	51.05	50.69	50.99	50.90	50.73	50.87	50.86	51.17	51.44	51.56
15	51.03	51.09	51.12	50.88	51.03	50.74	50.69	50.93	50.89	51.19	51.56	51.63
20	51.15	50.90	51.04	50.92	51.04	50.72	50.88	50.80	50.99	51.39	51.70	51.58
25	50.93	51.05	50.84	50.97	51.06	50.55	50.95	50.80	51.03	51.45	51.73	51.75
EOM	51.15	51.18	50.97	50.90	50.60	50.63	50.87	50.81	51.13	51.43	51.55	51.63

WTR YR 1987 HIGH 50.49 MAR 1

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1986 TO SEPTEMBER 1987

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	51.16	51.16	51.31	51.14	51.23	51.01	50.88	51.01	50.93	51.17	51.54	51.72
10	51.29	51.34	51.17	50.85	51.12	50.99	50.85	50.96	51.00	51.29	51.59	51.66
15	51.14	51.24	51.20	51.15	51.10	50.84	50.78	51.06	50.99	51.27	51.60	51.70
20	51.28	51.10	51.14	50.98	51.16	50.79	50.94	50.88	51.11	51.48	51.80	51.67
25	51.11	51.24	51.06	51.07	51.18	50.68	51.09	50.94	51.12	51.56	51.86	51.82
EOM	51.27	51.32	51.10	51.01	50.97	50.72	50.99	50.87	51.19	51.47	51.58	51.72

WTR YR 1987 LOW 51.93 AUG 24



*U.S.GOVERNMENT PRINTING OFFICE:1988-544-324-5

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