

CALENDAR FOR WATER YEAR 1991

1990

OCTOBER							NOVEMBER							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
	1	2	3	4	5	6					1	2	3							1
7	8	9	10	11	12	13	4	5	6	7	8	9	10	2	3	4	5	6	7	8
14	15	16	17	18	19	20	11	12	13	14	15	16	17	9	10	11	12	13	14	15
21	22	23	24	25	26	27	18	19	20	21	22	23	24	16	17	18	19	20	21	22
28	29	30	31				25	26	27	28	29	30		23	24	25	26	27	28	29
														30	31					

1991

JANUARY							FEBRUARY							MARCH						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
		1	2	3	4	5						1	2						1	2
6	7	8	9	10	11	12	3	4	5	6	7	8	9	5	4	5	6	7	8	9
13	14	15	16	17	18	19	10	11	12	13	14	15	16	10	11	12	13	14	15	16
20	21	22	23	24	25	26	17	18	19	20	21	22	23	17	18	19	20	21	22	23
27	28	29	30	31			24	25	26	27	28			24	25	26	27	28	29	30
														31						
APRIL							MAY							JUNE						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
	1	2	3	4	5	6				1	2	3	4							1
7	8	9	10	11	12	13	5	6	7	8	9	10	11	2	3	4	5	6	7	8
14	15	16	17	18	19	20	12	13	14	15	16	17	18	9	10	11	12	13	14	15
21	22	23	24	25	26	27	19	20	21	22	23	24	25	16	17	18	19	20	21	22
28	29	30					26	27	28	29	30	31		23	24	25	26	27	28	29
														30						
JULY							AUGUST							SEPTEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
	1	2	3	4	5	6					1	2	3	1	2	3	4	5	6	7
7	8	9	10	11	12	13	4	5	6	7	8	9	10	8	9	10	11	12	13	14
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28	29	30	31				25	26	27	28	29	30	31	29	30					



Water Resources Data Indiana Water Year 1991

by James A. Stewart and Clyde E. Deiwert



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT IN-91-1
Prepared in cooperation with the State of Indiana
and with other agencies

U. S. DEPARTMENT OF THE INTERIOR

MANUEL LUJAN, JR., Secretary

U.S. GEOLOGICAL SURVEY

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Indianapolis, Indiana 46278

PREFACE

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

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

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(d-discharge, e-gage heights, c-chemical, t-temperature, s-sediment,
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The following continuous-record surface-water discharge or stage-only stations (gaging stations) in Indiana have been discontinued. Daily streamflow or stage records were collected and published for the period of record, expressed in water years, shown for each station. Discontinued short-term project stations have not been included. Information regarding these stations may be obtained from the District Office at the address given on the back side of the title page of this report.

(Most stations are surface-water discharge, exceptions are designated with footnotes)

Station name	Station number	Drainage area (mi ²)	Period of record
WABASH RIVER BASIN			
East Fork Whitewater River at Richmond	03275500	121	1949-78
Laughery Creek near Farmers Retreat (a)	03277000	248	1941-73
Friday Branch tributary near Saint Meinrad (b)	03303276	.096	1981
Little Pigeon Creek near Tennyson	03304000	187	1944-47
Pigeon Creek at Evansville	03322100	323	1960-85
Wabash River near New Corydon	03322500	262	1951-88
Mississinewa River near Eaton (b)	03326000	310	1952-71
Wabash River at Delphi	03329500	4,072	1940-71
Tippecanoe River near Warsaw	03331000	126	1943-49
Tippecanoe River at Pulaski	03332000	1,089	1928-31
Little Indian Creek near Royal Center (a)	03332300	35.0	1959-73
Big Monon Creek near Francesville (a)	03332400	152	1959-73
Tippecanoe River near Monticello (c)	03332500	1,732	1932-81
Wildcat Creek at Greentown	03333500	168	1945-61
Big Pine Creek near Williamsport	03335700	323	1955-87
Coal Creek at Coal Creek	03339120	214	1965-72
Little Vermilion River near Newport	03339150	237	1965-72
Sugar Creek tributary near Deer Mill (b)	03339855	.45	1981
Sugar Creek near Byron (b)	03340000	670	1941-71
Big Raccoon Creek at Mansfield (d)	03341000	248	1939-58
Little Raccoon Creek near Catlin (d,g)	03341200	134	1957-71
Brouillets Creek near Universal (b)	03341420	321	1966-71
North Coal Creek near Terre Haute	03341470	1.91	1974-76
Honey Creek near Riley (b)	03341570	5.79	1981
West Fork Busseron Creek near Hymera	03342150	14.4	1966-86
Mud Creek near Dugger	03342250	11.9	1966-81
Busseron Creek near Sullivan	03342300	138	1966-86
Buttermilk Creek near Paxton	03342350	16.5	1966-73
Buttermilk Creek near Sullivan	03342360	17.6	1975-78
South Fork Smalls Creek at Bruceville (b,g)	03342800	4.94	1972-75
Killbuck Creek near Anderson	03348100	97.8	1964-68
White River near Noblesville	03348500	828	1915-26, 1929-74 (b)
Cicero Creek near Arcadia (a)	03349500	131	1955-76
Little Cicero Creek near Arcadia (a)	03349700	40.4	1956-76
Cicero Creek near Cicero	03350000	196	1946-54
Hinkle Creek near Cicero (a)	03350100	18.5	1956-76
Sugar Creek near Middletown	03351400	5.80	1969-89
Lawrence Creek at Fort Benjamin Harrison	03352000	2.74	1952-56, 1958-69
Mud Creek at Indianapolis (a)	03352200	42.4	1958-76
Pleasant Run at Brookville Road at Indpls.	03353160	10.1	1960-81
White River at Waverly	03353660	2,026	1986-88
Bear Creek near Trevlac (a)	03355000	6.94	1952-73
Beanblossom Creek at Dolan	03356000	100	1946-78
Beanblossom Creek near Bloomington	03356500	112	1931-33
Big Walnut Creek at Greencastle	03357420	216	1975-1982
Deer Creek near Putnamville	03359500	59.0	1955-65, 1968-72
Jordan Creek near Jordan (b)	03359980	25.9	1981
Sand Creek near Brewersville	03365000	155	1948-86
Graham Creek near Vernon	03366000	77.2	1955-73
Muscatatuck River near Austin	03367000	359	1932-43, 1944-71 (f)
Stucker Creek near Austin	03367500	127	1932-33
Vernon Fork near Crothersville	03370000	391	1932-33
Muscatatuck River near Tampico	03370500	960	1939
Muscatatuck River near Vallonia	03371000	1,134	1932-33
South Fork Salt Creek at Kurtz	03371600	38.2	1961-71, 1972-75 (e)

DISCONTINUED SURFACE-WATER DISCHARGE OR STAGE-ONLY STATIONS--Continued

Station name	Station number	Drainage area (mi ²)	Period of record
WABASH RIVER BASIN--Continued			
North Fork Salt Creek at Nashville (a)	03371650	76.1	1962-76
North Fork Salt Creek near Belmont	03372000	120	1946-71
Clear Creek near Harrodsburg	03372700	55.2	1960-71
Salt Creek near Peerless	03373000	573	1939-50, 1957-71 (d)
Indian Creek near Springville (a)	03373200	60.7	1961-73
White River at Hazleton (h)	03374100	11,305	1928-38
Patoka River near Jasper (g)	03376000	348	1944-47
Flat Creek near Otwell	03376260	21.3	1965-1982
Little Flat Creek near Otwell (b)	03376279	6.56	1981
South Fork Patoka River near Spurgeon	03376350	42.8	1964-86
STREAMS TRIBUTARY TO LAKE MICHIGAN			
Dunes Creek at Porter	04090500	3.40	1979-1982
Derby ditch at Beverly Shores	04095100	4.64	1980
Lime Lake outlet at Panama	04097970	17.5	1969-86
Fawn River at Orland	04098000	86.4	1943-47
Pigeon Creek and Hogback Lake near Angola	04099500	103	1946-74
Pretty Lake Inlet near Stroh	04099610	1.96	1963-80
Christiana Creek at Elkhart	04100000	127	1947-52
North Branch Elkhart River near Cosperville	04100220	134	1951-71
Turkey Creek at Syracuse	04100465	43.8	1969-87
STREAMS TRIBUTARY TO LAKE ERIE			
St. Joseph River at Hursh	04178500	734	1950-54
St. Joseph River at Cedarville	04179000	763	1931-32, 1956-81
Cedar Creek near Auburn (a)	04179500	87.3	1943-73
St. Marys River at Fort Wayne	04182700	810	1905-06
UPPER MISSISSIPPI RIVER BASIN			
Kingsbury Creek near LaPorte	05515400	7.08	1970-86
Yellow River near Bremen (a)	05516000	135	1955-73
Singleton ditch near Hebron	05518500	34.2	1949-51
West Creek near Schneider	05519500	54.7	1948-52, 1954-72
Singleton ditch at Illinois, IL	05520000	220	1945-77
Oliver ditch near Aix	05521500	79.6	1948-51
Slough Creek near Collegeville	05523500	83.7	1948-52, 1953-82
Carpenter Creek at Egypt	05524000	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 Stage only station.

f High-water records only.

g Some record fragmentary.

h Some quality of water data available after station discontinued for stream-gaging records.

DISCONTINUED SURFACE-WATER-QUALITY STATIONS

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The following stations were discontinued as surface-water-quality stations. Records of temperature, specific conductance, pH, dissolved oxygen or sediment were collected and published for the record shown for each station. Discontinued short-term project stations have not been included. Information regarding these stations may be obtained from the District Office at the address given on the back side of the title page of this report.

Station name	Station number	Drainage area (mi ²)	Type of	Period of record
WABASH RIVER BASIN				
Friday Branch tributary near Saint Meinrad	03303276	.096		1981
Mississinewa River near Eaton	03326000	310		1952-71
Sugar Creek tributary near Deer Mill	03339855	.45		1981
Sugar Creek near Byron	03340000	670		1941-71
Brouillets Creek near Universal	03341420	321		1966-71
Honey Creek near Riley	03341570	5.79		1981
South Fork Smalls Creek at Bruceville (a)	03342800	4.94		1972-75
White River near Noblesville	03348500	828		1929-74
Jordan Creek near Jordan	03359980	25.9		1981
Little Flat Creek near Otwell	03376279	6.56		1981
White River at Hazleton (b)	03374100	11,305		1928-38

a Some record fragmentary.

b Some quality of water data available after station discontinued for stream-gaging records.

WATER RESOURCES DATA - INDIANA, 1991

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 1991 water year for Indiana consist of records 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 183 gaging stations, stage at 7 gaging stations, stage and contents at 1 reservoir, water quality at 3 stream sites, sediment discharge at 1 gaging station, water levels at 80 lakes, and water levels at 95 observation wells. Locations of the streamflow and water-quality sites, and ground-water observation wells are shown on figures 4, 5, and 7. The number of lakes by county having 1991 water-level records are shown on figure 6. A systematic collection of stages on selected lakes was begun in 1943 in cooperation with the State of Indiana, Department of Natural Resources. The data collected since the beginning of record have not been published previously in the annual water data reports for Indiana. They are available from the Indiana District Office. A selected amount of lake data was published in Water-Supply Paper 1363, "Hydrology of Indiana Lakes," by J. I. Perrey and D. M. Corbett (1956). Additional lake data were published in Open-File Report 88-331, "Annual maximum and minimum lake levels for Indiana, water years 1942-85," by Kathleen K. Fowler (1988). These data represent that part of the National Water Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies in Indiana.

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

Prior to introduction of this series and for several water years concurrent with it, water-resources data for Indiana were published in U.S. Geological Survey Water-Supply Papers. Data on stream discharge and stage; and on lake or reservoir contents and stage, through September 1960, were published annually under the title "Surface-Water Supply of the United States." Stream discharge and stage data were published in four compilation reports (through the 1950, 1951-60, 1961-65, and 1966-70 water years). Data on water 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-91-1." 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. Beginning with the 1990 water year, all water-data reports will also be available on Compact Disc - Read Only Memory (CD-ROM). All data reports published for the current water year for the entire Nation, including Puerto Rico and the Trust Territories, will be reproduced on a single CD-ROM disc.

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

Additional information, including current prices, for ordering specific reports may be obtained from the District Chief at the address given on the back of the title page or by telephone (317) 290-3333. A limited number of CD-ROM discs will be available for sale by the Books and Open-File Reports Section, U.S. Geological Survey, Federal Center, Box 25425, Denver, Colorado 80225.

COOPERATION

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

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

State of Indiana, Department of Environmental Management, Kathy Prosser, Commissioner,
Corinne Wellish, Assistant Commissioner

State of Indiana, Department of Highways, John Dillion, Director

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

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

SUMMARY OF HYDROLOGIC CONDITIONS

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

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

Precipitation and runoff amounts in Indiana during the 1991 water year departed significantly from normal. Precipitation ranged from over 2 inches below normal in the southwestern part of the State to over 4 inches above normal in the northeastern part. Runoff ranged from almost 3 inches above normal to slightly greater than 15 inches above normal.

The effects of greater-than-normal precipitation on discharges are shown on figure 3, which compares 1991 water year monthly and annual means at the three Indiana index stations to monthly and annual medians for the period 1951-80. Monthly means were higher than monthly medians at all three index stations for 7 out of 12 months. The 1991 annual means at the three index stations were significantly greater than the medians, reflecting the generally wet year; the annual means ranged from 136 to 138 percent of their respective medians.

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

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

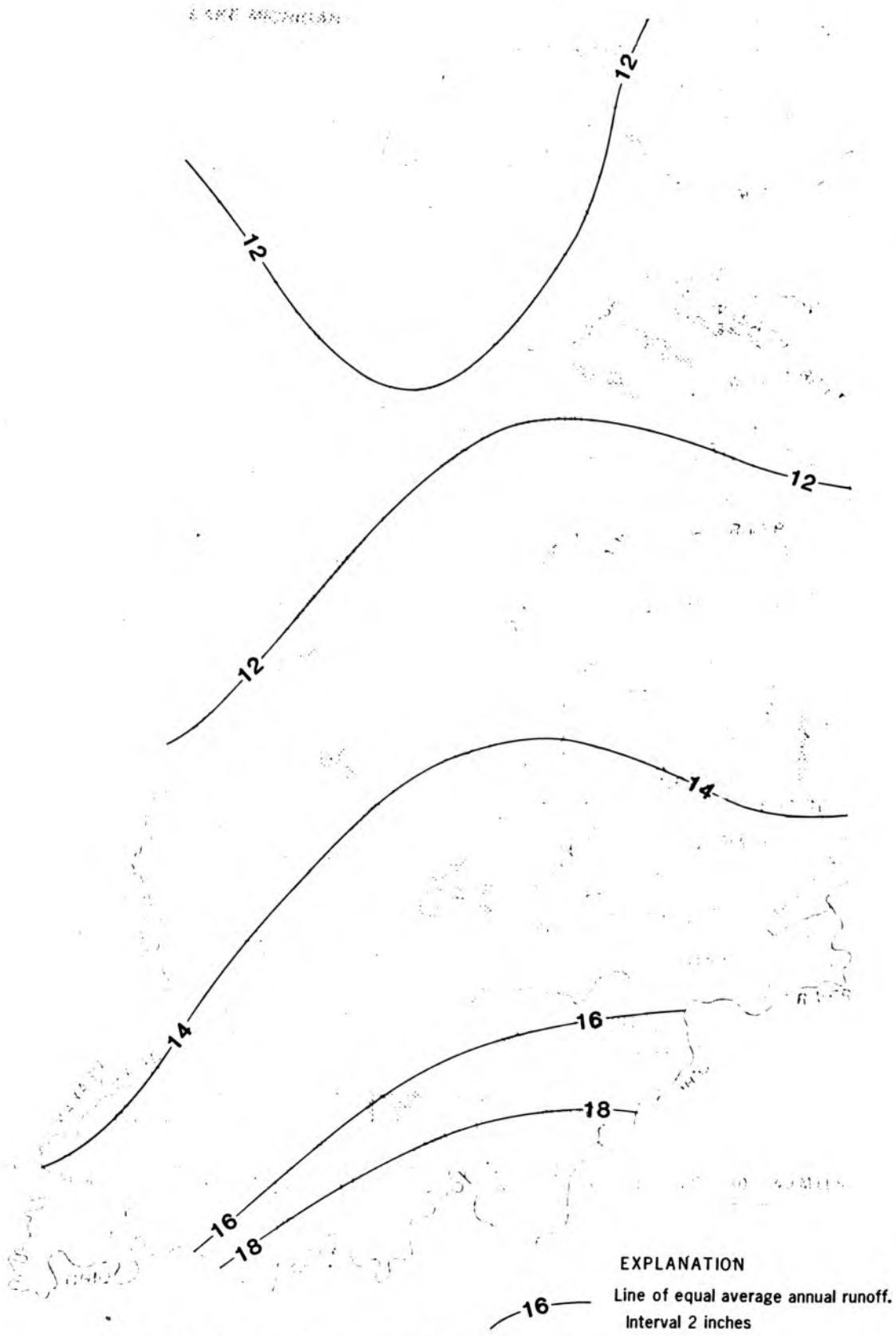


Figure 2.- Average annual runoff in Indiana, 1951-80.

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

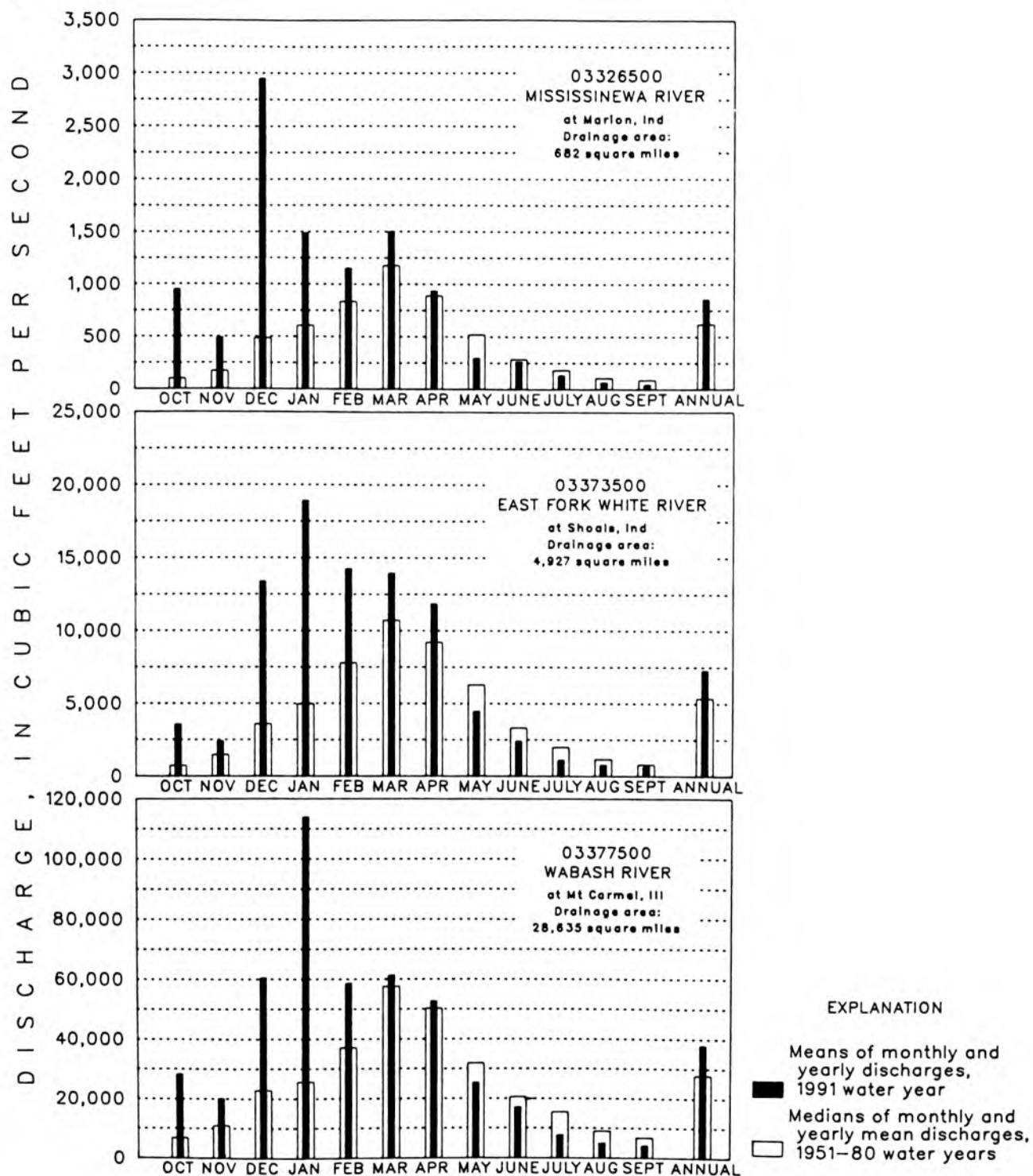


Figure 3. — Mean discharges at Indiana index stations during 1991 water year and median discharges for period 1951-80.

October 1990 precipitation amounts were all above normal, ranging from slightly less than 2 inches above normal in the east-central portion of Indiana to greater than 3 inches above normal in the west-central portion. Monthly mean discharges at the three index stations ranged from 408 to 950 percent of the monthly medians.

During November, precipitation ranged from slightly less than 1 inch below normal in the southeastern portion of the State to greater than 3 inches above normal in the northwestern portion. Monthly mean discharges at the three index stations ranged from 162 to 280 percent of the monthly medians.

December 1990 precipitation amounts were all above normal, ranging from more than 3 inches above normal in the northwestern part of the State to greater than 5 inches above normal in the east-central portion. Monthly mean discharges at the three index stations ranged from 263 to 605 percent of the monthly medians.

During January 1991, precipitation amounts were all below normal, ranging from slightly below normal in the southwestern part of the State to nearly 1 inch below normal in the central portion. Monthly mean discharges at the three index stations ranged from 243 to 442 percent of the monthly medians.

February precipitation ranged from greater than 1 inch below normal in the west-central portion of the State to less than 1 inch above normal in the southeastern portion. Monthly mean discharges at the three index stations ranged from 135 to 182 percent of the monthly medians.

During March, precipitation ranged from slightly below normal in the northeastern portion of the State to slightly greater than 2 inches above normal in the central portion. Monthly mean discharges at the three index stations ranged from 106 to 130 percent of the monthly medians.

April precipitation ranged from slightly more than 1 inch below normal in the south-central portion of the State to slightly less than 1 inch above normal in the northeastern portion. Monthly mean discharges at the three index stations ranged from 104 to 128 percent of the monthly medians.

During May, precipitation ranged from slightly less than 2 inches below normal in the southwestern portion of the State to slightly less than 3 inches above normal in the northeastern portion. Monthly mean discharges at the three index stations ranged from 57 to 79 percent of the monthly medians.

June precipitation amounts were all below normal, ranging from more than 2 inches below normal in the southeastern and northeastern portions of the State to greater than 3 inches below normal in the west-central portion. Monthly mean discharges at the three index stations ranged from 72 to 95 percent of the monthly medians.

During July, precipitation amounts were all below normal, ranging from slightly greater than 1 inch in the east-central portion of the State to nearly 3 inches below normal in the northwestern portion. Monthly mean discharges at the three index stations ranged from 49 to 74 percent of the monthly medians.

August precipitation ranged from greater than 1 inch below normal in the southwestern portion of the State to slightly less than 2 inches above normal in the southeastern portion. Monthly mean discharges at the three index stations ranged from 53 to 64 percent of the monthly medians.

During September, precipitation amounts were all below normal, ranging from slightly below normal in the south-central portion of the State to greater than 1 inch below normal in the west-central portion. Monthly mean discharges at the three index stations ranged from 48 to 83 percent of the monthly medians.

SPECIAL NETWORKS AND PROGRAMS

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

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

EXPLANATION OF THE RECORDS

The surface-water and ground-water records published in this report are for the 1991 water year that began October 1, 1990, and ended September 30, 1991. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow and stage data, stage and content data for a reservoir, water-quality data for surface water, and ground-water, lake-level data, peak-flow data, and ground-water-level data. The following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

Station Identification Numbers

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

Downstream Order System

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

The station-identification number is assigned according to downstream order. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete 8-digit number for each station, such as 03335500, which appears just to the left of the station name, includes the 2-digit Part number "03" plus the 6-digit downstream-order number "335500." The Part number designates the major river basin; for example, Part "03" is the Ohio River basin.

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

Latitude-Longitude System

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

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

Data Collection and Computation

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

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

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

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

At some stream-gaging stations, the stage-discharge relation is affected by the backwater from reservoirs, tributary streams, or other sources. This necessitates the use of the slope method in which the slope or fall in a reach of the stream is a factor in computing discharge. The slope or fall is

obtained by means of an auxiliary gage set at some distance from the base gage. At some stations, the stage-discharge relation is affected by changing stage; at these stations the rate of change in stage is used as a factor in computing discharge.

For some gaging stations, there are periods when no gage-height record is obtained, or the recorded gage height is so faulty that it cannot be used to compute daily discharge or contents. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods, the daily discharges are estimated from the recorded range in stage, previous or following record, discharge measurements, weather records, and comparison with other station records from the same or nearby basins. Information explaining how estimated daily-discharge values are identified in station records is included in the next two sections, "Data Presentation" (REMARKS paragraph) and "Identifying Estimated Daily Discharge."

Data Presentation

Streamflow data in this report are presented in a new format that is considerably different from the format in data reports prior to the 1991 water year. The major changes are that statistical characteristics of discharge now appear in tabular summaries following the water-year data table and less information is provided in the text or station manuscript above the table. These changes represent the results of a pilot program to reformat the annual water-data report to meet current user needs and data preferences.

The records published for each continuous-record surface-water discharge station (gaging station) now consist of four parts: the manuscript or station description; the data table of daily mean values of discharge for the current water year with summary data; a tabular statistical summary of monthly mean flow data for a designated period, by water year; and a summary statistics table that includes statistical data of annual, daily, and instantaneous flows as well as data pertaining to annual runoff, 7-day low-flow minimums, and flow duration.

Station manuscript

The manuscript provides, under various headings, descriptive information, such as station location; period of record; historical extremes outside the period of record; record accuracy; and other remarks pertinent to station operation and regulation. The following information, as appropriate, is provided with each continuous record of discharge or lake content. Comments to 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.--Because of new information, published records, 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.

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.

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.

Manuscript information for lake or reservoir stations differs from that for stream stations in the nature of the "Remarks" and in the inclusion of a skeleton stage-capacity table when daily contents are given.

Headings for AVERAGE DISCHARGE, EXTREMES FOR PERIOD OF RECORD, AND EXTREMES FOR CURRENT YEAR have been deleted and the information contained in these paragraphs, except for the listing of secondary instantaneous peak discharges in the EXTREMES FOR CURRENT YEAR paragraph, is now presented in the tabular summaries following the discharge table or in the REMARKS paragraph, as appropriate. No changes have been made to the data presentations of lake contents.

Data table of daily mean values

The daily table for stream-gaging stations gives mean discharge for each day of the water year. In the monthly summary for the table, the line headed "TOTAL" gives the sum of the daily figures for each month. the line headed "MEAN" gives the average flow in cubic feet per second for the month; and the lines headed "MAX" and "MIN" give the maximum and minimum daily discharges, respectively, for each 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."); or in acre-feet (line headed "AC-FT"). Figures for cubic feet per second per square mile and runoff in inches or in acre-feet may be omitted if there is extensive regulation or diversion or if the drainage area includes large noncontributing areas. At some stations monthly and (or) yearly observed discharges are adjusted for reservoir storage or diversion, or diversion data or reservoir contents are gives. These figures are identified by a symbol and corresponding footnote.

Statistics of monthly mean data

A tabular summary of the mean (line headed "MEAN"), maximum (line headed "MAX"), and minimum (line headed "MIN") of monthly mean flows for each month for a designated period is provided below the mean values table. The water years of the first occurrence of the maximum and minium

monthly flows are provided immediately below those figures. The designated period of will be expressed as "FOR WATER YEARS ____ - ____, BY WATER YEAR (WY)," and will list the first and last water years of the range of years selected from the PERIOD OF RECORD paragraph in the station manuscript. It will consist of all of the station record within the specified water years, inclusive, including complete months of record for partial water years, if any, and may coincide with the period of record for the station. The water years for which the statistics are computed will be consecutive, unless a break in the station record is indicated in the manuscript.

Summary statistics

A table titled "SUMMARY STATISTICS" follows the statistics of monthly mean data tabulation. This table consists of four columns, with the first column containing the line headings of the statistics being reported. The table provides a statistical summary of yearly, daily, and instantaneous flows, not only for the current water year but also for the previous calendar year and for a designated period, as appropriate. The designated period selected, "WATER YEARS ____ - ____, " will consist of all of the station record within the specified water years, inclusive, including complete months of record for partial water years, if any, and may coincide with the period of record for the station. The water year for which the statistics are computed will be consecutive, unless a break in the station record is indicated in the manuscript. All of the calculations for the statistical characteristics designated ANNUAL (See line headings below.), except for the "ANNUAL" 7-DAY MINIMUM" statistic, are calculated for the designated period using complete water years. The other statistical characteristics may be calculated using partial water years.

The date or water year, as appropriate, of the first occurrence of each statistic reporting extreme values of discharge is provided adjacent to the statistic. Repeated occurrences may be noted in the REMARKS paragraph of the manuscript or in footnotes. Because the designated period may not be the same as the station period of record published in the manuscript, occasionally the dates of occurrence listed for the daily and instantaneous extremes in the designated-period column may not be within the selected water years listed in the handing. When this occurs, it will be noted in the REMARKS paragraph or in footnotes. Selected streamflow duration curve statistics and runoff data are also given. Runoff data may be omitted if there is extensive regulation or diversion of flow in the drainage basin.

The following summary statistics data, as appropriate, are provided with each continuous record of discharge. Comments to follow clarify information presented under the various line headings of the summary statistics table. ANNUAL TOTAL.--The sum of the daily mean values of discharge for the year. At some stations the annual total discharge is adjusted for reservoir storage or diversion. The adjusted figures are identified by a symbol and corresponding footnotes.

ANNUAL TOTAL.--The sum of the daily mean values of discharge for the year. At some stations the annual total discharge is adjusted for reservoir storage or diversion. The adjusted figures are identified by a symbol and corresponding footnotes.

ANNUAL MEAN.--The arithmetic mean of the individual daily mean discharges for the year noted or for the designated period. At some stations the yearly mean discharge is adjusted for reservoir storage or diversion. The adjusted figures are identified by a symbol and corresponding footnotes. At least five complete years of record must be available before this statistic is published for the designated period.

HIGHEST ANNUAL MEAN.--The maximum annual mean discharge occurring for the designated period.

LOWEST ANNUAL MEAN.--The minimum annual mean discharge occurring for the designated period.

HIGHEST DAILY MEAN.--The maximum daily mean discharge for the year or for the designated period.

LOWEST DAILY MEAN.--The minimum daily mean discharge for the year or for the designated period.

ANNUAL 7-DAY MINIMUM.--The lowest mean discharge for seven consecutive days for a calendar year or a water year. Note that most low-flow frequency analyses of annual 7-day minimum flows use a climatic year (April 1-March 31). The date shown in the summary statistics table is the initial date of the 7-day period. (This value should not be confused with the 7-day 10-year low-flow statistic.)

INSTANTANEOUS PEAK FLOW.--The maximum instantaneous discharge occurring for the water year or for the designated period. Note that secondary instantaneous peak discharges above a selected base discharge are stored in District computer files for stations meeting certain criteria. Those discharge values may be obtained by writing to the District Office. (See address on back of title page of this report.)

INSTANTANEOUS PEAK STAGE.--The maximum instantaneous stage occurring for the water year or for the designated period. If the dates of occurrence for the instantaneous peak flow and instantaneous peak stage differ, the REMARKS paragraph in the manuscript or a footnote may be used to provide further information.

INSTANTANEOUS LOW FLOW.--The minimum instantaneous discharge occurring for the water year or for the designated period.

ANNUAL RUNOFF (AC-FT).--Indicates the depth, in acre-feet, to which the drainage area would be covered if all the runoff for the year were uniformly distributed on it.

ANNUAL RUNOFF (CFSM).--Indicates 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 for the year.

ANNUAL RUNOFF (INCHES).--Indicates the depth to which the drainage area would be covered if all the runoff for the year were uniformly distributed on it.

10 PERCENT EXCEEDS.--The discharge that is exceeded by 10 percent of the flow for the designated period.

50 PERCENT EXCEEDS.--The discharge that is exceeded by 50 percent of the flow for the designated period.

90 PERCENT EXCEEDS.--The discharge that is exceeded by 90 percent of the flow for the designated period.

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 ft³/s; to the nearest tenth between 1.0 and 10 ft³/s; to whole numbers between 10 and 1,000 ft³/s; and to 3 significant figures for more than 1,000 ft³/s. The number of significant figures used is based solely on the magnitude of the discharge value. The same rounding rules apply to discharges listed for partial-record stations and miscellaneous sites.

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

Other Records Available

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

Records of Surface-Water Quality

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

Classification of Records

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

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

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

Arrangement of Records

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

On-site Measurements and Sample Collection

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

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

NOTE: Traditionally, dissolved trace-element concentrations have been reported at the microgram per liter ($\mu\text{g/L}$) level. Recent evidence, mostly from large rivers, indicates that actual dissolved-phase concentrations for a number of trace elements are with the range of 10's to 100's of nanograms per liter (ng/L). Present data above the $\mu\text{g/L}$ level should be viewed with caution. Such data may actually represent elevated environmental concentrations from natural or human causes; however, these data could reflect contamination introduced during sampling, processing, or analysis. To confidently produce dissolved trace-element data with insignificant contamination, the U.S. Geological Survey will begin using new trace-element protocols in the near future.

Laboratory Measurements

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

Data Presentation

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

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

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

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

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

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

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

WATER RESOURCES DATA - INDIANA, 1991

Remark Codes

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

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

NOTE: In March 1989 the National Water-Quality Laboratory discovered a bias in the turbidimetric method for sulfate analysis, indicating that values below 75 mg/L have a median positive bias of 2 mg/L above the true value for the period between 1982 and 1989. Correct sulfate values have been made by the laboratory and published in this report since April 17, 1989.

Records of Lake Levels

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

Data Collection and Computation

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

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

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

Data Presentation

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

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

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

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

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

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

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

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

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

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

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

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

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

Records of Ground-Water Levels

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

Data Collection and Computation

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

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

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

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

Data Presentation

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

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

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

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

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

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

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

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

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

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

Records of Ground-Water Quality

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

Sample Collection and Analysis

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

Data Presentation

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

ACCESS TO WATSTORE DATA

The U. S. Geological Survey is the principal Federal water-data agency and, as such, collects and disseminates about 70 percent of the water data currently being used by numerous State, local, private, and other Federal agencies to develop and manage our water resources. As part of the Geological Survey's program of releasing water data to the public, a large-scale computerized system has been developed for the storage and retrieval of water data collected through its activities. The National WATER Data STORAGE and RETRIEVAL System (WATSTORE) was established in 1972 to provide an effective and efficient means for the processing and maintenance of water data collected through the

the activities of the U.S. Geological Survey and to facilitate release of the data to the public. A variety of useful products, ranging from data tables to complex statistical analyses such as Log Pearson Type III, can be produced using WATSTORE. The system resides on the central computer facilities of the U.S. Geological Survey at its National Center in Reston, Virginia and consists of related filed and data bases.

- ★ Station Header File - Contains descriptive information on more than 440,000 sites throughout the United States and its territories where the U.S. Geological Survey collects or has collected data.
- ★ Daily Values File - Contains more than 220 million daily values of stream flows, stages, reservoir contents, water temperatures, specific conductances, sediment concentrations, sediment discharges, and ground-water levels.
- ★ Peak Flow File - Contains approximately 500,000 maximum (peak) streamflow gage-heights values at surface-water sites.
- ★ Water Quality File - Contains approximately 2 million analyses of water samples that describe the chemical, physical, biological, and radio-chemical characteristics of both surface- and ground-water.
- ★ Ground-Water Site Inventory Data Base - Contains inventory data for more than 900,000 wells, springs, and other sources of ground water. The data includes site location, geohydrologic characteristics, well-construction history, and one-time field measurements such as water temperature.

In 1976, the U.S. Geological Survey opened WATSTORE to the public for direct access. The signing of a Memorandum of Agreement with the Survey is required to obtain direct access to WATSTORE. The system can be accessed either synchronously or asynchronously. The requestor will be expected to pay all computer costs he/she incurs. Direct access may be obtained by contacting:

U.S. Geological Survey
National Water Data Exchange
421 USGS National Center
Reston, Virginia 22092

In addition to providing direct access to WATSTORE, data can be provided in various machine-readable formats on magnetic tape or 5-1/4 inch floppy disk; and, as noted in the introduction, on CD-ROM discs. Beginning with the 1990 water year, all water-data reports will also be available on Compact Disc - Read Only Memory (CD-ROM). All data reports published for the current water year for the entire Nation, including Puerto Rico and the Trust Territories, will be reproduced on a single CD-ROM disc. Information about the availability of specific types of data or products, and user charges, can be obtained locally from each of the Water Resources Divisions's District offices. (See address on the back of the title page.) A limited number of CD-ROM discs will be available for sale by the Books and Open-File Reports Section, U.S. Geological Survey, Federal Center, Box 25425, Denver, Colorado 80225.

DEFINITION OF TERMS

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

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

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

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

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

Fecal coliform bacteria are bacteria that are present in the intestine or feces of warm-blooded animals. They are often used as indicators of the sanitary quality of the water. In the laboratory, they are defined as all organisms that produce blue colonies within 24 hours when incubated at $44.5^{\circ}\text{C} \pm 0.2^{\circ}\text{C}$ 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 $35^{\circ}\text{C} \pm 1.0^{\circ}\text{C}$ on KF-streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

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

Bottom material: See Bed material.

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

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

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

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

Cubic foot per second (ft^3/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to 7.48 gallons per second or 448.8 gallons per minute or 0.02832 cubic meters per second.

Cubic foot per second-day is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-feet, about 646,000 gallons, or 2,445 cubic meters.

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

Annual 7-day minimum is the lowest mean discharge for 7 consecutive days for a calendar year or a water year. Note that most low-flow frequency analyses of annual 7-day minimum flows use a climatic year (April 1 - March 31). The date shown in the summary statistics table is the initial date of the 7-day period. (This value should not be confused with the 7-day 10-year low-flow statistic.)

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

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

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

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

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

Gaging station is a particular site on a stream, canal, lake, or reservoir where systematic observations of hydrologic data are obtained.

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

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

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

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

Micrograms per gram ($\mu\text{g/g}$) 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, $\mu\text{g/L}$) is a unit expressing the concentration of chemical constituents in solution as mass (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to one milligram per liter.

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

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

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

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

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

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

Particle size is the diameter, in millimeters (mm), of a particle determined by either sieve or sedimentation methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) determine fall diameter of particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling).

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

<u>Classification</u>	<u>Size (mm)</u>	<u>Method of analysis</u>
Clay.....	0.00024 - 0.004	Sedimentation
Slit.....	.004 - .062	Sedimentation
Sand.....	.062 - 2.0	Sedimentation or sieve
Gravel.....	2.0 - 64.0	Sieve

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

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

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

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

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

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

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

Suspended sediment is the sediment that at any given time is maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid.

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

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

Suspended-sediment discharge (tons/day) is the rate at which dry mass of sediment passes a section of a stream or is the quantity of sediment, as measured by dry mass or volume, that passes a section in a given time. It is calculated in units of tons per day as follows: Concentration (mg/L) x discharge (ft³/s) x 0.0027.

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

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

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

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

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

Solute is any substance that is dissolved in water.

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

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

Streamflow is the discharge that occurs in a natural channel. Although the term "discharge" can be applied to the flow of a canal, the word "streamflow" uniquely describes the discharge in a surface stream course. The term "streamflow" is more general than "runoff," as streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

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

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

Suspended (as used in tables of chemical analyses) refers to the amount (concentration) of undissolved material in a water-sediment mixture. It is associated with the material retained on a 0.45- μ m 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- μ m 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- μ m membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total."

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

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water that would be contained in a vessel or reservoir that had received equal quantities of water from the stream each day for the year.

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

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

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

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

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

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

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

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

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

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

Ion	Multiply by	Ion	Multiply by
Aluminum (Al^{+3})	0.11119	Iodide (I^{-1})	0.00788
Ammonia as NH_4^{+1}	.05544	Iron (Fe^{+3})*	.05372
Barium (Ba^{+2})	.01456	Lead (Pb^{+2})*	.00965
Bicarbonate (HCO_3^{-1})	.01639	Lithium (Li^{+1})*	.14411
Bromide (Br^{-1})	.01251	Magnesium (Mg^{+2})	.08226
Calcium (Ca^{+2})	.04990	Manganese (Mn^{+2})*	.03640
Carbonate (CO_3^{-2})	.03333	Nickel (Ni^{+2})*	.03406
Chloride (Cl^{-1})	.02821	Nitrate (NO_3^{-1})	.01613
Chromium (Cr^{+6})*	.11539	Nitrite (NO_2^{-1})	.02174
Cobalt (Co^{+2})*	.03394	Phosphate (PO_4^{-3})	.03159
Copper (Cu^{+2})*	.03148	Potassium (K^{+1})	.02557
Cyanide (CN^{-1})	.03844	Sodium (Na^{+1})	.04350
Fluoride (F^{-1})	.05264	Strontium (Sr^{+2})*	.02283
Hydrogen (H^{+1})	.99209	Sulfate (SO_4^{-2})	.02082
Hydroxide (OH^{-1})	.05880	Zinc (Zn^{+2})*	.03060

*Constituent reported in micrograms per liter; multiply by factor and divide results by 1,000.

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

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

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

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

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

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

- 1-D1. *Water temperature--influential factors, field measurement, and data presentation*, by H. H. Stevens, Jr., J. F. Ficke, and G. F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages.
- 1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W. W. Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages.
- 2-D1. *Application of surface geophysics to ground-water investigations*, by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages.
- 2-D2. *Application of seismic-refraction techniques to hydrologic studies*, by F. P. Haeni: USGS--TWRI Book 2, Chapter D2. 1988. 86 pages.
- 2-E1. *Application of borehole geophysics to water-resources investigations*, by W. S. Keys and L. M. McCary: USGS--TWRI Book 2, Chapter E1. 1971. 126 pages.
- 2-E2. *Borehole geophysics applied to ground-water investigations*, by W. Scott Keys: USGS--TWRI Book 2, Chapter E2. 1990. 150 pages.
- 2-F1. *Application of drilling, coring, and sampling techniques to test holes and wells*, by Eugene Shuter and Warren E. Teasdale: USGS--TWRI Book 2, Chapter F1. 1989. 97 pages.
- 3-A1. *General field and office procedures for indirect discharge measurements*, by M. A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 pages.
- 3-A2. *Measurement of peak discharge by the slope-area method*, by Tate Dalrymple and M. A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages.
- 3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages.
- 3-A4. *Measurement of peak discharge at width contractions by indirect methods*, by H. F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 pages.
- 3-A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages.
- 3-A6. *General procedure for gaging streams*, by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6. 1968. 13 pages.
- 3-A7. *Stage measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages.
- 3-A8. *Discharge measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages.
- 3-A9. *Measurement of time of travel in streams by dye tracing*, by F. A. Kilpatrick and J. F. Wilson, Jr.: USGS--TWRI Book 3, Chapter A9. 1989. 27 pages.
- 3-A10. *Discharge ratings at gaging stations*, by E. J. Kennedy: USGS--TWRI Book 3, Chapter A10. 1984. 59 pages.

- 3-A11. *Measurement of discharge by moving-boat method*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 pages.
- 3-A12. *Fluorometric procedures for dye tracing*, by J. F. Wilson, Jr., E. D. Cobb, and F. A. Kilpatrick: USGS--TWRI Book 3, Chapter A12. 1986. 41 pages.
- 3-A13. *Computation of continuous records of streamflow*, by E. J. Kennedy: USGS--TWRI Book 3, Chapter A13. 1983. 53 pages.
- 3-A14. *Use of flumes in measuring discharge*, by F. A. Kilpatrick and V. R. Schneider: USGS--TWRI Book 3, Chapter A14. 1983. 46 pages.
- 3-A15. *Computation of water-surface profiles in open channels*, by Jacob Davidian: USGS--TWRI Book 3, Chapter A15. 1984. 48 pages.
- 3-A16. *Measurement of discharge using tracers*, by F. A. Kilpatrick and E. D. Cobb: USGS--TWRI Book 3, Chapter A16. 1985. 52 pages.
- 3-A17. *Acoustic velocity meter systems*, by Antonius Laenen: USGS--TWRI Book 3, Chapter A17. 1985. 38 pages.
- 3-A18. *Determination of stream reaeration coefficients by use of tracers*, by F. A. Kilpatrick, R. E. Rathburn, N. Yotsukura, G. W. Parker, and L. L. DeLong: USGS--TWRI Book 3, Chapter A18. 1989. 52 pages.
- 3-A19. *Levels of streamflow gaging stations*, by E. J. Kennedy: USGS--TWRI Book 3, Chapter A19. 1990. 27 pages.
- 3-B1. *Aquifer-test design, observation, and data analysis*, by R. W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages.
- 3-B2. *Introduction to ground-water hydraulics, a programmed text for self-instruction*, by G. D. Bennett: USGS--TWRI Book 3, Chapter B2. 1976. 172 pages.
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03

inside Marion

County

see figure 5

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

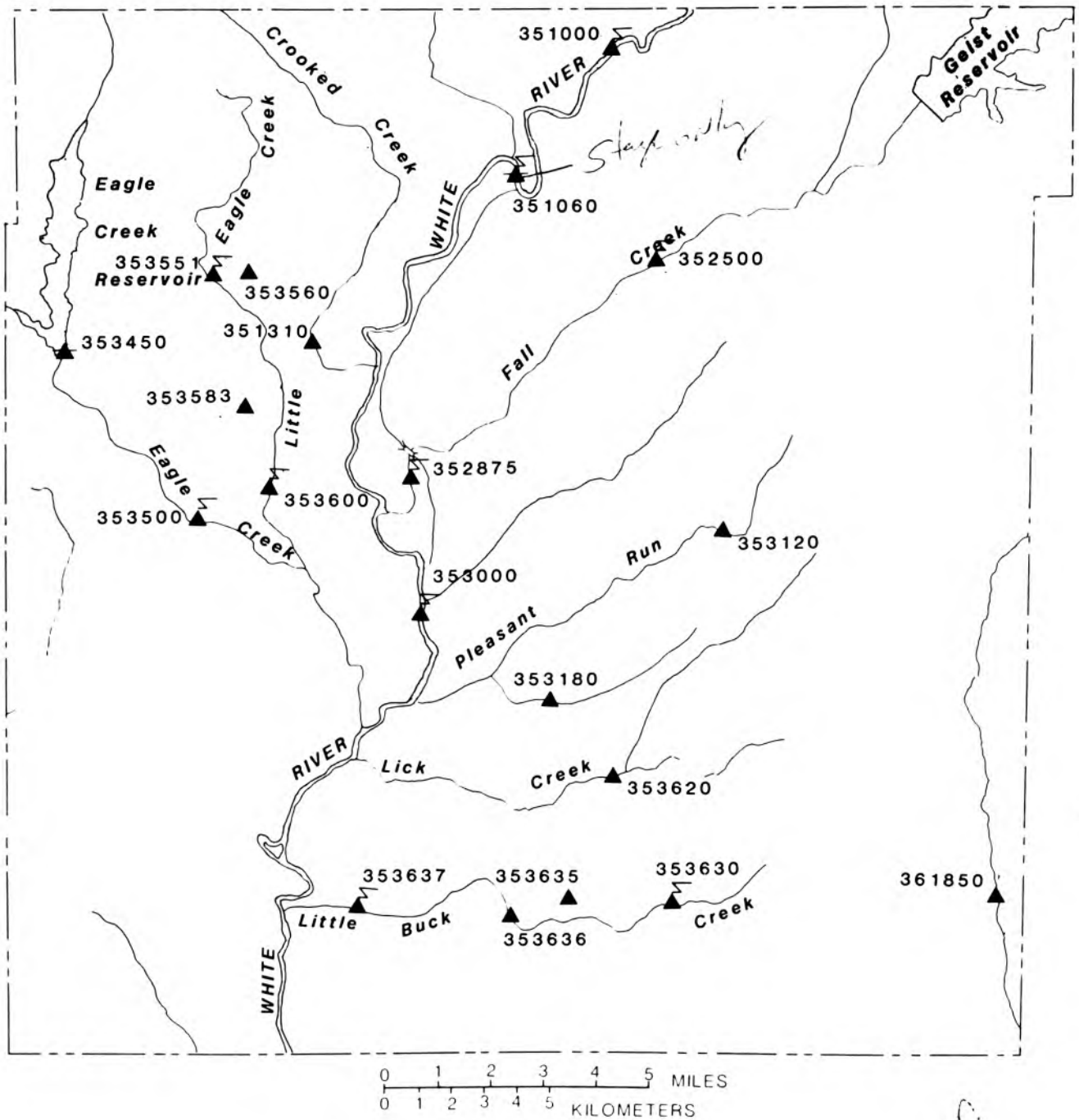


Figure 5.-- Location of streamflow and water-quality gaging stations in Marion County.

03274650 WHITEWATER RIVER NEAR ECONOMY, IN

LOCATION.--Lat 40°00'05", Long 85°06'56", in NW¼NE¼ sec.19, T.18 N., R.13 E., Wayne County, Hydrologic Unit 05080003, on right bank 15 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 mi².

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.--Records good except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e3.0	3.9	e7.0	e45	e7.8	e7.3	e13	6.1	31	1.7	.89	.76
2	e2.9	3.7	e5.4	e36	e9.5	e9.0	e12	5.6	12	1.7	.86	.73
3	2.9	3.6	e52	e30	e13	e8.0	e12	5.2	7.1	1.6	.86	.86
4	21	3.6	e25	e24	e12	e7.5	e11	5.7	5.1	1.6	1.2	1.1
5	11	6.9	e11	e20	e20	e7.0	e11	7.1	4.2	1.5	.94	1.0
6	6.8	7.5	e8.5	e17	e60	e6.8	e11	13	3.7	1.5	1.0	.83
7	5.5	4.9	e7.7	e14	e32	e6.8	e11	8.4	3.3	1.4	.98	.70
8	4.8	4.2	e6.9	e13	e18	e6.8	e10	6.6	3.2	2.0	.98	.65
9	19	4.4	e6.6	e12	e14	e6.6	e9.8	6.0	3.1	1.7	.96	.64
10	52	5.6	e6.5	e11	e12	e6.5	e9.6	5.6	2.9	1.6	.90	.60
11	22	4.6	e6.3	e35	e11	e6.4	e9.3	5.3	2.9	1.5	.82	.61
12	13	4.0	e6.1	e24	e10	e7.0	e9.1	5.2	2.9	1.5	.81	.61
13	9.4	e3.6	e5.9	e13	e10	e52	e50	5.0	2.8	1.4	.77	.58
14	7.6	e3.5	e5.7	e11	e11	e52	e25	4.8	2.8	1.3	.78	.57
15	6.1	e3.5	e30	e10	e10	e52	e18	4.6	2.8	1.3	.71	.58
16	5.2	e3.5	e10	e26	e8.6	e27	e14	4.4	3.2	1.3	.71	.73
17	4.9	e3.3	e8.6	e16	e8.6	e22	e12	6.4	2.9	1.3	.97	.70
18	14	e3.3	e100	e12	e20	e50	e10	17	2.6	1.3	1.9	.75
19	9.1	e3.3	e35	e11	e42	e16	e40	9.7	2.6	1.3	1.8	.79
20	7.0	e3.3	e14	e11	e22	e13	22	6.5	2.6	1.2	1.6	.70
21	5.9	e3.2	e60	e10	e13	e12	15	5.4	2.6	1.1	1.5	.66
22	8.3	e6.0	e35	e9.7	e11	e110	13	5.9	2.7	1.1	1.4	.61
23	8.2	e5.2	e23	e9.2	e10	e45	12	7.0	2.7	1.1	1.3	.61
24	6.6	e4.6	e16	e8.5	e9.4	e22	12	5.1	2.4	1.0	1.4	.54
25	5.5	e4.3	e13	e8.0	e9.0	e19	9.6	4.4	2.4	.99	1.4	.53
26	5.0	e4.0	e12	e7.6	e8.5	e28	9.0	6.6	2.4	.98	1.3	.51
27	4.8	e5.6	e11	e7.3	e8.0	e21	8.5	5.7	2.2	.98	1.2	.45
28	4.5	e29	e10	e7.0	e7.7	e24	7.8	4.4	2.0	.93	1.3	.46
29	4.1	e20	e150	e7.5	---	e18	7.6	8.0	1.9	.97	.93	.48
30	4.1	e8.6	e300	e11	---	e15	6.6	17	1.8	.96	.85	.51
31	4.0	---	e100	e9.0	---	e14	---	8.7	---	.90	.93	---
TOTAL	288.2	174.7	1088.2	485.8	428.1	697.7	420.9	216.4	126.8	40.71	33.95	19.85
MEAN	9.30	5.82	35.1	15.7	15.3	22.5	14.0	6.98	4.23	1.31	1.10	.66
MAX	52	29	300	45	60	110	50	17	31	2.0	1.9	1.1
MIN	2.9	3.2	5.4	7.0	7.7	6.4	6.6	4.4	1.8	.90	.71	.45
CFSM	.89	.56	3.38	1.51	1.47	2.16	1.35	.67	.41	.13	.11	.06
IN.	1.03	.62	3.89	1.74	1.53	2.50	1.51	.77	.45	.15	.12	.07

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1991, BY WATER YEAR (WY)

	MEAN	MAX	MIN	(WY)	MEAN	MAX	MIN	(WY)	MEAN	MAX	MIN	(WY)
1971	4.19	39.9	.56	1972	9.10	53.0	.45	1973	14.4	39.7	.51	1974
1972	12.2	33.0	.33	1973	20.9	56.0	3.31	1974	22.1	41.6	2.58	1975
1973	17.6	38.0	2.96	1974	12.3	42.6	1.47	1975	17.6	38.0	2.96	1976
1974	8.12	22.4	1.03	1975	6.15	27.5	.57	1976	12.3	42.6	1.47	1977
1975	5.37	61.5	.41	1976	3.69	32.2	.40	1977	6.15	27.5	.57	1978
1976	5.37	61.5	.41	1977	3.69	32.2	.40	1978	5.37	61.5	.41	1979
1977	5.37	61.5	.41	1978	3.69	32.2	.40	1979	5.37	61.5	.41	1980
1978	5.37	61.5	.41	1979	3.69	32.2	.40	1980	5.37	61.5	.41	1981
1979	5.37	61.5	.41	1980	3.69	32.2	.40	1981	5.37	61.5	.41	1982
1980	5.37	61.5	.41	1981	3.69	32.2	.40	1982	5.37	61.5	.41	1983
1981	5.37	61.5	.41	1982	3.69	32.2	.40	1983	5.37	61.5	.41	1984
1982	5.37	61.5	.41	1983	3.69	32.2	.40	1984	5.37	61.5	.41	1985
1983	5.37	61.5	.41	1984	3.69	32.2	.40	1985	5.37	61.5	.41	1986
1984	5.37	61.5	.41	1985	3.69	32.2	.40	1986	5.37	61.5	.41	1987
1985	5.37	61.5	.41	1986	3.69	32.2	.40	1987	5.37	61.5	.41	1988
1986	5.37	61.5	.41	1987	3.69	32.2	.40	1988	5.37	61.5	.41	1989
1987	5.37	61.5	.41	1988	3.69	32.2	.40	1989	5.37	61.5	.41	1990
1988	5.37	61.5	.41	1989	3.69	32.2	.40	1990	5.37	61.5	.41	1991

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1971 - 1991

ANNUAL TOTAL	5949.8	4021.31	11.3
ANNUAL MEAN	16.3	11.0	18.8
HIGHEST ANNUAL MEAN			3.26
LOWEST ANNUAL MEAN			569
HIGHEST DAILY MEAN	e300 Dec 30	e300 Dec 30	.22
LOWEST DAILY MEAN	1.8 Jul 9	.45 Sep 27	.24
ANNUAL SEVEN-DAY MINIMUM	2.0 Jul 4	.50 Sep 24	1100
INSTANTANEOUS PEAK FLOW		e700 Dec 30	8.85
INSTANTANEOUS PEAK STAGE		unknown	1.09
ANNUAL RUNOFF (CFSM)	1.57	1.06	14.76
ANNUAL RUNOFF (INCHES)	21.28	14.38	26
10 PERCENT EXCEEDS	34	22	3.9
50 PERCENT EXCEEDS	7.3	6.3	.72
90 PERCENT EXCEEDS	3.2	.86	

e Estimated

03274750 WHITEWATER RIVER NEAR HAGERSTOWN, IN

LOCATION.--Lat 39°52'25", long 85°09'47", in NE¼ 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 mi².

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.--Records good except estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	33	47	249	64	69	116	74	184	27	17	e13
2	28	33	43	203	83	76	107	71	85	27	16	e12
3	29	32	291	167	107	69	101	69	72	27	16	25
4	57	32	119	141	109	67	99	73	59	26	17	21
5	41	36	75	129	171	65	103	79	53	25	16	19
6	35	40	64	121	308	67	98	108	48	24	19	e17
7	33	35	58	111	260	66	94	80	46	23	19	e15
8	32	33	55	102	140	64	94	72	44	36	19	e14
9	52	34	52	95	115	63	92	69	44	27	19	e13
10	161	35	51	89	101	63	87	67	43	32	18	e12
11	76	34	49	195	90	62	83	65	42	27	17	e12
12	53	33	48	169	83	63	80	61	44	28	17	e12
13	46	32	47	111	84	294	204	60	41	26	17	e17
14	43	32	46	97	91	296	220	58	40	24	17	e15
15	40	31	169	95	78	297	165	56	39	23	17	e14
16	38	31	83	150	72	240	122	55	41	23	16	e13
17	36	31	73	130	71	193	103	54	39	22	20	e13
18	62	31	521	101	165	281	95	96	38	21	21	e12
19	47	31	238	93	241	142	141	65	36	21	e20	e12
20	42	31	116	93	178	116	142	55	35	21	18	e12
21	39	31	278	88	116	104	110	49	32	20	17	e12
22	42	42	247	e78	97	553	100	99	31	20	e16	e12
23	43	43	178	e72	86	455	95	83	31	20	e15	e14
24	40	37	111	e67	83	203	102	59	30	19	e14	e13
25	38	35	87	e63	77	168	89	52	31	19	e13	e12
26	37	34	76	e61	73	250	93	63	31	18	e13	e12
27	36	45	71	e58	70	203	88	59	29	17	e13	e12
28	35	165	70	e56	68	216	84	50	29	17	e13	e11
29	34	75	697	e60	---	151	82	92	28	19	e14	e11
30	34	52	1700	89	---	130	77	173	28	19	e16	e11
31	34	---	446	70	---	122	---	76	---	17	e14	---
TOTAL	1392	1219	6206	3403	3281	5208	3266	2242	1373	715	514	413
MEAN	44.9	40.6	200	110	117	168	109	72.3	45.8	23.1	16.6	13.8
MAX	161	165	1700	249	308	553	220	173	184	36	21	25
MIN	28	31	43	56	64	62	77	49	28	17	13	11
CFSM	.76	.69	3.41	1.87	2.00	2.86	1.85	1.23	.78	.39	.28	.23
IN.	.88	.77	3.93	2.16	2.08	3.30	2.07	1.42	.87	.45	.33	.26

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1991, BY WATER YEAR (WY)

	MEAN	30.6	50.4	79.3	71.1	110	121	107	81.7	54.9	46.4	40.2	26.4
MAX	188	230	205	170	233	224	189	196	114	219	312	121	
(WY)	1987	1973	1978	1975	1975	1973	1972	1990	1980	1979	1979	1989	
MIN	11.6	12.1	12.0	8.48	29.4	25.6	28.0	23.0	14.6	8.18	8.56	8.37	
(WY)	1977	1977	1977	1977	1978	1981	1971	1988	1977	1977	1988	1983	

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1971 - 1991

ANNUAL TOTAL	33457		29232		68.1	
ANNUAL MEAN	91.7		80.1		117	1979
HIGHEST ANNUAL MEAN					25.4	1977
LOWEST ANNUAL MEAN					1880	Feb 23 1975
HIGHEST DAILY MEAN	1700	Dec 30	1700	Dec 30	5.3	Aug 5 1977
LOWEST DAILY MEAN	25	Aug 10	e11	Sep 28	5.9	Jul 31 1977
ANNUAL SEVEN-DAY MINIMUM	27	Aug 6	12	Sep 24	2300	Jan 26 1976
INSTANTANEOUS PEAK FLOW			2210	Dec 30	11.48	May 26 1989
INSTANTANEOUS PEAK STAGE			11.38	Dec 30	1.16	
ANNUAL RUNOFF (CFSM)	1.56		1.36		15.75	
ANNUAL RUNOFF (INCHES)	21.20		18.53		126	
10 PERCENT EXCEEDS	141		167		37	
50 PERCENT EXCEEDS	60		53		14	
90 PERCENT EXCEEDS	32		16			

e Estimated

03274950 LITTLE WILLIAMS CREEK AT CONNERSVILLE, IN

LOCATION.--Lat 39°38'16", long 85°10'20". in SW¼ 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 Connerville, and 2.6 mi upstream from mouth. 2.
 DRAINAGE AREA.--9.16 mi².
 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.--Records fair except for estimated daily discharges, which are poor. Peak flows affected by ponding at abandoned railroad culvert 0.5 mi upstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e3.0	e4.8	4.5	24	e9.0	10	12	8.5	6.4	1.8	.64	1.0
2	e2.8	e4.8	4.4	20	10	11	12	8.1	5.9	1.5	.59	.85
3	e2.7	e4.8	22	17	10	9.7	11	7.7	5.7	1.6	.59	2.5
4	7.2	e4.7	9.8	15	10	9.5	11	7.8	5.2	2.0	.89	2.9
5	4.0	e6.0	7.7	15	12	9.2	12	8.3	4.9	1.8	.61	1.0
6	3.4	e5.6	6.9	16	45	9.9	11	8.3	4.8	1.7	1.2	.77
7	3.3	e5.2	6.1	15	28	9.4	11	7.4	4.6	1.6	1.2	.67
8	3.3	e4.8	5.6	14	17	9.1	11	6.9	4.4	8.9	.96	.53
9	33	e5.0	5.3	13	14	9.0	13	6.9	4.0	2.6	1.3	.50
10	26	e5.6	5.2	13	13	8.9	12	6.6	3.6	2.5	1.2	.55
11	9.6	e4.9	5.0	36	11	8.8	11	6.4	3.9	1.9	.95	.48
12	7.6	e4.8	4.9	22	11	11	11	6.2	4.3	2.4	.73	.44
13	6.8	e4.7	4.8	15	12	119	39	6.1	3.6	2.0	.64	1.2
14	e6.2	e4.6	4.6	14	13	38	38	6.6	3.3	1.6	.65	1.3
15	e5.8	4.4	21	14	11	21	17	6.7	3.2	1.4	.60	.78
16	e5.5	4.4	8.3	18	10	16	14	6.5	3.8	1.2	.50	.75
17	e5.2	4.4	21	16	10	21	12	6.3	3.3	1.1	.79	.75
18	11	4.4	159	14	19	31	12	132	3.0	1.1	1.4	.77
19	6.9	4.4	27	13	23	17	14	18	2.6	1.1	1.8	.78
20	e6.2	4.3	16	13	18	14	13	14	2.6	1.0	1.6	.71
21	e5.6	4.3	48	12	15	13	12	12	2.4	.98	1.1	.68
22	e6.4	6.6	31	11	13	124	11	11	2.4	.98	.85	.73
23	e6.1	5.0	50	e10	12	49	11	10	2.4	.94	.64	.82
24	e5.8	4.4	17	e9.5	11	19	10	9.5	2.2	.92	.66	.72
25	e5.6	4.3	14	e9.0	11	16	9.8	9.2	2.0	.93	.62	.70
26	e5.4	4.2	12	e8.5	10	38	9.9	32	2.0	.86	.56	.61
27	e5.3	4.2	11	e8.2	9.9	22	9.6	11	1.9	.90	.52	.57
28	e5.2	7.7	e10	e7.8	9.8	16	9.4	8.8	1.7	.88	.85	.52
29	e5.1	5.4	96	e8.4	---	14	9.2	8.3	1.8	.79	.78	.54
30	e5.0	4.7	410	13	---	13	8.8	8.2	1.7	.81	2.5	.50
31	e4.9	---	38	9.5	---	13	---	7.1	---	.71	1.5	---
TOTAL	219.9	147.4	1086.1	443.9	397.7	729.5	397.7	412.4	103.6	50.50	29.42	25.62
MEAN	7.09	4.91	35.0	14.3	14.2	23.5	13.3	13.3	3.45	1.63	.95	.85
MAX	33	7.7	410	36	45	124	39	132	6.4	8.9	2.5	2.9
MIN	2.7	4.2	4.4	7.8	9.0	8.8	8.8	6.1	1.7	.71	.50	.44
CFSM	.77	.54	3.82	1.56	1.55	2.57	1.45	1.45	.38	.18	.10	.09
IN.	.89	.60	4.41	1.80	1.62	2.96	1.62	1.67	.42	.21	.12	.10

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1991, BY WATER YEAR (WY)

	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
MEAN	2.97	6.69	11.8	10.8	17.2	17.5	15.9	14.0	8.24	6.69	5.37	2.05											
MAX	12.8	27.9	35.0	32.9	48.4	32.0	27.1	38.6	27.0	34.6	26.9	7.45											
(WY)	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979											
MIN	.51	1.13	1.05	.76	3.65	5.17	4.46	2.48	.58	.16	.017	.11											
(WY)	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980											

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1969 - 1991

	1990 CALENDAR YEAR	1991 WATER YEAR	WATER YEARS 1969 - 1991
ANNUAL TOTAL	5185.4	4043.74	
ANNUAL MEAN	14.2	11.1	9.90
HIGHEST ANNUAL MEAN			15.9
LOWEST ANNUAL MEAN			4.28
HIGHEST DAILY MEAN	410	410	521
LOWEST DAILY MEAN	2.4	.44	.00
ANNUAL SEVEN-DAY MINIMUM	2.7	.56	.00
INSTANTANEOUS PEAK FLOW		812	3560
INSTANTANEOUS PEAK STAGE		7.74	10.13
ANNUAL RUNOFF (CFSM)	1.55	1.21	1.08
ANNUAL RUNOFF (INCHES)	21.06	16.42	14.68
10 PERCENT EXCEEDS	18	18	19
50 PERCENT EXCEEDS	7.9	6.3	4.8
90 PERCENT EXCEEDS	4.2	.78	1.0

03275000 WHITEWATER RIVER NEAR ALPINE, IN

(National stream-quality accounting network station)

LOCATION.--Lat 39°34'46", long 85°09'29", in SW¼ 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.

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.--Records good.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	243	318	547	3870	653	596	969	558	728	222	129	109
2	234	307	479	2580	676	622	892	532	598	212	127	104
3	232	299	1490	1990	842	593	842	518	543	207	123	110
4	429	298	2450	1590	885	561	825	521	454	203	126	323
5	526	315	1080	1390	1040	543	832	544	400	203	122	179
6	392	349	811	1290	2530	542	792	686	376	199	137	149
7	330	340	665	1150	3560	544	752	650	350	193	138	134
8	308	307	585	1030	1800	513	764	557	342	277	133	124
9	791	305	532	959	1240	497	853	523	339	268	144	119
10	2000	334	496	903	985	490	799	500	323	242	137	119
11	1700	328	465	1430	851	471	701	481	319	234	134	114
12	972	308	447	2780	759	500	663	465	340	232	129	114
13	736	294	422	1590	742	3360	1690	446	314	232	117	127
14	606	288	390	1220	816	3820	2510	457	306	212	120	134
15	523	275	1060	1100	740	3150	1830	488	298	203	124	114
16	463	269	1400	1460	628	2580	1340	444	306	187	119	112
17	423	263	993	1710	651	2000	1020	505	303	178	124	107
18	635	262	4960	1300	813	3270	864	2940	283	167	178	106
19	794	262	6600	1060	2510	1960	949	1230	276	161	166	106
20	595	260	2260	980	2260	1350	1350	765	273	160	156	106
21	518	249	2200	940	1380	1110	1050	603	262	155	139	102
22	514	332	4440	838	1010	4760	896	609	265	152	133	104
23	542	498	3380	804	843	7430	799	902	293	146	127	114
24	505	440	2040	761	771	2770	779	600	293	142	117	111
25	451	379	1300	683	710	1740	729	517	270	142	113	109
26	415	344	1020	676	659	2270	698	722	262	138	111	104
27	391	337	846	649	633	2580	686	787	249	136	109	102
28	374	694	801	651	612	1900	649	572	238	136	111	98
29	353	1040	3500	623	---	1440	626	503	232	133	109	97
30	336	662	15400	778	---	1170	592	726	229	134	126	99
31	332	---	15400	735	---	1030	---	550	---	132	113	---
TOTAL	17663	10956	78459	39520	31599	56162	28741	20901	10064	5738	3991	3650
MEAN	570	365	2531	1275	1129	1812	958	674	335	185	129	122
MAX	2000	1040	15400	3870	3560	7430	2510	2940	728	277	178	323
MIN	232	249	390	623	612	471	592	444	229	132	109	97
CFSM	1.09	.70	4.85	2.44	2.16	3.47	1.84	1.29	.64	.35	.25	.23
IN.	1.26	.78	5.59	2.82	2.25	4.00	2.05	1.49	.72	.41	.28	.26

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 1991, BY WATER YEAR (WY)

	MEAN	189	332	555	813	893	1023	964	722	485	352	245	178
MAX	1685	1536	2531	4409	2639	2522	2359	2253	2314	1777	2342	920	
(WY)	1987	1973	1991	1937	1950	1963	1964	1933	1958	1979	1979	1989	
MIN	47.1	49.8	50.6	58.9	56.9	120	122	70.0	68.9	61.1	61.3	50.3	
(WY)	1935	1935	1935	1935	1935	1935	1941	1941	1934	1934	1988	1934	

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1929 - 1991

ANNUAL TOTAL	350244	307444	
ANNUAL MEAN	960	842	561
HIGHEST ANNUAL MEAN			1001
LOWEST ANNUAL MEAN			117
HIGHEST DAILY MEAN	15400	Dec 30	26300
LOWEST DAILY MEAN	187	Aug 17	30
ANNUAL SEVEN-DAY MINIMUM	215	Aug 11	103
INSTANTANEOUS PEAK FLOW			21500
INSTANTANEOUS PEAK STAGE			19.70
ANNUAL RUNOFF (CFSM)	1.84		1.61
ANNUAL RUNOFF (INCHES)	24.96		21.91
10 PERCENT EXCEEDS	1650		1130
50 PERCENT EXCEEDS	545		271
90 PERCENT EXCEEDS	277		85

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

WATER-QUALITY RECORDS

PERIOD OF RECORD---

CHEMICAL ANALYSIS: October 1986 to current year.

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)
OCT											
24...	1200	519	658	689	8.3	8.2	17.0	11.5	753	10.3	96
JAN											
24...	1245	759	681	669	8.2	8.0	-3.0	2.0	748	12.4	92
MAR											
14...	1430	3450	464	428	8.4	8.1	5.0	4.0	740	12.5	98
MAY											
02...	1445	519	637	630	8.1	8.3	22.0	16.5	746	11.1	116
JUL											
17...	1300	174	675	658	8.2	8.3	32.0	23.0	746	10.3	123
AUG											
29...	1200	110	683	683	8.0	8.2	31.0	23.0	748	8.5	101
DATE	TUR- BID- ITY (NTU) (00076)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCEI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LITY WAT DIS FIX END FIELD CACO3 (MG/L) (39036)	ALKA- LITY WAT DIS TOT IT FIELD CACO3 (MG/L AS CACO3) (39086)
OCT											
24...	2.9	130	52	350	49	89	31	9.8	2.2	300	301
JAN											
24...	3.3	33	98	360	67	91	32	9.7	1.8	280	292
MAR											
14...	60	700	2200	200	43	52	18	6.7	2.6	160	161
MAY											
02...	2.2	--	--	330	52	83	30	9.3	1.5	280	279
JUL											
17...	1.0	54	35	340	56	86	30	12	2.3	280	282
AUG											
29...	1.1	180	290	330	45	83	30	17	2.5	280	286
DATE	ALKA- LITY LAB (MG/L AS CACO3) (90410)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)
OCT											
24...	305	367	0	38	26	0.1	7.9	419	401	587	0.01
JAN											
24...	297	356	0	38	21	0.2	8.8	393	400	805	0.02
MAR											
14...	162	196	0	26	15	0.2	5.7	241	241	2240	0.03
MAY											
02...	272	340	0	36	20	0.2	3.4	373	366	523	0.04
JUL											
17...	283	344	0	37	25	0.3	7.3	389	383	183	0.04
AUG											
29...	286	349	0	45	31	0.3	7.7	387	402	115	0.06

GREAT MIAMI RIVER BASIN

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991										
DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)
OCT 24...	3.5	0.02	0.03	0.3	0.06	0.06	0.05	<10	3	79
JAN 24...	4.9	0.27	0.27	0.9	0.03	0.04	0.04	--	--	--
MAR 14...	3.9	0.19	0.15	1.0	0.25	0.10	0.10	<10	<1	41
MAY 02...	3.4	0.06	0.07	0.5	0.04	0.02	<0.01	10	<1	72
JUL 17...	3.2	0.03	0.04	0.6	0.07	0.06	0.05	--	--	--
AUG 29...	3.0	0.08	0.09	0.5	0.17	0.15	0.11	10	<1	81
DATE	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)
OCT 24...	<0.5	1	1	<3	<1	7	<1	8	8	<0.1
JAN 24...	--	--	--	--	--	--	--	--	--	--
MAR 14...	<0.5	1	<1	<3	3	29	1	<4	7	<0.1
MAY 02...	<0.5	<1	<1	<3	1	3	1	5	8	<0.1
JUL 17...	--	--	--	--	--	--	--	--	--	--
AUG 29...	<0.5	<1	<1	<3	1	4	<1	6	8	<0.1
DATE	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 24...	10	1	<1	<1	360	<6	6	93	130	19
JAN 24...	--	--	--	--	--	--	--	43	88	20
MAR 14...	<10	1	<1	<1	150	<6	9	295	2750	60
MAY 02...	<10	1	<1	<1	330	<6	8	6	8.4	65
JUL 17...	--	--	--	--	--	--	--	13	6.1	45
AUG 29...	20	1	<1	<1	310	<6	13	9	2.6	54

03275600 EAST FORK WHITEWATER RIVER AT ABINGTON, IN

LOCATION.--Lat 39°43'59", long 84°57'35", in NE¼SW¼ sec.2, T.12 N., R.2 W., Wayne County, Hydrologic Unit 05080003, 15 ft downstream 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 mi².

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

REVISED RECORDS.--WSP 2108: Drainage area. WDR IN-90-1: 1966(M), 1967-75(P), 1976-77(M), 1978-79(P), 1982(P), 1987(P), 1989(P).

GAGE.--Water-stage recorder. Datum of gage is 791.00 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 2, 1991 at site 250 ft downstream at same datum.

REMARKS.--Records fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66	116	207	845	220	208	346	216	142	72	e50	27
2	65	114	197	599	241	226	320	208	136	70	e49	26
3	64	112	777	474	306	208	305	201	132	68	52	36
4	129	110	518	394	303	195	302	214	121	67	55	39
5	99	128	245	366	343	187	316	260	111	65	54	35
6	85	133	195	362	802	205	292	301	105	64	60	35
7	77	121	169	335	967	207	278	238	103	62	57	32
8	75	115	152	307	493	188	289	213	102	232	63	30
9	437	117	142	293	366	181	375	202	99	99	73	30
10	1010	141	136	279	309	176	373	196	96	108	57	31
11	473	131	131	547	269	172	293	189	98	89	50	31
12	250	122	128	774	243	186	270	184	106	106	47	34
13	193	116	125	444	254	838	810	180	95	94	40	37
14	165	112	120	364	316	861	856	178	91	79	40	43
15	148	109	460	344	264	792	669	175	87	73	36	32
16	139	109	322	476	222	708	490	183	106	69	32	29
17	132	108	250	491	226	640	383	215	92	67	40	29
18	307	105	2620	370	446	1140	329	1210	86	64	66	29
19	245	103	1720	320	891	552	432	486	82	62	48	28
20	181	103	520	309	722	394	417	278	78	60	40	27
21	159	102	1000	291	435	335	347	211	76	59	34	28
22	172	163	1550	e250	334	2780	317	197	191	59	32	28
23	172	194	1290	e235	278	2150	292	179	162	57	32	36
24	157	172	581	e220	257	769	293	162	111	57	30	30
25	146	168	354	e210	237	579	265	148	96	56	29	29
26	135	170	278	e200	222	741	262	235	89	56	29	28
27	129	179	243	e195	215	746	252	216	82	54	28	27
28	125	254	234	e190	208	562	243	168	79	51	28	27
29	120	255	1410	e200	---	463	240	154	76	51	29	26
30	118	222	9990	301	---	397	227	152	74	e52	28	26
31	118	---	2740	241	---	361	---	137	---	e51	27	---
TOTAL	5891	4204	28804	11226	10389	18147	10883	7486	3104	2273	1335	925
MEAN	190	140	929	362	371	585	363	241	103	73.3	43.1	30.8
MAX	1010	255	9990	845	967	2780	856	1210	191	232	73	43
MIN	64	102	120	190	208	172	227	137	74	51	27	26
CFSM	.95	.70	4.65	1.81	1.86	2.93	1.81	1.21	.52	.37	.22	.15
IN.	1.10	.78	5.36	2.09	1.93	3.38	2.02	1.39	.58	.42	.25	.17

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1991, BY WATER YEAR (WY)

	MEAN	84.9	166	307	255	349	390	355	329	163	159	119	59.5
MAX	615	558	929	708	901	884	748	1049	419	773	773	773	242
(WY)	1987	1973	1991	1969	1975	1978	1970	1968	1980	1979	1979	1979	1979
MIN	22.5	32.7	26.5	21.3	85.3	113	88.7	55.9	24.6	22.9	18.6	19.9	19.9
(WY)	1989	1977	1977	1977	1978	1983	1976	1976	1988	1988	1988	1983	1983

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1966 - 1991

ANNUAL TOTAL	125362	104667	228
ANNUAL MEAN	343	287	388
HIGHEST ANNUAL MEAN			92.3
LOWEST ANNUAL MEAN			1979
HIGHEST DAILY MEAN	9990	Dec 30	9990
LOWEST DAILY MEAN	51	Jul 10	11
ANNUAL SEVEN-DAY MINIMUM	56	Jul 4	28
INSTANTANEOUS PEAK FLOW			15400
INSTANTANEOUS PEAK STAGE			15.16
ANNUAL RUNOFF (CFSM)	1.72		1.43
ANNUAL RUNOFF (INCHES)	23.32		19.47
10 PERCENT EXCEEDS	567		459
50 PERCENT EXCEEDS	184		113
90 PERCENT EXCEEDS	83		34

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 mi².

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.--Records good. Water temperature probe connected to a Data Collection Platform since Nov. 5, 1986. Flow regulated by Brookville Lake since January 1974.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	825	146	210	517	196	596	62	277	64	35	38
2	64	825	146	158	279	196	478	64	278	64	35	38
3	64	823	410	158	279	363	479	65	278	64	35	38
4	194	823	539	1110	411	473	229	66	180	64	35	38
5	248	490	735	2000	505	473	93	67	90	63	35	38
6	246	230	886	2000	671	472	97	97	91	63	35	38
7	246	443	886	2520	1230	386	97	193	91	62	35	38
8	246	582	886	2880	1710	308	97	238	92	63	35	38
9	442	582	886	2860	1700	309	98	239	93	61	34	38
10	630	582	640	2850	1690	310	569	239	84	62	33	37
11	1070	582	399	2850	1690	208	870	238	88	97	33	37
12	1440	578	298	2840	1020	123	464	234	89	249	33	37
13	848	767	299	2820	463	398	282	231	89	392	33	37
14	526	887	301	2810	466	751	143	228	90	389	33	37
15	810	886	313	2790	465	862	333	433	90	181	33	37
16	734	886	584	2780	464	863	1320	567	90	67	33	151
17	552	886	963	2760	463	870	1890	570	90	67	33	222
18	1170	886	768	2350	478	870	2010	577	90	55	33	219
19	1630	886	486	1810	956	628	2000	565	71	47	37	208
20	926	662	1490	819	1330	478	1640	1340	61	47	33	192
21	542	489	1910	275	1330	478	1070	1920	62	47	33	180
22	1010	493	1910	276	1320	496	607	1340	62	40	33	178
23	1120	494	1910	276	742	488	456	1030	62	35	32	174
24	680	493	1900	275	463	483	457	679	62	35	32	169
25	489	494	2250	276	462	642	457	400	62	35	33	168
26	492	496	3440	276	463	1180	397	275	62	35	33	166
27	494	732	3770	277	301	1610	319	275	62	35	33	164
28	631	1270	2920	278	196	1600	319	275	62	35	36	163
29	758	1510	1600	278	---	1230	323	275	63	35	50	160
30	829	633	546	588	---	685	146	276	63	35	44	157
31	827	---	143	858	---	687	---	276	---	35	38	---
TOTAL	20022	21215	34360	45308	22064	19116	18336	13334	3024	2623	1078	3235
MEAN	646	707	1108	1462	788	617	611	430	101	84.6	34.8	108
MAX	1630	1510	3770	2880	1710	1610	2010	1920	278	392	50	222
MIN	64	230	143	158	196	123	93	62	61	35	32	37

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 1991, BY WATER YEAR (WY)

	MEAN	222	417	484	466	610	668	556	578	327	230	181	112
MAX	936	1107	1513	1570	2003	1785	1458	2068	1507	1073	1497	358	
(WY)	1987	1980	1986	1959	1982	1963	1964	1968	1958	1958	1979	1979	
MIN	24.8	38.0	35.4	35.0	36.1	34.9	41.8	37.2	34.8	25.4	26.2	26.4	
(WY)	1965	1964	1964	1977	1974	1974	1976	1976	1976	1988	1988	1964	

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1955 - 1991

ANNUAL TOTAL	221961	203715	
ANNUAL MEAN	608	558	403
HIGHEST ANNUAL MEAN			630
LOWEST ANNUAL MEAN			159
HIGHEST DAILY MEAN	4790	3770	21600
LOWEST DAILY MEAN	63	32	.00
ANNUAL SEVEN-DAY MINIMUM	65	33	13
INSTANTANEOUS PEAK FLOW		3810	36100
INSTANTANEOUS PEAK STAGE		7.54	17.35
10 PERCENT EXCEEDS	1470	1550	953
50 PERCENT EXCEEDS	408	301	183
90 PERCENT EXCEEDS	71	37	42

(Former National stream-quality accounting network station)

DRAINAGE AREA.--1,224 mi^2

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.--Records good except for estimated daily discharges, which are fair. Flow regulated by Brookville Lake since January 1974.

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).

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	375	1280	989	8020	1620	1240	2190	996	1090	300	193	188
2	365	1250	851	3790	1380	1320	1930	960	1230	298	192	185
3	357	1250	4810	2740	1470	1420	1820	916	1090	291	191	185
4	1580	1240	4000	3230	1670	1460	1520	900	915	284	192	410
5	958	885	2700	4030	2190	1420	1450	934	692	284	190	344
6	701	628	2380	4110	8430	1420	1350	1060	630	284	195	228
7	553	844	2130	4530	7970	1380	1290	1170	586	284	197	205
8	482	969	1980	4600	5220	1210	1250	1100	552	283	197	197
9	2930	961	1870	4480	4290	1170	2320	1050	521	284	198	192
10	4100	1180	1470	4370	3790	1150	2630	1020	485	284	196	190
11	3660	1100	1110	5630	3500	1040	2260	985	465	324	191	187
12	3090	1040	932	6830	2580	983	1670	952	475	478	189	186
13	2020	1240	877	5400	1850	8560	11000	931	468	654	189	187
14	1400	1420	829	4850	2220	6800	5480	1030	435	622	187	199
15	1530	1400	1880	4630	1960	4880	4220	1450	428	402	186	191
16	1360	1400	2720	4770	1640	4130	4140	1360	418	261	187	274
17	1070	1380	2740	5100	1690	3670	4140	1370	412	254	187	347
18	2710	1370	12600	4440	3210	6040	4000	4050	403	239	192	342
19	2970	1360	9690	3580	4440	3930	4190	2810	396	226	219	317
20	1910	1030	5320	2410	4680	2700	4100	2770	376	225	206	288
21	1250	818	5540	1730	3820	2340	3120	3180	357	221	199	277
22	1800	1150	8410	e1550	3280	5100	2280	2490	347	214	193	274
23	2010	1390	8180	e1450	2370	13000	1910	2330	335	208	190	278
24	1440	1260	5860	e1350	1850	5260	1810	1770	334	205	188	277
25	1090	1130	4870	1320	1730	3420	1740	1270	334	203	186	273
26	1020	1060	5370	e1270	1630	6050	1600	1290	330	202	184	263
27	984	1400	5360	1260	1430	7110	1470	1500	320	199	183	258
28	1110	2630	4600	e1250	1270	5250	1420	1230	317	196	184	258
29	1240	3390	7450	1250	---	3990	1390	1190	316	196	191	254
30	1300	1720	26900	2350	---	2710	1170	1310	304	194	190	247
31	1290	---	25100	2150	---	2440	---	1200	---	194	195	---
TOTAL	48655	39175	169518	108470	83180	112593	80860	46574	15361	8793	5957	7501
MEAN	1570	1306	5468	3499	2971	3632	2695	1502	512	284	192	250
MAX	4100	3390	26900	8020	8430	13000	11000	4050	1230	654	219	410
MIN	357	628	829	1250	1270	983	1170	900	304	194	183	185
CF SM	1.28	1.07										

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1916 - 1991, BY WATER YEAR (WY)

MEAN	465	843	1300	1972	2045	2329	2138	1643	1113	725	505	418
MAX	2796	3238	5210	9401	6290	5909	4664	5738	4710	3390	4271	4239
(WY)	1927	1956	1991	1937	1950	1963	1964	1968	1958	1958	1979	1926
MIN	95.5	98.1	95.1	102	122	294	275	186	161	138	102	98.9
(WY)	1935	1935	1935	1977	1935	1941	1941	1941	1934	1934	1930	1940

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1916 - 1991
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ANNUAL TOTAL	810952		726637			
ANNUAL MEAN	2222		1991		1287	
HIGHEST ANNUAL MEAN					2359	1950
LOWEST ANNUAL MEAN					271	1941
HIGHEST DAILY MEAN	26900	Dec 30	26900	Dec 30	55000	Jan 21 1959
LOWEST DAILY MEAN	304	Aug 17	183	Aug 27	60	Jul 27 1934
ANNUAL SEVEN-DAY MINIMUM	321	Aug 12	187	Aug 23	66	Sep 25 1941
INSTANTANEOUS PEAK FLOW			43200	Dec 30	81800	Jan 21 1959
INSTANTANEOUS PEAK STAGE			20.44	Dec 30	27.78	Jan 21 1959
ANNUAL RUNOFF (CFSM)	1.82		1.63		1.05	
ANNUAL RUNOFF (INCHES)	24.65		22.08		14.29	
10 PERCENT EXCEEDS	4640		4720		2780	
50 PERCENT EXCEEDS	1310		1250		612	
90 PERCENT EXCEEDS	480		196		160	

032/6700 SOUTH HOGAN CREEK NEAR DILLSBORO, IN

(Hydrologic bench-mark station)

LOCATION.--Lat 39°01'47", long 85°02'17", in SW¼ 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 mi².

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.--Records poor.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	8.4	21	e93	e74	e40	27	10	2.6	.05	.00	.41
2	1.3	6.9	19	e68	e58	56	23	9.1	5.2	.05	.00	.20
3	1.2	6.2	614	e55	e49	46	20	7.9	7.6	.05	.00	.09
4	194	5.6	116	e44	e44	25	17	8.6	4.0	.05	.00	24
5	46	6.4	e74	e38	e80	21	19	9.8	2.1	.04	.00	8.7
6	20	9.8	e51	221	965	25	17	11	1.3	.02	.14	1.8
7	13	10	e43	126	514	35	14	8.9	.94	.01	3.4	.60
8	9.2	7.1	e37	68	142	e23	13	7.1	.75	.01	1.2	.22
9	361	13	e35	51	95	e20	78	9.2	.59	.06	4.5	.11
10	480	45	e32	53	e80	e18	73	9.1	.44	.20	3.2	.08
11	86	20	e30	372	e73	e15	28	7.6	.39	.18	1.6	.05
12	46	13	e28	182	e65	e80	22	6.6	.34	.49	.66	.18
13	30	10	e27	92	99	642	991	5.4	.29	1.5	.35	.73
14	22	8.3	e26	71	274	164	312	8.5	.24	.89	.20	2.5
15	18	7.5	332	60	e126	78	263	10	.18	.39	.13	.77
16	14	7.5	95	78	e92	59	85	6.1	.18	.21	.08	.34
17	11	7.2	184	77	70	185	52	5.1	.35	.12	.32	.15
18	531	6.7	2220	60	518	304	38	5.8	.29	.09	42	.09
19	54	5.8	232	51	212	95	37	13	.73	.07	14	.08
20	26	5.2	71	e46	121	64	35	6.6	.48	.06	22	.06
21	18	4.5	88	e41	84	53	28	4.6	.35	.04	6.2	.05
22	84	62	259	e36	70	685	23	5.9	.29	.02	2.7	.04
23	57	59	e160	e32	62	580	21	9.3	.21	.00	1.3	.04
24	27	31	e115	e28	e54	89	21	13	.17	.00	.71	.04
25	21	24	e88	e24	e48	57	16	6.3	.14	.00	.44	.03
26	19	20	e70	e22	e43	785	16	5.5	.10	.00	.28	.03
27	17	20	e56	e40	e39	185	14	7.5	.09	.00	.18	.02
28	15	51	e48	72	e36	105	13	6.2	.07	.00	.24	.01
29	12	40	617	62	---	59	14	4.2	.07	.00	.49	.01
30	9.9	25	1320	206	---	41	13	3.3	.06	.00	1.8	.00
31	8.7	---	e170	e120	---	31	---	2.8	---	.00	2.6	---
TOTAL	2254.1	546.1	7278	2589	4187	4665	2343	234.0	30.54	4.60	110.72	41.43
MEAN	72.7	18.2	235	83.5	150	150	78.1	7.55	1.02	.15	3.57	1.38
MAX	531	62	2220	372	965	785	991	13	7.6	1.5	42	24
MIN	1.2	4.5	19	22	36	15	13	2.8	.06	.00	.00	.00
CFSM	1.91	.48	6.16	2.19	3.92	3.95	2.05	.20	.03	.00	.09	.04
IN.	2.20	.53	7.11	2.53	4.09	4.55	2.29	.23	.03	.00	.11	.04

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1961 - 1991, BY WATER YEAR (WY)

	MEAN	11.6	35.8	59.3	57.3	77.6	101	76.9	56.3	19.4	15.1	9.66	8.29
MAX	72.7	180	235	189	190	260	237	322	150	110	64.4	62.3	
(WY)	1991	1986	1991	1982	1979	1963	1970	1968	1981	1962	1979	1979	
MIN	.000	.000	.097	.95	5.61	13.1	8.65	2.43	.049	.000	.000	.000	
(WY)	1964	1964	1964	1977	1964	1969	1976	1988	1988	1966	1963	1963	

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1961 - 1991

ANNUAL TOTAL	28400.08	24283.49	
ANNUAL MEAN	77.8	66.5	43.6
HIGHEST ANNUAL MEAN			69.7
LOWEST ANNUAL MEAN			4.83
HIGHEST DAILY MEAN	2220	Dec 18	3460
LOWEST DAILY MEAN	.00	Aug 11	.00
ANNUAL SEVEN-DAY MINIMUM	.01	Aug 11	.00
INSTANTANEOUS PEAK FLOW			4800
INSTANTANEOUS PEAK STAGE			8.51
ANNUAL RUNOFF (CFSM)	2.04		1.75
ANNUAL RUNOFF (INCHES)	27.73		23.71
10 PERCENT EXCEEDS	115		126
50 PERCENT EXCEEDS	21		14
90 PERCENT EXCEEDS	1.0		.06
			12.70
			1.15
			15.57
			82
			8.3
			.10

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

WATER-QUALITY RECORDS

PERIOD OF RECORD---

CHEMICAL ANALYSES: October 1968 to current year.

SEDIMENT DISCHARGE: August 1969 to current year (partial-record station).

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE OF (MM HG) (00025)	OXYGEN, DIS- SOLVED SATUR- ATION (PER- CENT ATMOM) (00301)	TUR- BID- ITY (NTU) (00076)		
OCT 25...	1000	21	486	490	8.5	8.2	11.0	10.5	760	10.9	98	5.5	
MAR 13...	1430	616	279	228	8.3	8.1	3.0	4.0	736	12.8	102	69	
MAY 01...	1500	9.8	465	454	8.4	8.4	21.0	19.5	746	11.7	130	1.9	
AUG 28...	1200	0.15	464	457	8.1	8.0	33.0	27.5	752	8.9	114	4.0	
DATE		COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FID. AS CACO3 (MG/L) (00904)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LITY WAT DIS FIX END FIELD CACO3 (MG/L) (39036)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ALKA- LITY LAB (MG/L AS CACO3) (90410)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)
OCT 25...	83	61	240	36	77	12	7.5	3.8	200	206	205	251	
MAR 13...	1400	2800	110	32	34	5.1	3.5	2.8	77	74	76	90	
MAY 01...	--	--	230	64	69	14	8.9	1.8	170	166	173	203	
AUG 28...	21	210	200	50	64	10	13	5.2	150	152	153	185	
DATE		CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITU- ENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)
OCT 25...	0	47	16	0.20	7.2	296	298	16.8	<0.010	0.800	0.010	0.020	
MAR 13...	0	27	5.8	0.10	4.8	153	132	254	0.010	0.850	0.180	0.120	
MAY 01...	0	61	9.2	0.10	0.38	252	265	6.66	<0.010	0.120	0.010	0.030	
AUG 28...	0	58	20	0.20	5.8	273	268	0.11	<0.010	<0.050	<0.010	0.020	
DATE		NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS DIS- SOLVED TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CO) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)
OCT 25...	0.30	0.070	0.040	0.050	10	1	40	<0.5	<1.0	1	<3	5	
MAR 13...	0.90	0.340	0.100	0.090	10	<1	21	<0.5	<1.0	<1	<3	1	
MAY 01...	0.30	0.030	0.010	<0.010	10	<1	36	<0.5	<1.0	<1	<3	2	
AUG 28...	0.40	0.050	0.040	0.020	20	<1	43	<0.5	<1.0	<1	<3	3	

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)
OCT 25...	31	1	7	11	<0.1	<10	1	<1	<1.0	210	<6	3
MAR 13...	26	<1	<4	13	<0.1	<10	1	<1	<1.0	82	<6	3
MAY 01...	14	<1	6	11	<0.1	<10	<1	<1	<1.0	220	<6	4
AUG 28...	<3	<1	5	19	<0.1	<10	<1	<1	<1.0	200	<6	6

DATE	GROSS ALPHA, DIS- SOLVED (UG/L U-NAT) (80030)	GROSS ALPHA, SUSP. TOTAL (UG/L U-NAT) (80040)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137) (03515)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137) (03516)	GROSS BETA, DIS- SOLVED (PCI/L AS SR/ YT-90) (80050)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/ YT-90) (80060)	RADIUM 226, DIS- SOLVED, RADON METHOD (PCI/L) (09511)	URANIUM NATURAL DIS- SOLVED (UG/L AS U) (22703)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 25...	--	--	--	--	--	--	--	--	10	0.60	85
MAR 13...	1.1	5.3	4.1	4.6	3.4	4.2	0.04	0.15	114	190	94
MAY 01...	--	--	--	--	--	--	--	--	4	0.11	75
AUG 28...	<0.6	<0.6	7.9	1.0	5.6	0.9	0.05	0.21	5	0.00	61

03291780 INDIAN-KENTUCK CREEK NEAR CANAAN, IN

LOCATION.--Lat 38°52'41", long 85°15'26", in SW¼ 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 mi².
 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.--Records good except for estimated daily discharges and those below 1 ft³/s, which are poor.

 DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.77	5.1	17	71	e45	14	27	6.2	3.2	.33	.00	.25
2	.57	4.6	14	45	e30	19	22	5.3	9.2	.38	.00	.12
3	.42	4.3	406	32	26	14	19	4.4	10	.56	.00	.08
4	86	4.0	86	28	26	12	18	4.7	3.4	.36	.00	17
5	14	4.9	40	27	44	11	18	5.7	2.6	.28	.00	5.1
6	5.0	7.4	29	247	587	24	15	6.0	2.1	.19	.08	1.9
7	3.5	5.1	23	147	268	28	13	3.9	1.7	.12	.17	.96
8	3.1	4.1	19	79	99	17	13	3.3	1.3	30	.27	.52
9	134	10	16	55	60	15	71	13	1.2	4.8	3.3	.37
10	143	38	14	48	43	14	58	15	.99	2.7	2.4	.29
11	31	18	13	277	32	13	26	24	.82	2.1	.97	.22
12	18	14	12	137	26	39	22	19	.65	2.3	.50	.16
13	12	11	11	70	62	404	676	30	.55	2.2	.33	.18
14	8.4	8.8	8.7	51	216	118	253	22	.46	1.4	.25	.13
15	5.8	7.6	255	43	e90	57	205	17	.35	.78	.16	.08
16	4.7	6.7	59	59	e50	40	83	11	139	.45	.10	.04
17	4.1	6.6	150	52	e40	123	49	7.4	23	.33	.17	.05
18	457	5.6	1580	39	290	212	35	44	7.2	.23	.57	.05
19	42	5.2	208	35	142	85	33	20	9.4	.18	.57	.07
20	23	5.1	81	33	80	52	27	12	3.7	.15	.48	.03
21	17	4.8	114	30	51	38	22	8.2	2.8	.12	.87	.00
22	63	60	256	e25	38	570	20	27	2.5	.09	.72	.00
23	44	40	266	e23	29	314	17	65	5.4	.08	.44	.02
24	25	23	85	e21	24	91	16	38	2.5	.08	.31	.00
25	18	18	e50	e19	20	54	13	17	1.8	.08	.21	.00
26	15	15	e38	e17	17	212	12	14	1.4	.06	.14	.00
27	13	14	e34	e20	16	149	12	14	1.1	.04	.11	.00
28	11	41	e30	e40	14	100	10	10	.77	.02	.07	.00
29	8.4	27	423	e30	---	56	9.9	6.0	.61	.02	.04	.00
30	6.6	20	852	e140	---	39	7.8	4.5	.43	.02	.09	.00
31	5.9	---	169	e60	---	32	---	3.6	---	.00	.17	---
TOTAL	1223.26	438.9	5358.7	2000	2465	2966	1822.7	481.2	240.13	50.45	13.49	27.62
MEAN	39.5	14.6	173	64.5	88.0	95.7	60.8	15.5	8.00	1.63	.44	.92
MAX	457	60	1580	277	587	570	676	65	139	30	3.3	.17
MIN	.42	4.0	8.7	17	14	11	7.8	3.3	.35	.00	.00	.00
CFSM	1.43	.53	6.29	2.35	3.20	3.48	2.21	.56	.29	.06	.02	.03
IN.	1.65	.59	7.25	2.71	3.33	4.01	2.47	.65	.32	.07	.02	.04

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 1991, BY WATER YEAR (WY)

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
MEAN	12.3	37.2	51.9	44.8	59.9	69.1	57.1	41.1	18.5	10.7	11.2	8.03										
MAX	83.6	137	173	169	136	134	104	193	57.7	40.8	58.6	57.9										
(WY)	1984	1980	1991	1982	1990	1975	1981	1983	1981	1973	1979	1979										
MIN	.000	.22	3.95	.60	9.74	11.7	6.55	4.63	.44	.12	.001	.000										
(WY)	1988	1988	1977	1977	1978	1983	1976	1976	1988	1975	1975	1987										

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1970 - 1991

ANNUAL TOTAL	22118.97	17087.45	35.0
ANNUAL MEAN	60.6	46.8	55.8
HIGHEST ANNUAL MEAN			17.0
LOWEST ANNUAL MEAN			1979
HIGHEST DAILY MEAN	1630	May 16	1630
LOWEST DAILY MEAN	.08	Aug 11	.00
ANNUAL SEVEN-DAY MINIMUM	.13	Aug 7	.00
INSTANTANEOUS PEAK FLOW			.00
INSTANTANEOUS PEAK STAGE			7800
ANNUAL RUNOFF (CFSM)	2.20	8.67	11.34
ANNUAL RUNOFF (INCHES)	29.92	1.70	1.27
10 PERCENT EXCEEDS	117	23.11	17.30
50 PERCENT EXCEEDS	18	106	75
90 PERCENT EXCEEDS	.58	13	9.0
		.10	.15

03294000 SILVER CREEK NEAR SELLERSBURG, IN

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

DRAINAGE AREA.--189 mi²

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

REVISID 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.--Records good except for those below 10 ft³/s, which are poor. Some regulation by Deam Lake.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	23	79	864	244	113	194	76	124	3.5	3.1	3.2
2	e11	20	68	559	232	232	157	65	94	2.6	3.1	2.3
3	e11	18	920	438	207	179	134	57	271	10	3.1	1.8
4	119	18	687	351	196	132	121	51	258	12	3.0	3.9
5	136	18	293	292	197	111	129	49	99	7.7	2.8	37
6	41	28	210	822	2180	114	122	71	53	4.3	2.7	21
7	26	36	144	1970	2250	176	107	50	37	2.9	2.6	7.7
8	21	23	115	1100	835	133	99	40	27	3.7	3.8	4.0
9	19	21	104	652	540	104	633	44	20	3.8	19	2.8
10	118	175	94	490	416	94	2090	50	16	3.4	32	3.7
11	90	123	81	1270	317	87	541	40	13	5.4	13	3.8
12	47	76	72	1550	249	87	359	33	21	6.0	4.2	3.3
13	38	54	65	656	308	1350	1760	33	11	4.8	2.2	3.1
14	25	42	57	480	2080	1050	946	60	11	3.8	1.6	6.1
15	21	35	298	393	917	568	726	546	10	2.8	1.6	6.3
16	17	31	396	441	436	390	552	142	8.1	2.1	1.5	5.3
17	e15	30	290	374	370	338	381	87	15	1.9	1.4	4.3
18	918	30	3620	315	965	990	285	62	13	1.6	256	3.5
19	302	28	4650	279	989	583	285	48	9.6	1.6	58	3.5
20	115	e26	1090	272	594	402	276	38	16	1.6	18	2.9
21	72	24	573	242	424	340	211	31	12	2.5	8.2	2.5
22	118	120	1500	178	337	3410	170	27	9.0	3.4	4.8	2.2
23	278	384	1330	168	266	6650	143	31	7.8	3.5	3.1	2.0
24	122	162	749	159	219	3410	189	279	6.3	2.9	2.2	1.8
25	86	104	447	136	180	731	148	101	5.8	2.8	2.0	1.8
26	58	79	351	133	149	526	123	104	15	2.8	3.5	1.7
27	44	69	282	125	130	599	109	90	9.8	2.8	e4.5	1.3
28	35	87	269	224	118	688	100	73	5.7	2.8	e6.8	1.1
29	31	158	1060	199	---	408	99	241	4.6	2.8	5.6	1.1
30	17	96	3150	381	---	308	94	1060	4.0	3.2	5.0	1.4
31	14	---	3260	337	---	243	---	239	---	3.3	5.3	---
TOTAL	3497	2138	26304	15850	16345	24546	11283	3918	1206.7	118.3	483.7	146.4
MEAN	96.7	70.3	849	511	584	792	376	126	40.2	3.82	15.6	4.88
MAX	918	334	4650	1970	2250	6650	2090	1060	271	12	256	37
MIN	11	18	57	125	118	87	94	27	4.0	1.6	1.4	1.1
CFSM	.51	.38	4.49	2.71	3.09	4.19	1.99	.67	.21	.02	.08	.03
IN.	.59	.42	5.18	3.12	3.22	4.83	2.22	.77	.24	.02	.10	.03

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 1991, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)
1955	32.4	143	1978	.21	1965
1956	129	805	1980	.61	1964
1957	257	862	1979	.60	1964
1958	298	1150	1959	5.43	1977
1959	433	1323	1956	45.0	1963
1960	515	2252	1964	112	1981
1961	409	1117	1970	72.3	1976
1962	292	1369	1983	25.4	1988
1963	149	1337	1960	3.07	1988
1964	74.1	316	1973	2.75	1959
1965	41.1	514	1978	1.86	1965
1966	36.4	390	1979	.24	1957

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1955 - 1991

ANNUAL TOTAL	129951.5	105336.1	221
ANNUAL MEAN	356	289	404
HIGHEST ANNUAL MEAN			1979
LOWEST ANNUAL MEAN			1981
HIGHEST DAILY MEAN	7410	6650	15100
LOWEST DAILY MEAN	1.3	1.1	.00
ANNUAL SEVEN-DAY MINIMUM	2.5	1.5	.00
INSTANTANEOUS PEAK FLOW		6890	19600
INSTANTANEOUS PEAK STAGE		22.37	30.89
ANNUAL RUNOFF (CFSM)	1.88	1.53	1.17
ANNUAL RUNOFF (INCHES)	25.58	20.73	15.90
10 PERCENT EXCEEDS	693	703	475
50 PERCENT EXCEEDS	104	79	51
90 PERCENT EXCEEDS	7.7	2.9	3.2

03302220 BUCK CREEK NEAR NEW MIDDLETOWN, IN

LOCATION.--Lat 38°07'13", long 86°05'16", in SE¼NE¼ sec.32, T.4 S., R.4 E., Harrison County, Hydrologic Unit 05140104, on right bank at downstream side of bridge on State Highway 337 (revised), 0.6 mi downstream from South Fork Buck Creek, 3.6 mi southwest of New Middletown, and 14.4 mi upstream from mouth.
 DRAINAGE AREA.--65.2 mi², of which 28.1 mi² 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.--Records good except for estimated daily discharges and those below 10 ft³/s, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e2.4	9.8	40	312	110	76	49	21	38	10	3.1	3.6
2	e2.3	8.1	32	169	91	66	43	19	31	8.6	2.1	1.6
3	e2.3	7.1	273	131	77	55	44	15	34	8.8	2.9	1.5
4	100	7.0	169	117	69	50	61	14	24	9.4	4.0	6.3
5	36	9.2	110	143	78	41	43	28	17	9.0	4.1	6.1
6	17	12	86	576	742	51	30	28	15	7.8	4.9	2.7
7	10	10	66	559	467	51	29	20	12	7.0	5.5	1.4
8	7.8	8.7	52	297	292	45	94	16	10	6.1	2.8	1.2
9	21	17	41	208	220	43	110	90	8.9	7.5	5.5	1.6
10	91	85	34	191	184	40	78	90	7.3	33	8.0	2.8
11	39	48	30	324	159	38	58	66	6.7	20	6.0	2.4
12	24	32	28	253	129	43	52	87	6.4	13	5.7	2.5
13	17	24	34	197	197	217	107	101	5.7	11	75	4.5
14	12	20	26	171	496	237	91	90	6.5	6.5	14	2.4
15	9.0	17	204	159	242	164	80	155	6.8	5.6	4.1	1.6
16	7.6	14	152	148	174	133	69	101	5.6	4.7	2.4	1.2
17	7.8	13	160	101	155	162	66	81	5.0	4.3	3.4	1.1
18	83	11	2030	90	540	285	57	59	13	4.2	5.7	1.5
19	28	10	648	87	319	201	60	43	32	12	3.4	2.9
20	20	9.4	312	85	234	167	49	36	9.9	6.2	2.3	1.8
21	14	9.2	210	70	189	163	43	30	223	4.6	2.0	1.0
22	77	28	263	e60	152	1110	40	26	134	4.1	1.8	.97
23	95	60	352	e50	131	739	37	157	66	3.9	1.7	1.2
24	55	41	231	e46	120	363	38	240	41	3.4	1.5	1.4
25	36	31	167	e40	108	230	32	141	29	3.5	1.5	2.8
26	26	43	127	e34	93	150	30	151	22	3.9	1.4	2.3
27	22	31	109	e33	86	127	28	115	18	3.2	1.5	1.5
28	22	69	100	90	81	106	27	88	17	2.9	1.9	1.5
29	17	68	389	66	---	93	27	69	14	3.6	1.7	1.3
30	14	49	1060	236	---	79	23	57	12	3.8	2.0	.96
31	12	---	601	153	---	63	---	49	---	3.3	3.1	---
TOTAL	927.2	801.5	8136	5196	5935	5388	1595	2283	870.8	234.9	185.0	65.63
MEAN	29.9	26.7	262	168	212	174	53.2	73.6	29.0	7.58	5.97	2.19
MAX	100	85	2030	576	742	1110	110	240	223	33	75	6.3
MIN	2.3	7.0	26	33	69	38	23	14	5.0	2.9	1.4	.96
CFSM	.81	.72	7.07	4.52	5.71	4.68	1.43	1.99	.78	.20	.16	.06
IN.	.93	.80	8.16	5.21	5.95	5.40	1.60	2.29	.87	.24	.19	.07

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 1991, BY WATER YEAR (WY)

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
MEAN	19.4	61.7	105	101	142	141	156	100	51.0	31.7	16.1	20.0										
MAX	71.8	228	252	201	368	342	412	558	222	219	66.1	217										
(WY)	1971	1980	1991	1974	1989	1975	1970	1983	1990	1979	1979	1979										
MIN	.76	3.16	6.01	2.64	28.9	40.4	22.4	16.3	1.56	4.59	2.11	.72										
(WY)	1988	1988	1977	1977	1978	1983	1986	1976	1988	1975	1987	1987										

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1970 - 1991

ANNUAL TOTAL	46294.7	31618.03	78.4
ANNUAL MEAN	127	86.6	146
HIGHEST ANNUAL MEAN			32.8
LOWEST ANNUAL MEAN			1979
HIGHEST DAILY MEAN	3230 Jun 7	2030 Dec 18	3970 May 1 1983
LOWEST DAILY MEAN	1.7 Sep 6	.96 Sep 30	.52 Jul 10 1988
ANNUAL SEVEN-DAY MINIMUM	1.9 Sep 5	1.5 Sep 16	.57 Jul 4 1988
INSTANTANEOUS PEAK FLOW		3790 Dec 18	12700 Apr 2 1970
INSTANTANEOUS PEAK STAGE		8.94 Dec 18	14.40 Apr 2 1970
ANNUAL RUNOFF (CFSM)	3.42	2.33	2.11
ANNUAL RUNOFF (INCHES)	46.42	31.70	28.70
10 PERCENT EXCEEDS	278	209	174
50 PERCENT EXCEEDS	46	34	28
90 PERCENT EXCEEDS	4.4	2.4	3.8

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 mi².
 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.--Records good except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.67	2.6	7.1	76	32	18	16	6.4	2.0	.18	.00	.20
2	.65	2.5	6.3	48	27	25	13	5.7	1.7	.18	.00	.13
3	1.0	2.5	146	34	22	20	12	5.0	1.5	.17	.00	.09
4	24	2.5	40	27	20	18	12	6.5	6.6	.12	.00	1.0
5	3.9	4.1	22	30	28	16	12	11	2.5	.09	.00	1.6
6	2.3	6.4	16	178	350	33	11	7.4	1.7	.08	.00	.68
7	1.6	4.6	11	240	190	30	9.7	5.8	1.4	.04	.00	.32
8	1.4	3.8	9.0	106	89	25	14	4.9	1.1	.09	.00	.21
9	8.0	9.8	7.6	60	53	22	96	13	1.0	.18	.00	.20
10	13	19	6.5	50	37	20	98	8.8	.89	.26	.00	.30
11	4.9	8.2	5.8	217	30	18	44	6.5	.86	.32	.00	.26
12	3.5	6.0	5.3	131	25	40	38	6.0	.76	.25	.00	.16
13	2.9	4.9	5.1	64	74	231	160	5.7	.57	.17	3.2	.13
14	2.2	4.4	4.5	42	237	137	83	6.7	.48	.12	.67	.09
15	2.0	3.8	70	36	89	71	100	9.7	.63	.07	.30	.05
16	1.6	3.5	27	41	e48	45	65	5.7	.54	.02	.21	.02
17	1.7	3.5	108	33	37	71	39	5.4	.57	.01	.42	.02
18	119	3.2	850	28	161	126	24	4.1	.72	.00	1.0	.05
19	13	3.2	193	25	100	68	33	3.6	1.0	.00	.55	.05
20	6.9	3.0	87	24	62	45	21	3.5	.87	.00	.32	.01
21	5.2	2.7	92	20	43	53	17	3.3	3.0	.00	.24	.01
22	26	21	169	e18	34	794	14	3.2	1.7	.00	.16	.01
23	15	17	165	e15	29	250	13	3.4	.89	.00	.11	.02
24	8.6	9.9	78	e13	28	124	25	3.1	.63	.04	.08	.02
25	6.2	7.6	47	e12	24	72	14	2.9	.45	.03	.04	.04
26	5.2	6.2	34	e10	21	56	12	5.6	.42	.13	.02	.02
27	4.6	6.0	28	e16	19	66	11	5.2	.42	.09	.01	.01
28	4.1	18	34	32	16	55	9.7	4.1	.42	.05	.01	.00
29	3.3	11	248	22	---	35	9.9	3.3	.42	.04	.09	.00
30	3.2	8.5	490	113	---	23	8.0	3.0	.25	.01	.76	.00
31	2.9	---	173	47	---	19	---	2.5	---	.00	.37	---
TOTAL	298.52	209.4	3185.2	1808	1925	2626	1034.3	171.0	35.99	2.74	8.56	5.70
MEAN	9.63	6.98	103	58.3	68.7	84.7	34.5	5.52	1.20	.088	.28	.19
MAX	119	21	850	240	350	794	160	13	6.6	.32	3.2	1.6
MIN	.65	2.5	4.5	10	16	16	8.0	2.5	.25	.00	.00	.00
CFSM	.60	.43	6.38	3.62	4.27	5.26	2.14	.34	.07	.01	.02	.01
IN.	.69	.48	7.36	4.18	4.45	6.07	2.39	.40	.08	.01	.02	.01

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1991, BY WATER YEAR (WY)

	5.20	17.0	33.2	32.6	43.4	45.6	46.8	26.8	14.0	9.69	5.80	4.85
MEAN	5.20	17.0	33.2	32.6	43.4	45.6	46.8	26.8	14.0	9.69	5.80	4.85
MAX	42.2	70.6	103	64.3	111	112	120	116	75.1	50.7	30.5	62.1
(WY)	1978	1980	1991	1969	1990	1975	1970	1983	1990	1979	1978	1979
MIN	.000	.38	1.80	.46	11.1	10.9	7.78	1.48	.002	.088	.15	.000
(WY)	1988	1988	1981	1977	1977	1976	1976	1988	1988	1991	1987	1987

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1969 - 1991

ANNUAL TOTAL	15277.38	11310.41	23.6
ANNUAL MEAN	41.9	31.0	45.0
HIGHEST ANNUAL MEAN			8.76
LOWEST ANNUAL MEAN			
HIGHEST DAILY MEAN	1300	850	1300
LOWEST DAILY MEAN	.04	.00	.00
ANNUAL SEVEN-DAY MINIMUM	.12	.00	.00
INSTANTANEOUS PEAK FLOW		2790	5500
INSTANTANEOUS PEAK STAGE		7.14	9.30
ANNUAL RUNOFF (CFSM)	2.60	1.92	1.47
ANNUAL RUNOFF (INCHES)	35.30	26.13	19.95
10 PERCENT EXCEEDS	89	80	47
50 PERCENT EXCEEDS	9.8	5.8	6.6
90 PERCENT EXCEEDS	.37	.02	.26

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 mi², of which 10.6 mi² 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.--Records good above 10 ft³/s and poor below. Periods of estimated daily discharge are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	40	90	e560	203	112	145	61	25	3.3	.51	1.7
2	9.8	36	77	e400	171	161	124	54	22	3.1	.44	1.7
3	8.2	33	718	e290	149	136	109	49	19	2.8	.46	1.7
4	136	31	462	e220	135	119	102	51	18	2.6	.74	2.4
5	126	32	245	e200	129	107	107	86	21	2.6	.77	3.3
6	52	38	179	e380	1510	120	89	95	17	2.2	.67	3.1
7	35	46	140	e900	1120	198	79	60	13	1.9	.38	3.1
8	27	36	112	e600	592	149	90	50	12	2.1	.37	3.0
9	29	35	94	e430	421	142	487	53	11	2.7	.62	2.8
10	125	141	80	e360	340	138	684	73	10	3.3	.63	2.6
11	111	110	72	e1000	266	125	329	63	9.5	3.5	.49	2.3
12	67	76	66	e700	219	127	234	112	9.1	3.1	.38	1.9
13	50	61	62	e500	244	751	636	81	8.9	3.2	.30	1.7
14	41	52	57	e380	1320	647	452	61	8.8	3.1	.26	1.4
15	33	47	326	e290	635	436	468	129	8.1	2.5	.18	1.1
16	28	43	308	278	397	322	397	82	7.2	1.8	.10	.79
17	24	42	257	226	336	281	290	73	6.7	1.4	.23	.44
18	1170	39	5000	194	617	641	222	57	7.6	1.0	.47	.61
19	279	36	1530	172	591	450	206	47	9.6	.77	.39	.85
20	155	35	564	163	439	339	174	42	11	.63	.30	.62
21	108	32	485	145	358	319	141	39	14	.34	.24	.40
22	175	84	954	e120	299	4190	123	36	13	.20	.31	.40
23	280	251	898	e115	236	3720	107	36	14	.10	.58	.40
24	164	144	538	110	197	780	150	39	11	.41	.50	.43
25	119	108	370	e95	171	484	117	35	8.0	.80	.42	.42
26	91	85	285	e90	152	391	102	46	6.3	.91	.30	.30
27	76	74	227	e86	133	335	89	57	5.2	.84	.26	.30
28	66	105	214	196	118	362	82	55	4.5	.62	2.0	.28
29	57	149	1050	140	---	262	78	41	4.1	.51	2.3	.20
30	50	107	e3000	311	---	210	73	34	3.6	.49	2.1	.16
31	44	---	e1300	294	---	168	---	29	---	.47	1.8	---
TOTAL	3746.0	2148	19760	9945	11498	16722	6486	1826	338.2	53.29	19.50	40.40
MEAN	121	71.6	637	321	411	539	216	58.9	11.3	1.72	.63	1.35
MAX	1170	251	5000	1000	1510	4190	684	129	25	3.5	2.3	3.3
MIN	8.2	31	57	86	118	107	73	29	3.6	.10	.10	.16
CFSM	.94	.56	4.94	2.49	3.18	4.18	1.68	.46	.09	.01	.00	.01
IN.	1.08	.62	5.70	2.87	3.32	4.82	1.87	.53	.10	.02	.01	.01

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 1991, BY WATER YEAR (WY)

	MEAN	28.0	101	193	270	325	382	302	184	112	65.5	42.0	31.4
MAX	301	553	652	1248	1008	1573	943	923	579	647	268	281	
(WY)	1978	1980	1958	1950	1950	1964	1970	1983	1990	1973	1949	1979	
MIN	.077	.44	1.16	5.94	16.8	49.3	68.0	17.8	2.24	.23	.24	.060	
(WY)	1954	1954	1944	1977	1944	1947	1976	1988	1988	1954	1951	1953	

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1944 - 1991
ANNUAL TOTAL	105314.9	72582.39	169
ANNUAL MEAN	289	199	345
HIGHEST ANNUAL MEAN			32.5
LOWEST ANNUAL MEAN			1950
HIGHEST DAILY MEAN	7260	5000	13900
LOWEST DAILY MEAN	2.4	.10	.00
ANNUAL SEVEN-DAY MINIMUM	2.9	.27	.00
INSTANTANEOUS PEAK FLOW		6910	26700
INSTANTANEOUS PEAK STAGE		15.85	22.64
ANNUAL RUNOFF (CFSM)	2.24	1.54	1.31
ANNUAL RUNOFF (INCHES)	30.37	20.93	17.79
10 PERCENT EXCEEDS	563	464	370
50 PERCENT EXCEEDS	95	67	44
90 PERCENT EXCEEDS	7.9	.50	1.8

03302680 WEST FORK BLUE RIVER AT SALEM, IN

LOCATION.--Lat 38°36'19", long 86°05'40", in SW¼ 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 mi².

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.--Records good except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.66	2.8	14	79	e17	e13	24	5.6	2.1	.34	.11	.23
2	.67	2.7	12	53	e15	e15	21	4.8	2.0	.34	.11	.22
3	.68	2.6	117	37	e14	e13	18	4.7	11	.37	.11	4.2
4	26	2.7	57	28	e13	e12	18	4.5	3.7	.36	.11	170
5	3.1	4.8	36	30	e12	e11	17	6.8	2.5	.33	.11	26
6	1.6	6.2	27	115	e230	e10	14	5.0	1.9	.52	.12	7.6
7	1.3	4.4	21	109	e160	e11	13	3.8	1.6	.39	.13	3.9
8	1.2	3.4	16	81	e100	e10	13	3.5	1.4	.39	.11	2.7
9	5.5	5.1	13	64	e60	e9.2	16	4.5	1.3	.34	50	2.2
10	9.9	11	11	56	e50	e8.6	14	3.7	1.1	1.2	4.2	1.8
11	5.3	7.3	9.6	156	e38	e8.1	10	4.7	1.0	.79	1.0	1.3
12	3.0	5.8	8.6	101	e30	9.3	13	5.6	.99	.43	.54	1.1
13	2.2	4.9	7.8	62	e27	59	117	4.3	.94	.33	.40	15
14	1.9	4.3	6.4	46	e150	53	57	3.9	.83	.26	.34	6.3
15	1.6	3.9	30	37	e100	37	49	4.1	.75	.23	.29	2.4
16	1.4	3.7	22	38	e50	30	36	2.8	2.4	.21	.28	1.5
17	6.0	3.7	37	31	e42	46	29	2.5	2.3	.19	2.1	1.2
18	99	3.2	709	27	e90	92	24	2.8	1.5	.17	51	1.4
19	21	3.3	155	e24	e70	58	24	2.2	2.2	.17	2.8	1.4
20	12	3.0	85	e23	e54	42	19	2.1	1.2	.17	1.4	.89
21	8.3	2.9	102	e20	e40	34	16	1.9	1.0	.17	.96	.77
22	13	23	171	e17	e32	351	14	1.9	1.1	.16	.70	.71
23	14	23	169	e16	e26	230	13	2.7	.88	.15	.54	.78
24	11	16	87	e15	e22	97	12	3.9	.70	.14	.42	.68
25	7.6	12	56	e14	e19	59	9.8	2.7	.59	.14	.36	.64
26	5.8	9.4	39	e12	e17	52	9.3	4.2	.56	.14	.33	.54
27	4.9	8.2	33	e11	e15	72	8.7	3.5	.50	.14	.30	.45
28	4.1	32	30	e17	e14	59	8.6	2.6	.46	.13	.40	.44
29	3.4	23	330	e14	---	44	8.1	7.5	.41	.16	.33	.42
30	3.1	17	496	e26	---	35	6.6	4.2	.36	.15	.28	.38
31	2.9	---	138	e21	---	28	---	2.7	---	.12	.25	---
TOTAL	282.11	255.3	3045.4	1380	1507	1608.2	652.1	119.7	49.27	9.13	120.13	257.15
MEAN	9.10	8.51	98.2	44.5	53.8	51.9	21.7	3.86	1.64	.29	3.88	8.57
MAX	99	32	709	156	230	351	117	7.5	11	1.2	51	170
MIN	.66	2.6	6.4	11	12	8.1	6.6	1.9	.36	.12	.11	.22
CFSM	.48	.45	5.17	2.34	2.83	2.73	1.14	.20	.09	.02	.20	.45
IN.	.55	.50	5.96	2.70	2.95	3.15	1.28	.23	.10	.02	.24	.50

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 1991, BY WATER YEAR (WY)

	MEAN	8.04	25.5	35.0	32.6	43.8	46.2	43.7	25.5	11.4	15.7	7.32	6.94
MAX	45.7	89.9	98.2	103	106	104	136	140	38.0	65.7	30.5	40.0	
(WY)	1984	1986	1991	1982	1989	1989	1972	1983	1985	1988	1985	1982	
MIN	.14	.74	2.33	.97	9.74	9.65	4.21	1.91	.088	.29	.13	.36	
(WY)	1988	1972	1977	1977	1978	1976	1976	1988	1988	1991	1987	1984	

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1970 - 1991
ANNUAL TOTAL	13371.10	9285.49	
ANNUAL MEAN	36.6	25.4	25.1
HIGHEST ANNUAL MEAN			43.1
LOWEST ANNUAL MEAN			10.7
HIGHEST DAILY MEAN	1350	709	1730
LOWEST DAILY MEAN	.35	.11	.02
ANNUAL SEVEN-DAY MINIMUM	.47	.11	.03
INSTANTANEOUS PEAK FLOW		1820	9240
INSTANTANEOUS PEAK STAGE		8.76	15.58
ANNUAL RUNOFF (CFSM)	1.93	1.34	1.32
ANNUAL RUNOFF (INCHES)	26.18	18.18	17.97
10 PERCENT EXCEEDS	62	59	54
50 PERCENT EXCEEDS	11	6.2	7.6
90 PERCENT EXCEEDS	.96	.33	.45

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 mi², of which 76.9 mi² 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.--Records good.
 EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 21, 1959, reached a stage of 29.20 ft, from floodmark, on left upstream wingwall.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.7	46	155	1240	228	221	414	123	157	19	5.4	8.5
2	9.2	43	131	853	216	272	350	109	122	18	8.1	7.7
3	8.9	39	832	639	201	247	309	101	102	18	7.1	6.9
4	203	39	862	498	193	213	279	98	112	17	5.6	89
5	193	39	424	435	193	193	276	103	83	16	5.0	464
6	75	45	308	977	2470	190	248	144	69	15	6.3	100
7	46	54	237	2010	3490	204	221	111	60	16	6.3	52
8	32	53	190	1320	1360	178	201	92	55	23	6.6	34
9	35	44	160	916	895	165	297	88	51	29	9.3	24
10	125	82	136	738	681	157	895	92	48	22	2.4	19
11	148	116	121	1210	523	147	399	86	45	18	64	21
12	92	84	110	1730	424	148	308	282	44	22	31	19
13	64	68	101	980	419	815	935	189	41	19	20	17
14	50	59	91	705	2250	1020	867	168	39	15	14	23
15	39	53	195	574	1300	705	705	403	36	13	27	28
16	33	49	405	561	748	526	610	212	33	11	20	16
17	62	47	291	477	621	451	465	148	41	11	20	12
18	782	45	6140	404	1240	1250	379	118	50	10	162	12
19	280	42	4290	365	1400	933	341	101	84	9.6	104	10
20	167	39	1260	353	910	670	308	93	65	9.1	42	8.3
21	114	38	924	312	696	548	263	85	48	8.5	25	7.6
22	122	92	2150	251	572	5070	239	76	42	8.0	17	6.1
23	181	368	2080	244	455	7210	216	74	39	7.8	13	5.9
24	140	222	1280	230	393	1890	209	564	32	7.4	11	5.3
25	109	158	813	192	336	1090	189	218	29	7.7	9.3	5.3
26	88	123	618	181	293	819	173	166	30	7.8	7.7	5.1
27	75	107	491	165	262	882	162	192	28	6.6	8.1	4.6
28	66	180	449	248	237	1550	153	163	26	6.0	16	3.8
29	59	279	2380	216	---	832	149	162	25	5.8	13	3.5
30	54	189	4950	260	---	617	138	557	21	5.7	14	3.5
31	51	---	3570	298	---	485	---	233	---	5.2	10	---
TOTAL	3512.8	2842	36144	19582	23006	29698	10698	5351	1657	407.2	941.8	1022.1
MEAN	113	94.7	1166	632	822	958	357	173	55.2	13.1	30.4	34.1
MAX	782	368	6140	2010	3490	7210	935	564	157	29	234	464
MIN	8.9	38	91	165	193	147	138	74	21	5.2	5.0	3.5
CFSM	.40	.33	4.12	2.23	2.90	3.39	1.26	.61	.20	.05	.11	.12
IN.	.46	.37	4.75	2.57	3.02	3.90	1.41	.70	.22	.05	.12	.13

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1991, BY WATER YEAR (WY)

	MEAN	70.8	278	441	473	584	629	596	369	214	163	92.2	66.2
MAX	305	1135	1166	1341	1236	1193	1280	1808	743	588	463	239	
(WY)	1984	1980	1991	1982	1990	1978	1972	1983	1990	1973	1977	1979	
MIN	6.35	12.5	29.4	11.6	129	142	86.8	35.2	8.36	13.1	18.8	8.37	
(WY)	1988	1988	1977	1977	1987	1969	1976	1988	1988	1991	1975	1987	

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1968 - 1991

ANNUAL TOTAL	176277.8	134861.9	331
ANNUAL MEAN	483	369	544
HIGHEST ANNUAL MEAN			148
LOWEST ANNUAL MEAN			1979
HIGHEST DAILY MEAN	11500	7210	11500
LOWEST DAILY MEAN	8.9	3.5	2.9
ANNUAL SEVEN-DAY MINIMUM	11	4.4	3.2
INSTANTANEOUS PEAK FLOW		9310	13500
INSTANTANEOUS PEAK STAGE		20.17	24.37
ANNUAL RUNOFF (CFSM)	1.71	1.31	1.17
ANNUAL RUNOFF (INCHES)	23.17	17.73	15.88
10 PERCENT EXCEEDS	983	895	749
50 PERCENT EXCEEDS	167	123	118
90 PERCENT EXCEEDS	23	9.0	16

03302849 WHISKEY RUN AT MARENGO, IN

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

DRAINAGE AREA.--7.02 mi².

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.--Records fair except for estimated daily discharges, which are poor.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.22	2.5	13	3.5	2.5	3.5	1.4	2.4	.01	.00	.00
2	.01	.20	1.9	8.1	3.2	4.8	2.8	1.0	1.6	.01	.00	.00
3	.01	.19	.55	5.6	3.0	3.5	2.4	.81	1.1	.01	.00	.00
4	4.9	.19	13	4.2	2.7	2.9	2.7	.70	.71	e.01	.00	e.01
5	.78	.29	6.1	5.4	3.2	2.5	4.1	.76	.50	.00	.00	.05
6	.28	.26	4.2	54	105	2.7	3.3	.61	.39	.00	.00	.00
7	.20	.20	2.9	60	45	2.7	2.9	.41	.34	.00	.00	.00
8	.17	.19	2.1	18	14	2.3	3.9	.31	.34	.12	.00	.00
9	.27	.35	1.7	9.8	8.6	2.0	16	.41	.30	.07	.00	.00
10	1.2	.63	1.4	7.3	6.1	1.8	12	.32	.28	.02	.00	.00
11	1.2	.78	1.2	43	4.5	1.7	6.4	.24	.26	.02	.00	.00
12	.52	.55	1.0	23	3.7	2.7	5.2	.23	.25	.01	.00	.00
13	.33	.39	.92	11	15	53	18	.17	.20	.01	.00	.00
14	.25	.31	.71	7.5	70	22	16	.15	.18	e.01	.00	.00
15	.22	.28	6.7	6.0	17	11	10	.14	.17	.00	.00	.00
16	.19	.26	5.0	7.8	8.4	7.1	6.9	.13	.16	.00	.00	.00
17	.73	.25	33	6.0	6.6	14	5.1	.12	.15	.00	.00	.00
18	29	.24	349	4.8	41	24	4.0	.11	.14	.00	.00	.00
19	3.3	.23	48	4.3	19	11	5.7	.08	.17	.00	.00	.00
20	1.6	.20	17	3.9	10	7.6	4.9	.11	.13	.00	.00	.00
21	.87	.20	37	3.2	7.3	6.2	4.0	.04	.57	.00	.00	.00
22	1.7	8.7	60	2.7	5.6	310	3.4	.03	.33	.00	.00	.00
23	2.1	5.8	43	2.6	4.4	79	3.0	.13	.16	.00	.00	.00
24	1.3	3.0	15	2.2	3.7	21	e15	.20	.13	.00	.00	.00
25	.84	1.9	8.9	1.9	3.1	12	e4.5	7.9	.12	.00	.00	.00
26	.57	1.4	6.2	1.8	2.7	8.7	3.7	4.4	.09	.00	.00	.00
27	.42	1.1	5.2	2.1	2.4	29	3.0	3.2	.05	.00	.00	.00
28	.35	16	4.7	3.8	2.1	16	2.7	1.7	.03	.00	.00	.00
29	.31	6.3	90	3.5	---	8.9	2.5	129	.02	.00	.00	.00
30	.27	3.5	141	6.4	---	5.8	1.8	52	.02	.00	.00	.00
31	.24	---	35	4.6	---	4.3	---	4.6	---	.00	.00	---
TOTAL	54.14	54.11	999.33	337.5	420.8	682.7	179.4	211.41	11.29	0.30	0.00	0.06
MEAN	1.75	1.80	32.2	10.9	15.0	22.0	5.98	6.82	.38	.010	.000	.002
MAX	29	16	349	60	105	310	18	129	2.4	.12	.00	.05
MIN	.01	.19	.71	1.8	2.1	1.7	1.8	.03	.02	.00	.00	.00
CFSM	.25	.26	4.59	1.55	2.14	3.14	.85	.97	.05	.00	.00	.00
IN.	.29	.29	5.30	1.79	2.23	3.62	.95	1.12	.06	.00	.00	.00

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1991, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)
1987	.47	1.75	1991	.000	1988
1988	2.50	5.94	1989	.001	1988
1989	8.01	32.2	1991	1.10	1988
1990	7.75	14.6	1990	.70	1987
1991	15.8	22.8	1991	6.19	1987
1992	11.0	22.0	1989	2.66	1990
1993	7.70	13.3	1990	5.17	1988
1994	7.48	26.8	1990	.22	1987
1995	7.89	37.3	1990	.009	1988
1996	.66	1.93	1989	.019	1991
1997	.16	.60	1988	.000	1991
1998	1.12	5.23	1989	.000	1987

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1987 - 1991

ANNUAL TOTAL	4458.48	2951.04	5.82	
ANNUAL MEAN	12.2	8.09	9.46	1990
HIGHEST ANNUAL MEAN			2.17	1987
LOWEST ANNUAL MEAN				
HIGHEST DAILY MEAN	855	349	855	Jun 7 1990
LOWEST DAILY MEAN	.00	.00	.00	Aug 9 1987
ANNUAL SEVEN-DAY MINIMUM	.00	.00	.00	Aug 9 1987
INSTANTANEOUS PEAK FLOW		1250	2920	Jun 7 1990
INSTANTANEOUS PEAK STAGE		7.71	12.39	Jun 7 1990
ANNUAL RUNOFF (CFSM)	1.74	1.15	.83	
ANNUAL RUNOFF (INCHES)	23.63	15.64	11.26	
10 PERCENT EXCEEDS	19	16	9.4	
50 PERCENT EXCEEDS	1.6	.81	.53	
90 PERCENT EXCEEDS	.02	.00	.00	

03303300 MIDDLE FORK ANDERSON RIVER AT BRISTOW, IN

LOCATION.--Lat 38°08'19", long 86°43'16", in SW¼ 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 mi².

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.--Records fair. Flow regulated by Forest Service and Middle Fork Anderson River Conservancy District control structures beginning June 1967.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 21, 1959, reached a stage of 20.0 ft, from floodmark, discharge 15,000 ft³/s, from rating curve extended above 7,000 ft³/s. This is the maximum flood since 1905, from information by local resident.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.33	6.1	27	407	75	36	63	30	7.8	.85	.00	.00
2	.13	5.9	20	292	62	44	50	26	7.0	1.3	.00	.00
3	.11	5.9	135	120	51	43	41	22	7.1	1.6	.00	.00
4	14	5.8	130	77	44	39	38	19	29	.86	.00	.02
5	7.4	7.0	71	85	44	34	45	19	12	.60	.00	.05
6	5.5	8.0	44	346	372	32	43	18	8.3	.38	.00	.22
7	5.0	8.4	31	459	386	32	39	16	6.9	.32	.00	.87
8	4.3	8.1	23	365	277	31	41	14	5.9	24	.00	.27
9	5.4	9.1	18	231	146	29	168	14	5.1	29	.00	.03
10	13	13	16	126	100	27	215	13	4.4	9.7	.00	.05
11	13	12	14	213	77	25	122	12	4.0	4.7	.00	.03
12	10	11	13	257	63	32	94	15	3.6	2.2	12	.00
13	8.1	10	11	170	116	200	152	15	2.8	1.1	8.5	.00
14	7.0	11	10	121	419	312	246	14	1.7	.59	1.6	.00
15	6.2	10	62	95	299	191	177	13	1.2	.49	.36	.00
16	5.7	10	58	102	163	124	127	12	1.1	.31	.00	.00
17	6.3	11	83	93	116	128	96	11	1.2	.37	.00	.00
18	107	11	841	80	357	244	77	10	1.7	.41	.00	.00
19	52	9.7	531	70	332	183	105	9.2	1.0	.37	.33	.00
20	26	8.9	458	62	218	128	96	8.2	.80	.32	1.1	.00
21	23	8.2	503	53	139	105	80	7.1	47	.35	.89	.00
22	22	37	578	43	103	721	66	6.3	9.1	.43	.54	.00
23	18	49	500	38	81	689	56	5.8	4.7	.40	.37	.00
24	12	30	402	34	66	507	68	32	3.1	.27	.12	.00
25	11	21	245	29	55	482	63	18	2.2	.25	.00	.00
26	8.8	15	102	27	47	453	55	18	1.8	.21	.00	.00
27	8.3	12	75	32	41	425	47	19	1.4	.17	.00	.00
28	7.3	98	73	81	37	328	41	15	1.2	.15	.00	.00
29	6.9	71	376	77	---	156	39	13	1.1	.10	.00	.00
30	6.4	41	587	107	---	100	34	10	.92	.04	.00	.00
31	6.4	---	471	95	---	78	---	8.6	---	.00	.00	---
TOTAL	426.57	564.1	6508	4387	4286	5958	2584	463.2	185.12	81.84	25.81	1.54
MEAN	13.8	18.8	210	142	153	192	86.1	14.9	6.17	2.64	.83	.051
MAX	107	98	841	459	419	721	246	32	47	29	12	.87
MIN	.11	5.8	10	27	37	25	34	5.8	.80	.00	.00	.00
CFSM	.35	.47	5.27	3.56	3.85	4.83	2.16	.38	.16	.07	.02	.00
IN.	.40	.53	6.08	4.10	4.01	5.57	2.42	.43	.17	.08	.02	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 1991, BY WATER YEAR (WY)

	MEAN	10.0	41.5	77.4	80.7	103	128	117	69.4	28.7	18.4	12.6	11.3
MAX	63.7	194	210	223	245	393	312	405	190	141	162	78.8	
(WY)	1978	1980	1991	1982	1989	1964	1972	1983	1979	1979	1979	1982	
MIN	.000	.000	.000	2.78	7.86	33.4	19.6	6.36	.82	.38	.013	.000	
(WY)	1965	1964	1964	1964	1964	1990	1963	1988	1988	1968	1965	1964	

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1962 - 1991

ANNUAL TOTAL	29783.43	25471.18	
ANNUAL MEAN	81.6	69.8	58.0
HIGHEST ANNUAL MEAN			122
LOWEST ANNUAL MEAN			25.9
HIGHEST DAILY MEAN	868	841	4870
LOWEST DAILY MEAN	.02	.00	.00
ANNUAL SEVEN-DAY MINIMUM	.23	.00	.00
INSTANTANEOUS PEAK FLOW		1460	6360
INSTANTANEOUS PEAK STAGE		15.35	19.33
ANNUAL RUNOFF (CFSM)	2.05	1.75	1.46
ANNUAL RUNOFF (INCHES)	27.84	23.81	19.79
10 PERCENT EXCEEDS	304	216	143
50 PERCENT EXCEEDS	20	14	16
90 PERCENT EXCEEDS	.62	.00	.24

03303400 CROOKED CREEK NEAR SANTA CLAUS, IN

LOCATION.--Lat 38°07'05", long 86°53'24", in SW 1/4 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 mi².
 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.--Records fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	1.0	4.6	15	7.1	6.8	7.4	1.2	.11	.00	.00	.00
2	.01	.98	3.8	10	6.0	8.0	6.6	.81	.11	.11	.00	.00
3	.00	1.1	56	7.3	5.2	5.2	6.5	.67	.09	.11	.00	.00
4	46	1.1	9.9	5.4	5.0	4.2	8.1	.64	.33	.04	.00	.00
5	1.9	2.4	6.2	23	11	3.8	8.0	3.2	.07	.02	.00	.03
6	.76	1.2	4.9	169	201	4.1	6.5	1.1	.05	.01	.00	.00
7	.46	1.1	3.8	97	41	3.0	6.4	.64	.04	.00	.00	.00
8	.33	.97	3.2	23	17	2.7	10	.52	.03	2.1	.00	.00
9	57	3.8	2.8	14	11	2.5	22	.66	.03	.21	.00	.00
10	34	2.8	2.6	13	8.5	2.1	14	.53	.03	.02	.00	.08
11	7.4	1.5	2.4	74	6.4	2.2	9.2	.43	.02	.02	.00	.06
12	3.3	1.1	2.3	23	5.6	5.3	8.9	.48	.02	.02	.00	.01
13	1.9	.94	2.0	13	73	43	18	.38	.02	.01	.00	.00
14	1.3	.87	1.8	9.6	115	38	14	1.5	.01	.00	.00	.00
15	.90	.78	19	13	20	15	12	1.1	.01	.00	.00	.00
16	.78	.81	6.5	16	11	9.5	8.4	6.9	.00	.00	.00	.00
17	4.5	.68	56	10	11	71	7.2	2.8	.01	.00	.00	.00
18	91	.69	531	7.8	151	46	7.1	.95	.05	.00	.00	.00
19	7.1	.66	48	7.2	27	16	33	.76	.05	.00	.00	.00
20	3.6	.56	19	6.6	15	11	12	1.4	.05	.00	.00	.00
21	2.4	.60	123	4.4	11	27	9.0	.75	.47	.00	.00	.00
22	12	31	100	3.7	8.4	453	7.8	.57	.09	.00	.00	.00
23	5.8	7.6	59	3.5	6.8	88	7.7	.59	.05	.00	.00	.00
24	3.2	3.5	17	2.9	5.9	24	7.5	.66	.04	.00	.00	.00
25	2.3	2.2	10	2.3	5.2	17	6.2	2.5	.03	.00	.00	.00
26	1.8	1.7	7.1	2.3	4.5	14	5.5	3.2	.02	.00	.00	.00
27	1.6	1.6	6.7	8.5	4.0	19	4.5	1.1	.00	.00	.00	.00
28	1.3	71	13	13	3.7	15	3.5	.52	.00	.00	.00	.00
29	1.1	10	219	11	---	12	2.7	.38	.00	.00	.00	.00
30	1.1	6.2	155	29	---	9.0	1.9	.27	.00	.00	.00	.00
31	1.0	---	28	10	---	7.8	---	.18	---	.00	.00	---
TOTAL	295.87	160.44	1523.6	647.5	797.3	985.2	281.6	37.39	1.83	2.67	0.00	0.18
MEAN	9.54	5.35	49.1	20.9	28.5	31.8	9.39	1.21	.061	.086	.000	.006
MAX	91	71	531	169	201	453	33	6.9	.47	2.1	.00	.08
MIN	.00	.56	1.8	2.3	3.7	2.1	1.9	.18	.00	.00	.00	.00
CFSM	1.21	.68	6.25	2.66	3.62	4.04	1.19	.15	.01	.01	.00	.00
IN.	1.40	.76	7.21	3.06	3.77	4.66	1.33	.18	.01	.01	.00	.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 1991, BY WATER YEAR (WY)

	MEAN	2.60	10.3	15.9	14.1	22.8	22.0	19.9	9.69	5.32	4.84	2.87	2.42
MAX	9.54	28.8	49.1	43.7	51.7	51.9	60.7	56.1	19.6	47.5	19.4	11.6	
(WY)	1991	1980	1991	1982	1989	1975	1983	1990	1986	1979	1977	1982	
MIN	.000	.31	.51	.058	3.20	5.35	2.27	.17	.000	.001	.000	.000	
(WY)	1988	1988	1977	1977	1978	1990	1976	1988	1988	1974	1983	1970	

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1970 - 1991
ANNUAL TOTAL	6252.75	4733.58	
ANNUAL MEAN	17.1	13.0	11.0
HIGHEST ANNUAL MEAN			17.4
LOWEST ANNUAL MEAN			4.04
HIGHEST DAILY MEAN	531 Dec 18	531 Dec 18	833 Feb 23 1975
LOWEST DAILY MEAN	.00 Oct 3	.00 Oct 3	.00 Oct 1 1969
ANNUAL SEVEN-DAY MINIMUM	.03 Sep 27	.00 Jul 14	.00 Jun 28 1970
INSTANTANEOUS PEAK FLOW		1120 Mar 22	4100 Apr 28 1970
INSTANTANEOUS PEAK STAGE		9.18 Mar 22	10.13 Apr 3 1989
ANNUAL RUNOFF (CFSM)	2.18	1.65	1.40
ANNUAL RUNOFF (INCHES)	29.59	22.40	18.99
10 PERCENT EXCEEDS	30	23	22
50 PERCENT EXCEEDS	2.4	1.8	1.8
90 PERCENT EXCEEDS	.09	.00	.00

03322011 PIGEON CREEK NEAR FORT BRANCH, IN

LOCATION.--Lat 38°15'08", long 87°31'11", in NW¼SW¼ sec.15, T.3 S., R.10 W., Gibson County, Hydrologic Unit 05140202, on right bank 20 ft downstream from bridge on State Highway 168, 1.1 mi upstream from West Fork Pigeon Creek and 2.6 mi east of intersection of U.S. Highway 41 at Fort Branch.
 DRAINAGE AREA.--35.4 mi.²
 PERIOD OF RECORD.--October 1986 to current year.
 GAGE.--Water-stage recorder. Datum of gage is 400.00 ft above National Geodetic Vertical Datum of 1929.
 REMARKS.--Records fair except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	4.3	8.3	37	14	49	12	6.6	3.3	e2.0	e.52	e1.1
2	3.1	4.3	7.0	25	14	56	11	5.9	3.3	e3.0	e.51	e1.0
3	4.4	4.3	42	20	15	21	11	5.8	3.1	5.3	e.51	e.94
4	569	4.3	11	e16	20	18	12	6.0	3.0	3.1	e.50	e1.2
5	7.7	8.3	8.0	73	97	16	15	9.1	2.8	2.2	e2.5	e6.0
6	4.6	5.4	7.4	720	986	16	12	6.4	2.8	2.0	e2.1	e3.2
7	5.1	4.7	6.7	518	151	13	34	5.2	2.6	1.9	e1.7	e1.7
8	4.8	4.4	6.4	112	45	12	26	5.0	2.6	2.2	e1.5	e1.2
9	248	4.7	6.2	97	31	12	16	5.5	2.5	3.6	e1.3	e.90
10	235	4.5	6.2	210	25	11	11	5.2	2.5	87	e1.2	e2.4
11	16	4.3	5.9	584	18	11	9.6	5.4	2.5	12	e1.1	e1.5
12	8.2	4.2	5.7	103	16	27	9.8	6.1	2.5	5.0	e1.1	e1.2
13	6.2	4.1	5.5	38	257	279	14	5.2	2.4	2.2	e1.0	e1.1
14	5.2	4.1	5.3	32	700	296	16	5.2	2.7	e1.7	e2.0	e.97
15	4.8	4.1	21	34	44	66	74	10	2.3	e1.4	e2.2	e.88
16	4.7	4.3	7.5	75	e20	34	16	5.8	2.4	e1.1	e1.6	e.80
17	4.7	4.2	84	34	e16	540	12	5.7	2.5	e1.0	e1.7	e.75
18	6.1	4.2	1090	24	329	338	10	4.7	2.4	e.91	e1.3	e.70
19	4.8	4.1	157	22	119	62	12	4.5	2.5	e.84	e1.0	e1.3
20	4.7	4.1	34	24	49	39	9.5	4.5	2.6	e.79	e.94	e1.0
21	4.5	4.0	407	17	34	37	8.9	4.3	18	e.73	e.86	e.75
22	6.4	117	436	e13	27	1780	8.5	4.0	8.1	e.69	e.81	e.63
23	5.7	14	40	e11	22	461	8.8	4.1	4.4	e.66	e.77	e.80
24	5.1	7.2	e15	e10	20	68	17	3.9	2.5	e.63	e.75	e.66
25	4.9	5.9	e11	e9.5	17	38	8.7	4.6	2.3	e.61	e.73	e.58
26	4.7	5.5	e8.4	e9.1	16	30	8.4	4.8	2.2	e.59	e.71	e.53
27	4.6	5.3	e7.0	e13	15	27	8.2	4.1	2.1	e.57	e.70	e.51
28	4.5	327	11	17	14	21	8.5	3.7	2.1	e.55	e3.0	e.49
29	4.4	20	1070	18	---	18	10	3.6	e2.1	e.54	e2.5	e.48
30	4.5	11	1740	118	---	14	7.6	3.6	e2.0	e.53	e1.7	e.47
31	4.3	---	198	16	---	13	---	3.4	---	e.52	e1.3	---
TOTAL	1203.7	607.8	5468.5	3049.6	3131	4423	437.5	161.9	99.1	145.86	40.11	46.54
MEAN	38.8	20.3	176	98.4	112	143	14.6	5.22	3.30	4.71	1.29	1.55
MAX	569	327	1740	720	986	1780	74	10	18	87	3.0	12
MIN	3.0	4.0	5.3	9.1	14	11	7.6	3.4	2.0	.52	.50	.47
CFSM	1.10	.57	4.98	2.78	3.16	4.03	.41	.15	.09	.13	.04	.04
IN.	1.26	.64	5.75	3.20	3.29	4.65	.46	.17	.10	.15	.04	.05

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1991, BY WATER YEAR (WY)

	1987	1988	1989	1990	1991
MEAN	14.6	25.0	52.6	55.6	103
MAX	38.8	62.9	176	98.4	170
(WY)	1991	1989	1991	1989	1990
MIN	.89	2.13	18.4	6.96	35.5
(WY)	1988	1988	1988	1987	1987

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1987 - 1991

ANNUAL TOTAL	24893.2	18814.61	
ANNUAL MEAN	68.2	51.5	40.1
HIGHEST ANNUAL MEAN			62.3
LOWEST ANNUAL MEAN			15.1
HIGHEST DAILY MEAN	1750	1780	1780
LOWEST DAILY MEAN	2.1	e.47	e.47
ANNUAL SEVEN-DAY MINIMUM	2.3	.52	.52
INSTANTANEOUS PEAK FLOW		2220	2810
INSTANTANEOUS PEAK STAGE		15.15	16.86
ANNUAL RUNOFF (CFSM)	1.93	1.46	1.13
ANNUAL RUNOFF (INCHES)	26.16	19.77	15.37
10 PERCENT EXCEEDS	116	74	51
50 PERCENT EXCEEDS	11	5.7	6.2
90 PERCENT EXCEEDS	3.6	.85	1.0

e Estimated

03322900 WABASH RIVER AT LINN GROVE, IN

LOCATION.--Lat 40°39'22", long 85°01'58", in SE1/4 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 mi².

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.--Records good except for estimated daily discharges, which are poor. Occasional regulation of Grand Lake, diversion from or into St. Marys River basin, and into Miami and Erie Canals.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood April 1964 reached a stage of 13.13 ft, from floodmark, discharge, 6,900 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	110	136	521	e6000	e410	385	385	125	1310	30	20	35
2	111	132	355	e4200	416	414	355	112	886	145	20	17
3	105	125	1120	e2900	410	407	329	96	797	342	20	13
4	784	120	2010	e2200	906	366	319	91	530	170	19	26
5	1180	171	2330	1510	1580	339	333	92	240	622	19	23
6	581	429	1520	1070	1990	336	334	96	153	593	18	18
7	278	344	783	792	2250	324	312	105	116	126	17	13
8	308	259	496	619	2280	301	302	91	96	75	18	11
9	424	235	387	546	1710	293	320	84	84	159	23	10
10	1830	240	352	508	1040	280	320	78	78	75	24	10
11	2280	257	329	563	730	273	284	73	71	46	22	9.4
12	2230	241	308	1240	539	275	219	68	67	38	19	11
13	1190	220	290	1280	477	287	174	66	66	34	17	10
14	521	210	266	878	508	310	1170	67	63	31	16	10
15	318	206	e700	971	e420	356	1470	80	58	29	15	12
16	244	203	e1200	1660	e330	567	785	67	57	29	15	11
17	212	e200	e1220	2200	e380	965	349	67	89	27	18	9.8
18	576	e198	e1600	2230	563	1470	207	76	59	27	24	8.9
19	738	194	1900	1470	1710	1720	653	88	50	26	28	8.4
20	451	191	2280	998	2500	1370	1810	66	42	26	25	7.9
21	287	190	2240	e820	2550	751	1960	58	38	24	18	7.9
22	270	215	2430	e700	1690	858	1170	52	36	25	17	8.0
23	440	336	2920	e620	916	1520	557	49	41	26	16	7.6
24	364	308	e2200	e560	637	1760	401	51	40	26	14	8.3
25	266	251	e1500	e520	501	1340	312	50	36	24	13	9.7
26	220	222	e840	e490	438	994	243	45	31	22	12	10
27	194	270	e640	e470	403	1550	208	58	33	22	14	8.2
28	176	978	492	e440	380	1720	180	65	33	20	13	6.9
29	162	1430	1550	e430	---	1210	162	54	31	20	12	6.4
30	153	958	4790	e410	---	663	151	50	28	22	15	6.5
31	142	---	7350	e400	---	440	---	702	---	21	31	---
TOTAL	17145	9469	46919	39695	28664	23844	15774	2922	5259	2902	572	353.9
MEAN	553	316	1514	1280	1024	769	526	94.3	175	93.6	18.5	11.8
MAX	2280	1430	7350	6000	2550	1760	1960	702	1310	622	31	35
MIN	105	120	266	400	330	273	151	45	28	20	12	6.4
CFSM	1.22	.70	3.34	2.83	2.26	1.70	1.16	.21	.39	.21	.04	.03
IN.	1.41	.78	3.85	3.26	2.35	1.96	1.30	.24	.43	.24	.05	.03

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1991, BY WATER YEAR (WY)

	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
MEAN	94.3	257	552	475	716	805	666	361	329	188	107	93.1															
MAX	553	1853	1514	1563	1717	2397	2085	1172	1914	856	709	753															
(WY)	1991	1973	1991	1974	1976	1978	1972	1989	1981	1990	1990	1972															
MIN	6.84	7.52	9.25	6.19	86.0	80.5	68.2	25.9	8.92	11.7	8.20	7.64															
(WY)	1965	1966	1977	1977	1978	1981	1971	1988	1988	1965	1966	1967															

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1965 - 1991

ANNUAL TOTAL	269545	193518.9	385
ANNUAL MEAN	738	530	710
HIGHEST ANNUAL MEAN			76.8
LOWEST ANNUAL MEAN			1973
HIGHEST DAILY MEAN	7350	Dec 31	8400
LOWEST DAILY MEAN	50	Jul 9	4.3
ANNUAL SEVEN-DAY MINIMUM	57	Jul 4	5.1
INSTANTANEOUS PEAK FLOW			9560
INSTANTANEOUS PEAK STAGE			13.87
ANNUAL RUNOFF (CFSM)	1.63	1.17	.85
ANNUAL RUNOFF (INCHES)	22.13	15.89	11.55
10 PERCENT EXCEEDS	2100	1550	1130
50 PERCENT EXCEEDS	356	244	110
90 PERCENT EXCEEDS	122	17	11

03323000 WABASH RIVER AT BLUFFTON, IN

LOCATION.--Lat 40°44'30", long 85°10'19", in NW¼ sec.4, T.26 N., R.12 E., Wells County, Hydrologic Unit 05120101, on downstream side of left abutment of Main Street (State Highway 1) bridge in Bluffton, 2 mi downstream from Sixmile Creek, and at mile 434.5.

DRAINAGE AREA.--532 mi².

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

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

REMARKS.--Gage-height accuracy to tenths of a foot during the stage-only period of record. Gage-heights estimated for Dec. 15 and 21, Feb. 18, May 22, and Sept. 20, and 22-23 are reasonably accurate.

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

EXTREMES FOR CURRENT YEAR.--Maximum gage height at 2400 hr 15.1 ft, Dec. 31; minimum gage height at 2400 hr, 1.0 ft Sept. 11, 20-21, 26-27.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	1.9	3.3	14.0	3.8	2.9	2.9	1.9	5.4	1.4	1.1	1.4
2	1.9	1.9	2.7	11.8	3.8	2.9	2.7	2.0	4.1	1.9	1.1	1.2
3	2.2	2.0	7.6	9.5	3.8	2.9	2.7	1.8	4.1	2.7	1.1	1.9
4	5.2	1.9	7.3	7.5	5.3	2.6	2.7	1.8	3.0	2.2	1.1	1.4
5	5.2	2.7	7.3	5.3	6.4	2.9	2.9	1.8	2.3	4.3	1.1	1.4
6	3.3	3.3	5.3	4.3	7.2	2.7	2.7	1.8	1.9	3.0	1.1	1.2
7	2.6	2.9	3.7	3.8	7.1	2.6	2.6	2.0	1.9	1.9	1.1	1.1
8	3.1	2.6	3.0	3.4	7.3	2.4	3.1	1.8	1.9	1.6	1.1	1.1
9	4.9	2.6	2.9	3.3	5.8	2.4	2.9	1.6	1.9	2.2	1.4	1.1
10	8.3	2.6	2.7	3.1	4.3	2.3	2.6	1.6	1.6	1.6	1.1	1.1
11	7.7	2.4	2.6	3.7	3.7	2.3	2.4	1.6	1.6	1.6	1.4	1.0
12	7.3	2.4	2.6	5.2	3.1	2.6	2.3	1.6	1.6	1.5	1.1	1.1
13	4.6	2.4	2.6	4.9	3.1	2.6	2.9	1.6	1.6	1.4	1.1	1.1
14	3.3	2.2	2.4	4.5	3.1	2.6	6.5	1.6	1.6	1.4	1.1	1.1
15	2.7	2.4	5.0	5.3	2.7	2.9	6.1	1.9	1.6	1.2	1.1	1.1
16	2.4	---	5.4	7.5	2.6	3.5	3.7	1.6	1.6	1.1	1.1	1.1
17	2.6	---	---	7.5	3.1	4.8	2.7	1.6	1.6	1.2	1.1	1.1
18	4.1	2.2	6.5	7.2	4.5	6.0	2.3	1.8	1.4	1.2	1.4	1.2
19	3.9	2.3	6.9	5.2	7.1	6.1	7.5	1.9	1.4	1.4	1.4	1.1
20	2.9	2.2	7.3	4.6	7.7	5.0	6.9	1.6	1.4	1.2	1.4	1.0
21	2.7	2.3	8.7	4.5	7.6	3.7	6.8	1.6	1.4	1.4	1.1	1.0
22	2.7	2.4	8.1	3.7	5.6	5.0	4.5	1.6	1.4	1.2	1.1	1.1
23	3.1	2.9	8.3	3.4	4.1	6.1	3.3	1.6	1.4	1.1	1.1	1.1
24	3.0	2.7	7.7	3.9	3.4	6.2	3.0	1.6	1.4	1.1	1.1	1.1
25	2.4	2.6	6.5	4.2	3.1	4.8	2.6	1.6	1.4	1.1	1.1	1.1
26	2.2	2.3	4.5	4.2	2.9	5.4	2.6	1.8	1.4	1.1	1.1	1.0
27	2.3	2.6	3.5	4.2	2.9	6.0	2.3	1.6	1.4	1.2	1.1	1.0
28	2.0	5.6	3.1	4.2	2.7	6.2	2.2	1.6	1.4	1.1	1.1	1.1
29	2.0	5.7	11.0	3.9	---	4.3	2.2	1.6	1.4	1.1	1.1	1.1
30	2.3	4.1	13.7	3.7	---	3.4	2.0	1.9	1.4	1.1	1.1	1.1
31	1.9	---	15.1	3.7	---	2.9	---	5.4	---	1.1	1.2	---
MEAN	3.4	---	---	5.3	4.6	3.8	3.4	1.8	1.9	1.6	1.2	1.1
MAX	8.3	---	---	14.0	7.7	6.2	7.5	5.4	5.4	4.3	1.4	1.9
MIN	1.8	---	---	3.1	2.6	2.3	2.0	1.6	1.4	1.1	1.1	1.0

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 mi².

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

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

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

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

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

AVERAGE DISCHARGE.--40 years, 600 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 14,900 ft³/s Feb. 10, 1959; maximum gage height 23.20 ft. Feb. 10, 1959 (backwater from ice); minimum daily discharge, 0.0 ft³/s Sept. 12, 1989.

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

EXTREMES FOR CURRENT YEARS.--Maximum daily discharge, 5,900 ft³/s Jan. 9; minimum daily discharge, 21 ft³/s May 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	188	188	1510	2030	261	336	324	21	184	61	27	27
2	187	186	1100	3250	314	384	274	43	192	61	27	27
3	186	184	879	4290	354	412	333	56	765	109	27	27
4	133	182	2010	4630	437	424	327	81	1650	218	27	27
5	948	181	3300	4880	1340	383	325	119	2630	197	27	27
6	1320	308	3550	5640	2330	286	331	157	2860	214	27	38
7	682	443	2700	5880	2710	276	337	201	2250	349	27	44
8	435	469	1150	5860	2780	288	340	213	983	438	27	44
9	525	313	509	5900	2650	286	424	212	257	286	50	44
10	620	204	368	4600	2180	283	555	211	239	107	62	44
11	906	207	334	2690	1300	262	475	210	204	95	62	44
12	1450	209	312	1920	589	249	325	172	164	100	62	44
13	2050	316	260	1890	508	249	197	152	145	95	52	44
14	2460	362	269	1890	455	248	532	135	110	89	43	44
15	2840	347	284	2450	400	259	1600	80	83	78	43	64
16	1810	233	992	2380	236	373	2390	61	112	68	43	103
17	992	226	1440	2440	250	639	2000	71	118	37	33	112
18	1060	244	1600	3000	380	1160	837	102	95	27	27	111
19	1950	240	2220	3260	1510	1820	517	107	83	27	39	98
20	1600	237	2700	2770	2690	1980	645	192	83	27	27	81
21	1220	117	2560	2440	2960	1760	1850	243	46	27	27	81
22	582	58	2620	2320	2950	995	2780	255	83	27	27	81
23	422	189	3130	1450	2400	1220	2450	168	78	27	27	80
24	471	251	3430	845	1120	2050	1390	126	75	27	27	80
25	491	294	3350	508	617	2200	551	205	66	27	27	79
26	397	299	2680	377	481	2130	257	430	61	27	33	79
27	328	247	1720	349	302	1950	176	257	61	27	36	79
28	302	515	1180	353	224	1960	103	157	61	27	36	78
29	223	953	751	356	---	1910	53	155	61	27	35	78
30	190	1350	535	353	---	1010	42	143	61	27	35	78
31	189	---	856	263	---	546	---	161	---	27	31	---
TOTAL	27157	9552	50299	81264	34728	28328	22740	4896	13860	2980	1100	1887
MEAN	876	318	1623	2621	1240	914	758	158	462	96.1	35.5	62.9
MAX	2840	1350	3550	5900	2960	2200	2780	430	2860	438	62	112
MIN	133	58	260	263	224	248	42	21	46	27	27	27

CAL YR 1990 TOTAL 361549 MEAN 991 MAX 4720 MIN 37
WTR YR 1991 TOTAL 278791 MEAN 764 MAX 5900 MIN 21

03324000 LITTLE RIVER NEAR HUNTINGTON, IN

LOCATION.--Lat 40°54'14", long 85°24'22", in NE1/4 sec.9, T.28 N., R.10 E., Huntington County, Hydrologic Unit 05120101, on right bank on upstream side of former highway bridge, 5 mi east of Huntington, and at mile 7.5.

DRAINAGE AREA.--263 mi².

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.--Records good. During periods of extreme high water in the St. Marys River, some water leaves the St. Marys River basin through Junk ditch and flows into Little River basin via Graham McCulloch ditch.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	68	213	4160	e100	129	129	135	4600	54	20	31
2	29	65	164	2480	e103	235	111	136	3640	150	19	22
3	28	62	1500	1150	e125	241	100	112	2230	284	22	23
4	131	64	2200	719	330	168	100	100	1020	95	30	110
5	150	368	916	501	614	137	368	103	500	65	23	76
6	84	912	408	381	598	135	274	146	305	53	18	41
7	77	328	283	297	615	123	182	112	209	45	19	29
8	79	202	238	227	375	101	186	91	161	60	35	28
9	673	158	198	181	297	95	570	85	132	56	113	23
10	2540	136	177	150	247	93	278	81	115	45	55	22
11	2440	116	153	176	192	85	172	77	106	40	36	21
12	1310	101	142	402	e140	81	138	76	102	38	29	26
13	522	89	129	235	e130	81	131	75	88	40	24	68
14	296	83	111	217	e130	86	333	84	77	40	29	44
15	212	80	438	477	e115	137	1160	77	70	35	32	34
16	162	78	464	1570	e115	163	817	70	69	31	29	27
17	136	75	263	1390	e120	172	438	103	64	30	26	21
18	816	71	548	532	212	827	313	98	55	31	31	21
19	491	67	852	317	1790	444	626	87	49	27	52	21
20	249	65	390	328	1300	249	1940	70	45	25	89	21
21	181	62	1160	425	588	192	780	61	44	25	52	21
22	147	74	2240	e250	377	187	365	58	47	43	33	24
23	129	83	1040	e220	251	317	255	57	45	48	27	22
24	118	74	453	e190	201	322	554	59	43	30	26	22
25	103	67	e340	e170	171	238	377	193	40	24	23	22
26	93	61	e250	e150	143	401	239	470	38	23	22	21
27	87	120	e200	e140	130	543	192	214	36	22	19	21
28	80	1150	e190	e130	123	342	166	128	34	25	20	22
29	74	785	2070	e120	---	206	149	96	34	25	19	23
30	71	301	4630	e110	---	156	135	530	33	25	19	21
31	70	---	5100	e103	---	131	---	4040	---	21	47	---
TOTAL	11609	5965	27460	17898	9632	6817	11578	7824	14031	1555	1038	928
MEAN	374	199	886	577	344	220	386	252	468	50.2	33.5	30.9
MAX	2540	1150	5100	4160	1790	827	1940	4040	4600	284	113	110
MIN	28	61	111	103	100	81	100	57	33	21	18	21
CFSM	1.42	.76	3.37	2.20	1.31	.84	1.47	.96	1.78	.19	.13	.12
IN.	1.64	.84	3.88	2.53	1.36	.96	1.64	1.11	1.98	.22	.15	.13

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 1991, BY WATER YEAR (WY)

	MEAN	81.4	138	283	310	413	496	415	239	219	88.1	61.7	45.2
MAX	701	717	1010	1693	1164	1765	1396	555	809	630	501	326	
(WY)	1955	1973	1967	1950	1959	1982	1957	1974	1958	1986	1958	1950	
MIN	5.72	10.2	8.93	6.25	17.5	90.7	40.3	35.2	22.3	15.9	7.76	4.22	
(WY)	1963	1965	1964	1977	1964	1981	1946	1963	1988	1962	1963	1962	

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1945 - 1991
ANNUAL TOTAL	141577	116335	
ANNUAL MEAN	388	319	231
HIGHEST ANNUAL MEAN			450
LOWEST ANNUAL MEAN			67.0
HIGHEST DAILY MEAN	5100	5100	5610
LOWEST DAILY MEAN	28	18	1.1
ANNUAL SEVEN-DAY MINIMUM	33	21	1.8
INSTANTANEOUS PEAK FLOW		5230	5990
INSTANTANEOUS PEAK STAGE		18.98	19.50
ANNUAL RUNOFF (CFSM)	1.47	1.21	.88
ANNUAL RUNOFF (INCHES)	20.03	16.45	11.95
10 PERCENT EXCEEDS	936	645	581
50 PERCENT EXCEEDS	153	116	64
90 PERCENT EXCEEDS	62	25	13

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.
 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.--Records good except for estimated daily discharges, which are poor. Natural flow partially affected by sewage effluent.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.3	12	49	175	e18	30	31	19	107	3.8	2.0	3.6
2	5.7	12	36	96	22	39	27	18	35	101	e2.3	2.1
3	5.3	12	682	65	67	36	23	15	23	36	e2.1	3.3
4	347	11	338	49	295	30	23	16	15	49	e1.4	4.7
5	118	25	97	44	526	25	26	16	11	253	e2.2	2.8
6	39	49	57	40	452	25	24	17	8.0	40	e3.0	e1.8
7	24	26	44	37	463	23	22	14	6.7	15	e2.1	e3.1
8	23	17	36	33	168	18	22	11	6.3	156	3.5	e2.0
9	124	16	29	31	103	17	24	11	5.6	65	4.6	e2.1
10	677	23	27	28	78	17	22	10	4.8	21	2.9	e2.7
11	227	25	24	131	55	15	18	9.7	5.9	13	e2.3	e3.0
12	79	17	23	264	e38	15	14	9.6	7.3	9.9	e1.6	e2.9
13	48	14	21	93	e35	20	87	11	5.9	8.0	e2.3	e4.5
14	34	12	17	70	77	25	481	77	4.8	6.0	e1.6	6.9
15	26	11	473	122	e50	40	173	107	6.0	4.7	e2.2	2.3
16	19	12	228	578	e41	173	78	25	17	4.1	e2.4	e1.9
17	17	12	106	366	e36	428	46	26	8.5	3.6	9.5	2.3
18	123	10	680	116	170	841	35	105	5.5	3.8	7.2	e2.6
19	70	10	611	71	733	210	364	41	4.4	3.2	e3.1	e1.8
20	34	9.8	192	91	275	98	392	20	4.0	3.2	e2.5	e1.5
21	25	8.4	582	118	121	65	109	14	3.7	2.8	e2.0	3.5
22	55	26	750	e51	75	313	66	11	10	2.7	e2.2	e2.5
23	77	55	300	e43	51	593	48	13	11	3.5	2.5	5.7
24	40	28	148	e36	44	133	51	13	8.1	2.5	e3.2	e2.3
25	28	18	e67	e30	37	66	38	11	5.5	2.7	e2.6	e2.0
26	21	14	e48	e26	32	372	33	11	49	2.2	e2.3	e1.9
27	18	110	e35	e25	30	257	31	9.6	13	3.0	e2.2	e1.8
28	16	531	e31	e23	28	104	28	8.6	6.4	1.6	e2.1	e3.0
29	14	212	1050	e22	---	54	25	7.1	5.2	2.8	e2.7	e2.0
30	13	79	2950	e21	---	39	22	7.4	4.1	e2.5	4.2	e2.1
31	13	---	1810	e19	---	32	---	193	---	e2.1	6.8	---
TOTAL	2365.3	1417.2	11541	2914	4120	4153	2383	877.0	407.7	827.7	93.6	84.7
MEAN	76.3	47.2	372	94.0	147	134	79.4	28.3	13.6	26.7	3.02	2.82
MAX	677	531	2950	578	733	841	481	193	107	253	9.5	6.9
MIN	5.3	8.4	17	19	18	15	14	7.1	3.7	1.6	1.4	1.5
CFSM	.89	.55	4.35	1.10	1.72	1.57	.93	.33	.16	.31	.04	.03
IN.	1.03	.62	5.02	1.27	1.79	1.80	1.04	.38	.18	.36	.04	.04

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 1991, BY WATER YEAR (WY)

	MEAN	15.0	51.7	103	91.6	123	176	135	62.2	56.0	36.9	24.1	19.8
MAX	76.3	378	372	391	312	494	436	243	305	185	195	237	237
(WY)	1991	1973	1991	1962	1976	1978	1964	1989	1981	1979	1990	1972	1972
MIN	.90	1.75	1.95	1.83	2.62	17.5	11.5	5.65	2.82	1.89	1.57	1.34	1.34
(WY)	1983	1966	1964	1977	1964	1981	1976	1988	1965	1965	1965	1982	1982

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1960 - 1991
ANNUAL TOTAL	51027.9	31184.2	74.3
ANNUAL MEAN	140	85.4	128
HIGHEST ANNUAL MEAN			23.2
LOWEST ANNUAL MEAN			3140
HIGHEST DAILY MEAN	2950	2950	Mar 5 1963
LOWEST DAILY MEAN	4.7	e1.4	Aug 4
ANNUAL SEVEN-DAY MINIMUM	5.2	2.1	Jul 30
INSTANTANEOUS PEAK FLOW		3240	Dec 30
INSTANTANEOUS PEAK STAGE		16.38	Dec 30
ANNUAL RUNOFF (CFSM)	1.63	1.00	16.96
ANNUAL RUNOFF (INCHES)	22.18	13.55	.87
10 PERCENT EXCEEDS	368	211	11.79
50 PERCENT EXCEEDS	31	22	152
90 PERCENT EXCEEDS	8.4	2.5	12
			2.2

e Estimated

03324300 SALAMONIE RIVER NEAR WARREN, IN

LOCATION.--Lat 40°42'45", long 85°27'13", in SE1/4 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 mi².

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.--Records good, except those for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	88	377	8180	e115	156	211	136	1010	53	14	23
2	48	86	270	5460	120	189	183	123	406	225	15	16
3	51	86	1880	1230	133	223	159	110	221	364	18	17
4	410	86	3780	599	465	186	152	104	134	130	20	23
5	1310	152	1750	442	2160	157	203	104	97	92	21	30
6	363	478	527	358	1760	146	230	110	79	294	21	17
7	180	316	357	295	2100	141	190	104	68	87	22	14
8	207	193	281	253	1320	124	199	92	62	433	26	16
9	418	149	232	227	649	115	520	87	59	608	18	16
10	3000	134	206	200	457	109	313	85	59	196	15	13
11	3420	129	187	209	347	104	202	82	60	74	13	14
12	1310	125	175	889	249	102	153	86	63	49	12	12
13	512	110	160	678	216	112	219	89	60	50	11	12
14	349	98	143	409	237	116	1480	91	64	34	11	13
15	254	92	481	817	269	140	3000	185	66	25	12	15
16	196	90	1700	2350	138	345	1400	223	75	21	9.6	17
17	160	90	600	2860	204	1290	545	198	85	19	13	21
18	317	86	1320	1250	302	2850	335	174	87	17	19	13
19	625	84	2630	560	2560	3190	827	227	79	16	34	9.9
20	305	81	1690	503	2720	1240	2990	142	75	16	27	8.0
21	202	78	1520	694	1040	591	1630	92	75	16	16	7.8
22	167	82	3590	453	561	966	572	77	80	16	12	8.5
23	225	132	2660	295	369	2620	391	80	80	16	10	10
24	239	186	e800	226	281	1730	404	75	91	15	9.9	12
25	172	134	e550	e185	235	592	326	222	86	15	11	11
26	141	109	e400	e170	199	871	248	345	78	14	13	11
27	121	134	e330	e160	175	2110	213	176	95	14	14	12
28	110	1370	368	e150	163	1200	189	100	94	13	15	10
29	101	2010	3220	e140	---	607	169	73	62	13	16	10
30	94	673	10400	e125	---	336	151	68	54	15	16	9.7
31	93	---	9660	e120	---	246	---	1070	---	14	19	---
TOTAL	15148	7661	52244	30487	19544	22904	17804	4930	3704	2964	503.5	421.9
MEAN	489	255	1685	983	698	739	593	159	123	95.6	16.2	14.1
MAX	3420	2010	10400	8180	2720	3190	3000	1070	1010	608	34	30
MIN	48	78	143	120	115	102	151	68	54	13	9.6	7.8
CFSM	1.15	.60	3.97	2.31	1.64	1.74	1.40	.37	.29	.22	.04	.03
IN.	1.33	.67	4.57	2.67	1.71	2.00	1.56	.43	.32	.26	.04	.04

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 1991, BY WATER YEAR (WY)

	MEAN	91.1	268	526	459	680	873	762	359	346	200	120	93.6
MAX	489	1585	1685	1724	1906	2616	2565	1353	2312	1009	991	894	
(WY)	1991	1973	1991	1974	1976	1978	1957	1989	1958	1957	1990	1972	
MIN	8.13	13.7	11.4	6.12	19.2	103	74.5	32.8	16.7	23.8	11.8	9.22	
(WY)	1964	1964	1977	1977	1964	1981	1976	1988	1988	1967	1965	1963	

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1957 - 1991

ANNUAL TOTAL	263307	178315.4	
ANNUAL MEAN	721	489	390
HIGHEST ANNUAL MEAN			612
LOWEST ANNUAL MEAN			109
HIGHEST DAILY MEAN	10400	10400	10700
LOWEST DAILY MEAN	39	7.8	5.1
ANNUAL SEVEN-DAY MINIMUM	43	9.6	5.9
INSTANTANEOUS PEAK FLOW		11700	13200
INSTANTANEOUS PEAK STAGE		16.21	17.05
ANNUAL RUNOFF (CFSM)	1.70	1.15	.92
ANNUAL RUNOFF (INCHES)	23.05	15.61	12.48
10 PERCENT EXCEEDS	2260	1320	1000
50 PERCENT EXCEEDS	206	146	90
90 PERCENT EXCEEDS	71	14	16

03J24500 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 mi².

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

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

GAGE.--Data-Collection Platform since May 1, 1986. Datum of gage is 673.96 ft above National Geodetic Vertical Datum of 1929 (levels by State of Indiana, Department of Natural Resources). Prior to Oct. 1, 1951, non-recording gage at site 1.5 mi upstream at datum 688.59 ft National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers) and Oct. 1, 1951, to Oct. 8, 1961, water-stage recorder located on left bank 2,000 ft upstream at datum 679.77 ft National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Oct. 9, 1961, to Sept. 30, 1974, water-stage recorder at site described in "LOCATION" paragraph.

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

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

AVERAGE DISCHARGE.--67 years (1924 to current year), 512 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 16,500 ft³/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 ft³/s Oct. 30, 1968, result of abnormal regulation.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 5,040 ft³/s Jan. 14; minimum daily, 25 ft³/s May 10 to May 14.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	484	185	1450	127	183	252	243	35	297	26	26	48
2	451	723	1380	130	184	237	160	69	374	26	26	39
3	291	1910	724	131	196	248	106	57	828	46	26	26
4	526	2110	967	131	304	283	106	47	1270	170	26	26
5	1230	2050	1690	131	993	300	107	47	1370	223	26	26
6	1570	1260	2240	398	1840	212	107	47	1010	223	26	26
7	778	527	2370	818	2110	169	107	47	509	223	26	26
8	1030	527	2230	1000	1710	223	107	47	241	418	26	26
9	1510	857	1180	997	993	220	108	32	133	911	26	26
10	241	1010	391	1550	654	203	108	25	151	731	26	26
11	120	752	315	3670	436	213	108	25	151	184	26	26
12	122	506	279	4790	382	178	109	25	128	112	26	26
13	122	503	221	4980	396	177	109	25	85	70	26	26
14	123	644	221	5040	349	187	109	25	70	26	26	26
15	402	779	310	4470	204	161	460	26	70	26	26	26
16	1040	767	1040	3540	143	243	833	26	70	26	26	189
17	1730	754	1030	2860	226	656	699	26	60	26	100	287
18	879	539	1190	2860	286	1350	514	26	48	26	26	306
19	499	445	1620	2820	719	1740	515	26	33	26	26	335
20	1430	459	2020	2930	1640	1790	524	26	26	26	26	334
21	2200	352	1550	3100	2080	1340	750	26	26	26	26	333
22	3120	119	483	3730	2000	774	906	26	26	26	26	333
23	2910	272	372	4450	1300	692	690	26	26	26	26	332
24	2230	349	1050	5020	590	1290	537	26	26	26	26	331
25	1200	403	1540	4980	409	1140	537	279	26	26	26	330
26	269	430	2140	4010	259	994	305	967	26	26	26	249
27	239	476	2400	2030	275	1010	118	948	26	26	26	388
28	198	744	2020	730	274	1300	85	744	26	26	26	411
29	185	1150	833	318	---	1330	69	321	26	26	26	410
30	185	1490	113	316	---	624	69	233	26	26	26	408
31	185	---	122	227	---	337	---	292	---	26	41	---
TOTAL	27499	23092	35491	72284	21135	19873	9305	4597	7184	3831	895	5401
MEAN	887	770	1145	2332	755	641	310	148	239	124	28.9	180
MAX	3120	2110	2400	5040	2110	1790	906	967	1370	911	100	411
MIN	120	119	113	127	143	161	69	25	26	26	26	26

CAL YR 1990 TOTAL 311008 MEAN 852 MAX 3990 MIN 24
WTR YR 1991 TOTAL 230587 MEAN 632 MAX 5040 MIN 25

03325000 WABASH RIVER AT WABASH, IN

LOCATION.--Lat 40°47'25", long 85°49'13", in SE1/4 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 mi².

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. WDR 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.--Records good. Flow regulated by Huntington Lake and Salamonie Lake. Annual mean computations do not include the 1936 water-year.

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 ft³/s, from rating curve extended above 49,000 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	682	617	3640	7060	800	964	1190	402	8080	150	84	105
2	670	865	3330	6570	841	1230	921	395	5280	193	77	115
3	541	2190	4670	5980	957	1380	772	350	4240	546	78	99
4	807	2560	5810	5980	1430	1300	817	315	4070	522	85	147
5	1640	2880	6170	5820	2880	1240	1060	356	4370	612	83	168
6	3080	3580	6410	6290	4920	1080	1210	454	4490	495	87	140
7	2170	1830	5960	7240	5900	772	997	496	3550	574	84	116
8	1530	1570	4650	7260	5440	831	986	479	2250	1340	121	111
9	3120	1670	2790	7190	4350	840	1620	452	717	1410	164	107
10	6690	1600	1450	6710	3700	782	1530	426	652	1220	185	102
11	4970	1380	1110	6350	2740	788	1280	415	599	440	151	96
12	3660	978	1050	6810	1730	717	972	409	563	274	135	99
13	3080	953	898	6630	1450	701	835	354	448	274	143	100
14	3130	1210	824	6560	e1250	727	1010	359	385	192	114	123
15	3480	1430	1340	7140	e1070	783	3110	353	324	185	102	123
16	3910	1360	2570	8130	e860	1060	4540	246	307	162	104	215
17	2760	1190	3350	7540	778	2030	3790	226	342	141	165	436
18	3960	1070	3600	6350	1100	4470	2570	304	297	115	101	438
19	3650	877	5190	6410	4110	4670	2070	326	242	100	156	466
20	3460	879	5360	6160	6020	4450	3950	340	208	95	157	443
21	3790	896	6270	5990	6010	3970	3500	394	204	94	153	427
22	4010	990	6710	6050	5630	2920	4130	447	197	94	120	427
23	3770	916	5300	6230	4840	2620	3930	740	196	98	104	428
24	3060	843	e4400	5880	2840	3850	3300	565	184	109	92	427
25	2280	914	e3900	5680	1850	4040	2340	1460	176	99	86	421
26	1040	953	e3500	5030	1370	3960	1310	2400	162	92	85	355
27	862	1150	e3300	3430	1240	4200	806	2050	151	86	83	447
28	792	3530	e3100	1970	934	3830	642	1340	148	84	87	494
29	733	3880	7870	1220	---	3940	496	836	145	81	87	494
30	624	3570	14900	e1050	---	2710	418	1440	145	84	91	494
31	618	---	8590	e940	---	1570	---	8860	---	85	83	---
TOTAL	78569	48331	138012	177650	77040	68425	56102	27989	43122	10046	3447	8163
MEAN	2534	1611	4452	5731	2751	2207	1870	903	1437	324	111	272
MAX	6690	3880	14900	8130	6020	4670	4540	8860	8080	1410	185	494
MIN	541	617	824	940	778	701	418	226	145	81	77	96
CFSM	1.43	.91	2.52	3.24	1.56	1.25	1.06	.51	.81	.18	.06	.15
IN.	1.65	1.02	2.90	3.74	1.62	1.44	1.18	.59	.91	.21	.07	.17

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 1991, BY WATER YEAR (WY)

	MEAN	574	859	1743	2225	2479	3129	2742	1603	1288	690	440	475
MAX	3200	4971	5829	13260	7764	8144	11060	10410	8260	3879	2179	5675	
(WY)	1927	1973	1968	1950	1959	1982	1957	1943	1958	1957	1990	1926	
MIN	32.3	61.7	56.0	72.8	114	177	264	135	78.3	55.4	43.4	29.9	
(WY)	1964	1965	1964	1977	1964	1941	1971	1941	1988	1934	1941	1941	

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1924 - 1991	
ANNUAL TOTAL	948970		736896			
ANNUAL MEAN	2600		2019		1517	
HIGHEST ANNUAL MEAN					2994	
LOWEST ANNUAL MEAN					276	
HIGHEST DAILY MEAN	14900	Dec 30	14900	Dec 30	47800	May 18 1943
LOWEST DAILY MEAN	185	Jul 9	77	Aug 2	17	Aug 3 1934
ANNUAL SEVEN-DAY MINIMUM	225	Jul 4	82	Jul 28	18	Aug 3 1934
INSTANTANEOUS PEAK FLOW			16100	Dec 30	49600	May 18 1943
INSTANTANEOUS PEAK STAGE			17.27	Dec 30	24.44	Feb 11 1959
ANNUAL RUNOFF (CFSM)	1.47		1.14		.86	
ANNUAL RUNOFF (INCHES)	19.97		15.50		11.66	
10 PERCENT EXCEEDS	4940		5890		4460	
50 PERCENT EXCEEDS	2390		972		499	
90 PERCENT EXCEEDS	549		105		82	

03325J11 LITTLE MISSISSINAWA 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 mi².

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.--Records good except for estimated daily discharges in September which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	2.6	7.5	55	e4.1	4.7	5.0	3.3	8.1	.55	.07	.03
2	1.4	2.6	5.4	34	10	5.5	4.0	2.8	4.2	.49	.06	.03
3	1.6	2.4	70	22	21	4.3	3.7	2.6	3.0	.48	.75	.10
4	25	2.5	49	14	25	4.1	3.7	2.7	2.3	.45	.19	.32
5	11	4.1	24	11	43	3.6	3.6	3.2	1.9	.35	.03	.10
6	6.4	3.3	16	8.4	58	4.4	3.4	3.8	1.7	.29	.05	.04
7	4.6	2.6	11	7.2	55	3.4	3.2	2.6	1.6	.24	.05	.03
8	3.8	2.3	9.1	6.3	33	3.0	3.3	2.3	1.5	1.1	.07	e.02
9	26	2.7	7.5	5.3	21	3.1	3.2	2.3	1.4	.44	.13	e.02
10	65	3.7	6.6	4.6	15	2.7	2.5	2.1	1.3	.31	.09	e.02
11	35	2.8	6.0	22	9.7	2.7	2.1	2.0	1.5	.24	.04	e.02
12	20	2.3	5.6	27	e6.3	2.9	2.0	2.1	1.4	.24	.03	e.03
13	13	1.9	4.7	13	e6.6	5.4	29	2.0	1.1	.23	.02	.15
14	9.3	1.8	4.1	9.9	11	6.9	40	1.9	1.1	.18	.03	.10
15	6.5	1.8	72	16	e6.0	12	25	1.6	1.1	.14	.02	.07
16	5.2	2.0	48	43	e5.2	35	13	1.5	1.2	.12	.03	e.05
17	4.9	1.6	35	33	e4.8	72	8.4	1.5	.96	.11	.09	e.03
18	31	1.6	89	17	16	99	6.6	1.7	.86	.11	.14	e.02
19	17	1.6	84	12	51	50	19	1.4	.77	.10	.22	e.02
20	10	1.3	54	13	39	30	20	1.3	.71	.09	.29	e.02
21	7.5	1.4	71	12	22	20	11	1.3	.69	.09	.08	e.02
22	12	5.4	89	8.5	14	42	8.4	1.3	21	.09	.04	e.02
23	11	5.7	73	e6.2	9.4	113	6.7	1.3	27	.09	.03	e.07
24	8.3	3.8	42	e5.0	8.0	44	5.6	1.2	7.4	.08	.03	e.06
25	6.2	3.0	27	e4.4	6.4	27	4.8	1.2	3.2	.08	.02	e.05
26	4.9	2.5	18	e4.0	5.8	48	4.8	1.6	2.1	.06	.02	e.04
27	4.4	5.3	12	e3.8	5.3	41	4.5	1.4	2.2	.05	.02	e.03
28	3.6	31	9.0	e3.7	4.8	23	4.1	1.1	.97	.04	.03	e.03
29	3.1	18	113	3.7	---	13	4.0	1.1	.81	.04	.03	e.03
30	3.0	11	480	9.8	---	7.5	3.3	1.3	.68	.08	.04	e.02
31	2.7	---	112	e5.0	---	5.9	---	2.6	---	.08	.04	---
TOTAL	364.7	134.6	1654.5	439.8	516.4	739.1	257.9	60.1	103.75	7.04	2.78	1.59
MEAN	11.8	4.49	53.4	14.2	18.4	23.8	8.60	1.94	3.46	.23	.090	.053
MAX	65	31	480	55	58	113	40	3.8	27	1.1	.75	.32
MIN	1.3	1.3	4.1	3.7	4.1	2.7	2.0	1.1	.68	.04	.02	.02
CFSM	1.22	.46	5.52	1.47	1.91	2.47	.89	.20	.36	.02	.01	.01
IN.	1.40	.52	6.36	1.69	1.99	2.84	.99	.23	.40	.03	.01	.01

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1991, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)
1983	4.40	23.1	1987	.035	1983
1984	7.95	28.5	1988	.084	1988
1985	15.4	53.4	1991	2.59	1990
1986	7.11	15.3	1989	1.19	1988
1987	17.4	38.6	1990	4.66	1989
1988	16.3	23.8	1991	3.05	1983
1989	16.6	33.7	1989	8.60	1991
1990	11.4	26.4	1989	.93	1988
1991	7.70	24.2	1987	.23	1988
1992	7.95	20.3	1986	.065	1988
1993	1.99	11.2	1990	.004	1988
1994	3.07	24.0	1989	.000	1983

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1983 - 1991
ANNUAL TOTAL	5895.72	4282.26	9.73
ANNUAL MEAN	16.2	11.7	14.8
HIGHEST ANNUAL MEAN			3.53
LOWEST ANNUAL MEAN			1986
HIGHEST DAILY MEAN	480	480	480
LOWEST DAILY MEAN	.20	.02	.00
ANNUAL SEVEN-DAY MINIMUM	.81	.03	.00
INSTANTANEOUS PEAK FLOW		586	586
INSTANTANEOUS PEAK STAGE		8.02	8.67
ANNUAL RUNOFF (CFSM)	1.67	1.21	1.01
ANNUAL RUNOFF (INCHES)	22.68	16.47	13.67
10 PERCENT EXCEEDS	42	33	27
50 PERCENT EXCEEDS	5.1	3.3	2.6
90 PERCENT EXCEEDS	1.3	.04	.05

03J25500 MISSISSINAWA RIVER NEAR RIDGEVILLE, IN

LOCATION.--Lat 40°16'49", long 81°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 mi².

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.--Records good, except for periods of estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	36	95	690	e56	55	69	45	265	9.3	3.9	3.2
2	26	35	71	321	74	71	58	41	110	12	3.4	2.5
3	22	34	1110	214	349	58	54	38	88	10	3.2	2.1
4	649	33	575	155	527	51	52	39	55	10	8.0	13
5	213	42	203	128	920	45	57	39	41	14	6.4	10
6	99	57	132	111	945	49	51	55	34	9.5	4.1	3.9
7	67	39	99	98	837	45	48	40	30	7.7	4.0	2.7
8	54	34	81	86	346	36	48	34	27	31	4.8	2.1
9	312	35	66	79	221	36	49	33	24	18	8.3	1.9
10	1170	57	61	69	164	34	43	32	22	10	6.3	1.9
11	436	47	54	270	114	32	35	31	24	9.0	4.4	2.3
12	197	38	52	408	86	33	32	31	32	8.4	3.3	2.4
13	125	34	47	175	90	46	253	34	22	8.6	2.8	7.8
14	92	32	38	134	142	68	555	31	20	7.5	3.3	12
15	72	31	1360	188	e82	126	298	28	19	6.5	3.6	6.3
16	57	31	540	803	e73	456	153	26	21	5.9	3.0	3.1
17	53	31	288	576	e66	1000	102	27	18	5.7	3.2	2.3
18	383	27	1580	229	256	1910	80	34	17	5.5	9.4	e2.1
19	178	27	1180	160	1060	524	336	32	16	5.6	5.9	e2.0
20	103	26	414	180	622	264	392	25	15	5.7	7.1	e2.0
21	79	25	1090	184	265	173	165	24	14	5.1	6.6	e1.9
22	149	84	1430	114	164	528	121	114	29	4.7	4.0	e1.9
23	143	107	788	e84	108	1550	94	123	94	4.3	3.0	6.5
24	95	61	361	e68	93	377	95	51	39	4.1	2.4	7.5
25	74	47	200	e60	76	189	73	37	34	4.1	2.0	4.7
26	61	38	134	e56	67	667	69	53	46	3.9	1.9	e3.5
27	54	122	106	e54	61	465	64	60	18	3.6	1.9	e2.6
28	49	697	95	e51	55	203	58	37	14	3.2	2.1	e2.3
29	42	279	1480	47	---	126	55	32	12	4.9	2.2	e2.1
30	40	133	7910	86	---	89	50	32	10	11	3.5	e2.0
31	39	---	5400	e64	---	73	---	445	---	5.5	5.6	---
TOTAL	5165	2319	27040	5942	7919	9379	3609	1703	1210	254.3	133.6	120.6
MEAN	167	77.3	872	192	283	303	120	54.9	40.3	8.20	4.31	4.02
MAX	1170	697	7910	803	1060	1910	555	445	265	31	9.4	13
MIN	22	25	38	47	55	32	32	24	10	3.2	1.9	1.9
CFSM	1.25	.58	6.56	1.44	2.13	2.27	.90	.41	.30	.06	.03	.03
IN.	1.44	.65	7.56	1.66	2.21	2.62	1.01	.48	.34	.07	.04	.03

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 1991, BY WATER YEAR (WY)

	MEAN	30.7	78.4	157	179	214	259	219	119	143	81.4	42.0	31.6
MAX	272	589	872	865	548	714	810	352	1417	709	454	337	
(WY)	1987	1973	1991	1950	1950	1978	1964	1981	1958	1979	1979	1972	
MIN	1.25	1.82	2.62	3.25	5.00	46.1	25.8	15.3	6.52	2.37	2.13	.99	
(WY)	1947	1954	1964	1977	1964	1957	1976	1988	1988	1952	1983	1954	

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1947 - 1991

ANNUAL TOTAL	93124	64794.5	
ANNUAL MEAN	255	178	129
HIGHEST ANNUAL MEAN			223
LOWEST ANNUAL MEAN			29.8
HIGHEST DAILY MEAN	7910	Dec 30	11300
LOWEST DAILY MEAN	10	Aug 12	.10
ANNUAL SEVEN-DAY MINIMUM	13	Aug 6	.23
INSTANTANEOUS PEAK FLOW			13900
INSTANTANEOUS PEAK STAGE			16.25
ANNUAL RUNOFF (CFSM)	1.92	1.33	.97
ANNUAL RUNOFF (INCHES)	26.05	18.12	13.18
10 PERCENT EXCEEDS	555	410	278
50 PERCENT EXCEEDS	66	48	28
90 PERCENT EXCEEDS	23	3.5	3.8

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 mi².

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.--Records good except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	5.0	20	97	e5.2	11	e16	9.1	122	1.5	.86	.93
2	2.0	4.7	14	56	e5.6	17	e14	7.5	30	29	.81	.55
3	1.9	4.5	421	36	20	13	13	6.0	9.4	6.2	.80	.66
4	304	4.5	161	25	97	10	14	6.1	5.8	3.1	.87	2.9
5	69	45	51	19	158	8.6	e25	6.2	4.3	2.2	.90	1.5
6	23	53	30	17	185	9.0	e20	6.6	3.6	1.8	.93	.77
7	14	15	22	14	196	7.4	e15	5.2	3.2	1.6	1.0	.58
8	21	9.4	15	12	66	6.2	e20	4.7	3.1	33	.95	.52
9	148	8.2	12	11	39	6.1	e30	4.6	2.9	9.1	1.2	.40
10	425	9.1	11	10	28	5.7	e19	4.4	2.7	3.7	1.2	.36
11	143	7.6	10	43	18	5.4	14	4.2	2.8	2.3	.88	.43
12	49	6.3	9.4	78	13	5.6	10	4.1	3.2	2.0	.77	.47
13	27	5.5	8.3	29	14	7.4	e70	4.1	2.5	2.2	.74	.89
14	17	5.2	6.8	35	27	9.2	e140	6.1	2.3	1.6	.74	3.5
15	11	4.9	176	77	e14	29	e80	9.2	2.4	1.4	.74	1.5
16	8.1	5.0	73	252	e11	140	e50	5.2	7.2	1.3	.71	.66
17	7.0	4.7	41	141	e10	299	e27	11	3.7	1.2	.89	.43
18	177	4.3	291	42	120	486	e21	47	2.5	1.2	6.6	e.60
19	51	4.2	210	29	346	200	e100	23	2.1	1.1	1.8	e.52
20	25	4.0	86	38	150	e53	e90	7.0	2.0	1.1	1.9	e.45
21	16	3.8	319	35	69	e37	e50	5.0	1.9	1.2	1.0	e.40
22	26	15	250	e15	41	211	e34	4.4	4.1	1.2	.76	e.50
23	22	19	80	e11	22	249	e25	4.1	31	1.1	.67	2.2
24	14	8.7	38	e9.5	17	104	e23	3.8	4.8	.95	1.2	1.5
25	11	6.4	e20	e8.4	14	e37	e20	3.7	2.6	.89	.83	.71
26	8.8	5.3	e13	e7.9	11	196	e18	4.7	1.9	.81	.61	.59
27	7.8	81	e11	e7.5	10	e130	e16	4.3	1.7	.79	.60	.53
28	6.8	318	e10	e7.0	9.7	e60	e14	3.4	1.6	.74	.61	.56
29	6.0	104	556	e6.4	---	e32	e12	3.0	1.5	.87	.61	.54
30	5.7	37	1430	7.1	---	e22	e11	3.2	1.4	2.3	.70	.50
31	5.4	---	460	e5.5	---	e18	---	74	---	1.1	.98	---
TOTAL	1654.6	808.3	4855.5	1181.3	1716.5	2424.6	1011	294.9	270.2	118.55	33.86	26.65
MEAN	53.4	26.9	157	38.1	61.3	78.2	33.7	9.51	9.01	3.82	1.09	.89
MAX	425	318	1430	252	346	486	140	74	122	33	6.6	3.5
MIN	1.9	3.8	6.8	5.5	5.2	5.4	10	3.0	1.4	.74	.60	.36
CFSM	1.83	.92	5.36	1.31	2.10	2.68	1.15	.33	.31	.13	.04	.03
IN.	2.11	1.03	6.19	1.50	2.19	3.09	1.29	.38	.34	.15	.04	.03

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 1991, BY WATER YEAR (WY)

	MEAN	8.14	23.5	42.6	29.1	49.2	61.6	41.6	25.4	27.7	14.4	9.67	8.01
MAX	53.4	135	157	92.7	124	152	112	114	148	78.7	45.9	55.0	
(WY)	1991	1986	1991	1974	1990	1978	1972	1981	1981	1990	1980	1972	
MIN	.92	1.26	1.63	.76	3.41	9.38	4.85	2.37	1.21	1.11	.95	.61	
(WY)	1983	1977	1977	1977	1978	1983	1976	1988	1988	1977	1988	1983	

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1972 - 1991

ANNUAL TOTAL	20287.9	14395.96	28.3	
ANNUAL MEAN	55.6	39.4	39.4	1991
HIGHEST ANNUAL MEAN			9.21	1977
LOWEST ANNUAL MEAN				
HIGHEST DAILY MEAN	1430	Dec 30	1580	Jun 6 1981
LOWEST DAILY MEAN	1.4	May 2	.19	Oct 4 1983
ANNUAL SEVEN-DAY MINIMUM	1.9	Aug 6	.32	Sep 28 1983
INSTANTANEOUS PEAK FLOW			1640	Dec 30
INSTANTANEOUS PEAK STAGE			15.45	Dec 30
ANNUAL RUNOFF (CFSM)	1.90		1.35	
ANNUAL RUNOFF (INCHES)	25.85		18.34	
10 PERCENT EXCEEDS	158		102	
50 PERCENT EXCEEDS	11		8.1	
90 PERCENT EXCEEDS	2.7		.80	

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 mi².

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

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

GAGE.--Data-Collection Platform. Datum of gage was 660.00 ft above National Geodetic Vertical Datum of 1929. Oct. 1, 1962, to Sept. 30, 1974, water-stage recorder at site described in "LOCATION" paragraph. Prior to Oct. 7, 1954, nonrecording gage and crest-stage gage on highway bridge 2,500 ft upstream, and Oct. 7, 1954, to Sept. 30, 1962, water-stage recorder on right bank at site 2,500 ft upstream at same datum. Data-Collection Platform installed on Aug. 21, 1986.

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

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

AVERAGE DISCHARGE.--39 years, 725 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 28,000 ft³/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, 6,090 ft³/s Mar. 4; minimum daily, 37 ft³/s Aug. 21 to Sept. 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	161	721	2330	55	355	441	1740	195	653	110	47	37
2	161	691	2590	260	389	490	283	354	656	175	47	37
3	204	669	1870	900	389	457	152	395	881	380	47	37
4	336	667	957	1960	534	403	88	394	1010	467	47	37
5	2060	744	1800	2940	1710	382	73	305	909	365	47	37
6	1900	799	2360	3240	2850	382	74	252	577	217	73	37
7	1140	799	2330	3220	3600	382	75	252	352	171	89	37
8	687	797	2300	3200	3950	382	76	252	192	305	131	37
9	521	943	2260	3190	3600	339	77	266	192	564	193	37
10	241	1010	2210	3170	1590	290	79	275	152	487	193	37
11	85	927	1270	3200	868	277	79	275	132	288	148	82
12	97	820	517	2970	966	277	80	275	146	202	127	111
13	98	810	471	3610	782	322	81	274	179	110	154	209
14	98	805	416	3900	649	355	81	274	193	110	154	360
15	691	801	547	3870	649	508	262	274	193	110	96	359
16	1470	796	1720	3490	431	626	932	274	193	110	68	399
17	1990	792	1700	1880	399	634	1530	275	193	111	68	464
18	1980	741	1330	1690	798	879	1120	384	211	91	68	276
19	1970	645	1610	2650	1620	1110	675	488	223	77	115	233
20	1970	592	1670	3580	2170	1140	1130	488	223	77	70	244
21	1960	298	1430	4170	2610	1380	1730	353	223	77	37	463
22	2360	165	1100	4880	2850	1700	1860	261	178	64	37	462
23	2540	492	1130	5540	1780	2250	1270	261	128	60	37	462
24	2520	743	1520	5970	682	2530	736	317	146	68	37	328
25	2910	862	1820	6020	743	2770	373	455	213	68	37	328
26	3150	795	1940	5900	586	3350	99	639	223	68	37	460
27	3110	745	2020	6030	412	3150	109	706	234	68	37	459
28	1900	885	2000	6090	372	3080	109	594	239	68	37	408
29	1050	1020	1100	5910	---	3540	110	323	239	68	37	386
30	899	1550	47	4800	---	3500	130	261	151	57	37	385
31	749	---	52	1450	---	3540	---	524	---	47	37	---
TOTAL	41008	23124	46417	109735	38334	40866	15213	10915	9434	5240	2389	7248
MEAN	1323	771	1497	3540	1369	1318	507	352	314	169	77.1	242
MAX	3150	1550	2590	6090	3950	3540	1860	706	1010	564	193	464
MIN	85	165	47	55	355	277	73	195	128	47	37	37

CAL YR 1990 TOTAL 404483 MEAN 1108 MAX 5350 MIN 47
WTR YR 1991 TOTAL 349923 MEAN 959 MAX 6090 MIN 37

LOCATION.--Lat 40°44'35", long 86°05'45", in SE 1/4 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.

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.--Records good. Flow regulated by Huntington Lake, Salamonie Lake and Mississinewa Lake.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 26, 1913, reached a stage of 28.1 ft, discharge, 115,000 ft³/s, from rating curve extended above 63,000 ft³/s.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	937	1520	6350	8220	1380	1580	3860	736	10300	356	181	163
2	935	1490	6530	7690	1390	1860	1490	906	6990	480	167	175
3	914	2690	7330	7640	1470	2030	1110	951	5620	806	151	199
4	1120	3390	7640	8640	1920	1890	1050	898	5520	1080	150	196
5	2980	3920	8500	9570	3880	1750	1120	869	5640	1140	155	216
6	5620	5110	9500	10300	7750	1710	1440	849	5780	860	166	225
7	3950	3260	9110	11400	9860	1340	1230	900	4520	822	194	195
8	2420	2760	7700	11500	9960	1340	1160	886	2990	1640	232	190
9	3760	2810	5880	11400	8500	1360	1600	862	1430	1990	358	184
10	8540	3000	4090	11000	6150	1240	1780	844	972	2160	338	172
11	6390	2850	3040	10400	3990	1140	1510	831	842	991	324	166
12	4420	2150	1860	10700	3080	1160	1240	819	815	649	276	216
13	3510	2090	1660	11000	2490	1140	1090	796	734	440	284	238
14	3430	2220	1460	11500	2350	1220	1160	746	669	395	267	477
15	4120	2540	1830	11800	2120	1340	2800	763	609	349	248	512
16	5670	2530	3940	12900	1650	1720	5790	695	596	348	186	511
17	5140	2290	5730	11100	1310	2620	5930	653	588	325	187	835
18	7020	2210	4850	8790	1910	5890	4340	754	583	291	236	769
19	6290	1830	7310	9750	4910	6710	2860	952	515	247	302	701
20	5880	1740	7540	10500	8740	6280	5120	968	483	236	313	699
21	6240	1740	8730	10800	9310	6010	5390	916	508	220	223	880
22	6680	1900	9260	11200	9130	5160	6470	798	493	209	206	926
23	7020	1860	7520	12300	7840	5150	6070	882	424	213	179	776
24	6140	1770	7010	12200	4000	6650	4410	1170	393	216	177	775
25	5840	1960	e6200	12100	2960	7540	3330	1490	430	225	168	773
26	4690	2000	e5600	11500	2280	7810	1790	3070	439	217	166	908
27	4400	2050	e5200	9820	1960	8330	1170	3160	441	210	162	841
28	3420	4380	e5000	8030	1580	7190	948	2340	494	185	163	946
29	2030	5650	10200	6860	---	8200	794	1530	495	188	169	912
30	1820	5410	17400	6040	---	6950	713	1620	448	182	187	902
31	1590	---	11400	3250	---	5480	---	8930	---	177	184	---
TOTAL	132916	81120	205370	309900	123870	119790	78765	42584	60761	17847	6699	15678
MEAN	4288	2704	6625	9997	4424	3864	2625	1374	2025	576	216	523
MAX	8540	5650	17400	12900	9960	8330	6470	8930	10300	2160	358	946
MIN	914	1490	1460	3250	1310	1140	713	651	393	177	150	

e Estimated

MEAN	1054	1556	2716	3366	3771	4794	4271	2373	2254	1306	713	760
MAX	4319	7653	8314	18500	10740	10890	14840	5191	14260	5767	3342	3602
(WY)	1973	1973	1958	1950	1959	1982	1957	1947	1958	1957	1990	1989
MIN	110	149	142	141	247	830	412	345	194	175	163	119
(WY)	1954	1954	1964	1945	1964	1983	1971	1976	1988	1944	1966	1963

ANNUAL TOTAL	1505446		1195300			
ANNUAL MEAN	4125		3275		2403	
HIGHEST ANNUAL MEAN					4425	1950
LOWEST ANNUAL MEAN					691	1954
HIGHEST DAILY MEAN	17400	Dec 30	17400	Dec 30	50900	Jun 12 1958
LOWEST DAILY MEAN	376	Jul 8	150	Aug 4	72	Oct 5 1946
ANNUAL SEVEN-DAY MINIMUM	469	Jul 4	164	Jul 31	85	Oct 29 1944
INSTANTANEOUS PEAK FLOW			18000	Dec 30	68000	May 18 1943
INSTANTANEOUS PEAK STAGE			13.27	Dec 30	24.46	May 18 1943
ANNUAL RUNOFF (CFSM)	1.54		1.22		.89	
ANNUAL RUNOFF (INCHES)	20.85		16.55		12.16	
10 PERCENT EXCEEDS	8310		8730		6760	
50 PERCENT EXCEEDS	3590		1740		952	
90 PERCENT EXCEEDS	850		216		207	

03327520 PIPE CREEK NEAR BUNKER HILL, IN

LOCATION.--Lat 40°40'06", long 86°05'44", in NE½SE¼ 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 mi².
 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.--Records good except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	49	215	2230	e56	82	143	93	464	17	7.5	4.9
2	12	48	156	788	63	92	121	86	237	99	7.0	4.4
3	12	45	526	432	76	89	107	79	141	126	6.7	4.3
4	59	44	726	318	136	80	101	76	103	53	6.9	4.8
5	55	160	437	250	226	75	107	78	80	62	6.3	5.9
6	35	276	291	197	314	75	104	84	67	74	7.7	5.9
7	33	179	210	156	442	72	99	73	59	41	11	4.7
8	127	120	167	137	334	62	98	65	54	73	13	3.9
9	404	98	137	123	268	58	131	62	50	130	22	3.9
10	1350	86	121	105	224	56	136	60	46	65	13	4.0
11	1220	73	108	132	177	53	103	59	44	41	13	4.2
12	655	63	102	286	140	54	88	58	42	31	11	4.1
13	426	55	93	210	132	63	90	57	39	26	8.6	5.3
14	309	51	78	183	132	63	172	56	36	21	5.9	7.7
15	226	49	168	315	100	64	339	63	36	18	5.3	5.6
16	164	48	256	639	e74	91	338	75	39	16	5.0	5.4
17	138	46	200	708	e76	310	227	62	34	14	4.9	5.2
18	525	43	379	456	93	1140	170	72	32	13	4.9	4.9
19	378	42	515	324	246	1390	182	103	29	12	6.7	5.1
20	243	41	362	300	316	953	462	68	26	11	13	5.3
21	179	39	610	302	236	586	348	56	25	11	9.6	5.4
22	139	42	1060	235	189	486	243	70	24	10	8.8	5.5
23	118	42	631	192	147	805	188	229	23	9.6	8.2	5.6
24	101	40	381	152	130	589	182	172	22	9.1	7.9	5.6
25	88	39	e250	e120	110	383	151	245	21	8.8	9.8	6.3
26	78	36	e180	e100	98	395	136	291	21	8.4	6.4	5.9
27	72	80	e135	e90	92	612	127	190	20	8.1	6.1	5.3
28	65	543	e118	e84	86	436	116	126	19	7.9	4.6	5.2
29	58	523	1030	e77	---	289	109	100	18	8.2	4.1	5.2
30	55	312	e3700	e70	---	210	100	213	18	8.1	4.5	5.2
31	53	---	e4100	e66	---	163	---	205	---	7.8	6.2	---
TOTAL	7389	3312	17442	9777	4713	9876	5018	3326	1869	1040.0	255.6	154.7
MEAN	238	110	563	315	168	319	167	107	62.3	33.5	8.25	5.16
MAX	1350	543	4100	2230	442	1390	462	291	464	130	22	7.7
MIN	12	36	78	66	56	53	88	56	18	7.8	4.1	3.9
CFSM	1.50	.69	3.54	1.98	1.06	2.00	1.05	.67	.39	.21	.05	.03
IN.	1.73	.77	4.08	2.29	1.10	2.31	1.17	.78	.44	.24	.06	.04

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1991, BY WATER YEAR (WY)

	MEAN	53.1	116	196	164	245	313	233	163	132	75.3	52.3	36.2
MAX	238	660	563	731	648	902	637	411	429	334	296	226	226
(WY)	1991	1986	1991	1974	1990	1982	1972	1989	1980	1986	1973	1972	1972
MIN	6.66	8.79	6.57	3.70	25.1	49.7	45.6	28.5	12.4	8.17	7.63	5.16	5.16
(WY)	1989	1981	1977	1977	1978	1981	1971	1976	1988	1988	1971	1991	1991

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1968 - 1991

ANNUAL TOTAL	85070		64172.3		148	
ANNUAL MEAN	233		176		236	1974
HIGHEST ANNUAL MEAN					67.6	1977
LOWEST ANNUAL MEAN					4210	Feb 24 1985
HIGHEST DAILY MEAN	e4100	Dec 31	e4100	Dec 31	3.3	Feb 1 1977
LOWEST DAILY MEAN	11	Sep 29	3.9	Sep 8	3.5	Jan 27 1977
ANNUAL SEVEN-DAY MINIMUM	12	Sep 27	4.3	Sep 7	5140	Dec 31 1990
INSTANTANEOUS PEAK FLOW			5140	Dec 31	17.91	Dec 31 1990
INSTANTANEOUS PEAK STAGE			17.91	Dec 31	.93	
ANNUAL RUNOFF (CFSM)	1.47		1.11		12.68	
ANNUAL RUNOFF (INCHES)	19.90		15.01		362	
10 PERCENT EXCEEDS	524		399		54	
50 PERCENT EXCEEDS	116		78		11	
90 PERCENT EXCEEDS	25		6.0			

e Estimated

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 mi², 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.--Records good except for estimated daily discharges, which are poor. Records include flow of Pony Creek. Maximum instantaneous and mean daily discharges for period of record are estimated, maximum gage height is unknown.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	168	295	491	e5750	307	332	352	488	3510	173	86	103
2	161	282	404	4170	287	632	327	458	2980	195	86	89
3	158	273	1230	3090	357	801	308	395	2450	190	88	89
4	811	266	2090	2030	587	561	296	357	1450	151	92	94
5	835	892	1260	e1320	782	442	412	346	876	137	92	90
6	454	2350	816	e1020	774	402	460	450	661	129	92	84
7	333	1520	638	e880	770	369	379	402	513	122	91	82
8	377	907	528	e740	609	327	383	339	422	276	104	81
9	2140	677	461	e660	558	310	873	315	360	169	136	78
10	4340	555	429	e600	516	301	629	299	319	142	114	78
11	4880	474	394	e560	444	288	452	281	285	132	101	75
12	3800	415	372	e840	372	278	386	269	269	124	95	79
13	2770	371	357	e700	353	272	334	274	257	123	92	124
14	1550	346	330	e600	352	283	374	308	236	120	90	115
15	1120	331	557	e800	e320	322	764	274	219	116	89	90
16	919	321	867	1860	e280	431	934	252	255	111	88	79
17	769	307	624	2000	e300	501	1070	265	231	107	87	75
18	1430	307	733	1160	332	1360	1200	265	208	102	90	74
19	1300	280	939	825	1450	1080	959	247	193	99	108	74
20	887	269	679	762	1480	685	2190	229	183	98	116	74
21	704	262	794	e700	940	527	1670	218	175	97	104	74
22	599	267	1970	e600	724	449	993	211	164	129	96	73
23	530	268	1350	e516	559	428	735	241	158	148	91	73
24	477	262	867	e460	463	461	1420	316	150	107	87	72
25	429	251	e685	e425	406	440	1260	327	146	99	85	71
26	391	239	e580	e390	359	523	810	488	145	95	83	71
27	367	250	e520	e360	331	752	627	406	144	91	83	71
28	346	998	e458	e330	317	785	884	301	140	87	82	71
29	331	1100	2470	e315	---	591	722	255	134	88	80	69
30	320	649	e7760	e307	---	437	575	677	130	89	100	68
31	307	---	e7770	305	---	373	---	2530	---	86	152	---
TOTAL	34003	15984	39423	35075	15329	15743	22778	12483	17363	3932	2980	2440
MEAN	1097	533	1272	1131	547	508	759	403	579	127	96.1	81.3
MAX	4880	2350	7770	5750	1480	1360	2190	2530	3510	276	152	124
MIN	158	239	330	305	280	272	296	211	130	86	80	68
CFSM	2.63	1.28	3.05	2.71	1.31	1.22	1.82	.97	1.39	.30	.23	.20
IN.	3.03	1.43	3.52	3.13	1.37	1.40	2.03	1.11	1.55	.35	.27	.22

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 1991, BY WATER YEAR (WY)

	MEAN	168	255	401	453	587	721	664	419	326	195	156	121
MAX	1165	1037	1717	2258	1772	2425	1768	2021	1376	767	1031	449	
(WY)	1955	1973	1967	1950	1959	1982	1957	1943	1981	1951	1990	1972	
MIN	46.2	53.4	49.4	43.2	62.0	200	141	86.1	68.1	44.2	30.7	27.6	
(WY)	1947	1940	1964	1977	1964	1941	1946	1931	1934	1941	1941	1941	

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1930 - 1991

ANNUAL TOTAL	277624		217533									
ANNUAL MEAN	761		596									
HIGHEST ANNUAL MEAN										372		
LOWEST ANNUAL MEAN										783		1950
HIGHEST DAILY MEAN	e7770	Dec 31	e7770	Dec 31						103		1931
LOWEST DAILY MEAN	109	Jul 9	68	Sep 30						16		Oct 19 1956
ANNUAL SEVEN-DAY MINIMUM	121	Jul 4	70	Sep 24						23		Sep 13 1941
INSTANTANEOUS PEAK FLOW			e8740	Dec 30						e8740		Dec 30 1990
INSTANTANEOUS PEAK STAGE			unknown	Dec 30						unknown		Dec 30 1990
ANNUAL RUNOFF (CFSM)	1.82		1.43							.89		
ANNUAL RUNOFF (INCHES)	24.77		19.41							12.12		
10 PERCENT EXCEEDS	1590		1240							882		
50 PERCENT EXCEEDS	434		339							169		
90 PERCENT EXCEEDS	186		89							63		

e Estimated

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 mi².
 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.--Records good, except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.49	5.1	11	70	e6.2	7.3	12	8.1	5.3	1.6	1.2	1.1
2	.47	5.0	8.2	52	e7.2	18	10	7.7	4.4	1.6	1.1	.86
3	1.7	4.8	76	42	14	15	9.5	6.9	3.8	1.7	1.3	1.8
4	55	4.8	45	34	19	10	9.4	6.5	3.3	1.4	1.3	2.7
5	10	70	22	e25	23	9.0	15	6.5	3.2	1.4	1.2	1.1
6	3.9	56	16	e20	24	8.7	13	8.2	3.0	1.4	1.3	.91
7	4.1	27	13	e18	24	7.4	11	8.4	2.9	1.3	1.2	.86
8	16	17	11	e16	18	6.6	10	8.0	2.8	20	2.9	.80
9	156	13	9.5	e15	16	6.4	11	7.1	2.7	7.0	2.1	.80
10	228	11	9.5	14	13	5.9	9.8	6.7	2.6	3.1	1.2	.84
11	93	9.0	8.9	20	11	5.7	8.5	6.4	3.1	2.2	1.1	.85
12	52	8.1	8.6	25	8.7	5.6	7.9	6.1	3.0	2.0	1.0	.99
13	38	7.4	7.9	19	8.3	14	7.9	6.1	2.6	1.9	1.0	.97
14	28	6.9	7.0	20	8.1	7.5	21	6.0	2.4	1.7	.97	.86
15	22	6.5	15	28	e6.2	9.8	59	6.0	3.1	1.6	.95	.82
16	17	6.3	13	80	e6.2	16	29	5.3	4.1	1.5	.91	e.82
17	14	5.9	11	47	e6.4	36	19	5.0	2.9	1.5	.93	e.80
18	29	5.8	16	25	12	91	15	12	2.5	1.4	.96	e.78
19	20	5.5	16	21	46	43	14	9.4	2.3	1.4	1.8	e.78
20	15	5.1	12	22	24	26	15	6.9	2.2	1.4	1.2	e.77
21	11	5.0	48	20	18	21	12	5.9	2.1	1.4	1.0	e.77
22	9.4	5.2	53	16	15	17	11	5.3	2.1	1.4	.92	e.90
23	8.5	5.1	24	e12	11	18	10	5.5	1.9	1.3	.90	e.84
24	7.9	4.7	18	e10	9.8	20	16	5.7	1.9	1.3	.85	e.81
25	7.2	4.8	14	e9.0	8.6	17	12	5.0	1.8	1.4	.85	e.79
26	6.8	4.7	11	e8.4	7.6	31	10	4.9	1.7	1.3	.83	e.78
27	6.6	5.2	10	e7.8	7.1	27	9.4	4.4	1.7	1.3	.84	e.78
28	6.0	65	9.6	e7.4	6.8	36	8.7	3.8	1.6	1.2	.85	e.77
29	5.8	27	247	e7.0	---	19	8.6	3.4	1.7	1.4	.84	e.76
30	5.7	15	233	e6.7	---	14	8.0	3.7	1.6	1.3	5.1	e.76
31	5.4	---	109	e6.5	---	12	---	6.3	---	1.2	2.3	---
TOTAL	883.96	421.9	1113.2	723.8	385.2	580.9	412.7	197.2	80.3	71.6	40.90	28.17
MEAN	28.5	14.1	35.9	23.3	13.8	18.7	13.8	6.36	2.68	2.31	1.32	.94
MAX	228	70	247	80	46	91	59	12	5.3	20	5.1	2.7
MIN	.47	4.7	7.0	6.5	6.2	5.6	7.9	3.4	1.6	1.2	.83	.76
CFSM	3.21	1.59	4.05	2.63	1.55	2.11	1.55	.72	.30	.26	.15	.11
IN.	3.71	1.77	4.67	3.04	1.62	2.44	1.73	.83	.34	.30	.17	.12

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1991, BY WATER YEAR (WY)

	MEAN	4.97	8.51	13.8	9.89	17.9	21.9	15.8	10.9	8.66	4.60	4.75	4.03
MAX	28.5	28.2	35.9	25.8	47.6	53.7	34.5	24.6	31.6	20.3	47.0	21.6	
(WY)	1991	1986	1991	1974	1985	1982	1983	1983	1986	1990	1990	1989	
MIN	.79	.95	.61	.30	2.62	3.50	4.60	3.30	1.17	.80	.66	.45	
(WY)	1975	1977	1977	1977	1978	1981	1971	1977	1988	1988	1988	1988	

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1971 - 1991

ANNUAL TOTAL	8041.17	4939.83	10.4
ANNUAL MEAN	22.0	13.5	16.7
HIGHEST ANNUAL MEAN			5.52
LOWEST ANNUAL MEAN			1990
HIGHEST DAILY MEAN	436	247	436
LOWEST DAILY MEAN	.46	.47	.26
ANNUAL SEVEN-DAY MINIMUM	.48	.78	.27
INSTANTANEOUS PEAK FLOW		379	518
INSTANTANEOUS PEAK STAGE		6.32	7.37
ANNUAL RUNOFF (CFSM)	2.48	1.53	1.18
ANNUAL RUNOFF (INCHES)	33.72	20.72	15.99
10 PERCENT EXCEEDS	52	26	24
50 PERCENT EXCEEDS	9.5	6.9	4.3
90 PERCENT EXCEEDS	2.3	.94	.99

03328500 EEL RIVER NEAR LOGANSPOET, IN

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

DRAINAGE AREA.--789 mi².

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.--Records good except for estimated daily discharges, which are poor.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 18, 1943, reached a stage of 13.2 ft, from floodmark, discharge, 17,000 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	330	528	1020	11000	e600	684	780	842	4640	262	167	213
2	323	509	831	7130	603	786	749	780	4210	312	161	181
3	325	493	1610	5130	644	1230	696	730	3160	346	159	192
4	503	480	3800	3580	848	1130	664	675	2350	344	161	272
5	1180	984	2690	2450	1180	883	733	645	1420	281	166	200
6	955	3440	1670	1950	1420	782	896	710	1030	254	173	177
7	674	3030	1220	1650	1530	741	840	756	843	240	168	161
8	600	1870	1000	1420	1330	689	767	664	710	469	187	154
9	1920	1280	870	1260	1130	645	1020	598	623	918	221	149
10	6500	1020	798	1130	1040	623	1250	564	562	456	241	146
11	7880	868	752	1080	918	605	936	537	520	341	208	146
12	6960	765	718	1450	796	593	777	518	558	298	187	145
13	4820	693	685	1520	736	595	737	504	510	270	175	152
14	3250	644	647	1200	723	594	905	510	456	255	170	163
15	2070	609	677	1410	673	623	1630	545	436	243	165	185
16	1620	587	1170	2750	563	739	2040	504	496	234	161	166
17	1340	565	1190	3850	589	1160	1500	477	510	223	159	152
18	1940	542	1070	2580	702	2890	1800	699	434	209	167	144
19	2590	534	1490	1700	1540	2910	1520	612	391	199	195	138
20	1730	508	1370	1440	2710	1880	2500	511	362	193	199	137
21	1270	493	1310	e1300	1900	1360	2710	464	345	187	206	139
22	1050	495	3230	e1140	1420	1110	1880	727	333	183	192	142
23	917	496	2970	e1010	1150	1060	1340	822	316	218	175	145
24	829	487	1880	e910	949	1100	1460	701	304	243	166	143
25	754	474	e1300	e850	836	1080	2000	691	296	202	160	146
26	695	459	e1050	e780	762	1120	1480	713	286	184	156	143
27	652	469	e910	e720	719	1690	1120	763	280	177	153	140
28	619	1280	e820	e670	688	1590	985	621	275	173	156	140
29	586	2430	3700	e640	---	1380	1200	517	264	170	152	137
30	562	1490	11500	e620	---	1020	980	498	257	175	150	137
31	547	---	14300	e610	---	847	---	1750	---	171	209	---
TOTAL	55991	28522	68248	64930	28699	34139	37895	20648	27177	8430	5465	4785
MEAN	1806	951	2202	2095	1025	1101	1263	666	906	272	176	159
MAX	7880	3440	14300	11000	2710	2910	2710	1750	4640	918	241	272
MIN	323	459	647	610	563	593	664	464	257	170	150	137
CFSM	2.29	1.20	2.79	2.65	1.30	1.40	1.60	.84	1.15	.34	.22	.20
IN.	2.64	1.34	3.22	3.06	1.35	1.61	1.79	.97	1.28	.40	.26	.23

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 1991, BY WATER YEAR (WY)

MEAN	354	487	837	906	1165	1386	1299	858	757	421	358	289
MAX	1806	1821	2898	4507	3090	4612	3285	1827	2208	1311	2115	1051
(WY)	1991	1973	1967	1950	1959	1982	1950	1983	1975	1969	1990	1972
MIN	95.1	110	98.2	101	184	353	366	245	176	140	128	101
(WY)	1964	1964	1964	1977	1964	1966	1958	1988	1988	1988	1966	1963

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1944 - 1991

ANNUAL TOTAL	490125	384929	757
ANNUAL MEAN	1343	1055	1573
HIGHEST ANNUAL MEAN			324
LOWEST ANNUAL MEAN			1950
HIGHEST DAILY MEAN	14300	Dec 31	16600
LOWEST DAILY MEAN	228	Jul 9	70
ANNUAL SEVEN-DAY MINIMUM	261	Jul 4	76
INSTANTANEOUS PEAK FLOW			17700
INSTANTANEOUS PEAK STAGE			12.68
ANNUAL RUNOFF (CFSM)	1.70	1.34	.96
ANNUAL RUNOFF (INCHES)	23.11	18.15	13.04
10 PERCENT EXCEEDS	2770	1970	1750
50 PERCENT EXCEEDS	791	688	390
90 PERCENT EXCEEDS	392	166	147

LOCATION.--Lat 40°44'47", long 86°22'39", in SW¼ 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 El River, and at mile 353.7.
DRAINAGE AREA.--3,779 mi².
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.--Records good. Flow partially regulated by Huntington Lake, Salamonie Lake, and Mississinewa Lake.
EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 25.3 ft March 26, 1913, from floodmarks, discharge, 140,000 ft³/s.

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1380	2290	7580	22200	2320	2430	5690	1880	15400	760	406	457
2	1370	2250	7650	16400	2290	2790	2740	1880	11800	998	397	422
3	1380	2900	9200	13800	2340	3430	2230	1930	8980	1390	396	556
4	1620	3950	12200	12900	2840	3290	2070	1810	8090	1650	395	701
5	3260	5100	11500	12600	4590	2890	2150	1800	7180	1560	396	506
6	6770	8910	11600	12700	9030	2730	2570	1850	6980	1390	442	482
7	5030	6930	11000	13500	11600	2410	2430	1910	5610	1200	459	445
8	3550	4970	9410	13400	11700	2210	2260	1800	4110	1750	563	392
9	5740	4220	7560	13100	10100	2190	2690	1690	2590	3250	737	361
10	16700	4320	5480	12700	8050	2050	3410	1640	1730	3010	744	353
11	16500	3980	4590	11800	5410	1960	2800	1580	1570	1840	699	347
12	12600	3260	2990	12700	4310	1920	2380	1550	1540	1250	615	368
13	9240	2970	2760	13000	3640	1980	2150	1520	1440	955	577	459
14	7360	2990	2450	13100	3370	2010	2590	1470	1290	853	562	599
15	6360	3260	2670	13600	3140	2080	4480	1510	1230	761	544	776
16	7320	3290	4920	16400	e2500	2590	7960	1450	1300	724	476	748
17	7010	3090	7480	16600	e2000	3870	8000	1340	1250	675	440	895
18	9740	2980	6200	12200	e2400	9990	6830	1720	1180	641	490	1090
19	9650	2630	9340	11700	5490	12100	4860	1820	1110	572	702	885
20	8100	2460	9460	12300	11400	9880	7440	1700	1020	532	728	900
21	7850	2420	10600	12600	11400	8500	8640	1630	962	513	593	920
22	7860	2570	14100	12600	10800	7170	8610	1830	936	482	524	1110
23	8370	2590	11700	13500	9710	7280	8060	2610	877	491	465	1090
24	7350	2450	9260	13300	5590	8300	6300	2320	822	535	424	974
25	6860	2570	e8400	13100	4220	9220	5930	2270	808	516	397	978
26	5880	2650	e7500	12500	3430	9290	3800	4020	840	487	384	992
27	5330	2670	e6900	10900	2960	11100	2760	4420	824	463	371	1040
28	4760	5620	e6500	9160	2560	9330	2320	3420	848	450	372	1120
29	2900	9030	15300	7910	---	9980	2360	2520	855	435	377	1110
30	2720	7260	34800	7240	---	8560	2040	2150	846	440	384	1100
31	2410	---	32000	4850	---	6730	---	8860	---	422	477	---
TOTAL	202970	116580	303100	394360	159190	170260	128550	69900	94018	30995	15536	22176
MEAN	6547	3886	9777	12720	5685	5492	4285	2255	3134	1000	501	739
MAX	16700	9030	34800	22200	11700	12100	8640	8860	15400	3250	744	1120
MIN	1370											

MEAN	1380	2029	3674	4606	5245	6538	5966	3765	3003	1752	1194	1164
MAX	6547	10940	12340	25590	15880	18180	17520	21310	16440	6521	5576	10710
(WY)	1991	1973	1968	1950	1959	1982	1957	1943	1958	1957	1990	1926
MIN	197	296	252	290	417	638	929	600	388	269	203	176
(WY)	1964	1964	1964	1945	1964	1941	1971	1941	1988	1936	1941	1941

ANNUAL TOTAL	2117536		1707635			
ANNUAL MEAN	5801		4678		3349	
HIGHEST ANNUAL MEAN					6614	1950
LOWEST ANNUAL MEAN					796	1941
HIGHEST DAILY MEAN	34800	Dec 30	34800	Dec 30	84700	May 19 1943
LOWEST DAILY MEAN	661	Jul 9	347	Sep 11	135	Sep 26 1941
ANNUAL SEVEN-DAY MINIMUM	823	Jul 4	387	Aug 24	142	Sep 24 1941
INSTANTANEOUS PEAK FLOW			36400	Dec 30	89800	May 18 1943
INSTANTANEOUS PEAK STAGE			13.26	Dec 30	21.32	May 18 1943
ANNUAL RUNOFF (CFSM)	1.54		1.24		.89	
ANNUAL RUNOFF (INCHES)	20.84		16.81		12.04	
10 PERCENT EXCEEDS	11000		11700		9000	
50 PERCENT EXCEEDS	4590		2610		1390	
90 PERCENT EXCEEDS	1490		491		402	

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.--Records good, except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	3.2	7.0	23	e3.9	4.4	9.2	6.7	5.2	1.6	.37	.28
2	1.7	3.1	5.9	18	e4.1	9.5	8.4	6.3	4.5	1.7	.36	.29
3	2.2	2.8	22	e14	e4.8	7.4	8.0	6.1	4.2	1.6	.41	.48
4	3.0	2.8	14	e11	e7.0	6.3	8.1	6.0	3.9	1.4	.40	.37
5	2.3	32	9.7	e10	10	5.8	7.6	9.8	3.6	1.4	.39	.28
6	2.2	30	8.1	8.7	10	5.6	7.2	11	3.5	1.3	.51	.27
7	3.6	18	6.8	8.0	9.6	4.6	6.9	8.1	3.4	1.3	.40	.27
8	4.4	12	6.2	7.7	8.6	4.4	7.3	7.2	3.3	1.5	.57	.27
9	41	10	5.6	7.0	8.0	4.3	7.4	6.8	3.1	1.2	.49	.28
10	102	8.2	5.3	6.6	7.4	4.0	6.4	6.3	3.1	1.2	.38	.29
11	44	6.9	5.1	10	6.5	4.0	5.9	6.9	3.1	1.1	.38	.30
12	28	6.1	4.8	11	6.0	4.3	5.8	7.4	2.9	1.1	.37	.30
13	19	5.6	4.1	8.5	6.3	5.3	6.4	6.6	2.7	1.0	.36	.68
14	13	5.3	3.9	11	5.8	5.3	14	17	2.7	.95	.35	.94
15	10	5.0	6.8	17	e4.2	6.6	37	12	2.7	.87	.34	.43
16	8.3	4.8	5.7	54	e4.1	14	21	10	2.6	.83	.33	.31
17	7.7	4.3	6.0	27	e4.3	40	15	10	2.5	.76	.33	.27
18	19	4.2	7.6	15	5.8	96	12	45	2.4	.72	.33	.29
19	11	4.0	7.3	13	8.5	53	11	18	2.2	.63	.46	.27
20	8.7	3.6	6.7	13	7.2	29	9.9	11	2.1	.57	.39	.27
21	7.0	3.7	17	11	6.6	21	9.3	8.6	2.1	.52	.33	.27
22	5.7	3.7	19	e9.0	5.9	19	8.7	7.8	2.1	.51	.33	e.31
23	5.3	3.5	12	e7.4	5.4	22	8.6	7.5	2.0	.45	.31	e.29
24	4.8	3.4	8.5	e6.6	5.2	18	8.4	7.1	2.0	.47	.30	e.28
25	4.4	3.1	e6.6	e5.9	4.7	15	7.8	6.8	1.9	.47	.30	e.27
26	4.2	3.0	e5.7	e5.3	4.5	23	7.6	6.3	1.8	.45	.29	e.27
27	4.2	3.4	e5.4	e4.9	4.4	21	7.5	5.6	1.8	.44	.30	e.26
28	3.9	23	e5.2	e4.6	4.4	20	7.0	5.1	1.7	.41	.29	e.26
29	3.7	12	193	e4.3	---	14	7.5	5.1	1.7	.41	.30	e.26
30	3.6	8.4	143	e4.1	---	11	6.8	4.9	1.7	.41	.34	e.26
31	3.4	---	39	e4.0	---	10	---	4.7	---	.39	.31	---
TOTAL	382.9	239.1	603.0	360.6	173.2	507.8	293.7	287.7	82.5	27.66	11.32	9.87
MEAN	12.4	7.97	19.5	11.6	6.19	16.4	9.79	9.28	2.75	.89	.37	.33
MAX	102	32	193	54	10	96	37	45	5.2	1.7	.57	.94
MIN	1.6	2.8	3.9	4.0	3.9	4.0	5.8	4.7	1.7	.39	.29	.26
CFSM	1.81	1.17	2.85	1.70	.91	2.40	1.43	1.36	.40	.13	.05	.05
IN.	2.09	1.30	3.28	1.96	.94	2.77	1.60	1.57	.45	.15	.06	.05

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1991, BY WATER YEAR (WY)

	3.00	4.49	7.78	6.58	9.53	11.7	10.8	9.63	7.76	3.90	2.94	3.29
MEAN	3.00	4.49	7.78	6.58	9.53	11.7	10.8	9.63	7.76	3.90	2.94	3.29
MAX	12.4	17.2	19.5	20.6	27.4	29.2	23.6	28.4	22.1	19.5	22.5	21.5
(WY)	1991	1973	1991	1969	1990	1982	1974	1981	1975	1969	1990	1977
MIN	.27	.39	.11	.069	1.73	1.57	2.38	2.04	.93	.45	.19	.073
(WY)	1989	1977	1977	1977	1978	1981	1971	1976	1977	1977	1988	1988

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1969 - 1991

ANNUAL TOTAL	4257.0	2979.35	
ANNUAL MEAN	11.7	8.16	6.76
HIGHEST ANNUAL MEAN			11.6
LOWEST ANNUAL MEAN			3.02
HIGHEST DAILY MEAN	201	Aug 21	234
LOWEST DAILY MEAN	1.2	Sep 27	.06
ANNUAL SEVEN-DAY MINIMUM	1.3	Sep 23	.06
INSTANTANEOUS PEAK FLOW			491
INSTANTANEOUS PEAK STAGE			5.30
ANNUAL RUNOFF (CFSM)	1.71		.99
ANNUAL RUNOFF (INCHES)	23.19		13.46
10 PERCENT EXCEEDS	22		16
50 PERCENT EXCEEDS	5.3		2.8
90 PERCENT EXCEEDS	1.9		.51

e Estimated

03329700 DEER CREEK NEAR DELPHI, IN

LOCATION.--Lat 40°35'25", long 86°37'15", in NE1/4 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 mi².

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.--Records good.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1943 reached a stage of 19.8 ft, from floodmarks, discharge, 18,000 ft³/s from rating curve extended above 8,000 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	160	434	2180	e170	216	332	214	235	39	22	23
2	46	155	344	1230	e180	234	292	201	228	79	21	26
3	50	149	674	870	e200	229	268	186	171	202	21	25
4	137	144	1130	657	e270	210	260	184	141	108	23	28
5	110	488	660	548	414	201	263	200	121	72	23	25
6	114	926	483	449	480	202	249	247	110	56	29	22
7	102	563	381	377	635	192	236	206	101	52	28	21
8	112	393	325	334	548	173	241	179	97	61	41	20
9	918	330	287	310	463	166	253	166	93	57	46	18
10	2990	289	265	281	410	162	238	160	89	58	47	18
11	3040	250	249	323	350	157	209	156	86	54	39	19
12	1540	224	242	583	300	171	192	161	85	55	32	18
13	937	200	228	449	295	264	200	152	82	49	28	26
14	669	189	203	385	301	356	367	144	76	45	27	39
15	495	181	299	599	e230	496	1060	142	74	42	25	23
16	387	178	446	1220	e190	773	817	136	120	39	24	20
17	336	170	363	1290	e210	1210	528	130	103	36	24	20
18	1280	161	475	832	e240	2740	402	230	88	35	25	21
19	1020	159	729	617	472	2860	365	181	75	33	48	21
20	637	152	558	580	528	2060	411	157	67	31	38	20
21	472	148	705	554	425	1280	409	135	61	30	35	20
22	379	152	1800	e420	366	963	345	124	59	29	32	21
23	323	151	1130	e330	311	1450	315	825	57	28	28	22
24	283	147	700	e290	289	1110	314	631	54	26	26	21
25	251	141	e490	e270	262	749	283	450	51	27	24	21
26	226	135	e400	e240	239	756	262	576	48	26	23	21
27	208	144	e320	e220	229	1080	254	326	45	25	22	20
28	194	774	e310	e210	221	800	242	235	43	25	22	21
29	180	1030	2140	e190	---	576	235	191	41	24	29	20
30	172	589	7580	e185	---	440	220	184	40	24	36	20
31	166	---	6120	e175	---	366	---	255	---	23	26	---
TOTAL	17822	8872	30470	17198	9228	22642	10062	7464	2741	1490	914	660
MEAN	575	296	983	555	330	730	335	241	91.4	48.1	29.5	22.0
MAX	3040	1030	7580	2180	635	2860	1060	825	235	202	48	39
MIN	46	135	203	175	170	157	192	124	40	23	21	18
CFSM	2.10	1.08	3.59	2.02	1.20	2.67	1.22	.88	.33	.18	.11	.08
IN.	2.42	1.20	4.14	2.33	1.25	3.07	1.37	1.01	.37	.20	.12	.09

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 1991, BY WATER YEAR (WY)

	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955
MEAN	95.1	145	263	314	387	448	428	301	253	145	100	76.5
MAX	575	727	983	1882	1039	1311	1109	793	1799	669	537	568
(WY)	1991	1973	1991	1950	1959	1982	1959	1983	1958	1957	1958	1989
MIN	15.0	22.7	22.2	17.6	36.1	46.8	83.0	62.2	30.7	22.5	12.5	10.5
(WY)	1965	1954	1945	1977	1954	1954	1971	1976	1977	1944	1966	1954

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1944 - 1991

	1990 CALENDAR YEAR	1991 WATER YEAR	WATER YEARS 1944 - 1991
ANNUAL TOTAL	158852	129563	245
ANNUAL MEAN	435	355	510
HIGHEST ANNUAL MEAN			62.7
LOWEST ANNUAL MEAN			1950
HIGHEST DAILY MEAN	7580	7580	12600
LOWEST DAILY MEAN	46	18	6.2
ANNUAL SEVEN-DAY MINIMUM	49	19	6.3
INSTANTANEOUS PEAK FLOW		8250	14400
INSTANTANEOUS PEAK STAGE		12.69	18.26
ANNUAL RUNOFF (CFSM)	1.59	1.30	.90
ANNUAL RUNOFF (INCHES)	21.57	17.59	12.16
10 PERCENT EXCEEDS	870	763	555
50 PERCENT EXCEEDS	228	200	100
90 PERCENT EXCEEDS	71	24	27

03J30241 TIPPECANOE RIVER AT NORTH WEBSTER, IN

LOCATION.--Lat 41°18'58", long 85°41'32", in SE¼ sec.15, T.33 N., R.7 E., Kosciusko County, Hydrologic Unit 05120106, on right upstream corner of State Road 13 bridge, at the intersection of State Road 13 and County Road 550 North, and 0.4 mi southeast of North Webster.

DRAINAGE AREA.--49.3 mi².

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.--Records good. Flow regulated at times by dams at Webster Lake, 0.25 mi upstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	61	66	339	69	64	52	131	144	9.6	11	24
2	14	60	65	353	68	66	51	118	154	10	11	23
3	17	70	62	359	56	64	51	70	160	11	13	22
4	27	65	61	342	40	64	27	69	163	12	13	22
5	52	48	61	325	40	64	12	71	163	13	12	21
6	118	89	62	302	40	65	12	72	161	14	12	20
7	117	154	62	268	40	65	12	71	156	14	11	20
8	115	152	e63	249	40	64	36	70	150	15	22	19
9	122	151	e63	232	41	64	96	52	144	14	48	18
10	217	148	e63	219	48	63	95	13	75	13	45	18
11	277	145	e63	210	68	62	93	12	28	12	38	16
12	288	142	e63	203	67	61	78	12	56	12	15	16
13	295	97	e63	165	67	61	56	13	54	13	12	16
14	297	40	e63	96	68	60	57	20	52	15	11	17
15	290	38	e64	96	68	55	59	29	36	15	10	16
16	270	38	e64	99	66	36	60	29	16	15	9.8	4.2
17	249	38	e64	100	64	36	71	28	15	14	9.4	4.0
18	223	38	e64	103	63	37	94	25	14	14	9.0	3.8
19	178	81	e64	106	64	37	107	24	17	12	10	3.4
20	173	121	64	125	63	38	126	24	19	6.8	11	4.4
21	143	117	76	143	64	38	129	16	20	6.5	9.9	3.8
22	125	90	105	138	65	39	132	7.2	20	10	9.5	3.3
23	125	70	104	134	65	68	133	9.5	21	11	9.3	3.1
24	125	58	103	131	66	112	143	29	20	11	8.9	2.7
25	122	37	103	127	66	109	153	39	20	12	8.3	2.5
26	96	37	102	115	65	108	149	60	20	11	8.3	2.3
27	66	37	100	79	65	106	145	81	20	11	8.0	2.2
28	66	52	99	77	64	80	141	54	18	11	14	2.5
29	65	67	113	75	---	54	137	26	6.6	11	12	3.4
30	63	67	201	74	---	52	133	37	7.4	12	17	2.8
31	62	---	305	72	---	52	---	113	---	11	25	---
TOTAL	4410	2408	2675	5456	1660	1944	2640	1424.7	1950.0	371.9	463.4	336.4
MEAN	142	80.3	86.3	176	59.3	62.7	88.0	46.0	65.0	12.0	14.9	11.2
MAX	297	154	305	359	69	112	153	131	163	15	48	24
MIN	13	37	61	72	40	36	12	7.2	6.6	6.5	8.0	2.2
CFSM	2.89	1.63	1.75	3.57	1.20	1.27	1.78	.93	1.32	.24	.30	.23
IN.	3.33	1.82	2.02	4.12	1.25	1.47	1.99	1.08	1.47	.28	.35	.25

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 1991, BY WATER YEAR (WY)

	MEAN	62.0	52.9	64.3	82.1	66.1	61.8	68.0	46.8	44.4	19.5	24.1	29.1
MAX	142	99.2	98.8	176	119	102	88.0	77.4	93.9	38.1	80.1	87.7	
(WY)	1991	1989	1987	1991	1990	1990	1991	1987	1989	1990	1990	1990	
MIN	15.2	23.7	14.0	46.3	31.5	30.6	50.1	15.4	3.07	4.36	2.00	6.53	
(WY)	1990	1990	1990	1990	1989	1989	1987	1988	1988	1988	1988	1988	

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1987 - 1991

ANNUAL TOTAL	28999.3	25739.4	51.7
ANNUAL MEAN	79.5	70.5	70.5
HIGHEST ANNUAL MEAN			33.9
LOWEST ANNUAL MEAN			1991
HIGHEST DAILY MEAN	305	359	359
LOWEST DAILY MEAN	4.3	2.2	Jan 3 1991
ANNUAL SEVEN-DAY MINIMUM	12	2.6	Aug 18 1988
INSTANTANEOUS PEAK FLOW		364	364
INSTANTANEOUS PEAK STAGE		6.49	Jan 2 1991
ANNUAL RUNOFF (CFSM)	1.61	1.43	1.05
ANNUAL RUNOFF (INCHES)	21.88	19.42	14.24
10 PERCENT EXCEEDS	143	150	115
50 PERCENT EXCEEDS	67	61	36
90 PERCENT EXCEEDS	18	11	6.0

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 mi².

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.--Records fair. Periodic regulation by gates at lake outlet.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	194	148	443	e205	146	166	274	231	31	15	19
2	34	182	152	533	e190	150	160	268	245	31	14	19
3	62	172	157	598	e175	154	155	258	257	31	14	e18
4	66	167	161	615	e163	154	150	244	263	30	14	e18
5	69	176	167	605	156	155	145	234	261	28	14	e18
6	115	185	171	580	151	155	139	226	258	27	14	e18
7	170	198	173	541	149	155	127	218	254	29	14	e17
8	192	218	174	503	146	155	108	213	247	28	14	e17
9	215	232	173	468	146	152	114	203	240	28	15	e17
10	258	240	172	437	144	151	126	188	231	26	17	e17
11	314	245	168	415	144	149	145	171	212	24	17	e17
12	359	246	165	399	145	147	162	156	197	24	17	e17
13	408	245	161	378	145	150	158	145	184	24	17	e16
14	447	229	157	348	146	146	157	126	169	24	17	e16
15	473	211	157	327	145	142	163	88	152	24	17	e16
16	472	195	156	318	144	139	168	89	141	23	17	e16
17	455	183	156	309	143	137	182	90	124	23	16	e16
18	436	170	156	303	143	137	194	103	52	23	17	e16
19	413	161	157	297	143	136	210	93	33	23	17	e16
20	393	162	157	293	144	137	232	85	34	26	18	e15
21	372	165	159	292	146	138	248	85	35	30	18	e15
22	348	167	168	289	148	140	261	82	51	30	19	e15
23	330	161	181	e285	150	140	269	92	56	29	19	e15
24	314	158	190	e282	150	149	280	109	32	29	19	e15
25	300	151	196	e280	150	158	285	117	32	29	19	e15
26	287	144	199	e275	148	167	288	136	32	28	19	e14
27	269	138	201	e265	146	173	287	140	32	28	18	e14
28	251	141	201	e258	146	185	286	143	31	28	18	e14
29	233	143	236	e245	---	187	284	141	31	28	18	e14
30	218	145	304	e235	---	179	275	142	31	18	19	e14
31	205	---	370	e220	---	171	---	197	---	15	19	---
TOTAL	8506	5524	5643	11636	4251	4734	5924	4856	4148	819	520	484
MEAN	274	184	182	375	152	153	197	157	138	26.4	16.8	16.1
MAX	473	246	370	615	205	187	288	274	263	31	19	19
MIN	28	138	148	220	143	136	108	82	31	15	14	14
CFSM	2.43	1.63	1.61	3.32	1.34	1.35	1.75	1.39	1.22	.23	.15	.14
IN.	2.80	1.82	1.86	3.83	1.40	1.56	1.95	1.60	1.37	.27	.17	.16

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 1991, BY WATER YEAR (WY)

	MEAN	62.7	71.8	109	126	140	186	194	128	96.6	61.4	45.2	45.1
MAX	369	220	298	443	373	498	493	340	363	198	198	188	237
(WY)	1955	1973	1967	1950	1950	1982	1950	1956	1981	1968	1968	1990	1958
MIN	4.73	7.25	16.0	7.51	11.0	44.0	58.6	30.8	18.6	11.4	1.13	.40	.40
(WY)	1954	1954	1963	1963	1963	1964	1966	1958	1988	1988	1967	1967	1967

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1950 - 1991

ANNUAL TOTAL	65485	57045	105
ANNUAL MEAN	179	156	196
HIGHEST ANNUAL MEAN			30.8
LOWEST ANNUAL MEAN			944
HIGHEST DAILY MEAN	473	615	Mar 21 1982
LOWEST DAILY MEAN	21	14	Aug 4 1967
ANNUAL SEVEN-DAY MINIMUM	32	14	Aug 22 1967
INSTANTANEOUS PEAK FLOW		622	Mar 21 1982
INSTANTANEOUS PEAK STAGE		8.72	Mar 21 1982
ANNUAL RUNOFF (CFSM)	1.59	1.38	.93
ANNUAL RUNOFF (INCHES)	21.56	18.78	12.67
10 PERCENT EXCEEDS	295	295	236
50 PERCENT EXCEEDS	167	150	75
90 PERCENT EXCEEDS	56	17	15

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 mi².
 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.--Records good, except for estimated daily discharges, which are poor. Flow occasionally regulated by lakes upstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	20	30	194	e16	16	33	23	37	37	2.4	1.2
2	15	19	26	127	17	29	33	21	37	27	2.2	1.1
3	15	17	36	92	19	34	31	20	29	18	2.1	1.2
4	34	16	50	74	23	31	31	18	20	13	2.0	1.3
5	40	41	46	63	31	26	33	20	12	11	1.9	1.2
6	39	69	39	56	36	23	34	29	9.6	8.9	1.8	1.1
7	36	67	33	50	36	21	34	29	8.3	7.8	1.8	1.1
8	35	55	28	44	34	19	33	28	7.4	19	2.9	1.2
9	69	43	24	40	32	17	35	24	6.8	19	3.2	1.0
10	189	37	22	38	30	16	35	19	6.2	15	2.8	.84
11	201	33	20	38	27	15	35	16	5.9	12	2.5	.83
12	158	29	19	44	24	15	33	16	5.6	10	2.4	1.0
13	116	26	17	42	21	15	31	17	5.2	8.9	2.2	1.1
14	89	24	16	39	e19	16	36	17	4.7	7.9	2.1	1.1
15	75	23	19	40	e17	16	41	17	4.9	6.8	2.0	.96
16	64	21	23	59	e16	18	42	17	6.0	6.1	1.8	.88
17	54	19	24	70	15	22	53	16	6.2	5.6	1.8	.81
18	54	18	24	61	16	38	47	12	5.8	5.0	1.8	.80
19	50	17	24	49	28	41	49	11	5.6	4.6	2.4	.74
20	44	16	23	e42	34	38	60	11	5.2	4.2	2.5	.71
21	39	15	25	e39	32	34	55	11	4.9	4.1	1.9	.67
22	36	15	36	e35	28	29	45	11	4.7	3.9	1.5	.69
23	33	16	38	e31	25	26	42	12	4.2	3.6	1.3	.67
24	31	17	35	e28	21	27	42	14	3.8	3.3	1.3	.70
25	28	16	29	e26	19	26	42	15	3.8	3.0	1.2	.71
26	26	15	e25	e24	18	31	37	17	3.5	2.9	1.2	.58
27	25	17	22	e22	16	38	29	17	3.2	2.7	1.1	.50
28	23	33	20	e20	15	39	26	17	3.2	2.5	1.1	.50
29	19	38	155	e19	---	39	25	16	3.0	2.6	1.1	.50
30	19	36	304	e18	---	37	25	16	30	2.6	1.4	.47
31	20	---	266	e17	---	34	---	20	---	2.4	1.6	---
TOTAL	1692	828	1498	1541	665	826	1127	547	292.7	280.4	59.3	26.16
MEAN	54.6	27.6	48.3	49.7	23.7	26.6	37.6	17.6	9.76	9.05	1.91	.87
MAX	201	69	304	194	36	41	60	29	37	37	3.2	1.3
MIN	15	15	16	17	15	15	25	11	3.0	2.4	1.1	.47
CFSM	2.78	1.41	2.47	2.54	1.21	1.36	1.92	.90	.50	.46	.10	.04
IN.	3.21	1.57	2.84	2.92	1.26	1.57	2.14	1.04	.56	.53	.11	.05

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 1991, BY WATER YEAR (WY)

	MEAN	8.81	13.6	21.8	17.7	25.5	37.0	35.2	20.9	17.7	6.67	6.12	6.46
MAX	54.6	40.2	48.3	49.7	60.6	110	66.5	60.8	80.3	20.9	53.7	27.0	
(WY)	1991	1973	1991	1991	1985	1982	1981	1981	1981	1981	1990	1980	
MIN	1.04	2.18	1.43	.91	2.87	14.0	14.3	6.35	2.34	1.73	1.07	.80	
(WY)	1977	1979	1977	1977	1979	1989	1976	1988	1988	1988	1971	1976	

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1970 - 1991

ANNUAL TOTAL	11972.2	9382.56	18.1
ANNUAL MEAN	32.8	25.7	28.2
HIGHEST ANNUAL MEAN			10.0
LOWEST ANNUAL MEAN			389
HIGHEST DAILY MEAN	304	304	389
LOWEST DAILY MEAN	2.3	.47	.40
ANNUAL SEVEN-DAY MINIMUM	3.1	.57	.46
INSTANTANEOUS PEAK FLOW		317	561
INSTANTANEOUS PEAK STAGE		4.31	5.38
ANNUAL RUNOFF (CFSM)	1.67	1.31	.92
ANNUAL RUNOFF (INCHES)	22.72	17.81	12.53
10 PERCENT EXCEEDS	58	44	42
50 PERCENT EXCEEDS	24	19	10
90 PERCENT EXCEEDS	8.7	1.3	1.7

LOCATION.--Lat 41°09'26", long 86°33'49", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ 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 mi²

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.--Records good below 1,000 ft/s and fair above except for estimated daily discharges, which are poor.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	655	1190	1530	6720	e950	1160	1690	1840	1780	416	232	220
2	606	1140	1450	6230	e925	1290	1590	1780	2130	404	219	219
3	584	1100	1470	e5640	e900	1630	1490	1700	2090	513	214	210
4	609	1090	1770	e5060	e1040	1710	1440	1630	2010	547	213	225
5	698	1330	1840	e4500	e1200	1620	1430	1610	1820	507	212	228
6	726	2160	1710	e3800	e1500	1570	1420	1630	1600	442	211	221
7	743	2680	1630	e3200	e1760	1480	1370	1610	1430	400	210	217
8	801	2610	1570	e2700	e1790	1370	1330	1520	1290	561	236	209
9	1090	2390	1500	e2350	e1600	1270	1400	1450	1150	981	282	202
10	2330	2260	1420	e2100	e1480	1200	1420	1400	1040	673	279	195
11	3710	2110	1350	e1900	e1390	1150	1340	1340	967	563	279	186
12	4660	1930	1290	e1750	e1310	1110	1290	1260	925	496	265	191
13	4670	1750	1240	e1630	e1250	1090	1250	1190	885	444	250	205
14	4380	1600	1170	e1550	1260	1080	1300	1140	840	403	240	211
15	4100	1500	1200	e1500	1200	1110	1860	1210	799	380	229	228
16	3770	1430	1310	e1700	1130	1200	2790	1100	899	357	221	219
17	3430	1360	1310	2700	1060	1410	3170	1270	942	336	219	207
18	3150	1290	1320	3210	1080	1870	3160	1260	854	321	217	200
19	2940	1230	1360	e2900	1370	2410	3070	1340	767	307	243	195
20	2730	1170	1330	e2550	1690	2390	2840	1170	687	298	279	194
21	2470	1120	1320	e2250	1780	2210	2640	1050	611	287	281	193
22	2260	1110	1570	e2000	1720	2060	2470	976	553	280	275	190
23	2050	1080	1780	e1800	1640	1960	2320	990	521	275	260	195
24	1900	1030	1700	e1600	1540	1910	2270	1320	494	267	245	195
25	1780	1010	e1570	e1450	1430	1850	2250	1370	478	265	235	194
26	1650	980	e1430	e1300	1320	1780	2170	1380	461	258	229	195
27	1560	1000	e1380	e1200	1230	1960	2080	1360	438	250	219	194
28	1470	1310	e2000	e1130	1170	2070	2010	1290	416	244	212	194
29	1390	1710	e3300	e1070	---	2050	1960	1180	406	239	208	193
30	1320	1650	4780	e1020	---	1910	1920	1160	396	238	222	190
31	1250	---	6460	e980	---	1770	---	1350	---	232	223	---
TOTAL	65482	45320	56060	79490	37715	50650	58740	41876	29679	12184	7359	6115
MEAN	2112	1511	1808	2564	1347	1634	1958	1351	989	393	237	204
MAX	4670	2680	6460	6720	1790	2410	3170	1840	2130	981	282	228
MIN	584	980	1170	980	900	1080	1250	976	396	232	208	186
CFSM	2.47											

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 1991, BY WATER YEAR (WY)

MEAN	461	561	799	939	1172	1475	1542	1114	867	538	414	355
MAX	2112	1933	2478	3552	3020	4239	4116	2869	3468	1311	2699	1224
(WY)	1991	1973	1967	1950	1959	1982	1950	1981	1981	1951	1990	1958
MIN	134	155	177	183	192	451	525	337	243	180	155	107
(WY)	1954	1954	1964	1963	1963	1957	1958	1958	1988	1988	1988	1966

ANNUAL TOTAL	578599		490670			
ANNUAL MEAN	1585		1344		851	
HIGHEST ANNUAL MEAN					1580	1950
LOWEST ANNUAL MEAN					354	1964
HIGHEST DAILY MEAN	6970	Aug 21	6720	Jan 1	8450	Jun 15 1981
LOWEST DAILY MEAN	365	Jan 1	186	Sep 11	87	Sep 13 1966
ANNUAL SEVEN-DAY MINIMUM	457	Jul 5	194	Sep 24	93	Sep 8 1966
INSTANTANEOUS PEAK FLOW			6830	Dec 31	8660	Jun 15 1981
INSTANTANEOUS PEAK STAGE			15.00	Dec 31	15.22	Aug 20 1990
ANNUAL RUNOFF (CFSM)	1.85		1.57		.99	
ANNUAL RUNOFF (INCHES)	25.14		21.32		13.51	
10 PERCENT EXCEEDS	3100		2400		1800	
50 PERCENT EXCEEDS	1250		1290		585	
90 PERCENT EXCEEDS	645		220		208	

03332345 TIPPECANOE RIVER AT BUFFALO, IN

LOCATION.--Lat 40°53'05", long 86°44'49", in SE¼SE¼ sec.10, T.28 N., R.3 W., White County, Hydrologic Unit 05120106, on right bank approximately 30 ft upstream from State Road 16 bridge at Buffalo, 0.2 mi downstream from Harp ditch, 10.8 mi upstream from Norway dam.

DRAINAGE AREA.--1,284 mi².

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

GAGE.--Water-stage recorder. Datum of gage is 640.000 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Stage possibly affected by backwater from Norway dam.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 15.46 ft Aug. 21, 1990; minimum gage height, 6.98 ft Sept. 30, 1986.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 15.42 ft Dec. 31, 1990; minimum gage height, 7.79 ft Aug. 2, Sept. 11 and 12.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.36	8.98	9.40	15.29	11.16	9.13	9.43	9.39	9.34	8.21	7.95	7.89
2	8.34	8.93	9.24	15.12	9.38	9.45	9.35	9.27	9.53	8.52	7.96	7.94
3	8.44	8.89	9.81	14.26	9.27	9.56	9.27	9.22	9.55	8.27	7.84	7.99
4	8.38	8.91	9.62	13.09	9.45	9.58	9.26	9.10	9.45	8.22	7.97	7.90
5	8.47	10.38	9.70	12.71	9.67	9.47	9.22	9.23	9.29	8.23	7.85	7.97
6	8.42	10.41	9.52	12.07	9.71	9.37	9.13	9.21	9.14	8.22	7.95	7.93
7	8.53	10.41	9.45	11.45	9.77	9.33	9.08	9.11	8.98	8.14	7.89	7.84
8	8.73	10.37	9.38	11.13	9.73	9.17	9.02	9.03	8.82	8.19	7.94	7.89
9	10.55	10.19	9.33	10.90	9.67	9.07	9.08	8.99	8.70	8.47	7.94	7.86
10	12.82	9.98	9.22	10.66	9.57	8.98	9.15	8.86	8.71	8.35	7.98	7.87
11	12.17	9.83	9.17	10.71	9.45	8.92	8.98	8.81	8.62	8.31	7.92	7.83
12	12.31	9.69	9.11	10.65	9.37	8.98	8.99	8.74	8.61	8.24	7.92	7.88
13	12.50	9.52	9.05	10.57	9.26	8.89	8.98	8.71	8.49	8.11	7.97	7.94
14	12.18	9.42	8.97	10.50	9.22	8.93	9.15	9.09	8.52	8.05	7.94	8.01
15	11.82	9.31	9.10	10.59	9.11	8.98	11.07	8.90	8.50	8.07	7.91	8.01
16	11.47	9.20	9.14	11.99	11.95	9.03	10.81	9.35	8.53	8.06	8.02	7.88
17	11.15	9.10	9.19	11.54	11.29	9.42	11.15	9.11	8.61	7.97	7.95	7.96
18	11.03	9.06	9.21	11.42	9.24	11.37	10.91	10.39	8.47	8.01	7.91	8.03
19	10.70	9.02	9.18	11.31	9.62	11.31	10.75	9.67	8.39	7.99	7.99	7.85
20	10.47	8.99	9.17	11.17	9.70	10.97	10.55	9.27	8.38	7.96	7.99	7.88
21	10.25	8.99	9.40	10.85	9.69	10.55	10.29	9.01	8.30	7.95	8.03	7.92
22	10.07	8.93	9.66	10.70	9.55	10.25	10.08	8.89	8.18	8.08	7.93	7.92
23	9.87	8.89	9.67	10.39	9.50	10.29	9.94	9.10	8.19	8.05	8.01	7.92
24	9.75	8.82	9.75	10.30	9.38	10.21	9.83	9.23	8.19	8.04	7.97	7.95
25	9.57	8.77	12.92	11.63	9.26	9.95	9.77	10.07	8.14	7.99	7.89	7.98
26	9.50	8.82	11.98	12.43	9.17	10.48	9.71	9.54	8.14	7.93	7.90	8.04
27	9.38	8.87	11.38	13.09	9.05	10.38	9.62	9.23	8.22	7.92	7.95	7.96
28	9.26	9.66	11.85	12.79	9.09	10.19	9.55	9.07	8.18	8.00	7.91	7.94
29	9.20	9.58	14.29	11.47	---	9.95	9.57	8.95	8.14	7.94	7.97	7.88
30	9.12	9.57	15.40	10.53	---	9.77	9.43	8.88	8.42	7.95	7.87	7.95
31	9.01	---	15.07	11.64	---	9.59	---	9.01	---	7.95	7.97	---
MEAN	10.06	9.38	10.24	11.71	9.65	9.73	9.70	9.18	8.62	8.11	7.94	7.93
MAX	12.82	10.41	15.40	15.29	11.95	11.37	11.15	10.39	9.55	8.52	8.03	8.04
MIN	8.34	8.77	8.97	10.30	9.05	8.89	8.98	8.71	8.14	7.92	7.84	7.83

03333050 TIPPECANOE RIVER NEAR DELPHI, IN

LOCATION.--Lat 40°35'38", long 86°46'12", in SW¼SW¼ sec.21, T.25 N., R.3 W., Carroll County, Hydrologic Unit 05120106, on left bank 20 ft upstream from bridge on State Highway 18, 1,400 ft east of Springboro, 8.1 mi downstream from Big Creek, 5 mi west of Delphi, and at mile 8.7.

DRAINAGE AREA.--1,869 mi².

PERIOD OF RECORD.--March to December 1903, March to December 1904, March 1905 to July 1906, November and December 1908, July 1939 to September 1987, October 1987 to current year. Published as "at Springboro" 1903-08. Published as "03333000 Tippecanoe River near Delphi:" July 1939 to September 1987.

REVISED RECORDS.--WSP 973: 1942. WSP 1335: 1905-6. WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 535.00 ft above National Geodetic Vertical Datum of 1929.

Mar. 14, 1903, to July 20, 1906, and Nov. 2 to Dec. 31, 1908, nonrecording gage at present site at different datum. July 1939 to Sept. 30, 1987, at site 6.4 mi upstream at datum 17.01 ft higher.

REMARKS.--Records good. Flow regulated by upstream reservoirs.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1180	1060	3220	14900	2490	2560	3650	3170	2850	950	335	353
2	926	263	2800	13500	2680	3000	3030	2840	3080	759	386	338
3	1170	1320	3120	12100	2790	3500	2790	2710	3150	1120	345	382
4	1350	1880	4040	9600	2980	3310	2940	2700	2830	863	384	432
5	1330	3390	3110	8080	3500	3200	2900	2640	2710	925	346	406
6	1180	6270	3500	7030	3690	3090	2800	2700	2640	725	401	338
7	1570	5140	2640	6150	3830	2910	2680	2690	2170	660	376	338
8	1800	4550	2880	5390	3590	2590	2750	2450	2150	964	753	380
9	4320	4360	2370	5100	3580	2650	2550	2130	1950	745	436	363
10	11100	3860	2430	4590	3490	2290	2550	2460	1680	1560	561	338
11	11400	3470	2350	4630	3290	2220	2430	2220	1780	1000	495	339
12	8890	3310	2370	5040	2920	2320	2250	2150	1590	1020	462	348
13	8120	2860	2190	4590	3050	2980	2380	2140	1450	833	443	407
14	7370	2900	1880	4450	2830	3100	2730	2150	1450	728	409	468
15	6670	2400	2540	4830	2320	3210	5360	2610	1470	724	333	430
16	5980	2450	2340	7610	2010	3650	6970	2590	1420	447	371	484
17	5470	2250	2540	8720	2380	5030	6050	3520	1410	668	450	300
18	5510	2230	2760	6800	2720	9250	6160	6560	1400	481	407	236
19	4940	1970	2530	6270	3350	10500	5490	6280	1400	689	651	376
20	4560	1980	2570	6140	3490	9120	4900	4130	1210	425	407	373
21	4310	1850	2740	5690	3540	7370	4650	3440	1070	502	512	403
22	3740	1920	4110	4860	3430	5960	4100	2890	1080	443	484	403
23	3500	1830	3840	4500	3060	6080	3910	2690	755	451	470	374
24	3240	1860	3200	3820	3090	5870	3910	3150	911	403	461	276
25	3110	1680	2170	3220	2820	5190	3390	4320	811	408	358	353
26	2820	1680	2540	3140	2610	5210	3510	5110	895	383	446	364
27	2810	1700	1950	3090	2530	6260	3350	3740	751	458	352	347
28	2570	3220	1840	2940	2190	5430	3310	3100	704	401	334	377
29	3560	4360	8040	3050	---	4850	3130	2680	695	299	443	356
30	4180	3290	21400	2970	---	3780	3200	2640	688	441	358	403
31	2920	---	18000	2700	---	3720	---	2390	---	403	396	---
TOTAL	131596	81303	124010	185500	84250	140200	109820	96990	48150	20878	13365	11085
MEAN	4245	2710	4000	5984	3009	4523	3661	3129	1605	673	431	369
MAX	11400	6270	21400	14900	3830	10500	6970	6560	3150	1560	753	484
MIN	926	263	1840	2700	2010	2220	2250	2130	688	299	333	236
CFSM	2.27	1.45	2.14	3.20	1.61	2.42	1.96	1.67	.86	.36	.23	.20
IN.	2.62	1.62	2.47	3.69	1.68	2.79	2.19	1.93	.96	.42	.27	.22

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1991, BY WATER YEAR (WY)

	1988	1989	1990	1991
MEAN	1575	1554	2448	3026
MAX	4245	2710	4000	5984
(WY)	1991	1991	1991	1991
MIN	518	929	810	1680
(WY)	1989	1988	1990	1990

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1988 - 1991

ANNUAL TOTAL	1178960	1047147	2119
ANNUAL MEAN	3230	2869	2869
HIGHEST ANNUAL MEAN			1520
LOWEST ANNUAL MEAN			1520
HIGHEST DAILY MEAN	21400	Dec 30	21400
LOWEST DAILY MEAN	263	Nov 2	131
ANNUAL SEVEN-DAY MINIMUM	860	Jul 4	255
INSTANTANEOUS PEAK FLOW			22100
INSTANTANEOUS PEAK STAGE			12.87
ANNUAL RUNOFF (CFSM)	1.73	1.53	1.13
ANNUAL RUNOFF (INCHES)	23.47	20.84	15.41
10 PERCENT EXCEEDS	5980	5760	4280
50 PERCENT EXCEEDS	2450	2610	1550
90 PERCENT EXCEEDS	1250	392	415

03333450 WILDCAT CREEK NEAR JEROME, IN

LOCATION.--Lat 40°26'29", long 85°55'08", in NE1/4 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 mi².

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.--Records good except for Sept. 12-30, which are poor.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1913 reached a stage of about 18 ft, from information by local residents.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	49	226	1320	e68	101	154	84	682	13	4.1	5.3
2	15	47	167	759	e70	115	129	78	347	83	3.9	3.1
3	17	45	547	500	e80	111	114	71	312	45	3.9	2.4
4	106	46	878	350	160	101	109	71	214	25	4.8	4.8
5	113	86	475	270	274	94	113	71	138	18	4.5	2.9
6	72	227	322	212	388	97	106	73	101	15	4.4	2.2
7	61	151	237	170	551	88	102	66	81	12	4.5	2.0
8	124	111	191	149	398	73	102	56	71	64	5.1	1.7
9	205	96	157	135	313	71	176	53	61	45	6.2	1.4
10	1130	88	141	115	261	68	133	52	54	25	5.9	1.5
11	1170	75	126	142	208	64	101	50	51	17	4.9	1.6
12	643	65	120	368	164	70	87	53	48	16	4.2	e1.5
13	412	57	109	264	e156	120	107	67	43	14	3.6	e1.5
14	285	53	91	219	e150	440	314	66	37	12	3.3	e2.7
15	206	54	186	423	e100	485	568	115	35	9.9	3.0	e2.0
16	153	50	267	859	e93	660	520	85	42	8.8	2.8	e1.7
17	130	49	202	893	e97	1110	305	74	39	8.1	3.0	e1.6
18	222	48	353	548	e120	1800	213	67	32	7.6	3.6	e1.5
19	251	49	567	398	435	1340	278	56	28	7.0	4.4	e3.0
20	179	45	397	390	439	819	595	48	25	6.6	4.6	e2.5
21	143	42	566	387	309	574	393	44	22	6.2	4.1	e1.9
22	120	48	1050	275	242	530	269	213	23	6.0	3.6	e1.9
23	106	49	638	226	186	903	206	242	58	5.8	2.8	e1.8
24	96	50	380	169	163	661	174	126	42	5.6	2.7	e1.6
25	84	44	260	e140	136	410	141	123	27	5.5	2.3	e1.5
26	75	40	194	e123	121	487	125	195	22	5.1	2.0	e1.5
27	67	57	e150	e110	114	772	117	132	19	4.8	2.0	e1.4
28	64	472	e140	e100	105	509	108	89	16	4.5	2.1	e1.4
29	56	583	879	e92	---	326	101	72	14	4.3	2.2	e1.5
30	53	322	5980	e85	---	231	92	74	13	4.7	3.3	e1.4
31	52	---	3280	e75	---	178	---	564	---	4.4	8.1	---
TOTAL	6425	3198	19276	10266	5901	13408	6052	3230	2697	508.9	119.9	62.8
MEAN	207	107	622	331	211	433	202	104	89.9	16.4	3.87	2.09
MAX	1170	583	5980	1320	551	1800	595	564	682	83	8.1	5.3
MIN	15	40	91	75	68	64	87	44	13	4.3	2.0	1.4
CFSM	1.42	.73	4.26	2.27	1.44	2.96	1.38	.71	.62	.11	.03	.01
IN.	1.64	.81	4.91	2.62	1.50	3.42	1.54	.82	.69	.13	.03	.02

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 1991, BY WATER YEAR (WY)

	MEAN	46.0	94.2	176	145	216	295	222	146	112	66.4	37.6	48.4
MAX	252	541	622	687	649	793	689	372	544	327	199	589	
(WY)	1970	1973	1991	1974	1976	1982	1964	1989	1980	1962	1973	1989	
MIN	1.72	2.95	2.49	1.02	11.2	52.6	38.7	17.9	8.20	7.13	3.80	2.09	
(WY)	1967	1977	1977	1977	1963	1981	1971	1976	1988	1988	1966	1991	

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1962 - 1991	
ANNUAL TOTAL	88955.7		71144.6		133	
ANNUAL MEAN	244		195		234	
HIGHEST ANNUAL MEAN					50.2	
LOWEST ANNUAL MEAN					1974	
HIGHEST DAILY MEAN	5980		5980		5980	
LOWEST DAILY MEAN	9.7		1.4		Dec 30 1990	
ANNUAL SEVEN-DAY MINIMUM	12		1.5		Aug 11	
INSTANTANEOUS PEAK FLOW			6890		Sep 9	
INSTANTANEOUS PEAK STAGE			13.71		Sep 24	
ANNUAL RUNOFF (CFSM)	1.67		1.34		Dec 30 1990	
ANNUAL RUNOFF (INCHES)	22.67		18.13		Dec 30 1990	
10 PERCENT EXCEEDS	566		492		12.40	
50 PERCENT EXCEEDS	115		87		328	
90 PERCENT EXCEEDS	19		3.0		45	
					5.0	

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 mi².
 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.--Records good except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	9.8	40	169	e17	20	30	16	57	2.2	e.58	.30
2	2.4	9.6	31	120	e17	23	26	15	32	11	e.55	.22
3	3.6	9.6	149	87	e18	20	24	13	29	7.0	e.54	.20
4	17	12	127	65	e27	19	23	14	22	3.4	.76	.21
5	15	39	68	54	55	18	23	14	16	3.2	.70	.21
6	9.8	53	50	45	76	18	21	14	12	2.3	.86	.17
7	16	32	38	39	89	15	20	12	10	1.9	.90	e.15
8	48	24	32	35	67	13	21	10	8.9	11	1.4	e.13
9	76	20	27	33	59	12	22	9.7	7.8	4.1	1.3	e.11
10	323	17	25	31	52	12	18	9.2	6.9	2.5	1.1	e.12
11	228	14	22	47	43	11	15	9.5	6.5	1.8	.96	e.11
12	126	12	21	76	37	13	14	9.7	6.1	1.8	.80	e.11
13	82	10	19	52	38	29	17	10	5.1	1.7	.65	.22
14	57	9.3	16	50	37	55	32	11	4.4	1.3	.57	.22
15	39	9.0	40	81	27	70	72	13	4.4	e1.1	.77	.17
16	30	9.0	40	170	e22	144	54	10	5.8	e1.0	.54	.17
17	26	e8.8	36	142	e23	282	37	12	4.6	e.92	.47	.15
18	162	e8.5	74	87	e31	411	30	11	3.7	e.85	.75	.19
19	98	e8.2	92	70	86	246	50	8.3	3.1	e.80	2.1	.18
20	60	e8.0	62	72	71	137	73	7.2	2.7	e.75	.92	.17
21	42	e7.8	158	68	50	94	49	6.8	2.7	e.72	.67	.15
22	33	e10	199	51	41	97	39	6.8	3.3	e.68	.62	.13
23	28	e8.7	105	45	33	207	33	17	30	e.64	.62	.16
24	24	e7.7	62	36	30	103	31	11	16	e.61	.54	.14
25	20	e7.5	45	31	26	66	26	34	7.5	e.58	.43	.15
26	17	e7.3	33	e29	24	115	25	45	4.5	e.55	.33	.15
27	16	25	29	e27	22	123	23	25	3.2	e.53	.27	.14
28	14	148	27	e25	20	83	21	17	2.5	e.51	.25	.11
29	12	95	276	e22	---	56	20	14	2.3	e.49	.24	.11
30	11	54	757	e21	---	41	18	13	2.3	e.71	.23	.12
31	11	---	462	e18	---	34	---	102	---	e.61	.41	---
TOTAL	1649.1	693.8	3162	1898	1138	2587	907	520.2	322.3	67.25	21.83	4.87
MEAN	53.2	23.1	102	61.2	40.6	83.5	30.2	16.8	10.7	2.17	.70	.16
MAX	323	148	757	170	89	411	73	102	57	11	2.1	.30
MIN	2.3	7.3	16	18	17	11	14	6.8	2.3	.49	.23	.11
CFSM	2.15	.94	4.13	2.48	1.65	3.38	1.22	.68	.43	.09	.03	.01
IN.	2.48	1.04	4.76	2.86	1.71	3.90	1.37	.78	.49	.10	.03	.01

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 1991, BY WATER YEAR (WY)

	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
MEAN	10.2	16.4	27.6	23.4	36.3	50.9	40.2	23.9	16.3	9.60	6.53	6.84
MAX	68.1	108	102	114	129	150	117	78.0	99.7	42.8	34.7	66.7
(WY)	1970	1986	1991	1974	1990	1982	1964	1990	1980	1962	1990	1989
MIN	.55	.57	.44	.33	1.98	7.87	6.91	2.52	1.20	1.07	.50	.16
(WY)	1965	1977	1977	1977	1964	1981	1976	1976	1988	1988	1988	1991

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1960 - 1991
ANNUAL TOTAL	17819.5	12971.35	
ANNUAL MEAN	48.8	35.5	22.3
HIGHEST ANNUAL MEAN			40.6
LOWEST ANNUAL MEAN			8.76
HIGHEST DAILY MEAN	757	757	757
LOWEST DAILY MEAN	2.3	.11	.07
ANNUAL SEVEN-DAY MINIMUM	2.4	.13	.11
INSTANTANEOUS PEAK FLOW		783	1040
INSTANTANEOUS PEAK STAGE		9.17	9.88
ANNUAL RUNOFF (CFSM)	1.98	1.44	.90
ANNUAL RUNOFF (INCHES)	26.84	19.54	12.25
10 PERCENT EXCEEDS	126	84	53
50 PERCENT EXCEEDS	21	17	7.2
90 PERCENT EXCEEDS	3.4	.42	.88

03333700 WILDCAT CREEK AT KOKOMO, IN

LOCATION.--Lat 40°28'15", long 86°09'11", in SW¼ 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 mi².

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

REVISED RECORDS.--WSP 2109: Drainage area. WDR-IN-83: 1980, 1981(P), 1982. WDR-IN-88: 1986(P), 1987 (M).

GAGE.--Water-stage recorder. Datum of gage is 775.62 ft above National Geodetic Vertical Datum of 1929 (levels by State of Indiana, Department of Natural Resources). Prior to May 9, 1986, recording gage at site 0.4 mi downstream at present datum.

REMARKS.--Records good. Some regulation of Kokomo Reservoirs No. 1 and 2, combined capacity, 4,170 acre-ft, for municipal water supply and by Kokomo Sewage Treatment Plant.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	123	379	3120	121	169	286	166	1050	46	23	19
2	38	118	290	1580	123	177	250	137	618	137	24	19
3	59	87	735	1030	126	177	209	138	396	100	23	25
4	116	80	1360	712	200	152	196	134	346	73	22	25
5	51	212	884	529	360	150	209	131	209	56	21	23
6	44	287	526	416	576	136	186	131	151	41	24	23
7	90	272	383	330	870	135	174	121	111	33	21	23
8	180	208	301	276	740	122	210	111	93	136	75	23
9	349	164	251	250	557	103	226	101	82	72	35	25
10	1780	143	224	225	448	102	231	97	74	54	25	25
11	2090	127	204	311	363	100	191	92	74	40	22	25
12	1180	111	190	518	292	120	151	90	69	41	22	25
13	686	102	174	513	271	247	202	100	64	30	22	33
14	454	93	162	398	265	479	477	176	58	26	28	30
15	334	90	249	593	221	838	894	280	101	26	26	22
16	257	88	376	1250	160	1110	958	179	82	26	22	23
17	210	88	349	1570	170	1930	582	134	62	26	36	24
18	461	82	482	1110	225	3020	407	193	56	25	24	24
19	453	81	806	748	525	2810	474	113	49	25	71	21
20	318	79	655	657	756	1790	913	98	43	25	28	21
21	243	77	972	672	557	1200	744	82	38	25	25	19
22	225	90	1680	520	420	1090	495	194	49	26	24	19
23	213	80	1250	399	332	1560	401	681	77	24	24	22
24	191	74	691	312	265	1400	341	287	56	25	22	20
25	183	80	450	230	231	913	269	355	53	26	21	21
26	176	80	335	217	197	847	231	342	45	25	27	20
27	172	172	268	191	179	940	211	272	40	22	25	19
28	165	662	251	182	174	1070	194	181	35	21	24	19
29	163	951	1500	162	---	692	188	153	32	24	25	17
30	155	586	6770	152	---	460	153	139	29	25	41	19
31	82	---	6850	127	---	350	---	660	---	24	24	---
TOTAL	11155	5487	29997	19300	9724	24389	10653	6068	4242	1305	876	673
MEAN	360	183	968	623	347	787	355	196	141	42.1	28.3	22.4
MAX	2090	951	6850	3120	870	3020	958	681	1050	137	75	33
MIN	37	74	162	127	121	100	151	82	29	21	21	17
CFSM	1.49	.76	4.00	2.57	1.44	3.25	1.47	.81	.58	.17	.12	.09
IN.	1.71	.84	4.61	2.97	1.49	3.75	1.64	.93	.65	.20	.13	.10

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 1991, BY WATER YEAR (WY)

	MEAN	87.5	167	278	240	358	454	417	257	228	140	89.5	87.1
MAX	469	949	968	1375	1097	1376	1117	626	1432	606	383	879	
(WY)	1970	1986	1991	1974	1990	1982	1957	1989	1958	1962	1973	1989	
MIN	11.2	15.5	13.8	16.5	25.8	67.4	71.7	53.6	28.2	28.6	25.2	12.8	
(WY)	1957	1957	1964	1961	1964	1981	1966	1988	1988	1988	1966	1956	

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1956 - 1991

ANNUAL TOTAL	149238												
ANNUAL MEAN	409												
HIGHEST ANNUAL MEAN										233			
LOWEST ANNUAL MEAN										440			1974
HIGHEST DAILY MEAN										89.7			1966
LOWEST DAILY MEAN										6970			Feb 24 1985
ANNUAL SEVEN-DAY MINIMUM										7.2			Sep 30 1956
INSTANTANEOUS PEAK FLOW										8.3			Dec 28 1963
INSTANTANEOUS PEAK STAGE										8100			Feb 10 1959
ANNUAL RUNOFF (CFSM)										16.95			Dec 30 1990
ANNUAL RUNOFF (INCHES)										.96			
10 PERCENT EXCEEDS										13.07			
50 PERCENT EXCEEDS										548			
90 PERCENT EXCEEDS										86			
										25			

LOCATION.--Lat 40°27'50", long 86°38'15", in SE¼SE¼ sec.4, T.23 N., R.2 W., Carroll County, on left bank 200 ft downstream from bridge on State Highway 39, 0.5 mi northwest of Owasco, and 15 mi upstream from South Fork Wildcat Creek.

PERIOD OF RECORD.--October 1943 to September 1973. Annual maximum, water years 1975-81. October 1988 to current year. Prior to March 1944 monthly discharge only, published in WSP 1305.
 REVISIONS.--None.

GAGE.--Water-stage recorder. Datum of gage is 624.63 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1950, nonrecording gage at site 500 ft upstream at same datum.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 18, 1943, reached a stage of 14.00 ft, from floodmarks.

e Estimated

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1945 - 1991	
ANNUAL TOTAL	227653		200522			
ANNUAL MEAN	624		549		370	
HIGHEST ANNUAL MEAN					733	1950
LOWEST ANNUAL MEAN					104	1954
HIGHEST DAILY MEAN	9160	Dec 31	9160	Dec 31	9850	Jan 5 1950
LOWEST DAILY MEAN	66	Oct 2	34	Sep 29	12	Oct 23 1944
ANNUAL SEVEN-DAY MINIMUM	70	Sep 27	35	Sep 24	15	Sep 23 1954
INSTANTANEOUS PEAK FLOW			9650	Dec 31	10200	Jan 5 1950
INSTANTANEOUS PEAK STAGE			12.04	Dec 31	13.30	Jan 5 1950
ANNUAL RUNOFF (CFSM)	1.58		1.39		.94	
ANNUAL RUNOFF (INCHES)	21.39		18.84		12.71	
10 PERCENT EXCEEDS	1430		1230		885	
50 PERCENT EXCEEDS	334		302		157	
90 PERCENT EXCEEDS	109		42		38	

LOCATION.--Lat 40°25'04", long 86°46'05", in SW1/4 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 mi².

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.--Records good. Backwater from Middle Fork at times on peaks.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1943 reached a stage of 16.8 ft, from floodmarks, discharge, 17,900 ft³/s by contracted-opening measurement.

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR			FOR 1991 WATER YEAR			WATER YEARS 1944 - 1991		
ANNUAL TOTAL	146582			116962					
ANNUAL MEAN	402			320			242		
HIGHEST ANNUAL MEAN							473		
LOWEST ANNUAL MEAN							79.2		
HIGHEST DAILY MEAN	8280 Dec 30			8280 Dec 30			11000 May 2 1983		
LOWEST DAILY MEAN	42 Oct 3			22 Sep 10			15 Sep 19 1944		
ANNUAL SEVEN-DAY MINIMUM	44 Sep 27			24 Sep 6			16 Sep 17 1944		
INSTANTANEOUS PEAK FLOW				8880 Dec 30			15100 May 2 1983		
INSTANTANEOUS PEAK STAGE				13.62 Dec 30			15.68 May 2 1983		
ANNUAL RUNOFF (CFSM)	1.65			1.32			1.99		
ANNUAL RUNOFF (INCHES)	22.44			17.91			13.51		
10 PERCENT EXCEEDS	777			623			536		
50 PERCENT EXCEEDS	221			194			109		
90 PERCENT EXCEEDS	67			30			34		

03335000 WILDCAT CREEK NEAR LAFAYETTE, IN

LOCATION.--Lat 40°26'26", long 86°49'45", in SW¼ 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 mi².

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.--Records fair.

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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	141	391	1500	12500	e500	636	1020	562	1150	199	e83	91
2	138	342	1140	8130	e490	654	886	536	1290	251	e85	99
3	136	389	1560	3250	e520	662	796	495	1390	272	e86	98
4	214	345	2640	2110	735	621	737	502	1260	284	90	93
5	287	713	2280	1610	1060	591	729	538	799	244	86	90
6	222	1430	1730	1300	1380	582	709	623	598	221	101	89
7	207	1080	1310	1080	1930	570	659	581	491	198	103	88
8	255	875	1080	922	1780	532	643	513	425	183	129	82
9	1170	719	917	837	1520	513	697	477	378	225	138	78
10	4280	622	813	781	1300	497	674	453	349	285	152	76
11	4330	551	738	797	1120	480	621	437	326	236	121	73
12	3460	495	693	1390	970	547	574	469	314	214	103	77
13	2310	445	645	1280	895	2360	570	447	307	191	95	90
14	1610	416	587	1120	879	3270	770	443	289	176	89	216
15	1230	398	755	1320	e740	3620	2090	446	294	154	88	233
16	971	387	1080	2350	e600	3420	1990	553	424	142	86	148
17	823	372	1060	3030	e620	3350	1670	535	391	132	86	124
18	1750	359	1270	2690	695	5290	1260	549	308	125	86	113
19	1560	352	1750	2130	1060	5550	1030	527	272	e116	131	106
20	1240	346	1740	1790	1430	5000	1040	435	257	e114	160	112
21	982	331	1890	1530	1390	3520	1240	381	240	e110	163	118
22	807	338	4120	1300	1180	2450	1170	356	231	e105	130	114
23	700	349	e3500	1180	995	3000	974	351	249	e103	113	115
24	653	337	e2300	991	886	3070	898	655	637	e99	107	105
25	578	322	e1800	831	790	2570	813	619	393	e99	102	105
26	531	314	e1300	e740	720	2170	727	682	314	e95	93	104
27	498	335	e1150	e700	676	2790	678	780	283	e93	92	105
28	476	1900	e1050	e640	649	2280	641	614	246	e93	85	105
29	454	2610	3600	e600	---	2020	620	537	228	e93	92	107
30	437	2020	14400	e550	---	1510	594	544	217	e88	101	109
31	429	---	16300	e530	---	1200	---	690	---	e83	96	---
TOTAL	32879	19883	76698	60009	27510	65325	27520	16330	14350	5023	3272	3263
MEAN	1061	663	2474	1936	982	2107	917	527	478	162	106	109
MAX	4330	2610	16300	12500	1930	5550	2090	780	1390	285	163	233
MIN	136	314	587	530	490	480	570	351	217	83	83	73
CFSM	1.34	.83	3.12	2.44	1.24	2.65	1.16	.66	.60	.20	.13	.14
IN.	1.54	.93	3.59	2.81	1.29	3.06	1.29	.77	.67	.24	.15	.15

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 1991, BY WATER YEAR (WY)

	311	510	866	791	1133	1414	1306	908	808	511	345	307
MEAN	1298	2519	2474	3711	3227	3991	3657	2614	5210	2495	1511	2546
MAX	1970	1986	1991	1974	1976	1982	1964	1983	1958	1957	1958	1989
(WY)	67.9	85.6	67.0	61.6	104	290	310	231	130	84.4	79.8	68.8
MIN	1964	1964	1964	1977	1963	1981	1971	1976	1988	1977	1966	1956
(WY)												

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1955 - 1991	
ANNUAL TOTAL	439132		352062		765	
ANNUAL MEAN	1203		965		1359	
HIGHEST ANNUAL MEAN					310	
LOWEST ANNUAL MEAN					1987	
HIGHEST DAILY MEAN	16300	Dec 31	16300	Dec 31	22100	Jun 10 1958
LOWEST DAILY MEAN	136	Oct 3	73	Sep 11	47	Sep 6 1964
ANNUAL SEVEN-DAY MINIMUM	144	Sep 27	80	Sep 6	51	Dec 20 1963
INSTANTANEOUS PEAK FLOW			16900	Dec 31	25000	Jun 10 1958
INSTANTANEOUS PEAK STAGE			18.84	Dec 31	21.52	Jun 10 1958
ANNUAL RUNOFF (CFSM)	1.52		1.21		.96	
ANNUAL RUNOFF (INCHES)	20.57		16.49		13.09	
10 PERCENT EXCEEDS	2490		2120		1740	
50 PERCENT EXCEEDS	693		562		355	
90 PERCENT EXCEEDS	228		99		111	

03335500 WABASH RIVER AT LAFAYETTE, IN

LOCATION.--Lat 40°25'19", long 86°53'49", in NE1/4 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 mi².

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.--Records good except for estimated daily discharges, which are poor. Flow partially regulated by upstream reservoirs and power development.

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 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3220	5500	13200	70300	e5000	6350	13500	6870	18100	2230	1010	1180
2	3100	3890	12600	54200	2900	6690	10900	6220	20500	2160	974	1130
3	2980	4150	13200	40000	2970	7970	8180	6310	16900	2980	1020	1120
4	3610	6180	19500	30400	3380	8250	7680	5970	14600	3070	968	1490
5	3810	8330	19400	25400	5030	7720	7440	5900	12500	3260	985	1650
6	6320	15900	18000	23500	8350	7200	7580	6490	11500	2930	1020	1240
7	7950	17000	16800	22300	12800	6970	7620	6120	10500	2640	1130	1180
8	6960	13000	15200	21700	14200	6040	7290	5960	8470	2570	1330	1160
9	8930	10800	13200	20900	13200	5900	7240	5510	7010	3580	1850	1190
10	23900	9850	11000	20100	11200	5480	7820	5470	5190	4960	1720	1080
11	37800	9190	9280	19300	e8900	5460	7680	5300	4480	4560	1710	1070
12	36900	8410	7930	20600	e8400	5500	6880	5290	4140	3370	1530	1080
13	27800	7320	6840	21000	e8600	7790	6570	5160	4050	2700	1390	1120
14	21000	7040	6160	20500	8230	10600	6960	5010	3740	2290	1330	1480
15	16700	6790	6310	21100	7690	11100	11500	5590	3550	2040	1220	1620
16	15000	6970	7880	25100	6160	11500	18300	5330	3890	1780	1170	1740
17	14900	6630	10700	31500	6100	13500	18700	5870	3740	1610	1250	1590
18	16300	6440	12000	28900	6370	22800	17100	8000	3490	1620	1270	1570
19	19300	6110	13300	23600	8130	31700	14800	10600	3300	1480	1770	1850
20	16700	5520	15400	22300	14700	32100	12900	7860	3100	1530	1860	1660
21	14600	5460	15400	e20400	18000	26400	16400	6600	2740	1280	1680	1730
22	13500	5580	22200	e19000	17300	21600	15900	5750	2640	1310	1660	1800
23	13300	5500	23800	e18000	16100	20300	15400	6490	2400	1210	1470	2030
24	12900	5450	e20000	e17500	13300	21300	14000	7840	2650	1140	1340	1840
25	11600	5200	e16900	e17100	9760	20700	12200	7650	2380	1210	1210	1760
26	11000	5290	e14700	e16900	8220	19700	10900	9930	2200	1140	1220	1780
27	9620	5450	e13500	e16200	7360	23000	8740	10100	2280	1150	1170	1810
28	9160	8270	14300	e14800	6850	23000	7810	9020	2050	1140	1080	1850
29	8100	16400	20000	e13000	---	20400	7400	7460	2040	1010	1130	1970
30	8290	15300	54800	e11000	---	18300	7230	6740	2020	1020	1160	1950
31	7020	---	75200	e8000	---	15500	---	7450	---	1100	1150	---
TOTAL	412270	242920	538700	734600	259200	450820	322620	209860	186150	66070	40777	45720
MEAN	13300	8097	17380	23700	9257	14540	10750	6770	6205	2131	1315	1524
MAX	37800	17000	75200	70300	18000	32100	18700	10600	20500	4960	1860	2030
MIN	2980	3890	6160	8000	2900	5460	6570	5010	2020	1010	968	1070
CFSM	1.83	1.11	2.39	3.26	1.27	2.00	1.48	.93	.85	.29	.18	.21
IN.	2.11	1.24	2.76	3.76	1.33	2.31	1.65	1.07	.95	.34	.21	.23

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 1991, BY WATER YEAR (WY)

	MEAN	2923	3979	6748	8391	9696	11890	11680	8240	6278	3771	2619	2565
MAX	14750	18800	25250	42040	28000	33560	28000	37290	31830	14820	12090	20120	
(WY)	1927	1973	1928	1950	1959	1982	1957	1943	1958	1957	1990	1926	
MIN	652	828	747	735	1232	1663	3135	1460	1029	655	484	435	
(WY)	1964	1965	1964	1977	1964	1941	1941	1934	1934	1936	1941	1941	

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1924 - 1991	
ANNUAL TOTAL	4145670		3509707			
ANNUAL MEAN	11360		9616		6546	
HIGHEST ANNUAL MEAN					12340	
LOWEST ANNUAL MEAN					1631	
HIGHEST DAILY MEAN	75200		75200		129000	
LOWEST DAILY MEAN	2500		968		399	
ANNUAL SEVEN-DAY MINIMUM	2970		1010		404	
INSTANTANEOUS PEAK FLOW			77400		131000	
INSTANTANEOUS PEAK STAGE			23.96		28.47	
ANNUAL RUNOFF (CFSM)	1.56		1.32		.90	
ANNUAL RUNOFF (INCHES)	21.22		17.97		12.24	
10 PERCENT EXCEEDS	20100		20500		15800	
50 PERCENT EXCEEDS	8440		7020		3500	
90 PERCENT EXCEEDS	4140		1250		1120	

03335677 MARSHALL DITCH NEAR MONTMORENCI, IN

LOCATION.--Lat 40°30'42", long 87°01'10", in NW1/4 sec.20, T.24 N., R.5 W., Tippecanoe County, Hydrologic Unit 05120108, on right bank at mile 1.7, and 2.9 mi northeast of Montmorenci.

DRAINAGE AREA.--1.58 mi².

PERIOD OF RECORD.--October 1990 to current year.

GAGE.--Data Collection Platform. Datum of gage is 710.00 ft. above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for estimated daily discharges which are poor. Minimum daily discharge, no flow for many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.01	.23	.68	1.8	e.29	.56	.66	.51	1.5	.06	.02	.00
2	.01	.21	.54	1.4	.97	.45	.59	.46	.96	.55	.01	.00
3	.04	.19	3.6	1.0	1.5	.43	.57	.43	.75	.42	.00	.00
4	.12	.20	1.6	e.74	1.2	.40	.59	.42	.59	.21	.00	.00
5	.03	3.3	1.1	e.66	1.2	.46	.55	.52	.52	.15	.00	.00
6	.02	1.8	.82	e.62	1.3	.30	.55	.50	.49	.12	.00	.00
7	.07	1.1	.69	.61	1.1	.28	.52	.40	.49	.10	.00	.00
8	.16	.81	.60	.61	.93	.30	.54	.38	.42	.08	.02	.00
9	11	.71	.54	.51	.87	.25	.53	.36	.39	.07	.02	.00
10	27	.58	.49	.49	.82	.26	.40	.34	.38	.07	.02	.00
11	3.5	.47	.50	1.2	.66	.32	.35	.41	.38	.07	.01	.00
12	1.9	.39	.48	1.1	.60	10	.35	.54	.34	.06	.01	.00
13	1.4	.36	.36	.70	.50	8.1	.46	.48	.30	.06	.01	.00
14	1.0	.35	.37	2.7	.39	19	2.6	.42	.31	.05	.00	.00
15	.72	.32	1.2	4.5	e.39	6.3	3.4	.39	.30	.04	.00	.00
16	.64	.30	.80	13	e.35	2.9	1.6	.39	.27	.04	.00	.00
17	.85	.26	.92	2.7	e.54	17	1.2	.36	.24	.04	.00	.00
18	2.9	.27	1.5	1.5	1.1	3.9	1.0	3.3	.20	.04	.00	.00
19	1.3	.24	1.2	1.3	.85	2.3	.91	1.0	.18	.04	.00	.00
20	.93	.22	1.0	1.3	.76	1.8	.78	.71	.17	.04	.00	.00
21	.74	.24	5.2	e.80	.64	1.4	.74	.59	.16	.04	.00	.00
22	.62	.22	3.2	e.65	.60	4.3	.70	.63	.15	.02	.00	.00
23	.54	.23	1.6	e.55	.54	2.5	.67	1.8	.11	.02	.00	.00
24	.47	.20	1.2	e.49	.47	1.6	.57	1.2	.11	.02	.00	.00
25	.39	.16	.94	e.44	.45	1.3	.54	.76	.10	.03	.00	.00
26	.37	.17	e.68	e.40	.42	4.7	.59	.62	.09	.03	.00	.00
27	.34	.28	e.62	e.36	.41	2.2	.54	.52	.08	.07	.00	.00
28	.26	3.5	e.55	e.33	.42	1.4	.51	.49	.07	.02	.00	.00
29	.26	1.2	128	e.31	---	1.0	.61	.49	.07	.02	.00	.00
30	.26	.89	29	e.29	---	.81	.52	1.4	.06	.03	.00	.00
31	.23	---	2.9	e.27	---	.77	---	8.0	---	.03	.00	---
TOTAL	58.08	19.40	192.88	43.33	20.27	97.29	24.14	28.82	10.18	2.64	0.12	0.00
MEAN	1.87	.65	6.22	1.40	.72	3.14	.80	.93	.34	.085	.004	.000
MAX	27	3.5	128	13	1.5	19	3.4	8.0	1.5	.55	.02	.00
MIN	.01	.16	.36	.27	.29	.25	.35	.34	.06	.02	.00	.00
CFSM	1.19	.41	3.94	.88	.46	1.99	.51	.59	.21	.05	.00	.00
IN.	1.37	.46	4.54	1.02	.48	2.29	.57	.68	.24	.06	.00	.00

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1991, BY WATER YEAR (WY)

MEAN	1.87	.65	6.20	1.40	.70	3.14	.80	.91	.35	.11	.005	.000
MAX	1.87	.65	6.20	1.40	.70	3.14	.80	.91	.35	.11	.005	.000
(WY)	1991	1991	1991	1991	1991	1991	1991	1991	1991	1991	1991	1991
MIN	1.87	.65	6.20	1.40	.70	3.14	.80	.91	.35	.11	.005	.000
(WY)	1991	1991	1991	1991	1991	1991	1991	1991	1991	1991	1991	1991

SUMMARY STATISTICS

FOR 1991 WATER YEAR

WATER YEARS 1990 - 1991

ANNUAL TOTAL	497.15	
ANNUAL MEAN	1.36	1.36
HIGHEST ANNUAL MEAN		1.36
LOWEST ANNUAL MEAN		1.36
HIGHEST DAILY MEAN	128	128
LOWEST DAILY MEAN	.00	.00
ANNUAL SEVEN-DAY MINIMUM	.00	.00
INSTANTANEOUS PEAK FLOW	374	374
INSTANTANEOUS PEAK STAGE	5.57	5.57
ANNUAL RUNOFF (CFSM)	.86	.86
ANNUAL RUNOFF (INCHES)	11.71	11.68
10 PERCENT EXCEEDS	1.8	1.8
50 PERCENT EXCEEDS	.42	.43
90 PERCENT EXCEEDS	.00	.00

03335678 INDIAN CREEK NEAR MONTMORENCI, IN

LOCATION.--Lat 40°25'53", long 87°02'16", in SE1/4 sec.13, T.23 N., R.6 W., Tippecanoe County, Hydrologic Unit 05120108, on right bank 1.8 mile upstream from mouth, 1.4 mile downstream from Goose Creek and 3.0 miles southwest on Montmorenci.

DRAINAGE AREA.--27.8 mi².

PERIOD OF RECORD.--October 1990 to current year.

GAGE.--Data-Collection Platform. Datum of gage is 530.05 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.34	5.0	13	66	e11	13	23	14	19	1.8	1.2	.15
2	.26	5.5	10	43	e11	16	21	13	14	2.1	.75	.15
3	.69	5.1	73	29	16	14	21	12	15	1.9	.98	.23
4	5.3	5.0	36	e20	19	14	21	13	9.7	2.1	2.2	.19
5	1.4	76	22	e18	25	13	22	14	8.0	1.9	2.5	.12
6	.62	49	18	e15	29	13	21	14	6.9	1.7	3.4	.12
7	4.3	23	15	14	30	12	21	12	6.2	1.6	2.3	.12
8	8.1	15	13	14	25	11	25	11	5.9	1.6	17	.08
9	90	13	12	13	24	11	26	11	5.7	1.8	3.4	.11
10	238	11	11	12	22	10	22	11	5.4	1.8	.67	.12
11	70	9.3	11	28	19	9.9	20	15	5.2	1.8	.46	.11
12	36	8.1	11	27	19	44	20	20	5.0	4.5	.37	.12
13	22	6.9	9.4	17	19	282	22	14	4.6	3.6	.37	.29
14	16	6.4	7.9	25	18	170	49	12	4.1	3.1	.37	.19
15	12	5.8	26	47	e17	148	75	11	3.8	2.8	.37	.12
16	11	5.5	19	170	e16	95	41	11	4.3	2.7	.36	.14
17	10	5.0	18	65	e15	120	25	11	3.8	2.4	.42	.17
18	52	4.7	31	36	17	200	20	92	3.4	2.4	.45	.26
19	24	4.7	27	31	27	69	20	24	e3.0	2.3	.95	.26
20	16	4.3	20	33	22	51	17	15	e2.9	2.3	.48	.29
21	13	4.1	93	29	20	43	16	12	2.8	2.1	.26	.31
22	10	4.7	81	e25	18	55	15	11	2.8	2.0	.19	.38
23	9.4	4.1	38	e23	16	95	15	12	2.6	1.5	.15	.39
24	8.3	4.1	e31	e20	16	47	14	12	2.3	2.2	.15	.31
25	7.4	3.8	e25	e18	14	36	13	11	2.0	2.5	.14	.32
26	6.7	3.5	e22	e16	15	79	13	9.5	2.0	2.0	.14	.32
27	6.5	4.9	e20	e15	14	60	13	8.2	1.9	1.7	.15	.35
28	5.9	56	e18	e14	13	39	13	7.2	1.7	1.6	.15	.40
29	5.1	26	997	e14	---	31	14	9.5	1.6	1.7	.16	.37
30	4.9	16	686	e13	---	26	13	12	1.5	1.9	.20	.36
31	4.9	---	118	e12	---	25	---	74	---	1.6	.20	---
TOTAL	700.11	395.5	2532.3	922	527	1851.9	671	528.4	157.1	67.0	40.89	6.85
MEAN	22.6	13.2	81.7	29.7	18.8	59.7	22.4	17.0	5.24	2.16	1.32	.23
MAX	238	76	997	170	30	282	75	92	19	4.5	.17	.40
MIN	.26	3.5	7.9	12	11	9.9	13	7.2	1.5	1.5	.14	.08
CFSM	.81	.47	2.94	1.07	.68	2.15	.80	.61	.19	.08	.05	.01
IN.	.94	.53	3.39	1.23	.71	2.48	.90	.71	.21	.09	.05	.01

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1991, BY WATER YEAR (WY)

MEAN	21.7	12.8	81.7	28.6	18.3	56.8	21.7	16.7	5.23	2.17	1.30	.21
MAX	21.7	12.8	81.7	28.6	18.3	56.8	21.7	16.7	5.23	2.17	1.30	.21
(WY)	1991	1991	1991	1991	1991	1991	1991	1991	1991	1991	1991	1991
MIN	21.7	12.8	81.7	28.6	18.3	56.8	21.7	16.7	5.23	2.17	1.30	.21
(WY)	1991	1991	1991	1991	1991	1991	1991	1991	1991	1991	1991	1991

SUMMARY STATISTICS

FOR 1991 WATER YEAR

WATER YEARS 1990 - 1991

ANNUAL TOTAL	8400.05		
ANNUAL MEAN	23.0		22.4
HIGHEST ANNUAL MEAN			22.4
LOWEST ANNUAL MEAN			22.4
HIGHEST DAILY MEAN	997	Dec 29	1010
LOWEST DAILY MEAN	.08	Sep 8	.10
ANNUAL SEVEN-DAY MINIMUM	.11	Sep 5	.13
INSTANTANEOUS PEAK FLOW	1660	Dec 29	1660
INSTANTANEOUS PEAK STAGE	7.60	Dec 29	7.60
ANNUAL RUNOFF (CFSM)	.83		.81
ANNUAL RUNOFF (INCHES)	11.24		10.96
10 PERCENT EXCEEDS	43		40
50 PERCENT EXCEEDS	11		11
90 PERCENT EXCEEDS	.33		.29

03335679 LITTLE PINE CREEK AT GREEN HILL, IN

LOCATION.--Lat 40°24'34", long 87°06'53", in NE1SE1 sec.29, T.23 N., R.6 W., Warren County, Hydrologic Unit 05120108, on right bank at southwest edge of Green Hill, 1.2 mile downstream from Armstrong Creek and at mile 6.1.

DRAINAGE AREA.--42.3 mi².

PERIOD OF RECORD.--October 1990 to current year.

GAGE.--Data-Collection Platform. Datum of gage is 599.90 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	13	46	271	e22	23	46	27	122	e3.6	e3.0	e.87
2	1.9	12	35	196	e23	34	40	25	69	e3.4	e2.6	e.87
3	4.0	12	105	151	41	32	35	24	52	e3.2	e3.1	e1.1
4	19	12	107	113	57	29	33	29	40	e5.2	e4.5	e1.0
5	12	82	70	94	70	26	33	29	32	e3.9	e6.0	e.76
6	7.9	145	58	80	72	27	30	32	27	e3.6	e9.4	e.76
7	14	85	45	68	70	22	29	27	24	e3.0	e8.0	e.75
8	23	53	38	61	59	19	33	26	23	e2.7	e2.1	e.55
9	130	41	32	54	54	18	37	24	21	e2.4	e6.0	e.64
10	272	29	30	48	48	19	29	22	20	e2.4	e2.7	e.68
11	263	23	27	63	39	17	25	22	18	e2.7	e2.7	e.70
12	193	19	27	80	34	30	50	52	17	e8.5	e2.7	e.70
13	144	17	25	56	36	235	39	40	15	e6.0	e2.7	e1.0
14	99	16	23	59	34	251	65	31	14	e5.1	e2.7	e1.3
15	72	15	51	101	e24	256	99	30	14	e4.8	e2.7	e1.0
16	58	15	50	252	e22	192	88	33	13	e4.6	e2.7	e.80
17	52	13	45	207	e24	158	66	45	12	e4.4	e2.2	e.86
18	113	12	66	122	e27	272	56	125	11	e4.3	e2.4	e1.0
19	93	12	64	98	47	195	62	132	9.9	e4.2	e4.8	e1.2
20	69	11	53	e79	40	125	48	73	8.8	e4.0	e3.0	e1.2
21	52	11	109	e62	36	99	41	52	7.8	e3.6	e2.3	e1.2
22	41	12	205	e51	33	94	38	43	e7.3	e3.3	e1.5	e1.3
23	31	11	125	e45	28	143	35	62	e7.0	e3.0	e1.1	e1.5
24	24	11	93	e40	28	101	32	93	e6.2	e2.8	e.88	e1.3
25	20	9.7	e67	e35	25	82	28	57	e6.0	e4.7	e.88	e1.0
26	19	8.5	e59	e32	24	113	29	47	e5.2	e3.9	e.88	e1.4
27	18	10	e48	e28	24	124	28	38	e4.8	e3.4	e.88	e1.5
28	17	104	e44	e26	23	89	26	32	e4.3	e3.1	e.88	e1.6
29	15	87	649	e25	---	71	27	29	e4.2	e3.9	e.91	e1.6
30	15	57	1250	e24	---	57	26	34	e3.7	e4.5	e1.0	e1.6
31	14	---	482	e23	---	51	---	181	---	e3.7	e1.0	---
TOTAL	1907.9	958.2	4128	2644	1064	3004	1253	1516	619.2	121.9	107.11	31.74
MEAN	61.5	31.9	133	85.3	38.0	96.9	41.8	48.9	20.6	3.93	3.46	1.06
MAX	272	145	1250	271	72	272	99	181	122	8.5	21	1.6
MIN	1.9	8.5	23	23	22	17	25	22	3.7	2.4	.88	.55
CFSM	1.45	.76	3.15	2.02	.90	2.29	.99	1.16	.49	.09	.08	.03
IN.	1.68	.84	3.63	2.33	.94	2.64	1.10	1.33	.54	.11	.09	.03

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1991, BY WATER YEAR (WY)

	1990	1991	1991	1991	1991	1991	1991	1991	1991	1991	1991	1991
MEAN	61.5	31.9	133	85.3	38.0	96.9	41.8	48.9	20.6	3.93	3.46	1.06
MAX	61.5	31.9	133	85.3	38.0	96.9	41.8	48.9	20.6	3.93	3.46	1.06
(WY)	1991	1991	1991	1991	1991	1991	1991	1991	1991	1991	1991	1991
MIN	61.5	31.9	133	85.3	38.0	96.9	41.8	48.9	20.6	3.93	3.46	1.06
(WY)	1991	1991	1991	1991	1991	1991	1991	1991	1991	1991	1991	1991

SUMMARY STATISTICS

FOR 1991 WATER YEAR

WATER YEARS 1990 - 1991

ANNUAL TOTAL	17355.05	
ANNUAL MEAN	47.5	47.5
HIGHEST ANNUAL MEAN		47.5
LOWEST ANNUAL MEAN		47.5
HIGHEST DAILY MEAN	1250	1250
LOWEST DAILY MEAN	.55	.55
ANNUAL SEVEN-DAY MINIMUM	.68	.68
INSTANTANEOUS PEAK FLOW	1490	1490
INSTANTANEOUS PEAK STAGE	10.03	10.03
ANNUAL RUNOFF (CFSM)	1.12	1.12
ANNUAL RUNOFF (INCHES)	15.26	15.27
10 PERCENT EXCEEDS	106	106
50 PERCENT EXCEEDS	26	26
90 PERCENT EXCEEDS	1.5	1.5

03335690 MUD PINE CREEK NEAR OXFORD, IN

LOCATION.--Lat 40°31'24", long 87°20'30", in NE1/4 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 mi².

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.--Records good except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	17	50	163	e22	31	45	26	30	3.9	1.3	1.0
2	1.4	17	40	120	27	82	41	24	26	4.6	1.3	.82
3	1.6	16	102	90	66	68	39	23	25	5.7	1.3	.84
4	3.3	16	82	75	83	54	40	24	21	3.8	1.7	1.4
5	1.7	166	58	e66	100	48	39	31	18	3.4	1.5	1.3
6	1.5	171	49	e55	88	46	37	29	17	3.0	2.6	.89
7	3.7	102	40	e51	80	35	36	24	16	2.6	2.3	.73
8	6.0	71	35	e45	65	32	35	22	15	2.4	4.6	.63
9	159	58	32	e42	62	31	35	22	14	2.3	11	.59
10	571	47	30	39	61	28	29	22	14	2.3	2.5	.78
11	258	38	29	56	51	28	27	21	13	2.2	1.9	.87
12	153	32	28	62	44	41	27	22	14	4.0	1.7	.70
13	107	30	24	45	45	212	30	22	11	2.8	1.6	.68
14	78	28	22	54	38	167	68	21	11	2.3	1.5	1.8
15	59	27	61	116	29	221	255	19	14	2.1	1.4	.90
16	50	26	49	395	e27	247	152	19	46	2.0	1.3	.49
17	46	22	46	178	e32	269	91	20	17	1.8	1.7	.32
18	101	23	54	108	e40	447	69	66	13	1.7	2.0	.45
19	67	22	49	87	79	178	59	46	11	1.6	2.7	.45
20	54	19	45	81	63	123	49	34	9.6	1.5	2.5	.33
21	45	21	129	63	55	95	45	29	9.1	1.5	1.7	.44
22	37	20	171	e50	50	83	42	31	9.3	1.5	1.5	.69
23	33	20	96	e40	45	163	38	41	7.9	1.3	1.5	1.1
24	30	18	e62	e36	42	106	33	38	6.8	1.4	1.3	.85
25	26	16	e50	e34	36	83	30	157	6.2	1.4	1.2	.70
26	24	15	e40	e31	33	130	30	117	5.7	1.3	1.1	.52
27	24	19	e37	e28	32	125	30	134	5.3	1.3	1.1	.45
28	20	167	e35	e26	30	86	28	66	4.8	1.3	1.2	.52
29	19	92	1430	e25	---	67	31	49	4.6	1.3	1.2	.54
30	19	64	1520	e23	---	55	27	41	4.3	1.4	1.2	.47
31	18	---	294	e22	---	51	---	34	---	1.3	1.1	---
TOTAL	2018.6	1400	4789	2306	1425	3432	1537	1274	419.6	71.0	62.5	22.25
MEAN	65.1	46.7	154	74.4	50.9	111	51.2	41.1	14.0	2.29	2.02	.74
MAX	571	171	1520	395	100	447	255	157	46	5.7	11	1.8
MIN	1.4	15	22	22	22	28	27	19	4.3	1.3	1.1	.32
CFSM	1.65	1.18	3.92	1.89	1.29	2.81	1.30	1.04	.35	.06	.05	.02
IN.	1.91	1.32	4.52	2.18	1.35	3.24	1.45	1.20	.40	.07	.06	.02

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 1991, BY WATER YEAR (WY)

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
MEAN	13.3	25.2	50.5	34.8	63.8	76.4	61.9	59.4	45.9	13.4	16.7	14.6								
MAX	91.2	169	154	123	158	237	147	159	145	66.7	122	94.4								
(WY)	1978	1986	1991	1974	1990	1979	1979	1981	1980	1979	1981	1977								
MIN	.89	.79	.98	.47	3.41	6.54	17.2	8.49	2.85	.65	.79	.40								
(WY)	1981	1981	1977	1977	1977	1981	1977	1976	1988	1988	1988	1983								

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1972 - 1991

ANNUAL TOTAL	27060.1	18756.95	
ANNUAL MEAN	74.1	51.4	
HIGHEST ANNUAL MEAN			39.5
LOWEST ANNUAL MEAN			59.2
HIGHEST DAILY MEAN	2100	1520	16.2
LOWEST DAILY MEAN	1.3	.32	.10
ANNUAL SEVEN-DAY MINIMUM	1.4	.45	.24
INSTANTANEOUS PEAK FLOW			
INSTANTANEOUS PEAK STAGE			
ANNUAL RUNOFF (CFSM)	1.88	1.30	1.00
ANNUAL RUNOFF (INCHES)	25.55	17.71	13.63
10 PERCENT EXCEEDS	117	104	92
50 PERCENT EXCEEDS	31	28	14
90 PERCENT EXCEEDS	2.7	1.3	.93

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 mi².

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.--Records good. Flow partially regulated by upstream reservoirs and power development.

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 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3560	7160	15700	84600	10200	7620	14700	7430	11200	2410	1410	1190
2	3490	5670	13800	78200	8150	7560	12800	7080	18400	2580	1330	1220
3	3390	4540	14200	58400	7660	8280	9870	6520	18500	2540	1260	1230
4	3550	5050	17200	44000	8100	9150	8210	6530	15600	3160	1310	1230
5	3960	7250	20700	35800	9290	9080	7830	6310	13400	3270	1270	1500
6	4380	12500	20000	30200	11900	8560	7680	6480	11900	3360	1320	1610
7	7430	18100	18700	25600	16600	8100	7800	6790	11100	3100	1340	1310
8	8020	16800	17200	22200	18400	7670	8030	6370	9900	2800	1420	1270
9	9100	13100	16400	20200	18600	6980	8050	6090	8440	2800	1710	1250
10	18600	11100	15200	19500	18100	6830	7690	5680	7010	3880	1890	1250
11	26200	10200	12000	19100	16500	6520	8050	5630	5530	4900	1820	1180
12	31200	9420	9710	19100	e14000	6480	7680	5530	5030	4510	1810	1170
13	34500	8570	8180	19300	e12000	9710	7000	5500	4730	3500	1640	1180
14	33100	7700	e7400	19400	e9800	14000	7320	5320	4570	2910	1520	1280
15	28100	7440	e8600	19400	e8600	14300	9230	5300	4290	2540	1500	1530
16	21300	7270	e10000	20900	e7800	13900	15100	5660	4210	2330	1420	1630
17	17200	7320	e11600	25500	e7600	14200	18700	6120	4470	2070	1360	1710
18	17000	7030	e13500	30100	e7800	17800	18300	9230	4270	1930	1360	1550
19	19400	6790	15300	30500	e8600	21700	16600	12200	4000	1850	1380	1530
20	19900	6440	16200	26500	11200	27500	14000	11400	3790	1830	1760	1710
21	17300	6050	17200	22900	16800	30100	13800	8670	3560	1790	1790	1620
22	15200	5950	20500	21000	17700	27700	15700	7270	3250	1670	1630	1670
23	14100	5970	24100	19800	17400	23100	15200	6500	3120	1640	1590	1760
24	13900	5930	24900	19400	16100	20300	14500	7910	2890	1560	1440	1880
25	12900	5840	21000	18900	12800	19600	12900	8450	3050	1510	1320	1740
26	11900	5670	16700	18500	10200	19300	11800	9000	2830	1520	1240	1680
27	10900	5850	15000	18200	8870	19500	10200	10600	2670	1470	1230	1700
28	9880	7490	14100	17300	8210	20300	8700	10200	2660	1480	1190	1750
29	9270	13100	19600	15400	---	19800	7980	9070	2490	1440	1120	1820
30	8450	17800	34400	13800	---	18800	7660	8350	2440	1340	1190	1890
31	8360	---	60000	12500	---	17400	---	8080	---	1330	1270	---
TOTAL	445540	259100	549090	846200	338980	461840	333080	231270	199300	75020	44840	45040
MEAN	14370	8637	17710	27300	12110	14900	11100	7460	6643	2420	1446	1501
MAX	34500	18100	60000	84600	18600	30100	18700	12200	18500	4900	1890	1890
MIN	3390	4540	7400	12500	7600	6480	7000	5300	2440	1330	1120	1170
CFSM	1.75	1.05	2.16	3.32	1.47	1.81	1.35	.91	.81	.29	.18	.18
IN.	2.02	1.17	2.49	3.83	1.53	2.09	1.51	1.05	.90	.34	.20	.20

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1991, BY WATER YEAR (WY)

	MEAN	3301	4414	7281	8933	11090	13350	13210	9852	7882	4713	3269	2807
MAX	14370	20110	22080	49700	34450	34840	28470	43540	36010	17520	12230	11960	
(WY)	1991	1973	1968	1950	1959	1982	1957	1943	1958	1957	1990	1989	
MIN	738	919	810	896	1357	1915	3536	1814	1542	1212	640	545	
(WY)	1965	1965	1964	1977	1963	1941	1941	1941	1988	1988	1941	1941	

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1940 - 1991

ANNUAL TOTAL	4612960	3829300	
ANNUAL MEAN	12640	10490	7486
HIGHEST ANNUAL MEAN			14980
LOWEST ANNUAL MEAN			1862
HIGHEST DAILY MEAN	60000	Dec 31	143000
LOWEST DAILY MEAN	2990	Jul 9	487
ANNUAL SEVEN-DAY MINIMUM	3630	Sep 28	497
INSTANTANEOUS PEAK FLOW			147000
INSTANTANEOUS PEAK STAGE			32.44
ANNUAL RUNOFF (CFSM)	1.54		.91
ANNUAL RUNOFF (INCHES)	20.88		12.38
10 PERCENT EXCEEDS	24600	20100	18100
50 PERCENT EXCEEDS	9540	8030	4300
90 PERCENT EXCEEDS	4700	1480	1400

033J9108 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 mi².

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.--Records good except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	25	47	101	e27	35	42	30	30	8.6	4.3	4.2
2	13	26	41	83	e32	41	39	28	26	8.4	4.2	3.7
3	17	25	105	70	48	36	38	27	24	8.7	4.2	3.9
4	74	26	67	62	62	34	39	31	21	8.3	4.7	4.7
5	24	118	50	e56	87	33	38	38	20	8.2	4.8	4.3
6	17	66	46	e53	104	34	36	62	19	7.7	12	3.9
7	61	42	42	51	87	30	35	39	18	7.2	7.4	3.7
8	44	34	38	49	67	29	42	34	18	7.1	7.0	3.5
9	112	31	36	47	58	29	42	31	17	7.3	7.5	3.7
10	269	28	34	45	53	28	35	29	17	8.5	6.8	4.0
11	73	26	33	88	47	29	33	28	17	8.9	6.0	4.1
12	51	24	32	86	43	45	32	28	17	12	5.4	3.9
13	42	23	30	61	46	205	37	26	15	8.9	5.1	4.3
14	36	23	28	66	46	95	53	25	15	8.0	5.3	5.8
15	32	22	76	91	e38	65	75	24	15	7.7	5.6	4.6
16	28	22	54	162	e34	53	53	25	16	7.2	5.1	4.2
17	28	22	51	104	e31	61	44	143	15	6.6	5.0	4.4
18	65	22	81	71	e42	95	40	476	14	6.2	4.9	4.7
19	39	21	71	65	67	63	41	83	13	5.9	5.3	5.0
20	33	21	56	68	52	53	37	58	12	5.7	6.3	5.0
21	30	21	212	60	47	48	35	46	12	5.6	5.6	5.0
22	28	23	131	e53	43	266	33	40	13	5.5	4.7	5.6
23	27	22	73	e48	40	195	33	60	13	5.0	4.4	6.7
24	26	21	e63	e42	39	85	31	50	11	4.9	4.2	5.9
25	25	21	e53	e41	36	64	30	38	11	5.4	4.1	5.9
26	25	20	e46	e38	35	212	30	32	11	4.9	3.9	5.5
27	25	33	e41	e37	34	110	31	28	10	4.6	4.1	5.5
28	25	211	e38	e35	35	72	30	26	10	4.6	4.2	6.0
29	24	78	850	e32	---	57	31	31	9.6	4.7	4.0	5.7
30	25	57	1140	e29	---	48	28	66	9.2	5.0	4.5	5.2
31	25	---	150	e28	---	45	---	42	---	4.5	4.9	---
TOTAL	1357	1154	3815	1922	1380	2295	1143	1724	468.8	211.8	165.5	142.6
MEAN	43.8	38.5	123	62.0	49.3	74.0	38.1	55.6	15.6	6.83	5.34	4.75
MAX	269	211	1140	162	104	266	75	476	30	12	12	6.7
MIN	13	20	28	28	27	28	28	24	9.2	4.5	3.9	3.5
CFSM	1.31	1.15	3.68	1.86	1.48	2.22	1.14	1.67	.47	.20	.16	.14
IN.	1.51	1.29	4.25	2.14	1.54	2.56	1.27	1.92	.52	.24	.18	.16

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1991, BY WATER YEAR (WY)

	MEAN	19.8	32.0	42.1	35.9	50.6	59.4	53.4	50.3	38.6	26.6	23.0	17.2
MAX	106	157	123	120	128	162	136	119	96.8	70.7	62.4	111	
(WY)	1978	1986	1991	1974	1985	1979	1972	1974	1980	1990	1979	1989	
MIN	6.21	6.35	5.93	4.04	8.28	10.2	10.7	9.98	6.25	5.07	3.03	4.71	
(WY)	1988	1977	1977	1977	1978	1981	1971	1987	1977	1988	1988	1983	

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1969 - 1991	
ANNUAL TOTAL	20280		15778.7			
ANNUAL MEAN	55.6		43.2		37.3	
HIGHEST ANNUAL MEAN					56.5	
LOWEST ANNUAL MEAN					16.4	
HIGHEST DAILY MEAN	1140	Dec 30	1140	Dec 30	1610	Oct 1 1977
LOWEST DAILY MEAN	11	Sep 3	3.5	Sep 8	2.1	Aug 25 1988
ANNUAL SEVEN-DAY MINIMUM	11	Aug 31	3.8	Sep 6	2.4	Aug 21 1988
INSTANTANEOUS PEAK FLOW			2100	Dec 29	2680	May 1 1983
INSTANTANEOUS PEAK STAGE			9.24	Dec 29	10.47	May 1 1983
ANNUAL RUNOFF (CFSM)	1.66		1.29		1.12	
ANNUAL RUNOFF (INCHES)	22.59		17.57		15.18	
10 PERCENT EXCEEDS	90		73		73	
50 PERCENT EXCEEDS	32		30		18	
90 PERCENT EXCEEDS	14		4.9		6.7	

03339280 PRAIRIE CREEK NEAR LEBANON, IN

LOCATION.--Lat 40°06'16", long 86°31'32", in NW¼SW¼ sec.10, T.19 N., R.1 W., Boone County, Hydrologic Unit 05120110, on right bank 50 ft upstream from bridge on County Road 450 North, 4.0 mi upstream from Deer Creek, 4.9 mi northwest of Lebanon, and 7.7 mi upstream from mouth.

DRAINAGE AREA.--33.2 mi².

PERIOD OF RECORD.--October 1987 to current year.

GAGE.--Water-stage recorder. Datum of gage is 860.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those for estimated daily discharges, which are poor. Maximum daily mean discharge for period of record is estimated.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.5	7.2	39	e220	e26	22	30	e20	59	3.6	2.2	2.5
2	3.6	7.5	28	e120	e24	33	26	e18	32	3.9	1.9	1.5
3	3.6	7.6	279	e70	e32	28	24	e16	24	3.5	2.4	2.0
4	35	7.5	172	e50	e30	24	25	e25	19	3.9	2.2	8.7
5	7.8	35	85	e43	e70	22	30	e24	15	3.5	1.8	1.7
6	3.8	24	59	e39	e180	23	27	e25	13	3.3	12	1.9
7	16	14	43	e36	e140	18	24	e15	12	3.2	5.8	1.9
8	11	11	35	e34	e100	16	32	e14	11	3.1	5.5	1.7
9	27	11	28	e31	e70	16	32	e13	11	3.1	8.8	1.9
10	233	9.3	27	e30	e52	14	24	e13	10	3.6	3.5	2.0
11	96	7.8	23	e100	e38	14	20	e12	10	3.8	2.9	2.0
12	41	7.2	20	e84	e26	67	18	e12	10	7.6	2.4	2.1
13	24	6.8	18	e66	e30	671	62	e12	8.8	4.7	2.7	2.2
14	18	6.7	15	e48	e36	292	125	e21	7.8	3.6	5.3	3.9
15	13	6.9	216	e60	e29	158	116	e42	11	3.0	7.2	2.0
16	11	8.1	123	e76	e24	99	70	e20	19	3.0	2.1	1.7
17	10	6.9	85	e60	e19	103	e47	e18	9.0	2.6	1.3	2.0
18	47	6.6	e190	e45	e48	200	e33	e120	7.6	2.9	1.3	1.5
19	26	6.8	e140	e36	e120	106	e100	e70	6.8	2.5	6.8	2.1
20	17	6.5	e92	e31	e90	72	e84	e35	6.3	2.5	3.9	1.9
21	14	6.3	e200	e26	e68	57	e64	e19	6.0	2.4	1.5	1.9
22	13	13	e110	e23	49	171	e54	17	6.2	2.3	1.8	1.8
23	12	8.4	e72	e21	37	287	e44	18	5.6	2.5	3.3	4.7
24	11	7.0	e52	e19	33	120	e33	18	5.9	2.3	1.6	1.8
25	11	6.9	e40	e18	29	73	e27	18	5.1	2.4	1.7	1.6
26	10	6.5	e32	e17	24	197	e25	16	4.8	2.2	1.6	1.5
27	11	43	e26	e17	23	157	e23	14	4.7	2.2	1.8	1.4
28	9.7	258	e22	e17	22	83	e22	12	4.6	2.0	2.1	1.5
29	8.5	116	e250	e18	---	57	e24	11	4.4	2.0	2.1	1.4
30	8.4	58	e1900	e31	---	41	e22	27	3.9	2.0	2.6	1.7
31	11	---	e470	e29	---	34	---	324	---	2.2	3.5	---
TOTAL	766.9	727.5	4891	1515	1469	3275	1287	1039	353.5	95.4	105.6	66.5
MEAN	24.7	24.2	158	48.9	52.5	106	42.9	33.5	11.8	3.08	3.41	2.22
MAX	233	258	1900	220	180	671	125	324	59	7.6	12	8.7
MIN	3.5	6.3	15	17	19	14	18	11	3.9	2.0	1.3	1.4
CFSM	.75	.73	4.75	1.47	1.58	3.18	1.29	1.01	.35	.09	.10	.07
IN.	.86	.82	5.48	1.70	1.65	3.67	1.44	1.16	.40	.11	.12	.07

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1991, BY WATER YEAR (WY)

	1988	1989	1990	1991
MEAN	11.0	17.0	48.8	29.3
MAX	24.7	29.7	158	48.9
(WY)	1991	1990	1991	1991
MIN	3.52	6.68	6.03	11.0
(WY)	1989	1988	1989	1989

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1988 - 1991

ANNUAL TOTAL	22384.1	15591.4	38.6	
ANNUAL MEAN	61.3	42.7	48.1	1990
HIGHEST ANNUAL MEAN			19.3	1988
LOWEST ANNUAL MEAN			e1900	Dec 30 1990
HIGHEST DAILY MEAN	e1900	Dec 30	1.3	Aug 17 1991
LOWEST DAILY MEAN	3.4	Sep 17	1.6	Sep 24 1991
ANNUAL SEVEN-DAY MINIMUM	3.8	Aug 31	2710	Mar 11 1990
INSTANTANEOUS PEAK FLOW		2550	13.99	Mar 11 1990
INSTANTANEOUS PEAK STAGE		13.65	1.16	
ANNUAL RUNOFF (CFSM)	1.85	1.29	15.81	
ANNUAL RUNOFF (INCHES)	25.08	17.47	82	
10 PERCENT EXCEEDS	133	100	12	
50 PERCENT EXCEEDS	24	17	2.7	
90 PERCENT EXCEEDS	5.0	2.1		

e Estimated

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 mi²

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. - - Records good.

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 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	138	987	4360	342	339	552	310	5380	63	21	17
2	43	127	718	2480	350	392	469	290	1820	59	20	17
3	44	123	1850	1820	346	378	412	266	1220	56	20	17
4	172	123	2260	1470	651	333	398	289	896	52	19	19
5	163	473	1110	1250	1100	311	418	298	568	52	19	19
6	98	1030	814	1030	1650	313	393	460	417	48	32	21
7	154	605	658	852	2170	295	362	382	331	44	31	19
8	372	396	586	757	1500	242	390	308	280	42	32	16
9	677	326	484	702	1180	226	470	273	245	40	27	15
10	2640	280	441	621	991	217	398	258	217	41	26	16
11	2400	245	398	931	797	208	322	245	201	42	25	17
12	1340	210	369	1880	619	266	282	371	193	55	22	15
13	886	187	323	1330	586	4310	329	353	175	52	20	15
14	619	174	266	1090	604	4990	1060	301	156	46	21	18
15	464	173	1090	1640	e520	2980	2180	506	145	41	22	44
16	360	167	1510	2900	e380	1970	1570	330	177	37	28	51
17	309	161	1050	2860	e400	1530	1040	666	186	34	24	33
18	445	157	1500	1860	e450	2780	773	2320	148	32	20	27
19	536	152	2050	1480	1430	2110	707	1240	124	31	21	23
20	405	146	1430	1410	1450	1400	783	696	109	29	30	22
21	329	145	2300	e1300	1050	1090	679	467	100	28	30	22
22	282	162	3630	e1000	836	2530	589	378	98	27	26	23
23	256	166	1570	e840	640	4210	522	370	355	26	22	24
24	226	155	e740	e700	553	2410	520	354	215	24	20	24
25	200	145	e500	e600	469	1400	436	1690	136	25	19	24
26	186	135	e390	e540	406	2050	396	1270	110	24	19	24
27	174	476	e370	e480	375	2540	388	673	93	24	18	24
28	160	2890	e360	e430	350	1580	374	423	82	22	18	24
29	147	2460	3740	e390	---	1100	363	330	75	22	18	24
30	140	1420	17500	e360	---	815	336	646	69	22	17	23
31	137	---	13600	336	---	629	---	3540	---	21	17	---
TOTAL	14409	13547	64594	39699	22195	45944	17911	20303	14321	1161	704	677
MEAN	465	452	2084	1281	793	1482	597	655	477	37.5	22.7	22.6
MAX	2640	2890	17500	4360	2170	4990	2180	3540	5380	63	32	51
MIN	43	123	266	336	342	208	282	245	69	21	17	15
CFSM	.91	.89	4.09	2.52	1.56	2.91	1.17	1.29	.94	.07	.04	.04
IN.	1.05	.99	4.72	2.90	1.62	3.36	1.31	1.48	1.05	.08	.05	.05

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1991, BY WATER YEAR (WY)

MEAN	148	293	515	619	749	907	869	642	554	290	173	162
MAX	1098	1790	2084	4163	2229	2390	2592	3297	2648	1273	1801	1991
(WY)	1978	1986	1991	1950	1985	1978	1964	1943	1957	1979	1958	1989
MIN	13.1	25.1	17.0	17.1	68.4	79.2	148	74.9	32.5	16.6	8.42	4.80
(WY)	1964	1941	1964	1977	1964	1941	1976	1941	1988	1988	1941	1941

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1939 - 1991

ANNUAL TOTAL	307212		255465				
ANNUAL MEAN	842		700		492		
HIGHEST ANNUAL MEAN					1086		1950
LOWEST ANNUAL MEAN					65.0		1941
HIGHEST DAILY MEAN	17500	Dec 30	17500	Dec 30	20100		Jun 29 1957
LOWEST DAILY MEAN	43	Oct 2	15	Sep 9	2.4		Sep 24 1941
ANNUAL SEVEN-DAY MINIMUM	45	Sep 27	16	Sep 8	2.7		Sep 21 1941
INSTANTANEOUS PEAK FLOW			21200	Dec 30	26300		Jun 28 1957
INSTANTANEOUS PEAK STAGE			13.19	Dec 30	14.48		Jun 28 1957
ANNUAL RUNOFF (CFSM)	1.65		1.38		.97		
ANNUAL RUNOFF (INCHES)	22.45		18.67		13.12		
10 PERCENT EXCEEDS	1940		1740		1150		
50 PERCENT EXCEEDS	396		336		176		
90 PERCENT EXCEEDS	77		22		28		

03340500 WABASH RIVER AT MONTEZUMA, IN

LOCATION.--Lat 39°47'33", long 87°22'26", in SE 1/4 sec.35, T.16 N., R.9 W., Parke County, Hydrologic Unit 05120108, on left bank 20 ft upstream from bridge on U.S. Highway 36 at Montezuma, 2.0 mi upstream from Big Raccoon Creek, 4.9 mi downstream from Sugar Creek, and at mile 240.0.

DRAINAGE AREA.--11,118 mi².

PERIOD OF RECORD.--October 1927 to current year. July 1924 to September 1927 (gage height only) in reports of State of Indiana, Department of Natural Resources.

REVISED RECORDS.--WSP 1335: 1929, 1931(M). WSP 1505: 1954. WSP 1915: 1954(M). WSP 2109: Drainage area. WDR IN-74-1: 1973.

GAGE.--Water-stage recorder. Datum of gage is 457.75 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Oct. 1, 1927, to July 12, 1950, nonrecording gage on downstream side of bridge and at same datum. July 12, 1950, to July 27, 1988, recording gage in downstream side of first pier from left bank at same datum.

REMARKS.--Records good. Flow partially regulated by upstream reservoirs.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 27, 1913, reached a stage of 34.0 ft, from floodmarks, discharge, 230,000 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4190	9500	22800	102000	15000	10300	21000	9750	15700	3000	1680	1490
2	4090	8260	19100	101000	13000	9990	18300	9360	20900	2960	1700	1450
3	4040	6780	19200	88000	11700	10800	15700	8690	21100	3070	1630	1500
4	4440	6200	24000	71800	12500	12100	13000	8630	18900	3180	1590	1500
5	4750	7880	25000	58900	16000	11900	12200	8560	16200	3640	1600	1510
6	4790	13800	24300	48800	19700	11200	11300	9110	14100	3680	1650	1720
7	6380	19800	22800	39800	24000	10600	10900	10800	12900	3600	1750	1720
8	9660	20600	21100	33800	25900	10000	10800	10100	11900	3360	1780	1540
9	11000	17300	19400	30100	25800	9130	11300	9040	10400	3100	1860	1490
10	23100	14200	17200	27900	24900	8690	10700	8390	9120	4240	2110	1460
11	31100	12800	15100	26600	23200	8390	10500	7900	7650	5210	2070	1430
12	33600	12000	13400	27400	20100	8460	10400	7800	6570	5460	2060	1370
13	35800	10900	12000	27400	16800	15000	9880	8040	6140	4670	1990	1360
14	36600	9970	10500	26900	15200	24600	10100	8000	5810	3820	1890	1380
15	34900	9410	11200	26800	13900	24500	12800	9100	5470	3250	1790	1450
16	30200	9080	13500	29100	12000	21600	18300	10000	5190	2880	1760	1650
17	23700	8940	13900	33600	10600	19600	22500	10300	5420	2690	1670	1710
18	20600	8750	16700	36100	10600	22300	22900	16600	5510	2420	1650	1770
19	21900	8430	20400	36600	11700	26600	21300	20800	5000	2390	1690	1650
20	22900	7990	20200	36000	14000	28700	18800	19000	4630	2280	1680	1670
21	21300	7540	22400	33700	18100	30600	16500	14600	4390	2250	2000	1780
22	18800	7330	30700	30700	20600	33300	17500	11400	4180	2140	1980	1750
23	16900	7230	31800	28400	20600	38300	17700	9940	4180	2050	1910	1800
24	15800	7150	31000	26800	19500	36200	17100	10800	3950	1980	1800	1880
25	15000	7070	28400	25400	17300	31500	16100	11500	3750	1910	1700	1930
26	13800	6860	23700	24200	13900	29600	14700	12500	3670	1850	1630	1810
27	13100	7180	19200	23100	11800	31400	13600	12900	3400	1840	1520	1780
28	12100	15500	17800	22300	10900	30800	11800	13000	3310	1800	1510	1810
29	11400	21600	24500	20700	---	29400	10700	11900	3170	1790	1490	1860
30	10600	23800	56600	18700	---	27100	10200	12300	3050	1750	1440	1890
31	10200	---	83300	17100	---	24200	---	11900	---	1670	1510	---
TOTAL	526740	333850	731200	1179700	469300	646860	438580	342710	245660	89930	54090	49110
MEAN	16990	11130	23590	38050	16760	20870	14620	11060	8189	2901	1745	1637
MAX	36600	23800	83300	102000	25900	38300	22900	20800	21100	5460	2110	1930
MIN	4040	6200	10500	17100	10600	8390	9880	7800	3050	1670	1440	1360
CFSM	1.53	1.00	2.12	3.42	1.51	1.88	1.31	.99	.74	.26	.16	.15
IN.	1.76	1.12	2.45	3.95	1.57	2.16	1.47	1.15	.82	.30	.18	.16

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1991, BY WATER YEAR (WY)

	MEAN	4092	5598	9461	12490	14470	17310	17510	13670	10180	6699	4186	3460
MAX	16990	27040	40350	66690	40610	49690	37650	58400	42730	23450	18840	17800	
(WY)	1991	1973	1928	1950	1959	1982	1938	1943	1958	1957	1958	1989	
MIN	973	1202	1041	1107	1789	2370	4941	2082	1357	1210	815	710	
(WY)	1964	1965	1964	1977	1931	1941	1931	1934	1934	1934	1941	1941	

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1928 - 1991

ANNUAL TOTAL	5999740	5107730	9901
ANNUAL MEAN	16440	13990	20290
HIGHEST ANNUAL MEAN			2506
LOWEST ANNUAL MEAN			1950
HIGHEST DAILY MEAN	83300	Dec 31	102000
LOWEST DAILY MEAN	3600	Jan 1	1360
ANNUAL SEVEN-DAY MINIMUM	4280	Sep 28	1420
INSTANTANEOUS PEAK FLOW			104000
INSTANTANEOUS PEAK STAGE			29.98
ANNUAL RUNOFF (CFSM)	1.48		1.26
ANNUAL RUNOFF (INCHES)	20.07		17.09
10 PERCENT EXCEEDS	31000	28900	24300
50 PERCENT EXCEEDS	12700	10900	5500
90 PERCENT EXCEEDS	6010	1720	1670

34
457
489

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 mi².

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.--Records good except for estimated daily discharges, which are poor.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 28, 1957, reached a stage of 19.10 ft discharge, 39,900 ft³/s, from slope-area measurement.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	34	258	564	e100	121	151	76	198	6.9	2.1	2.1
2	18	32	198	406	110	144	131	72	105	6.6	2.4	2.0
3	18	32	987	315	136	134	120	67	76	6.6	2.2	2.1
4	39	32	721	254	173	121	118	75	61	6.6	1.6	2.7
5	43	112	379	233	221	114	124	75	48	6.4	1.8	2.1
6	31	213	290	212	335	115	113	87	39	6.2	5.6	1.7
7	49	117	230	188	458	107	107	77	33	4.8	4.3	1.4
8	124	82	194	175	326	94	110	67	31	4.3	4.8	1.4
9	139	70	165	167	265	92	118	63	29	4.0	5.2	1.4
10	823	63	149	152	228	88	104	63	26	14	4.8	1.5
11	472	56	136	237	195	85	92	61	25	7.6	3.6	1.6
12	257	48	129	432	169	120	85	60	25	7.4	3.0	1.6
13	165	43	117	281	168	1110	97	59	22	7.3	2.9	1.6
14	117	41	102	235	173	641	172	58	20	6.1	2.5	1.6
15	87	40	435	314	e155	390	439	58	18	5.4	2.4	1.6
16	69	39	437	566	e135	292	328	51	21	4.7	2.1	1.5
17	61	38	306	538	e120	269	220	65	20	4.6	2.1	1.5
18	82	37	687	358	e210	489	175	59	17	4.2	2.4	1.5
19	93	36	801	299	464	351	168	66	15	3.6	2.3	1.5
20	74	36	474	e275	397	274	167	57	14	3.5	2.5	1.5
21	64	35	921	e250	289	237	143	49	13	3.2	2.7	1.6
22	57	46	1230	e225	233	372	130	45	12	3.0	3.0	2.2
23	52	52	555	e205	189	795	120	42	12	3.0	2.6	2.8
24	48	46	331	e185	172	407	112	52	11	2.7	2.1	2.4
25	43	42	268	e170	151	285	97	81	9.9	2.5	2.1	1.6
26	41	38	213	e155	136	424	95	75	9.0	3.0	2.0	1.6
27	39	94	197	e145	129	472	92	55	8.5	2.5	2.0	1.5
28	37	1150	179	e138	123	313	89	44	8.1	2.4	2.0	1.5
29	37	625	1650	e130	---	235	88	36	7.8	2.4	2.0	1.4
30	35	356	12200	e120	---	189	82	149	7.3	2.2	2.1	1.2
31	34	---	3350	e110	---	165	---	331	---	2.1	2.1	---
TOTAL	3266	3685	28289	8034	5960	9045	4187	2275	941.6	149.8	85.3	51.7
MEAN	105	123	913	259	213	292	140	73.4	31.4	4.83	2.75	1.72
MAX	823	1150	12200	566	464	1110	439	331	198	14	5.6	2.8
MIN	18	32	102	110	100	85	82	36	7.3	2.1	1.6	1.2
CFSM	.76	.88	6.57	1.86	1.53	2.10	1.00	.53	.23	.03	.02	.01
IN.	.87	.99	7.57	2.15	1.60	2.42	1.12	.61	.25	.04	.02	.01

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 1991, BY WATER YEAR (WY)

	MEAN	53.0	114	212	163	217	275	227	173	112	93.4	54.0	39.8
MAX	312	684	913	616	694	683	730	540	496	430	268	545	
(WY)	1970	1986	1991	1974	1985	1978	1964	1974	1974	1979	1979	1989	
MIN	3.13	5.89	4.93	4.69	26.2	28.6	43.5	19.5	11.1	4.83	2.75	1.72	
(WY)	1967	1964	1964	1977	1964	1981	1976	1976	1988	1991	1991	1991	

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1958 - 1991	
ANNUAL TOTAL	89377		65969.4			
ANNUAL MEAN	245		181		144	
HIGHEST ANNUAL MEAN					292	
LOWEST ANNUAL MEAN					38.5	
HIGHEST DAILY MEAN	12200	Dec 30	12200	Dec 30	12200	Dec 30 1990
LOWEST DAILY MEAN	18	Oct 1	1.2	Sep 30	1.0	Oct 11 1988
ANNUAL SEVEN-DAY MINIMUM	19	Sep 27	1.5	Sep 7	1.1	Oct 6 1988
INSTANTANEOUS PEAK FLOW			16000	Dec 30	16000	Dec 30 1990
INSTANTANEOUS PEAK STAGE			16.10	Dec 30	16.10	Dec 30 1990
ANNUAL RUNOFF (CFSM)	1.76		1.30		1.04	
ANNUAL RUNOFF (INCHES)	23.92		17.66		14.09	
10 PERCENT EXCEEDS	484		364		301	
50 PERCENT EXCEEDS	95		72		54	
90 PERCENT EXCEEDS	29		2.1		7.5	

03340900 BIG RACCOON CREEK AT FERNDAL, IN

LOCATION.--Lat 39°42'40", long 87°04'15", in SE¼SE¼ sec.28, T.15 N., R.6 W., Parke County, Hydrologic Unit 05120108, on right bank at upstream side of bridge on New Discovery Road, 0.5 mi downstream from Cecil M. Harden Lake, 3.7 mi upstream from Rocky Fork Creek, and at mile 33.3.

DRAINAGE AREA.--222 mi².

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

REVISED RECORDS.--WSP 2109: Drainage area.

GAGE.--Data-Collection Platform. Datum of gage is 590.00 ft above National Geodetic Vertical Datum of 1929 (U.S. Army Corps of Engineers bench mark). Prior to Oct. 1, 1974, water-stage recorder at site 1.7 mi downstream and at datum 7.64 ft lower. Data-Collection Platform installed on June 27, 1986.

REMARKS.--Flow regulated by Cecil M. Harden Lake since December 1960. Daily discharge computed from relation between discharge, head, and gate openings for Cecil M. Harden Lake beginning Oct. 1, 1974.

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

AVERAGE DISCHARGE.--35 years, 232 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 40,500 ft³/s June 28, 1957, gage height 19.87 ft, from rating curve extended above 5,000 ft³/s on basis of records for station at Big Raccoon Creek at Mansfield; minimum daily, 2.7 ft³/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, 1,690 ft³/s, Jan. 27; minimum daily 10 ft³/s, July 16.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67	1030	132	138	1590	159	675	21	22	22	22	22
2	48	1050	133	139	1570	131	903	21	22	22	22	22
3	48	1050	136	139	1550	132	997	21	22	22	22	22
4	48	845	140	139	1530	94	987	21	22	22	22	22
5	48	391	142	139	1510	43	639	21	22	22	22	22
6	48	346	143	140	1430	28	146	21	22	22	22	22
7	48	185	392	140	1280	30	146	21	22	22	22	22
8	48	98	736	140	1270	30	146	21	22	22	22	22
9	49	98	838	140	1250	30	147	22	22	22	22	22
10	49	238	984	140	1240	30	193	22	22	22	22	22
11	50	405	1150	140	1220	30	220	22	22	22	22	22
12	50	499	1180	320	1200	30	220	22	22	22	22	22
13	79	721	1160	622	1180	32	220	22	22	22	22	22
14	51	863	1060	695	1160	271	220	22	22	22	22	22
15	51	852	916	859	987	469	319	22	22	11	18	22
16	51	840	909	966	422	469	457	22	22	10	22	22
17	51	829	676	578	178	316	457	22	22	22	22	22
18	400	817	301	104	158	204	457	22	22	22	22	22
19	788	586	307	105	159	205	338	22	22	22	22	22
20	471	441	310	105	384	206	173	22	22	22	22	22
21	632	344	203	105	533	206	173	22	22	22	22	22
22	424	263	100	243	532	148	78	22	22	22	22	22
23	99	292	103	407	529	51	21	22	22	22	22	22
24	99	320	104	728	526	52	21	22	22	22	22	22
25	99	357	105	1160	320	52	21	22	22	22	22	22
26	374	170	105	1570	197	53	21	22	22	22	22	22
27	829	47	355	1690	197	54	21	22	22	22	22	22
28	982	49	338	1670	197	54	21	22	22	22	22	22
29	974	52	109	1660	---	54	21	22	22	22	22	22
30	966	105	125	1640	---	305	21	22	22	22	22	22
31	956	---	136	1620	---	526	---	22	---	22	22	---
TOTAL	8977	14183	13528	18381	24299	4494	8479	674	660	659	678	660
MEAN	290	473	436	593	868	145	283	21.7	22.0	21.3	21.9	22.0
MAX	982	1050	1180	1690	1590	526	997	22	22	22	22	22
MIN	48	47	100	104	158	28	21	21	22	10	18	22

CAL YR 1990 TOTAL 109930 MEAN 301 MAX 1530 MIN 17
WTR YR 1991 TOTAL 95672 MEAN 262 MAX 1690 MIN 10

03341300 BIG RACCOON CREEK AT COXVILLE, IN

LOCATION.--Lat 39°39'09", long 87°17'37", in SW¼ 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 mi².

PERIOD OF RECORD.--October 1956 to September 1988 (discharge). October 1988 to current year (gage height only). Prior to October 1963, published as Raccoon Creek at Coxville.

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

GAGE.--Water-stage recorder. Datum of gage is 494.00 ft above National Geodetic Vertical Datum of 1929 (Indiana Flood Control and Water Resources Commission bench mark).

REMARKS.--Gage heights are very doubtful on Oct. 8-18, Dec. 4-30, Feb. 7-18, May 23-30, June 20-30 and July 9-15 due to lagging intakes. Flow regulated by Cecil M. Harden Lake.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 108,000 ft³/s June 28, 1957, gage height, 21.23 ft, from rating curve extended above 35,000 ft³/s on basis of an estimate made by slope-area study; minimum daily, 6.5 ft³/s Oct. 10, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 15.25 ft Dec. 30, minimum gage height, 2.87 ft July 29.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.99	7.82	6.39	10.18	10.09	5.62	7.45	4.51	4.49	3.56	---	3.39
2	3.87	8.00	6.02	8.98	10.16	5.72	8.01	4.41	4.31	3.55	---	3.34
3	3.88	8.00	8.06	8.11	10.17	5.51	8.10	4.41	4.18	3.54	---	3.34
4	5.12	7.92	7.44	7.60	10.21	5.26	8.22	4.50	4.06	3.55	---	3.41
5	4.60	7.06	6.68	7.16	10.40	5.02	7.56	4.70	3.98	3.59	---	3.36
6	4.41	6.65	6.27	6.73	10.70	4.92	5.89	4.68	3.92	3.55	---	3.33
7	4.37	6.24	6.27	6.34	9.87	4.77	5.67	4.49	3.93	3.54	---	3.32
8	4.55	5.37	7.15	6.15	9.65	4.70	6.11	4.40	3.87	3.51	3.44	3.33
9	5.59	5.18	7.60	6.03	9.51	4.66	5.91	4.34	3.83	3.50	3.43	3.31
10	8.22	5.17	7.89	5.98	9.37	4.60	5.83	4.30	3.81	4.05	3.40	3.32
11	6.67	5.71	8.39	8.62	9.24	4.58	5.75	4.37	3.79	3.99	3.38	3.30
12	5.93	6.15	8.61	7.85	8.98	4.91	5.67	4.28	3.77	3.90	3.37	3.30
13	5.55	6.47	8.57	8.17	9.04	7.55	5.93	4.23	3.74	3.82	3.36	3.43
14	5.25	7.34	8.50	8.18	8.95	7.23	6.12	4.39	3.71	3.76	3.36	3.30
15	5.00	7.41	8.92	9.07	8.13	6.87	6.91	4.28	3.71	---	3.35	3.29
16	4.85	7.46	8.69	10.13	6.48	6.46	6.89	4.18	3.79	---	3.36	3.29
17	4.75	7.44	8.58	9.01	6.04	7.66	6.71	4.14	3.71	---	3.37	3.29
18	4.97	7.43	8.89	6.82	7.22	6.86	6.61	4.28	3.67	3.16	3.37	3.31
19	7.01	7.02	8.70	6.52	7.13	6.40	6.53	4.16	3.65	3.14	3.44	3.30
20	6.41	6.17	7.98	6.34	7.33	6.16	5.66	4.14	3.62	3.11	3.39	3.31
21	6.43	6.02	9.87	6.10	7.28	6.01	5.53	4.04	3.63	3.08	3.37	3.31
22	6.57	5.79	9.59	6.37	7.12	9.96	5.18	4.00	3.70	3.06	3.35	3.36
23	4.97	5.67	8.05	6.72	7.01	8.11	4.88	4.05	3.65	3.03	3.34	3.35
24	4.79	5.72	7.05	7.19	6.94	6.78	4.77	4.06	3.63	3.01	3.34	3.35
25	4.70	5.72	6.54	8.66	6.17	6.23	4.70	4.14	3.61	3.00	3.33	3.33
26	5.22	5.73	6.23	10.04	5.92	9.32	4.67	4.07	3.60	2.97	3.33	3.32
27	6.81	5.99	6.17	10.26	5.84	7.39	4.67	4.02	3.59	2.89	3.33	3.32
28	7.56	9.85	6.76	10.24	5.79	6.48	4.59	3.95	3.58	2.88	3.32	3.30
29	7.63	8.10	13.05	10.26	---	6.03	4.60	4.90	3.58	2.87	3.32	3.30
30	7.62	6.87	13.92	10.20	---	6.91	4.49	5.49	3.58	---	3.51	3.28
31	7.62	---	11.44	10.13	---	6.96	---	4.83	---	---	3.42	---
MEAN	5.64	6.72	8.20	8.07	8.24	6.31	5.99	4.35	3.79	---	---	3.33
MAX	8.22	9.85	13.92	10.26	10.70	9.96	8.22	5.49	4.49	---	---	3.43
MIN	3.87	5.17	6.02	5.98	5.79	4.58	4.49	3.95	3.58	---	---	3.28

03341315 BIG RACCOON CREEK NEAR MECCA, IN

LOCATION.--Lat 39°42'33", long 87°19'23", in NW¼NE¼ sec.32, T.15N., R.8W., Parke County, Hydrologic Unit 05120108, on left bank at downstream side of bridge on U.S. Highway 41, 1.2 mi southeast of Mecca, 4.8 mi downstream from Rock Run, 6.5 mi south of Rockville, and at river mile 7.4.
 DRAINAGE AREA.--473 mi.
 PERIOD OF RECORD.--October 1988 to current year.
 GAGE.--Water-stage recorder. Datum of gage is 475.00 ft above National Geodetic Vertical Datum of 1929.
 REMARKS.--Records poor. Flow regulated by Cecil M. Harden Lake. Maximum instantaneous and daily mean discharges for period of record are estimated. Periods of high flow occasionally are in backwater.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	120	943	714	e2500	1940	524	959	259	250	64	50	50
2	105	1070	609	e1800	1950	537	1180	255	204	63	48	47
3	90	1080	1510	e1500	1970	500	1440	242	172	63	47	44
4	330	1070	1200	e1200	1970	456	1480	255	149	64	47	46
5	190	747	781	e1000	2040	378	1510	263	133	70	46	48
6	140	670	654	e860	2070	341	736	330	121	66	83	45
7	130	555	607	728	2010	315	568	280	119	62	77	44
8	180	325	957	631	1880	291	562	254	114	60	59	45
9	215	268	1160	583	1830	279	668	242	106	59	54	44
10	1210	245	1190	547	1790	270	581	233	101	81	53	42
11	716	341	1430	844	1750	263	579	226	98	129	51	41
12	422	462	1550	1260	1710	275	553	232	97	103	49	40
13	300	529	1520	e1100	1710	1070	570	222	93	85	48	42
14	238	842	1510	e1000	1710	986	685	220	89	76	47	46
15	190	887	1610	e1200	1630	1030	908	205	86	70	47	41
16	161	905	1610	1910	1130	824	999	174	92	63	45	40
17	154	924	1510	1890	661	796	916	163	91	57	45	40
18	170	947	1510	1000	675	1200	860	160	85	58	47	40
19	546	928	1610	726	1090	854	845	169	80	57	49	40
20	667	564	1140	642	908	721	615	152	77	57	51	39
21	379	512	1010	583	1090	663	523	146	75	55	48	41
22	664	432	2070	503	1020	1100	492	137	78	54	46	41
23	268	430	1260	689	964	2030	368	153	80	53	44	45
24	192	432	856	766	939	1190	334	153	75	52	44	43
25	171	427	682	1240	885	816	310	146	72	52	43	43
26	177	456	594	1720	590	1310	306	147	70	51	43	42
27	417	360	e540	1940	563	1490	295	137	69	50	42	40
28	817	2280	e900	1970	546	981	290	128	67	49	43	41
29	872	1490	e1700	1980	---	736	284	189	65	49	42	40
30	909	856	e5600	1980	---	635	274	485	66	49	43	40
31	928	---	e3800	1950	---	945	---	376	---	49	53	---
TOTAL	12068	21977	43394	38242	39021	23806	20690	6733	3074	1970	1534	1280
MEAN	389	733	1400	1234	1394	768	690	217	102	63.5	49.5	42.7
MAX	1210	2280	5600	2500	2070	2030	1510	485	250	129	83	50
MIN	90	245	540	503	546	263	274	128	65	49	42	39
CFSM	.82	1.55	2.96	2.61	2.95	1.62	1.46	.46	.22	.13	.10	.09
IN.	.95	1.73	3.41	3.01	3.07	1.87	1.63	.53	.24	.15	.12	.10

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1991, BY WATER YEAR (WY)

	1989	1990	1991	1990	1991	1990	1991	1990	1991	1991	1991	1991
MEAN	460	563	643	641	869	788	598	718	640	362	375	528
MAX	887	733	1400	1234	1394	1314	690	988	1004	528	671	1423
(WY)	1990	1991	1991	1991	1991	1990	1991	1989	1990	1990	1989	1989
MIN	105	315	151	339	193	281	460	217	102	63.5	49.5	42.7
(WY)	1989	1989	1990	1990	1989	1989	1990	1991	1991	1991	1991	1991

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1989 - 1991

ANNUAL TOTAL	263097	213789	597
ANNUAL MEAN	721	586	650
HIGHEST ANNUAL MEAN			1990
LOWEST ANNUAL MEAN			1989
HIGHEST DAILY MEAN	e5600	Dec 30	6280
LOWEST DAILY MEAN	85	Sep 24	30
ANNUAL SEVEN-DAY MINIMUM	90	Sep 21	35
INSTANTANEOUS PEAK FLOW			8700
INSTANTANEOUS PEAK STAGE			21.32
ANNUAL RUNOFF (CFSM)	1.52		1.26
ANNUAL RUNOFF (INCHES)	20.69		17.14
10 PERCENT EXCEEDS	1490	1510	1340
50 PERCENT EXCEEDS	495	325	378
90 PERCENT EXCEEDS	152	46	75

e Estimated

03341500 WABASH RIVER AT TERRE HAUTE, IN

LOCATION.--Lat 39°28'33", long 87°25'07", in NE1/4 sec.21, T.12 N., R.9 W., Vigo County, Hydrologic Unit 05120111, on left bank at Indiana America Water Company, Inc., 1st and Elm Streets in Terre Haute, 3.0 mi upstream from Sugar Creek, and 3.6 mi downstream from Lost Creek and at mile 215.

DRAINAGE AREA.--12,263 mi².

PERIOD OF RECORD.--August 1902 to December 1903 (gage height only), February 1905 to July 1906, October 1927 to current year. Gage-height records collected at site 100 ft downstream June 1891 to June 1897 and since December 1904 are contained in reports of National Weather Service.

REVISED RECORDS.--WSP 205: 1905. WSP 1335: 1944. WDR IN-73-1: Drainage area. WDR IN-84-1: 1983. WDR IN-86-1: 1913 (Gage height).

GAGE.--Water-stage recorder. Datum of gage is 445.78 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 17, 1984, water-stage recorder at Wabash Avenue bridge 3,400 ft downstream at datum 2.88 ft lower. See WSP 1725 for history of changes prior to Oct. 27, 1928.

REMARKS.--Records good. Flow partially regulated by upstream reservoirs.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 27, 1913, reached a stage of 31.1 ft, present site and datum, discharge, 245,000 cfs.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4320	10600	26300	91500	18800	12000	26800	10700	15300	3170	1650	1520
2	4140	9640	23000	106000	16600	11800	22700	10400	20800	3080	1720	1400
3	4120	8380	22000	101000	14800	12100	19700	9720	23100	3130	1660	1370
4	5000	7340	26300	86400	14600	13200	16400	9050	21800	3150	1560	1540
5	5170	7860	28000	73600	17600	13200	14700	9180	18800	3590	1550	1440
6	4980	12100	27900	63000	21600	12500	13400	10000	16200	3780	2050	1490
7	5390	18600	26300	54300	26200	11800	12100	11200	14400	3800	2130	1830
8	8890	21900	24300	48200	29400	11100	11800	11500	13300	3560	1980	1630
9	10500	20000	22200	43000	30200	10400	12300	10200	11900	3270	2180	1400
10	20500	16100	20000	38300	29700	9640	12100	9290	10400	3600	2250	1380
11	32000	14000	17600	35500	28000	9260	11500	8790	9010	5200	2530	1310
12	35500	13000	15600	35300	24700	9090	11400	8520	7740	6390	2370	1240
13	38400	12000	14000	34900	20900	12600	11000	8740	7080	5760	2350	1180
14	40200	11100	12500	34000	18800	24100	11100	8800	6680	4520	2220	1150
15	41200	10400	12100	33400	17000	27100	13300	9960	6320	3760	2070	1190
16	39800	9980	14800	35100	14700	24900	17700	10800	5990	3200	1960	1380
17	33800	9710	15600	38600	12800	22200	22700	11300	5870	2950	1830	1630
18	25700	9600	18400	41300	12300	24100	24500	14800	6200	2890	1710	1750
19	24100	9330	23400	42500	13900	28200	23700	22100	5730	2790	1730	1730
20	25100	8930	23400	43400	15700	30900	21400	22300	5270	2720	1800	1560
21	24300	8420	25000	43000	18800	33200	18500	18200	4930	2550	1970	1720
22	21700	8160	34300	40900	22200	36600	17600	14100	4890	2520	2290	1780
23	19200	8040	38100	38000	23400	40800	18300	11900	5060	2310	2130	1780
24	17300	7890	38200	35000	22500	41700	17500	11400	4580	2230	2070	1800
25	16300	7790	36800	32700	20800	40300	16500	12400	4250	2090	1870	1960
26	15100	7640	32400	30500	17400	37800	15900	13200	4100	2010	1750	1920
27	14100	7950	25000	28900	14300	37600	14800	13700	3840	1950	1610	1770
28	13300	16800	21100	27000	12900	36900	12900	14000	3620	1920	1490	1780
29	12500	24500	25300	25100	---	35600	11700	13600	3490	1890	1470	1800
30	11700	25900	50100	23200	---	33600	11200	14000	3290	1870	1410	1850
31	11000	---	76000	21000	---	30400	---	13600	---	1760	1420	---
TOTAL	585310	363660	816000	1424600	550600	734690	485200	377450	273940	97410	58780	47280
MEAN	18880	12120	26320	45950	19660	23700	16170	12180	9131	3142	1896	1576
MAX	41200	25900	76000	106000	30200	41700	26800	22300	23100	6390	2530	1960
MIN	4120	7340	12100	21000	12300	9090	11000	8520	3290	1760	1410	1150
CFSM	1.54	.99	2.15	3.75	1.60	1.93	1.32	.99	.74	.26	.15	.13
IN.	1.78	1.10	2.47	4.32	1.67	2.23	1.47	1.14	.83	.30	.18	.14

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1991, BY WATER YEAR (WY)

	MEAN	4535	6082	10330	13780	15860	18850	19180	15350	11380	7555	4749	3888
MAX	18880	29880	44490	77540	47990	51250	41940	64810	44130	27840	21330	21440	
(WY)	1991	1973	1928	1950	1950	1982	1938	1943	1958	1957	1958	1989	
MIN	1103	1405	1145	1216	1998	2645	5250	2405	1492	1292	1002	966	
(WY)	1957	1954	1964	1977	1963	1941	1931	1934	1934	1936	1941	1941	

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1928 - 1991
ANNUAL TOTAL	6624990	5814920	
ANNUAL MEAN	18150	15930	10930
HIGHEST ANNUAL MEAN			22800
LOWEST ANNUAL MEAN			2864
HIGHEST DAILY MEAN	76000	Dec 31	106000
LOWEST DAILY MEAN	3980	Jan 1	1150
ANNUAL SEVEN-DAY MINIMUM	4370	Sep 27	1260
INSTANTANEOUS PEAK FLOW			108000
INSTANTANEOUS PEAK STAGE			26.08
ANNUAL RUNOFF (CFSM)	1.48		1.30
ANNUAL RUNOFF (INCHES)	20.09		17.64
10 PERCENT EXCEEDS	37900		35400
50 PERCENT EXCEEDS	13900		12100
90 PERCENT EXCEEDS	6520		1780

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 mi².

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.--Records good. Flow partially regulated by upstream reservoirs.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 28, 1913, reached a stage of 26.4 ft, from graph based on once-daily readings by Illinois Central Railroad Co., discharge, 250,000 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4660	11600	26300	60400	23200	13700	35100	12300	13900	4070	2190	1830
2	4530	11000	26000	74400	20600	13200	32900	11700	16200	4010	2110	1850
3	4380	9930	25400	87800	18500	13200	29200	11200	20300	3950	2110	1790
4	5550	8650	26600	97800	17100	13200	24100	10600	21600	3900	2090	1920
5	6130	7920	27000	101000	17500	14100	19800	10400	20500	3900	2030	2560
6	5560	9340	27500	96700	21000	14100	17200	10800	18100	4240	2380	2020
7	5390	13900	27500	85500	24900	13500	15400	11300	16000	4350	3410	1880
8	6450	18900	26700	73500	26900	12700	14300	12200	14500	4320	2810	2030
9	9460	20800	25200	62300	28400	12000	14600	12100	13400	4150	2520	1970
10	13700	19100	23300	53900	29300	11200	14500	11100	12000	3940	2990	1830
11	21900	16200	21000	48900	29600	10500	13800	10300	10700	4350	2650	1770
12	26100	14400	18600	46100	28900	10200	13100	9990	9250	7130	2710	1710
13	28700	13400	16700	42700	26700	12500	13000	9720	8080	8460	2610	1660
14	30400	12300	15000	39800	24900	18700	13300	9610	7460	6370	2570	1610
15	32100	11400	13600	37800	22100	24600	14500	9760	7050	5210	2630	1580
16	33300	10800	14100	37200	18700	26500	17100	10700	6810	4480	2570	1580
17	34200	10300	16000	36900	16200	26300	20100	11600	6550	3950	2320	1650
18	34500	10100	20300	36600	14600	29200	23200	12000	6440	3630	2190	1850
19	32600	9910	24700	37000	16600	29000	24900	15900	6540	3360	2080	1940
20	29500	9600	25600	38100	17500	29300	24800	20400	6170	3150	2060	1950
21	26900	9120	26300	39300	18000	30200	22700	20500	5870	3050	2090	1850
22	25100	8830	31400	40300	20300	32400	20100	17500	5630	2920	2160	1930
23	22800	8840	32700	40800	22400	36700	19600	14100	5920	2870	2360	2020
24	20100	8510	33500	40300	23000	39700	19700	12200	5800	2690	2300	2010
25	18200	8240	34200	38300	22400	40900	19200	12100	5320	2590	2240	2050
26	17000	8060	e34700	36200	20600	41600	18200	12700	4980	2480	2120	2130
27	15800	9090	e34300	34200	17600	41900	17000	13400	4800	2410	2020	2110
28	14800	17100	e32000	32800	15100	41300	15800	13900	4550	2360	1930	2010
29	13900	25000	29100	31300	---	40200	14100	14000	4350	2330	1840	2000
30	13000	26100	39700	29200	---	38800	12700	14400	4230	2280	1880	2010
31	12200	---	49300	26100	---	37000	---	14500	---	2250	1940	---
TOTAL	568910	378440	824300	1583200	602600	768400	574000	392980	293000	119150	71910	57100
MEAN	18350	12610	26590	51070	21520	24790	19130	12680	9767	3844	2320	1903
MAX	34500	26100	49300	101000	29600	41900	35100	20500	21600	8460	3410	2560
MIN	4380	7920	13600	26100	14600	10200	12700	9610	4230	2250	1840	1580
CFSM	1.39	.96	2.02	3.88	1.64	1.88	1.45	.96	.74	.29	.18	.14
IN.	1.61	1.07	2.33	4.47	1.70	2.17	1.62	1.11	.83	.34	.20	.16

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1991, BY WATER YEAR (WY)

	MEAN	4770	6538	10940	13780	17410	21110	21280	17000	13170	8440	5427	4415
MAX	18350	31150	39250	80210	54530	60520	41840	68010	45640	36240	23680	25370	
(WY)	1991	1973	1986	1950	1950	1982	1957	1943	1958	1957	1958	1989	
MIN	1382	1437	1213	1318	2057	2763	6363	3435	2601	1968	1215	1261	
(WY)	1957	1954	1964	1977	1963	1941	1941	1941	1977	1988	1941	1940	

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1940 - 1991
ANNUAL TOTAL	6956980	6233990	
ANNUAL MEAN	19060	17080	11990
HIGHEST ANNUAL MEAN			24340
LOWEST ANNUAL MEAN			3206
HIGHEST DAILY MEAN	62800	101000	200000
LOWEST DAILY MEAN	3470	1580	858
ANNUAL SEVEN-DAY MINIMUM	4720	1650	870
INSTANTANEOUS PEAK FLOW		101000	201000
INSTANTANEOUS PEAK STAGE		23.92	29.36
ANNUAL RUNOFF (CFSM)	1.45	1.30	.91
ANNUAL RUNOFF (INCHES)	19.66	17.62	12.38
10 PERCENT EXCEEDS	35700	36400	29200
50 PERCENT EXCEEDS	15200	13600	6980
90 PERCENT EXCEEDS	6710	2090	2130

03342100 BUSSEYON 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 mi².
 PERIOD OF RECORD.--June 1966 to current year.
 REVISED RECORDS.--WDR IN-72-1: 1971, WDR IN-87-1: 1982-86.
 GAGE.--Water-stage recorder. Datum of gage is 480.00 ft above National Geodetic Vertical Datum of 1929 (U.S. Soil Conservation Service benchmark).
 REMARKS.--Records good, except for periods of estimated daily discharges, which are poor. Flow affected by U.S. Soil Conservation Service floodwater-retarding structures.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.14	.84	20	81	e4.5	7.6	14	4.3	1.1	4.7	.06	.21
2	.12	.79	13	38	e5.3	12	12	3.7	1.1	2.5	.05	.13
3	.41	.79	262	27	e6.7	9.2	11	3.7	1.1	1.3	.04	.36
4	41	1.2	63	19	e8.7	7.5	13	4.0	1.0	.69	.04	3.1
5	4.9	6.3	24	e18	19	6.6	13	4.7	.97	.52	.07	2.0
6	1.5	6.4	15	17	121	8.1	12	3.9	1.0	.37	.72	1.3
7	24	5.2	11	e15	55	7.7	12	3.1	1.0	.21	1.2	.78
8	17	3.8	9.5	e14	24	6.0	48	2.7	1.1	.14	.67	.45
9	40	2.8	8.2	13	16	5.2	40	2.5	1.0	.10	.82	.29
10	169	1.9	7.1	12	12	4.4	16	2.3	.99	.27	2.0	.25
11	31	1.9	6.3	120	9.0	4.3	9.8	3.4	.96	4.7	2.0	.16
12	12	1.6	5.7	86	7.6	17	8.8	3.7	.89	181	1.5	.10
13	7.4	1.4	5.1	33	23	167	79	2.5	.81	56	1.2	.08
14	4.9	1.3	4.3	26	113	49	66	4.1	.80	41	.98	.07
15	3.1	1.2	24	37	32	24	165	4.0	1.5	26	1.2	.05
16	1.9	1.2	15	106	e17	16	66	2.5	4.0	18	.81	.03
17	1.7	1.1	96	43	e12	158	35	2.0	1.7	12	.88	e.02
18	10	1.1	295	23	100	146	24	1.6	1.5	7.4	.82	e.02
19	5.8	1.1	110	e17	106	47	23	1.5	2.5	4.9	.45	e.02
20	3.4	.96	37	e15	41	29	18	1.5	4.5	2.7	.28	e.01
21	2.1	.97	268	e13	23	22	13	1.4	1.5	1.4	.24	e.01
22	2.2	14	126	e10	16	385	11	1.4	2.1	.86	.17	e.08
23	2.0	9.6	40	e9.0	12	220	9.2	1.6	1.8	.56	.14	e.15
24	1.8	5.7	e20	e7.8	10	63	7.6	3.8	1.0	.51	.11	e.12
25	3.6	4.2	e13	e6.7	8.5	41	6.6	3.1	.69	.47	.10	e.08
26	2.3	3.4	e10	e5.7	6.9	226	6.3	2.4	.54	.33	.09	e.06
27	3.2	261	e9.0	e5.2	6.3	97	5.8	2.0	1.5	.21	.09	e.05
28	2.1	436	e8.0	e4.8	5.8	48	5.4	1.7	9.6	.14	.08	e.05
29	.90	70	395	e4.3	---	33	6.1	1.5	8.1	.11	.08	e.05
30	.80	31	793	e4.1	---	22	4.9	1.4	6.6	.09	.12	e.06
31	.78	---	268	e4.0	---	18	---	1.2	---	.07	.26	---
TOTAL	401.05	878.75	2981.2	834.6	821.3	1906.6	761.5	83.2	62.95	369.25	17.27	10.14
MEAN	12.9	29.3	96.2	26.9	29.3	61.5	25.4	2.68	2.10	11.9	.56	.34
MAX	169	436	793	120	121	385	165	4.7	9.6	181	2.0	3.1
MIN	.12	.79	4.3	4.0	4.5	4.3	4.9	1.2	.54	.07	.04	.01
CFSM	.77	1.75	5.76	1.61	1.76	3.68	1.52	.16	.13	.71	.03	.02
IN.	.89	1.96	6.64	1.86	1.83	4.25	1.70	.19	.14	.82	.04	.02

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 1991, BY WATER YEAR (WY)

	MEAN	2.62	14.1	27.9	22.4	29.6	37.7	31.5	22.8	9.83	13.8	5.09	8.33
MAX	14.7	72.6	96.8	105	67.4	112	72.5	86.2	41.1	79.3	25.4	60.9	
(WY)	1970	1986	1983	1969	1971	1973	1972	1981	1980	1973	1979	1989	
MIN	.020	.058	.026	.006	1.63	7.23	1.48	1.23	.22	.17	.065	.018	
(WY)	1988	1972	1977	1977	1978	1969	1971	1976	1977	1972	1983	1976	

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1967 - 1991
ANNUAL TOTAL	10198.62	9127.81	
ANNUAL MEAN	27.9	25.0	18.7
HIGHEST ANNUAL MEAN			36.1
LOWEST ANNUAL MEAN			6.93
HIGHEST DAILY MEAN	793	793	828
LOWEST DAILY MEAN	.12	e.01	.00
ANNUAL SEVEN-DAY MINIMUM	.17	.02	.00
INSTANTANEOUS PEAK FLOW		999	1890
INSTANTANEOUS PEAK STAGE		18.67	19.16
ANNUAL RUNOFF (CFSM)	1.67	1.50	1.12
ANNUAL RUNOFF (INCHES)	22.72	20.33	15.25
10 PERCENT EXCEEDS	50	55	47
50 PERCENT EXCEEDS	6.5	4.4	3.3
90 PERCENT EXCEEDS	.68	.14	.08

e Estimated

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 mi².

PERIOD OF RECORD.--October 1981 to current year.

GAGE.--Water-stage recorder. Datum of gage is 474.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except for estimated daily discharges which are poor. Flow affected by surface-mined areas.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	3.0	5.4	e22	e5.2	11	e18	e8.4	5.7	2.2	e1.1	e.97
2	2.9	2.9	5.0	e15	e6.0	17	e17	e8.0	6.0	3.5	e1.0	e.93
3	8.6	2.9	23	e13	e7.8	11	e16	e7.8	5.8	2.5	e.94	e2.0
4	22	2.9	7.4	e11	10	9.1	e33	e10	5.3	2.8	e.91	e4.0
5	4.1	8.0	5.7	e15	15	8.5	e24	e14	5.3	2.5	e.90	e2.3
6	2.9	5.7	5.3	e20	64	11	e19	e11	5.0	2.7	30	e1.7
7	9.0	3.4	4.9	18	32	11	e16	e8.8	4.6	2.4	3.6	e1.3
8	4.9	2.9	4.9	16	18	9.6	e80	e7.7	5.0	e2.3	2.2	e1.2
9	8.4	e2.7	4.6	15	14	e8.9	e64	e6.9	5.0	e2.2	2.9	e2.1
10	28	e2.5	4.6	15	12	e8.3	e34	e6.6	4.6	3.5	2.1	e1.7
11	6.1	e2.3	4.5	48	11	e8.0	e17	e11	e4.5	3.4	1.9	e1.2
12	4.4	e2.2	4.4	29	10	23	14	e10	e4.3	31	1.8	e.96
13	3.8	e2.2	4.2	18	17	73	61	e7.4	e4.1	e7.2	1.8	e.90
14	3.5	e2.1	4.1	16	33	32	40	e6.3	e4.0	e5.9	2.4	e.91
15	3.5	e2.1	8.1	16	16	22	59	e6.0	e4.0	e4.8	2.2	e1.0
16	3.8	e2.1	5.1	23	e12	20	23	e20	10	e3.9	1.8	e.90
17	4.0	e2.1	38	17	e10	92	16	e10	6.0	e3.3	2.2	e.80
18	4.7	e2.0	61	14	68	62	14	e7.9	5.9	e2.8	2.3	e1.9
19	4.3	e2.0	18	13	40	33	23	e6.6	5.0	e2.5	1.9	.86
20	3.6	e2.0	8.1	12	21	25	16	e5.9	4.5	e2.2	e1.7	.72
21	3.6	e2.0	60	9.6	15	25	13	e5.3	5.4	e1.9	e1.5	.79
22	4.3	12	19	e7.6	13	163	12	e5.1	17	e1.7	e1.4	1.1
23	4.1	4.0	8.4	e6.7	11	88	11	5.9	e9.0	e1.5	e1.3	1.5
24	3.8	3.3	6.3	e8.0	10	47	11	5.3	e7.0	e1.4	e1.3	.96
25	3.8	2.6	e5.6	e6.4	9.1	36	10	5.7	e4.7	e1.3	e1.2	.93
26	3.4	2.7	5.1	e6.0	7.8	e32	e9.5	5.6	3.4	e1.2	e1.2	.87
27	3.4	45	e4.8	e5.6	7.4	e29	e9.2	5.2	e2.2	e1.1	e1.1	.83
28	e3.2	80	e4.7	e5.3	7.3	e26	e9.0	5.0	2.5	e1.0	e1.1	.86
29	e3.1	8.4	108	e5.2	---	e23	e10	6.3	3.3	e1.5	e1.0	.82
30	e3.1	5.9	357	e5.1	---	e21	e9.2	5.6	2.8	e1.4	e1.0	.80
31	3.1	---	44	e5.0	---	e20	---	5.5	---	e1.3	e1.1	---
TOTAL	174.3	223.9	849.2	436.5	502.6	1005.4	707.9	240.8	161.9	108.9	78.85	37.81
MEAN	5.62	7.46	27.4	14.1	17.9	32.4	23.6	7.77	5.40	3.51	2.54	1.26
MAX	28	80	357	48	68	163	80	20	17	31	30	4.0
MIN	2.9	2.0	4.1	5.0	5.2	8.0	9.0	5.0	2.2	1.0	.90	.72
CFSM	.61	.81	2.99	1.54	1.96	3.54	2.58	.85	.59	.38	.28	.14
IN.	.71	.91	3.45	1.77	2.04	4.08	2.87	.98	.66	.44	.32	.15

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 1991, BY WATER YEAR (WY)

	MEAN	5.87	18.1	19.2	11.6	19.4	21.7	21.3	19.7	7.83	10.9	3.16	6.10
MAX	10.2	91.9	37.5	22.1	41.3	32.4	40.9	35.0	17.1	28.9	7.45	26.5	
(WY)	1990	1986	1983	1982	1990	1991	1984	1990	1986	1989	1989	1989	
MIN	.92	2.85	6.36	3.20	6.78	7.73	12.5	3.52	.96	2.47	1.25	.82	
(WY)	1988	1988	1990	1984	1987	1987	1988	1987	1988	1988	1988	1987	

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1982 - 1991	
ANNUAL TOTAL	6418.0		4528.06		13.7	
ANNUAL MEAN	17.6		12.4		20.6	
HIGHEST ANNUAL MEAN					6.69	
LOWEST ANNUAL MEAN					400	
HIGHEST DAILY MEAN	357	Dec 30	357	Dec 30	.20	Nov 19 1985
LOWEST DAILY MEAN	1.6	Sep 7	.72	Sep 20	.23	Sep 18 1988
ANNUAL SEVEN-DAY MINIMUM	1.9	Aug 15	.87	Sep 24		Oct 9 1988
INSTANTANEOUS PEAK FLOW			606	Dec 30	996	Jul 12 1989
INSTANTANEOUS PEAK STAGE			9.99	Dec 30	12.16	Jul 12 1989
ANNUAL RUNOFF (CFSM)	1.92		1.35		1.50	
ANNUAL RUNOFF (INCHES)	26.06		18.39		20.34	
10 PERCENT EXCEEDS	37		27		30	
50 PERCENT EXCEEDS	8.4		5.5		6.1	
90 PERCENT EXCEEDS	2.2		1.3		1.4	

03342500 BUSSEY CREEK NEAR CARLISLE, IN

LOCATION.--lat 38°58'27", long 87°25'33", in NW¼ survey 17, Vincennes Tract, Sullivan County, Hydrologic Unit 05120111, on left bank 10 ft downstream from bridge on State Highway 58, 1.5 mi northwest of Carlisle, and 6.7 mi (revised) upstream from mouth.

DRAINAGE AREA.--228 mi².

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.--Records good except for estimated daily discharges, which are poor. Flow affected by U.S. Soil Conservation Service floodwater-retarding structures and surface-mined areas.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	24	850	4250	e61	151	235	92	41	24	4.5	8.9
2	14	28	473	3490	e66	235	200	82	38	23	4.0	7.5
3	17	28	533	2310	e75	215	174	75	36	23	3.8	6.8
4	287	27	742	1470	e90	175	165	76	33	20	3.7	7.0
5	161	33	652	1160	142	153	182	78	30	20	3.8	9.9
6	66	60	370	1040	640	148	165	84	27	22	19	12
7	131	61	245	861	890	152	147	73	26	21	56	8.9
8	225	45	188	629	627	132	332	67	25	19	17	7.3
9	160	41	153	442	372	123	631	63	24	18	16	6.4
10	509	39	133	343	288	115	426	61	24	19	21	6.8
11	541	35	118	621	237	106	271	118	24	20	16	6.5
12	254	32	102	863	206	121	225	184	23	210	13	6.1
13	152	29	91	720	217	670	466	93	23	327	11	5.8
14	112	28	82	427	572	813	567	74	22	114	9.4	5.7
15	85	27	157	349	567	538	725	77	21	75	9.8	5.8
16	70	27	235	467	e260	326	840	80	25	54	16	6.3
17	60	27	276	498	e180	592	619	89	35	39	11	6.1
18	65	30	1020	342	e400	1290	391	69	29	31	9.8	5.5
19	80	26	1160	262	889	1160	348	66	25	23	9.6	6.0
20	64	24	1130	230	799	913	338	63	23	19	8.8	6.6
21	53	23	1110	198	536	565	262	57	30	15	8.3	5.4
22	46	68	1320	158	362	783	220	51	29	12	7.7	5.4
23	47	141	1200	e120	285	1740	189	49	65	10	7.2	6.1
24	41	95	901	e100	248	1670	166	53	45	8.7	7.0	7.5
25	37	70	506	e90	214	1710	145	53	30	7.5	6.9	6.8
26	33	56	302	e82	187	1160	133	60	27	6.7	6.8	5.9
27	32	393	233	e75	171	897	124	56	27	5.8	6.7	5.4
28	30	1070	216	e70	161	734	116	60	24	5.2	8.5	4.9
29	28	1080	853	e65	---	467	110	50	23	4.9	9.4	4.2
30	28	1130	3210	e62	---	341	105	55	25	6.0	9.6	3.9
31	26	---	3770	e60	---	274	---	46	---	5.6	9.5	---
TOTAL	3468	4797	22331	21854	9742	18469	9017	2254	879	1208.4	350.8	197.4
MEAN	112	160	720	705	348	596	301	72.7	29.3	39.0	11.3	6.58
MAX	541	1130	3770	4250	890	1740	840	184	65	327	56	12
MIN	14	23	82	60	61	106	105	46	21	4.9	3.7	3.9
CFSM	.49	.70	3.16	3.09	1.53	2.61	1.32	.32	.13	.17	.05	.03
IN.	.57	.78	3.64	3.57	1.59	3.01	1.47	.37	.14	.20	.06	.03

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 1991, BY WATER YEAR (WY)

	MEAN	44.7	152	272	312	382	473	428	310	174	112	52.9	70.1
MAX	263	1137	1421	2380	1317	1284	1102	1230	988	1101	633	701	
(WY)	1950	1986	1983	1950	1950	1978	1945	1981	1945	1979	1979	1989	
MIN	1.39	.94	2.87	3.64	11.3	12.8	35.6	31.6	8.88	.035	1.89	.88	
(WY)	1944	1955	1954	1977	1954	1954	1954	1954	1954	1954	1953	1953	

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1944 - 1991
ANNUAL TOTAL	128569	94567.6	231
ANNUAL MEAN	352	259	548
HIGHEST ANNUAL MEAN			10.8
LOWEST ANNUAL MEAN			1950
HIGHEST DAILY MEAN	4410	4250	8500
LOWEST DAILY MEAN	14	3.7	.00
ANNUAL SEVEN-DAY MINIMUM	16	4.5	.00
INSTANTANEOUS PEAK FLOW		4400	8800
INSTANTANEOUS PEAK STAGE		17.00	20.30
ANNUAL RUNOFF (CFSM)	1.54	1.14	1.01
ANNUAL RUNOFF (INCHES)	20.98	15.43	13.77
10 PERCENT EXCEEDS	884	758	648
50 PERCENT EXCEEDS	149	70	51
90 PERCENT EXCEEDS	26	7.0	5.0

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 mi².

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.--Records good. Flow partially regulated by upstream reservoirs.

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 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4450	12800	28800	51400	25400	14900	35200	13000	e14100	4360	2670	2210
2	4280	12200	29000	61900	23100	14100	33500	12300	e16500	4250	2520	2170
3	4160	11300	28500	74000	20900	14000	31100	11800	e20500	4330	2440	2200
4	5600	10000	28500	84300	19200	13900	27500	11200	e22000	4090	2430	2210
5	6510	8830	28900	90700	18500	14300	23100	e10700	20300	4050	2480	2570
6	5960	8850	29000	90800	22100	14600	19500	e11300	18700	4190	2460	2680
7	5470	12000	28300	85000	26100	14200	17000	e12000	16700	4490	3200	2390
8	6090	17100	27900	76600	27500	13500	15800	e12700	15100	4530	3560	2300
9	8760	20300	27000	67200	28300	12800	16200	e12600	13900	4450	3050	2470
10	13100	20500	25500	58200	28700	12000	15700	11700	12900	4280	2990	2370
11	20100	18300	23500	51500	28800	11200	14900	10900	11600	4190	3130	2320
12	25100	16100	21100	47800	28600	10800	14000	10800	10300	5370	2870	2290
13	27000	14700	19100	45000	27900	13300	13700	10300	9010	9110	2850	2290
14	28100	13700	17000	42500	27100	18100	14100	9950	8140	7710	2950	2220
15	29000	12600	15500	40400	25800	23300	15400	10000	7690	6090	2870	2210
16	29900	11800	15000	38900	22600	25500	17200	10700	7470	5090	2870	2160
17	30800	11200	16700	38300	18900	26200	19300	11700	7030	4430	2740	2110
18	31600	10800	22200	37900	16800	29600	21700	12200	6940	3950	2610	2220
19	31700	10600	27100	37700	17900	30400	23500	13900	6930	3640	2490	2260
20	30600	10300	28800	37600	19300	30500	24200	18700	6710	3350	2400	2330
21	28700	9930	29800	37500	19500	30800	23500	20300	6500	3200	2390	2270
22	27100	9620	32400	37600	20100	31200	21500	18800	6250	3170	2420	2210
23	25200	9530	33800	37800	21700	34900	20000	15600	6000	3140	2600	2330
24	22600	9300	34800	37700	22600	37300	19900	13300	6290	3040	2690	2370
25	20300	8920	35500	36800	22600	39000	19600	12400	5830	2910	2540	2400
26	18800	8630	36100	35900	21700	40600	18900	12700	5400	2900	2460	2440
27	17500	9490	36500	34300	19400	41200	17900	13200	5090	2870	2390	2480
28	16400	16900	35500	32800	16700	40800	16700	13700	4900	2890	2320	2460
29	15400	24900	33700	31300	---	39600	15400	e14100	4650	2890	2260	2450
30	14500	27900	38900	29800	---	38100	14000	e14300	4500	2850	2240	2440
31	13600	---	45500	27700	---	36600	---	e14600	---	2810	2300	---
TOTAL	568380	399100	879900	1536900	637800	767300	600000	401450	307930	128620	82190	69830
MEAN	18330	13300	28380	49580	22780	24750	20000	12950	10260	4149	2651	2328
MAX	31700	27900	45500	90800	28800	41200	35200	20300	22000	9110	3560	2680
MIN	4160	8630	15000	27700	16700	10800	13700	9950	4500	2810	2240	2110
CFSM	1.34	.97	2.07	3.62	1.66	1.81	1.46	.94	.75	.30	.19	.17
IN.	1.54	1.08	2.39	4.17	1.73	2.08	1.63	1.09	.84	.35	.22	.19

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 1991, BY WATER YEAR (WY)

	MEAN	4813	6707	10580	14370	16960	21340	21690	17710	12970	8845	5640	4543
MAX	18330	30610	39370	79760	57040	54760	49960	67770	42370	36090	24680	26040	2328
(WY)	1991	1973	1986	1950	1950	1982	1938	1943	1958	1957	1979	1989	
MIN	1244	1496	1347	1410	2037	3005	5247	3076	1612	1474	1303	1498	
(WY)	1957	1957	1964	1977	1931	1941	1931	1934	1934	1934	1936	1940	

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1931 - 1991
ANNUAL TOTAL	7358270	6379400	
ANNUAL MEAN	20160	17480	12150
HIGHEST ANNUAL MEAN			24920
LOWEST ANNUAL MEAN			3021
HIGHEST DAILY MEAN	62700	May 22	184000
LOWEST DAILY MEAN	3400	Jan 1	770
ANNUAL SEVEN-DAY MINIMUM	4490	Sep 27	799
INSTANTANEOUS PEAK FLOW			189000
INSTANTANEOUS PEAK STAGE			29.33
ANNUAL RUNOFF (CFSM)	1.47		.89
ANNUAL RUNOFF (INCHES)	19.97		12.05
10 PERCENT EXCEEDS	36900	36300	29600
50 PERCENT EXCEEDS	17400	14100	7250
90 PERCENT EXCEEDS	7380	2460	2240

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 mi².

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.--Records good except for estimated daily discharges, which are fair. 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.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 22.6 ft in March 1913, present datum, discharge, 20,000 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	85	105	285	2480	212	190	253	151	476	91	5.5	7.3
2	73	101	222	942	193	209	227	143	312	70	4.2	9.0
3	73	100	775	668	319	207	211	131	200	73	7.8	9.5
4	757	98	1160	518	568	185	207	138	151	83	16	14
5	537	130	572	439	868	175	214	139	122	76	14	22
6	297	189	355	397	982	169	208	144	103	65	13	12
7	212	151	275	351	1490	165	189	145	91	60	12	5.1
8	174	126	232	317	843	154	185	129	86	114	13	4.3
9	180	116	203	294	555	145	186	117	81	127	13	4.2
10	1110	131	180	271	422	139	170	110	76	93	14	4.1
11	951	135	167	357	343	133	149	105	74	77	12	4.1
12	514	117	158	834	283	133	138	100	76	77	9.4	9.0
13	345	102	144	517	257	205	234	93	68	77	6.3	19
14	268	95	132	384	306	576	980	88	64	73	5.6	21
15	216	91	989	364	298	717	779	89	62	61	7.4	32
16	184	90	1160	689	e270	1130	499	96	70	52	7.1	12
17	177	88	592	789	e260	1660	340	125	63	48	9.1	8.8
18	361	85	1270	520	258	2170	265	316	54	45	8.9	7.9
19	351	81	2200	390	950	1270	417	247	48	39	42	6.3
20	273	81	1080	e380	1030	670	737	157	41	40	27	8.3
21	215	82	938	e350	645	487	451	126	39	43	20	10
22	214	115	2000	e325	428	1060	335	124	59	39	12	14
23	242	201	1220	e300	327	2180	280	118	168	30	6.8	16
24	216	158	805	e270	278	1360	257	110	257	28	4.9	15
25	180	133	546	e265	245	628	227	98	143	25	4.4	17
26	157	110	381	e245	221	725	213	100	116	20	4.4	11
27	146	184	e370	e225	206	1080	203	103	96	11	4.3	12
28	132	868	e340	e212	193	616	191	88	110	6.8	4.2	15
29	119	813	1400	e200	---	420	182	81	105	6.9	8.2	16
30	111	408	6380	e210	---	333	169	177	99	11	5.5	11
31	107	---	8150	246	---	282	---	266	---	14	8.6	---
TOTAL	8977	5284	34681	14749	13250	19573	9096	4154	3510	1675.7	330.6	356.9
MEAN	290	176	1119	476	473	631	303	134	117	54.1	10.7	11.9
MAX	1110	868	8150	2480	1490	2180	980	316	476	127	42	32
MIN	73	81	132	200	193	133	138	81	39	6.8	4.2	4.1
CFSM	1.20	.73	4.64	1.97	1.96	2.62	1.26	.56	.49	.22	.04	.05
IN.	1.39	.82	5.35	2.28	2.05	3.02	1.40	.64	.54	.26	.05	.06

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 1991, BY WATER YEAR (WY)

	MEAN	55.8	126	230	296	350	423	398	258	206	101	70.0	58.1
MAX	409	947	1119	1654	1122	963	1476	1239	1492	562	816	825	
(WY)	1987	1973	1991	1950	1950	1978	1964	1933	1958	1979	1979	1989	
MIN	2.30	7.33	6.57	6.38	21.2	39.0	46.4	16.4	13.6	9.55	4.80	1.96	
(WY)	1957	1957	1961	1977	1935	1941	1941	1941	1988	1944	1940	1954	

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1932 - 1991
ANNUAL TOTAL	153944	115637.2	
ANNUAL MEAN	422	317	213
HIGHEST ANNUAL MEAN			421
LOWEST ANNUAL MEAN			42.1
HIGHEST DAILY MEAN	8150	8150	11600
LOWEST DAILY MEAN	36	4.1	1.1
ANNUAL SEVEN-DAY MINIMUM	42	5.1	1.2
INSTANTANEOUS PEAK FLOW		10400	14300
INSTANTANEOUS PEAK STAGE		12.96	21.07
ANNUAL RUNOFF (CFSM)	1.75	1.31	.89
ANNUAL RUNOFF (INCHES)	23.76	17.85	12.03
10 PERCENT EXCEEDS	973	783	480
50 PERCENT EXCEEDS	212	154	72
90 PERCENT EXCEEDS	97	11	11

03347500 BUCK CREEK NEAR MUNCIE, IN

LOCATION.--Lat 40°08'05", long 85°22'25", in SW¼ 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 mi².

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.--Records good except for estimated daily discharges, which are poor.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, about 15 ft, from information by local residents. Date unknown.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	e38.5	e60	154	e45	e54	63	47	112	23	17	16
2	32	e38	e50	116	e53	e56	59	45	57	22	17	15
3	33	e36	e80	97	e64	e52	57	44	47	24	17	16
4	147	e35	e120	85	e80	e47	58	46	41	24	18	18
5	71	e34.5	e90	80	e120	e46	65	46	38	22	17	16
6	52	e39	e66	76	e173	e48	60	45	35	22	18	16
7	46	e34	e56	71	e180	e47	56	43	34	21	18	15
8	44	e30	e49	67	e130	e43	56	42	33	35	18	15
9	57	e31	e44	64	e100	e42	57	41	32	25	19	15
10	166	e32	e39	63	e84	e41	53	40	31	24	18	15
11	95	e31	e37	115	e69	e40	50	40	30	23	17	16
12	66	e28.5	e36	116	e60	e80	49	39	30	24	17	16
13	56	e27.8	e35	79	e61	e230	111	39	29	23	16	17
14	51	e28	e34	70	e66	e220	140	39	29	22	17	17
15	46	e27.3	e66	75	e60	e170	112	38	28	21	18	16
16	43	e27	e88	122	e52	e135	81	40	30	21	17	16
17	43	e26.3	e72	106	e52	e110	67	62	28	20	18	16
18	112	e26	e130	78	e90	e193	60	231	27	20	20	17
19	70	e25.5	e250	70	e150	108	120	91	27	20	26	17
20	56	e25	e114	70	e130	82	117	59	26	20	25	16
21	50	e31	194	66	e100	71	80	49	26	19	19	17
22	57	e45	209	e60	e82	241	69	61	28	19	18	18
23	53	e46	134	e56	e71	301	63	60	28	19	17	19
24	48	e37.5	99	e52	e63	125	60	47	26	19	17	18
25	45	e33	83	e48	e58	93	56	42	25	19	16	16
26	43	e31	75	e47	e55	144	55	42	25	18	16	16
27	42	e60	70	e46	e52	128	53	39	25	18	16	16
28	41	e150	69	e47	e52	92	51	37	24	18	17	16
29	40	e120	279	49	---	78	50	59	24	18	17	15
30	39	e84	353	63	---	69	48	102	23	18	16	15
31	39	---	301	e54	---	66	---	61	---	18	16	---
TOTAL	1816	1257.9	3382	2362	2352	3252	2076	1716	998	659	553	487
MEAN	58.6	41.9	109	76.2	84.0	105	69.2	55.4	33.3	21.3	17.8	16.2
MAX	166	150	353	154	180	301	140	231	112	35	26	19
MIN	32	25	34	46	45	40	48	37	23	18	16	15
CFSM	1.65	1.18	3.07	2.15	2.37	2.96	1.95	1.56	.94	.60	.50	.46
IN.	1.90	1.32	3.54	2.48	2.46	3.41	2.18	1.80	1.05	.69	.58	.51

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 1991, BY WATER YEAR (WY)

	MEAN	20.3	28.3	38.3	39.6	52.4	58.5	56.4	43.0	39.0	27.2	23.5	18.5
MAX	58.6	99.3	107	96.2	123	117	166	89.6	153	70.8	108	76.4	
(WY)	1991	1973	1991	1959	1971	1982	1964	1968	1958	1979	1979	1989	
MIN	8.73	9.30	8.77	6.36	11.2	16.4	16.7	17.2	11.3	8.64	9.00	8.13	
(WY)	1964	1964	1965	1977	1964	1966	1966	1988	1988	1966	1965	1963	

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1955 - 1991

ANNUAL TOTAL	22281.9	20910.9	
ANNUAL MEAN	61.0	57.3	37.0
HIGHEST ANNUAL MEAN			57.1
LOWEST ANNUAL MEAN			15.4
HIGHEST DAILY MEAN	435	Mar 11	1260
LOWEST DAILY MEAN	23	Jul 9	4.7
ANNUAL SEVEN-DAY MINIMUM	25	Jul 4	5.5
INSTANTANEOUS PEAK FLOW			1780
INSTANTANEOUS PEAK STAGE			13.96
ANNUAL RUNOFF (CFSM)	1.72	1.61	1.04
ANNUAL RUNOFF (INCHES)	23.35	21.91	14.15
10 PERCENT EXCEEDS	107	116	66
50 PERCENT EXCEEDS	42	45	24
90 PERCENT EXCEEDS	29	17	11

03348000 WHITE RIVER AT ANDERSON, IN

LOCATION.--Lat 40°06'20", long 85°40'16", in NW¼ 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 mi².

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.--Records good except for estimated daily discharges, which are poor. Prior to Sept. 15, 1973, the City of Anderson diverted water for its municipal supply above the gage then in use.

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 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	283	277	605	8350	e390	437	559	386	1010	161	81	69
2	265	271	477	2080	e400	467	510	369	846	155	79	66
3	259	269	983	1450	617	462	473	353	522	153	74	72
4	1170	263	1940	1170	1020	430	454	358	396	143	89	99
5	1210	303	1030	1030	1380	402	509	361	329	144	86	86
6	686	394	709	945	1680	397	477	371	292	129	90	86
7	504	350	567	853	2280	388	438	360	262	119	91	72
8	440	306	479	778	1520	367	434	329	241	282	85	63
9	426	290	427	718	1100	353	443	307	229	236	118	60
10	1570	296	393	658	904	340	415	309	219	203	88	63
11	1940	297	375	756	754	334	376	311	215	161	85	63
12	1010	286	357	1420	644	348	349	310	216	151	80	62
13	718	271	342	1090	600	565	474	295	196	151	77	87
14	584	261	319	866	663	1230	1250	305	186	136	68	131
15	483	257	1010	814	e640	1460	1450	304	183	125	69	96
16	409	252	1970	1160	e520	1840	1030	306	210	115	71	98
17	381	252	1030	1480	e500	2400	754	404	189	110	77	86
18	595	243	1550	1130	e540	3160	597	1090	177	107	104	75
19	776	238	3340	890	1420	2540	721	950	166	104	89	73
20	575	234	1970	807	1580	1330	1320	545	160	97	312	69
21	471	231	1420	794	1170	1010	949	420	159	102	128	71
22	448	283	2990	e660	872	1460	741	377	183	96	101	74
23	487	364	2100	e580	702	3230	621	421	250	96	87	104
24	449	353	1350	e510	609	2610	583	346	391	88	80	96
25	400	317	936	e470	546	1290	522	303	276	87	71	84
26	357	287	735	e450	493	1160	480	315	213	86	67	87
27	338	385	596	e440	464	1860	458	297	181	80	66	82
28	324	1100	582	e425	446	1240	444	279	165	80	76	80
29	308	1550	1550	e410	---	905	426	263	172	80	68	76
30	297	824	10100	e412	---	728	399	526	164	89	90	77
31	288	---	16700	e420	---	615	---	979	---	83	83	---
TOTAL	18451	11304	58932	34016	24454	35358	18656	12849	8398	3949	2830	2407
MEAN	595	377	1901	1097	873	1141	622	414	280	127	91.3	80.2
MAX	1940	1550	16700	8350	2280	3230	1450	1090	1010	282	312	131
MIN	259	231	319	410	390	334	349	253	159	80	66	60
CFSM	1.47	.93	4.68	2.70	2.15	2.81	1.53	1.02	.69	.31	.22	.20
IN.	1.69	1.04	5.40	3.12	2.24	3.24	1.71	1.18	.77	.36	.26	.22

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 1991, BY WATER YEAR (WY)

	139	237	389	498	599	722	691	475	379	223	177	145
MEAN	139	237	389	498	599	722	691	475	379	223	177	145
MAX	619	1321	1901	2740	1882	1621	2164	1949	2232	1026	1547	1602
(WY)	1987	1973	1991	1950	1950	1978	1964	1933	1958	1979	1979	1989
MIN	30.3	45.4	45.1	44.4	67.5	81.5	94.0	41.5	76.2	37.9	25.1	20.9
(WY)	1941	1935	1964	1945	1935	1941	1941	1941	1988	1936	1940	1941

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1932 - 1991
ANNUAL TOTAL	285692	231604	
ANNUAL MEAN	783	635	390
HIGHEST ANNUAL MEAN			704
LOWEST ANNUAL MEAN			80.5
HIGHEST DAILY MEAN	16700	16700	16700
LOWEST DAILY MEAN	171	80	9.1
ANNUAL SEVEN-DAY MINIMUM	186	67	13
INSTANTANEOUS PEAK FLOW		17900	18700
INSTANTANEOUS PEAK STAGE		18.83	19.96
ANNUAL RUNOFF (CFSM)	1.93	1.56	.96
ANNUAL RUNOFF (INCHES)	26.18	21.22	13.05
10 PERCENT EXCEEDS	1570	1340	821
50 PERCENT EXCEEDS	432	376	178
90 PERCENT EXCEEDS	263	83	61

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 mi².

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.--Records good except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	19	32	157	18	20	31	22	85	11	4.2	e2.8
2	16	19	25	73	18	21	28	21	53	13	3.9	e2.6
3	16	18	195	55	28	19	27	20	56	16	3.7	e2.5
4	132	18	154	42	62	18	26	20	37	13	4.6	e3.5
5	65	28	57	37	109	17	30	20	30	12	4.9	e2.7
6	40	36	40	35	108	17	29	20	27	11	4.2	e2.5
7	33	22	32	32	161	16	27	19	25	10	4.3	e2.4
8	42	19	27	29	76	15	27	18	24	28	4.2	e2.4
9	73	18	23	27	52	15	30	19	23	20	5.2	e2.3
10	280	17	21	25	41	14	26	19	22	14	5.0	e2.7
11	175	16	20	41	33	14	24	19	22	12	4.2	e2.5
12	73	15	18	67	28	15	23	19	23	12	3.8	e2.3
13	53	14	17	39	27	23	64	19	21	12	3.7	e3.3
14	44	14	16	35	32	42	127	21	20	9.9	3.5	e5.0
15	39	14	116	50	27	52	104	22	19	8.8	3.5	e2.5
16	34	13	77	124	24	94	62	26	39	8.4	3.5	e2.5
17	31	13	46	98	22	190	41	56	27	8.0	4.2	e2.3
18	57	12	139	51	35	350	33	134	22	7.6	7.4	e2.2
19	41	12	159	40	111	187	85	61	20	7.2	8.0	e2.0
20	33	12	70	40	73	84	100	36	19	7.0	9.3	e1.9
21	30	12	129	39	46	61	50	28	18	6.8	7.8	e1.9
22	33	16	201	32	35	99	39	24	87	6.7	5.2	e2.3
23	34	20	82	29	30	149	33	22	135	6.2	4.0	e3.0
24	29	16	49	25	27	65	31	21	33	5.8	3.3	e2.5
25	26	14	35	23	24	43	28	22	21	5.9	2.8	e2.0
26	23	13	29	23	22	108	27	33	17	5.7	2.7	e2.1
27	22	45	25	22	21	106	26	25	15	5.0	2.7	e1.9
28	21	160	24	21	20	67	25	21	13	4.8	2.6	e1.7
29	19	85	227	20	---	47	24	18	12	4.8	e2.8	e1.6
30	19	43	903	21	---	38	23	18	11	4.8	e3.2	e1.6
31	19	---	654	19	---	33	---	201	---	4.5	e3.0	---
TOTAL	1568	773	3642	1371	1310	2039	1250	1044	976	301.9	135.4	73.5
MEAN	50.6	25.8	117	44.2	46.8	65.8	41.7	33.7	32.5	9.74	4.37	2.45
MAX	280	160	903	157	161	350	127	201	135	28	9.3	5.0
MIN	16	12	16	19	18	14	23	18	11	4.5	2.6	1.6
CFSM	1.98	1.01	4.61	1.73	1.83	2.58	1.63	1.32	1.28	.38	.17	.10
IN.	2.29	1.13	5.31	2.00	1.91	2.97	1.82	1.52	1.42	.44	.20	.11

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1991, BY WATER YEAR (WY)

	9.11	18.9	32.7	28.8	44.1	51.1	40.8	26.6	28.1	13.7	12.2	11.5
MEAN	9.11	18.9	32.7	28.8	44.1	51.1	40.8	26.6	28.1	13.7	12.2	11.5
MAX	50.6	90.6	117	86.1	110	139	97.4	84.0	123	50.4	79.5	111
(WY)	1991	1973	1991	1974	1990	1982	1972	1981	1980	1990	1990	1989
MIN	1.86	1.77	1.40	.89	4.69	11.8	9.91	6.56	2.61	2.07	2.05	1.21
(WY)	1977	1977	1977	1977	1978	1983	1976	1988	1988	1977	1988	1983

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1969 - 1991

ANNUAL TOTAL	21278.3	14483.8	26.4
ANNUAL MEAN	58.3	39.7	48.5
HIGHEST ANNUAL MEAN			6.66
LOWEST ANNUAL MEAN			966
HIGHEST DAILY MEAN	903	903	.76
LOWEST DAILY MEAN	9.1	e1.6	.80
ANNUAL SEVEN-DAY MINIMUM	10	1.9	1200
INSTANTANEOUS PEAK FLOW		1030	12.70
INSTANTANEOUS PEAK STAGE		11.99	1.03
ANNUAL RUNOFF (CFSM)	2.29	1.56	14.04
ANNUAL RUNOFF (INCHES)	31.04	21.13	58
10 PERCENT EXCEEDS	130	86	12
50 PERCENT EXCEEDS	25	22	3.0
90 PERCENT EXCEEDS	14	3.4	

e Estimated

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 mi².
 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---Records good.
 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 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	46	146	1090	66	80	138	67	648	24	9.7	7.5
2	25	44	108	620	65	89	115	63	326	26	9.5	6.9
3	25	43	481	361	81	86	100	58	226	54	9.1	6.7
4	245	45	941	265	160	78	94	58	146	37	10	9.2
5	280	59	433	220	270	73	112	60	93	27	9.5	7.1
6	154	116	255	188	330	73	113	65	71	22	9.9	6.2
7	105	81	198	165	513	70	98	57	58	19	10	6.2
8	148	64	162	150	339	63	94	51	51	45	11	6.6
9	189	57	138	139	235	61	143	50	46	56	14	6.6
10	655	55	125	128	187	60	128	47	42	32	10	7.6
11	869	49	111	153	150	58	95	45	41	25	9.5	7.5
12	490	45	102	271	123	60	79	45	40	23	8.8	7.1
13	276	42	93	195	118	118	107	45	36	23	8.1	9.4
14	202	40	81	165	130	232	351	52	34	20	7.9	14
15	152	39	267	244	e110	293	537	166	32	17	7.5	6.3
16	121	39	318	449	e100	431	578	120	151	16	7.4	6.2
17	101	38	205	501	92	737	270	145	76	15	8.3	5.4
18	200	37	374	301	105	1160	174	363	49	14	11	5.2
19	209	36	587	222	322	996	302	256	40	13	12	5.2
20	139	35	339	210	289	627	693	135	35	12	12	5.2
21	107	34	361	212	194	397	363	92	32	14	9.7	5.3
22	102	42	742	164	154	460	229	72	116	13	8.3	6.4
23	111	54	431	141	125	773	168	78	532	12	8.2	8.3
24	94	49	251	119	113	507	148	67	136	12	7.5	6.0
25	79	44	183	106	100	275	119	58	78	11	7.1	5.7
26	69	40	145	94	91	339	105	57	54	11	7.1	6.0
27	63	62	123	92	85	631	95	54	40	10	7.3	5.6
28	58	372	114	85	81	620	87	47	33	11	7.2	5.3
29	53	449	663	78	---	370	82	44	29	10	7.1	5.1
30	50	208	3820	77	---	216	74	44	26	12	7.2	5.1
31	49	---	2630	70	---	161	---	394	---	10	7.2	---
TOTAL	5446	2364	14927	7275	4728	10194	5791	2955	3317	646	279.1	200.9
MEAN	176	78.8	482	235	169	329	193	95.3	111	20.8	9.00	6.70
MAX	869	449	3820	1090	513	1160	693	394	648	56	14	14
MIN	25	34	81	70	65	58	74	44	26	10	7.1	5.1
CFSM	1.55	.70	4.26	2.08	1.49	2.91	1.71	.84	.98	.18	.08	.06
IN.	1.79	.78	4.91	2.39	1.56	3.36	1.91	.97	1.09	.21	.09	.07

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1991, BY WATER YEAR (WY)

	34.8	78.7	146	119	180	212	170	94.0	103	48.0	46.4	45.9
MEAN	34.8	78.7	146	119	180	212	170	94.0	103	48.0	46.4	45.9
MAX	176	416	482	409	416	544	467	224	409	142	234	529
(WY)	1991	1973	1991	1974	1990	1982	1972	1989	1980	1976	1990	1989
MIN	5.70	7.95	7.31	5.29	19.2	42.4	33.3	19.1	10.3	7.94	4.97	4.76
(WY)	1989	1977	1977	1977	1978	1981	1971	1976	1988	1977	1988	1983

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1969 - 1991	
ANNUAL TOTAL	74483		58123.0		106	
ANNUAL MEAN	204		159		180	
HIGHEST ANNUAL MEAN					32.7	
LOWEST ANNUAL MEAN					1973	
HIGHEST DAILY MEAN	3820	Dec 30	3820	Dec 30	3820	Dec 30 1990
LOWEST DAILY MEAN	18	Aug 10	5.1	Sep 29	3.0	Oct 11 1988
ANNUAL SEVEN-DAY MINIMUM	20	Aug 6	5.5	Sep 15	3.2	Oct 9 1988
INSTANTANEOUS PEAK FLOW			4550	Dec 30	4920	Sep 2 1989
INSTANTANEOUS PEAK STAGE			14.38	Dec 30	14.78	Jun 3 1980
ANNUAL RUNOFF (CFSM)	1.81		1.41		.94	
ANNUAL RUNOFF (INCHES)	24.52		19.13		12.74	
10 PERCENT EXCEEDS	484		373		254	
50 PERCENT EXCEEDS	94		78		40	
90 PERCENT EXCEEDS	35		7.8		9.3	

03J49000 WHITE RIVER AT NOBLESVILLE, IN

LOCATION.--Lat 40°02'50", long 86°01'00", in SE1/4 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 mi².

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	424	421	1440	20800	709	747	1190	718	4220	334	169	145
2	379	409	1080	8190	691	775	1050	674	3860	308	160	132
3	362	394	2280	3680	760	776	950	634	2260	306	161	133
4	1050	381	5110	2670	1240	721	904	626	1340	330	161	174
5	2580	436	3890	2170	1940	675	1000	626	887	299	173	176
6	1490	747	2110	1800	2930	653	1020	662	684	283	188	155
7	1010	726	1490	1520	3970	641	933	620	591	258	194	149
8	979	577	1200	1350	3700	602	917	585	531	455	190	135
9	1030	491	1010	1230	2370	571	1180	555	486	565	199	124
10	3050	469	906	1110	1780	553	1060	532	455	438	218	121
11	5280	453	839	1200	1440	531	879	524	438	357	180	122
12	3820	430	777	2280	1180	553	760	511	433	321	167	123
13	2140	399	730	2180	1070	1650	905	504	415	308	159	131
14	1510	377	672	1570	1100	3110	1830	489	392	290	154	174
15	1180	365	1360	1680	1100	3730	3610	840	375	268	158	207
16	964	366	3610	2650	860	3830	3570	737	438	248	143	155
17	839	357	2570	3640	874	4360	2280	926	527	234	148	155
18	960	342	2570	2780	880	5570	1540	2250	420	225	171	137
19	1520	333	4850	1920	1760	6290	1800	2590	371	215	207	124
20	1170	327	4650	1670	2890	4400	3370	1480	344	210	268	120
21	943	319	3180	1630	2280	2740	3000	1020	326	203	321	117
22	847	358	5010	1400	1630	2610	1930	885	360	257	218	122
23	860	462	5130	1180	1260	4740	1490	921	901	207	186	150
24	836	532	3130	1040	1070	5310	1280	1030	1010	196	163	163
25	742	463	2060	896	955	3250	1110	747	671	189	146	148
26	662	418	1510	833	862	2480	989	662	478	181	138	136
27	601	495	1240	813	802	3700	924	651	404	176	137	135
28	545	1850	1080	794	760	3590	865	588	362	169	134	128
29	496	3810	2450	734	---	2510	815	541	341	166	174	122
30	466	2380	14300	728	---	1720	770	579	326	170	144	119
31	444	---	25400	755	---	1360	---	2060	---	175	172	---
TOTAL	39179	19887	107634	76893	42863	74748	43921	26767	24646	8341	5501	4232
MEAN	1264	663	3472	2480	1531	2411	1464	863	822	269	177	141
MAX	5280	3810	25400	20800	3970	6290	3610	2590	4220	565	321	207
MIN	362	319	672	728	691	531	760	489	326	166	134	117
CFSM	1.47	.77	4.05	2.89	1.78	2.81	1.71	1.01	.96	.31	.21	.16
IN.	1.70	.86	4.67	3.33	1.86	3.24	1.90	1.16	1.07	.36	.24	.18

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 1991, BY WATER YEAR (WY)

	MEAN	285	529	913	1153	1339	1612	1501	927	827	502	362	302
MAX	1264	2805	3472	6494	3485	3732	4281	2213	4432	1574	2264	3143	
(WY)	1991	1973	1991	1950	1950	1978	1964	1981	1958	1979	1979	1989	
MIN	88.4	109	107	102	141	368	322	249	143	138	93.8	69.3	
(WY)	1964	1964	1964	1977	1964	1981	1971	1988	1988	1966	1988	1954	

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1947 - 1991	
ANNUAL TOTAL	566612		474612		851	
ANNUAL MEAN	1552		1300		1455	
HIGHEST ANNUAL MEAN					266	
LOWEST ANNUAL MEAN					25400	
HIGHEST DAILY MEAN	25400	Dec 31	25400	Dec 31	44	Dec 31 1990
LOWEST DAILY MEAN	284	Jul 9	117	Sep 21	58	Sep 28 1954
ANNUAL SEVEN-DAY MINIMUM	312	Jul 4	129	Sep 7	27000	Sep 23 1954
INSTANTANEOUS PEAK FLOW			27000	Dec 31	21.31	Dec 31 1990
INSTANTANEOUS PEAK STAGE			21.29	Dec 31	21.31	Apr 22 1964
ANNUAL RUNOFF (CFSM)	1.81		1.52		.99	
ANNUAL RUNOFF (INCHES)	24.57		20.58		13.48	
10 PERCENT EXCEEDS	3650		3120		1940	
50 PERCENT EXCEEDS	839		730		396	
90 PERCENT EXCEEDS	420		161		136	

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 mi².

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.--Records good except for estimated daily discharges, which are poor. Flow regulated by Morse Reservoir. Computation of summary statistics does not include water years 1981-1985.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	52	328	3190	e129	177	236	156	3080	10	e29	.58
2	2.2	49	258	1280	e130	206	191	134	2640	14	e30	.53
3	3.3	50	727	772	147	219	170	120	1490	12	e52	.61
4	113	54	1280	556	198	171	169	131	820	26	e33	.96
5	109	87	692	441	296	157	206	127	481	15	e4.1	.82
6	81	131	462	366	506	174	185	120	324	11	e24	.73
7	78	146	338	304	826	159	169	112	241	11	e1.2	.68
8	96	114	276	265	664	137	184	105	197	e43	e.70	.68
9	142	99	230	244	500	142	217	98	160	e9.0	e.85	.68
10	833	90	209	221	412	122	196	96	125	e8.5	.79	.79
11	1130	72	185	248	337	115	152	96	111	e7.5	.74	11
12	645	70	168	509	277	168	125	98	108	e9.0	.68	26
13	399	55	172	453	261	931	206	90	97	e9.0	.68	27
14	280	50	129	349	268	1820	496	91	80	e4.1	.75	17
15	211	50	380	459	235	1880	1030	287	79	e2.1	.83	5.3
16	159	63	580	862	145	1570	928	310	97	e1.7	.85	.98
17	127	46	425	1020	177	1400	564	249	112	e1.4	1.8	.80
18	190	39	564	733	211	1600	368	489	99	e1.5	1.2	.72
19	196	41	881	526	397	1470	542	461	79	e1.7	1.2	.71
20	180	42	653	481	514	949	886	285	61	e1.5	1.1	.68
21	151	38	685	479	424	663	647	193	48	e1.7	1.0	.68
22	151	68	1370	374	363	729	432	155	53	e1.7	1.0	.76
23	120	69	975	316	276	1170	330	185	92	e1.7	1.1	.87
24	112	45	549	270	252	1100	291	353	82	e3.3	1.1	.77
25	98	47	e330	216	228	683	238	217	70	e44	1.2	.69
26	65	45	e255	e190	196	643	217	160	45	e41	11	.86
27	66	93	e220	e175	185	910	197	149	33	e38	25	1.0
28	68	508	e230	e162	176	812	189	108	24	e39	25	.82
29	52	799	891	e154	---	530	170	95	32	e40	25	.77
30	52	478	6730	e150	---	332	156	98	30	e35	14	.77
31	56	---	5240	e131	---	254	---	1330	---	e30	.91	---
TOTAL	5967.5	3590	26412	15896	8730	21393	10087	6698	10990	474.4	291.78	105.24
MEAN	192	120	852	513	312	690	336	216	366	15.3	9.41	3.51
MAX	1130	799	6730	3190	826	1880	1030	1330	3080	44	52	27
MIN	2.0	38	129	131	129	115	125	90	24	1.4	.68	.53
CFSM	.89	.55	3.94	2.37	1.44	3.19	1.56	1.00	1.70	.07	.04	.02
IN.	1.03	.62	4.55	2.74	1.50	3.68	1.74	1.15	1.89	.08	.05	.02

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 1991, BY WATER YEAR (WY)

	MEAN	57.5	136	236	233	288	398	353	213	201	129	69.2	50.4
MAX	341	705	852	939	865	1076	1130	551	1052	518	356	726	
(WY)	1970	1986	1991	1974	1976	1978	1957	1956	1958	1979	1958	1989	
MIN	1.81	1.18	1.12	1.13	2.54	98.0	67.9	24.5	20.4	9.10	3.82	1.05	
(WY)	1988	1968	1989	1977	1964	1966	1971	1976	1988	1967	1959	1977	

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1951 - 1991	
ANNUAL TOTAL	122162.2		110634.92		197	
ANNUAL MEAN	335		303		374	
HIGHEST ANNUAL MEAN					50.3	
LOWEST ANNUAL MEAN					1974	
HIGHEST DAILY MEAN	6730	Dec 30	6730	Dec 30	6730	Dec 30 1990
LOWEST DAILY MEAN	1.8	Sep 18	.53	Sep 2	.25	Oct 21 1976
ANNUAL SEVEN-DAY MINIMUM	6.8	Sep 27	.70	Sep 1	.46	Nov 9 1988
INSTANTANEOUS PEAK FLOW			8240	Dec 30	9800	Jun 28 1957
INSTANTANEOUS PEAK STAGE			14.77	Dec 30	15.26	Jun 28 1957
ANNUAL RUNOFF (CFSM)	1.55		1.40		.91	
ANNUAL RUNOFF (INCHES)	21.04		19.05		12.36	
10 PERCENT EXCEEDS	774		749		484	
50 PERCENT EXCEEDS	158		142		73	
90 PERCENT EXCEEDS	22		1.0		2.7	

03350700 STONY CREEK NEAR NOBLESVILLE, IN

LOCATION (Revised).--Lat 40°01'44", long 85°59'44", in NE¼NE¼ sec.7, T.18 N., R.5 E., Hamilton County, Hydrologic Unit 05120201, on right bank, between dual bridges on State Highway 37, 1.1 mi upstream from mouth, and 1.4 mi southeast of Noblesville.

DRAINAGE AREA.--50.8 mi².

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

REVISED RECORDS.--WDR IN-82-1: 1981.

GAGE.--Water-stage recorder. Datum of gage is 749.00 ft above National Geodetic Vertical Datum of 1929 (Indiana Department of Highways bench mark). Prior to Oct. 1, 1988, water-stage recorder at county road bridge 200 ft upstream at same datum.

REMARKS.--Records good except those for periods of estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	25	96	434	e36.0	40	60	40	70	12	4.7	2.9
2	9.9	23	73	225	e38.0	43	51	37	51	13	4.1	2.6
3	11	23	313	166	e49.0	38	47	34	93	9.3	4.1	3.7
4	139	22	332	130	e82.0	34	47	37	49	8.4	4.2	16
5	108	38	167	111	e124	33	60	38	35	7.7	3.9	6.1
6	60	57	126	94	221	34	53	45	29	6.8	5.5	4.4
7	45	36	103	83	287	30	48	36	24	6.1	5.6	3.9
8	60	30	88	74	181	26	55	31	22	40	5.6	3.4
9	74	28	77	67	140	26	63	29	20	42	7.4	3.3
10	269	27	68	60	114	24	50	29	18	19	5.7	3.2
11	229	25	61	104	90	24	41	28	17	15	4.8	2.8
12	150	23	56	168	74	36	38	31	17	14	4.3	3.6
13	111	22	48	110	72	444	91	36	16	12	3.9	4.0
14	82	22	68	90	73	400	151	32	15	10	3.6	4.8
15	62	21	194	112	e58	272	239	29	15	8.7	6.1	3.9
16	48	21	121	177	e41	187	182	28	17	8.0	7.3	3.2
17	42	21	207	188	46	157	114	57	15	7.4	5.0	3.0
18	82	20	293	135	65	232	85	154	14	7.0	4.7	2.8
19	66	19	176	e121	144	165	255	91	13	6.7	4.7	2.6
20	50	19	153	e120	131	126	269	61	11	6.5	5.0	2.5
21	42	19	196	e115	99	105	163	47	11	7.5	6.2	2.1
22	47	22	377	e93.0	81	197	121	95	11	15	4.4	3.0
23	54	29	289	e77.0	65	310	96	109	26	8.8	3.9	4.0
24	46	25	168	e63.0	59	181	80	79	17	7.1	3.4	3.7
25	38	23	e105	e55.0	50	127	65	56	14	6.4	3.0	2.6
26	33	21	e82	e49.0	45	157	59	54	12	6.0	2.8	2.5
27	31	61	e70	e46.0	42	181	55	48	11	5.3	2.7	2.1
28	29	255	e74	e44.0	40	134	50	39	9.6	5.0	2.5	2.1
29	27	207	505	e43.0	---	101	47	35	9.1	5.2	2.8	2.0
30	26	129	1760	e41.0	---	79	42	39	8.6	5.1	3.9	1.8
31	26	---	846	e37.0	---	67	---	45	---	4.5	5.6	---
TOTAL	2107.9	1313	7292	3432.0	2547.0	4010	2777	1549	690.3	335.5	141.4	108.6
MEAN	68.0	43.8	235	111	91.0	129	92.6	50.0	23.0	10.8	4.56	3.62
MAX	269	255	1760	434	287	444	269	154	93	42	7.4	16
MIN	9.9	19	48	37	36	24	38	28	8.6	4.5	2.5	1.8
CFSM	1.34	.86	4.63	2.18	1.79	2.55	1.82	.98	.45	.21	.09	.07
IN.	1.54	.96	5.34	2.51	1.87	2.94	2.03	1.13	.51	.25	.10	.08

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1991, BY WATER YEAR (WY)

	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
MEAN	17.5	35.2	62.8	53.3	85.4	91.6	80.2	55.8	42.5	27.5	24.7	19.4												
MAX	68.0	152	235	145	190	203	160	146	142	128	80.5	210												
(WY)	1991	1973	1991	1974	1990	1978	1972	1981	1974	1979	1979	1989												
MIN	3.63	5.51	5.84	3.87	11.0	17.6	16.9	16.1	6.50	3.25	3.84	3.62												
(WY)	1988	1988	1977	1977	1978	1981	1971	1988	1988	1977	1988	1991												

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1968 - 1991

	1990	1991	1968-1991
ANNUAL TOTAL	35066.9	26303.7	
ANNUAL MEAN	96.1	72.1	49.4
HIGHEST ANNUAL MEAN			78.5
LOWEST ANNUAL MEAN			19.5
HIGHEST DAILY MEAN	1760	1760	1760
LOWEST DAILY MEAN	9.9	1.8	1.8
ANNUAL SEVEN-DAY MINIMUM	11	2.4	2.4
INSTANTANEOUS PEAK FLOW		2090	2090
INSTANTANEOUS PEAK STAGE		9.21	9.21
ANNUAL RUNOFF (CFSM)	1.89	1.42	.97
ANNUAL RUNOFF (INCHES)	25.68	19.26	13.22
10 PERCENT EXCEEDS	207	171	115
50 PERCENT EXCEEDS	51	40	23
90 PERCENT EXCEEDS	18	4.0	6.0

03351000 WHITE RIVER NEAR MORA, IN

LOCATION.--Lat 39°54'35", long 86°06'20", in NW1/4 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 Mora, 14 mi upstream from Fall Creek, and at mile 247.9.

DRAINAGE AREA.--1,219 mi².

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 Mora.

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.--Records good. Flow slightly regulated by Morse Reservoir.

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 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	497	688	2300	27800	1170	1160	1770	1170	5350	399	215	182
2	445	668	1750	19200	1150	1210	1580	1090	5750	365	204	150
3	421	645	2820	6450	1210	1230	1430	1030	4080	348	205	158
4	1060	626	6070	3960	1530	1150	1370	1030	2530	369	220	210
5	2690	710	5780	3140	2330	1060	1490	1020	1700	364	197	207
6	2220	1000	3300	2680	3590	1030	1510	1050	1270	327	267	193
7	1450	1180	2360	2340	4850	1020	1400	1000	1050	298	233	171
8	1270	997	1910	2120	5120	950	1410	950	914	367	219	162
9	1340	849	1620	1950	3520	903	1730	895	809	734	236	149
10	3150	791	1420	1790	2680	873	1610	860	727	628	249	142
11	6260	747	1310	1820	2220	825	1370	844	675	485	222	137
12	5540	709	1210	2720	1880	1020	1200	830	653	427	192	160
13	3280	667	1140	3260	1690	3350	1480	818	625	391	182	215
14	2320	625	1030	2450	1690	4850	2210	792	574	382	182	208
15	1820	599	1610	2340	1680	5350	4650	1060	530	342	170	236
16	1490	596	3850	3210	1400	5200	5120	1320	565	305	171	203
17	1270	597	3770	4680	1330	5520	3570	1240	709	284	178	178
18	1310	562	3340	4220	1470	7070	2430	2360	650	271	181	167
19	1830	546	5480	3000	2070	8100	2750	3260	546	255	224	152
20	1780	539	6250	2530	3620	6720	4310	2310	478	241	232	141
21	1420	530	4470	2450	3220	4040	4370	1510	435	234	384	138
22	1280	585	5940	2230	2440	3700	2970	1220	432	282	279	148
23	1240	682	7100	1920	1920	5700	2290	1300	698	246	223	175
24	1230	764	4620	1730	1610	6990	1960	1610	1270	224	190	178
25	1120	731	3090	1520	1470	5080	1710	1280	967	240	170	185
26	990	665	2340	1410	1330	3530	1530	1070	686	238	158	163
27	893	899	1890	1340	1240	4510	1420	996	546	229	161	159
28	839	2200	1700	1300	1180	4950	1340	905	469	223	171	154
29	779	4400	3070	1260	---	3630	1290	826	421	218	178	146
30	736	3700	16600	1240	---	2590	1220	853	405	217	211	142
31	714	---	26200	1210	---	2030	---	1560	---	215	179	---
TOTAL	52684	29497	135340	119270	60610	105341	64490	38059	36514	10148	6483	5109
MEAN	1699	983	4366	3847	2165	3398	2150	1228	1217	327	209	170
MAX	6260	4400	26200	27800	5120	8100	5120	3260	5750	734	384	236
MIN	421	530	1030	1210	1150	825	1200	792	405	215	158	137
CFSM	1.39	.81	3.58	3.16	1.78	2.79	1.76	1.01	1.00	.27	.17	.14
IN.	1.61	.90	4.13	3.64	1.85	3.21	1.97	1.16	1.11	.31	.20	.16

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 1991, BY WATER YEAR (WY)

	MEAN	361	636	1118	1583	1718	2120	2058	1377	1073	645	447	371
MAX	1699	3651	4366	9015	4805	5113	5878	6815	6093	2538	2612	4397	
(WY)	1991	1973	1991	1950	1950	1978	1964	1943	1958	1957	1979	1989	
MIN	108	110	119	119	182	194	280	141	200	102	82.5	72.3	
(WY)	1941	1935	1935	1945	1964	1941	1941	1941	1931	1936	1941	1941	

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1930 - 1991	
ANNUAL TOTAL	792850		663545			
ANNUAL MEAN	2172		1818		1122	
HIGHEST ANNUAL MEAN					2052	
LOWEST ANNUAL MEAN					235	
HIGHEST DAILY MEAN	26200		27800		31500	
LOWEST DAILY MEAN	373		137		49	
ANNUAL SEVEN-DAY MINIMUM	479		157		53	
INSTANTANEOUS PEAK FLOW			28700		32400	
INSTANTANEOUS PEAK STAGE			19.19		19.19	
ANNUAL RUNOFF (CFSM)	1.78		1.49		.92	
ANNUAL RUNOFF (INCHES)	4.20		20.25		12.51	
10 PERCENT EXCEEDS	5140		4330		2540	
50 PERCENT EXCEEDS	1290		1150		502	
90 PERCENT EXCEEDS	614		191		158	

03351060 WHITE RIVER AT BROAD RIPPLE

LOCATION.--Lat 39°52'17", long 86°08'16", IN SW¼ sec.36, T.17 N., R.3 E., Marion County, Hydrologic Unit 05120201, on left bank at Indianapolis Water Company, 75 ft downstream from diversion canal, and 500 ft upstream from Broad Ripple dam.

DRAINAGE AREA.--1,238 mi².

PERIOD OF RECORD.--October 1989 to current year. Fragmentary record November 1927 to Jan. 24, 1947 and continuous record, Jan. 24, 1947 to Sept. 30, 1989, available in District office.

GAGE.--Water-stage recorder. Datum of gage is 709.91 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Record good. Stage affected by diversion through canal for water supply.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 10.16 ft, Jan. 1, 1991; minimum, 2.51 ft, Sept. 11, 1991.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 10.16 ft, Jan. 1; minimum 2.51 ft, Sept. 11.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.06	3.18	3.90	9.31	3.34	3.40	3.68	3.42	5.06	2.88	2.64	2.65
2	3.02	3.16	3.69	6.33	3.35	3.43	3.58	3.37	4.92	2.84	2.61	2.60
3	3.14	3.15	4.85	4.72	3.38	3.43	3.53	3.36	4.26	2.85	2.71	2.67
4	3.65	3.16	5.42	4.35	3.67	3.37	3.53	3.36	3.86	2.91	2.73	2.76
5	4.24	3.27	4.75	4.14	4.06	3.32	3.59	3.35	3.59	2.87	2.69	2.74
6	3.73	3.47	4.23	3.99	4.62	3.32	3.56	3.36	3.43	2.84	2.86	2.70
7	3.58	3.46	3.96	3.86	4.90	3.31	3.51	3.34	3.31	2.78	2.78	2.67
8	3.52	3.34	3.81	3.77	4.61	3.26	3.64	3.31	3.25	2.97	2.73	2.64
9	3.65	3.27	3.68	3.68	4.19	3.24	3.68	3.29	3.19	3.13	2.79	2.59
10	4.88	3.25	3.60	3.63	3.97	3.22	3.60	3.27	3.15	3.04	2.82	2.55
11	5.35	3.23	3.55	3.79	3.80	3.20	3.46	3.25	3.14	2.96	2.75	2.51
12	4.68	3.21	3.51	4.30	3.66	3.70	3.40	3.24	3.10	2.94	2.66	2.77
13	4.14	3.18	3.47	4.09	3.62	4.73	3.69	3.24	3.07	2.92	2.69	2.74
14	3.87	3.15	3.40	3.86	3.63	4.77	4.13	3.18	3.03	2.91	2.70	2.75
15	3.68	3.14	4.13	3.98	3.60	4.91	4.93	3.47	3.04	2.83	2.67	2.80
16	3.55	3.14	4.88	4.49	3.40	4.88	4.70	3.46	3.10	2.80	2.67	2.69
17	3.46	3.14	4.37	4.75	3.44	5.13	4.16	3.49	3.18	2.78	2.73	2.68
18	3.59	3.12	4.67	4.36	3.60	5.45	3.88	4.20	3.09	2.75	2.70	2.71
19	3.86	3.11	5.29	4.05	4.13	5.62	4.42	4.27	---	2.75	2.81	2.67
20	3.63	3.10	5.03	3.96	4.40	4.87	4.79	3.76	---	2.73	2.79	2.61
21	3.52	3.09	4.84	3.94	4.12	4.36	4.46	3.53	---	2.70	2.89	2.63
22	3.48	3.19	5.45	3.78	3.88	4.66	4.08	3.47	---	2.82	2.79	2.75
23	3.47	3.25	5.24	3.67	3.69	5.25	3.89	3.52	---	2.70	2.73	2.72
24	3.45	3.30	4.53	3.59	3.60	5.28	3.79	3.61	---	2.70	2.69	2.73
25	3.40	3.24	4.15	3.47	3.53	4.50	3.69	3.42	3.22	2.73	2.63	2.76
26	3.32	3.19	3.92	3.46	3.46	4.44	3.60	3.35	3.08	2.70	2.58	2.71
27	3.29	3.44	3.77	3.43	3.41	4.82	3.55	3.31	3.00	2.70	2.60	2.70
28	3.26	4.45	3.72	3.39	3.39	4.65	3.52	3.24	2.95	2.69	2.61	2.71
29	3.22	4.88	5.70	3.40	---	4.25	3.48	3.22	2.90	2.69	2.74	2.69
30	3.21	4.22	8.73	3.37	---	3.92	3.43	3.22	2.89	2.71	2.70	2.62
31	3.20	---	9.83	3.36	---	3.75	---	4.32	---	2.66	2.66	---
MEAN	3.65	3.35	4.65	4.14	3.80	4.21	3.83	3.46	---	2.82	2.71	2.68
MAX	5.35	4.88	9.83	9.31	4.90	5.62	4.93	4.32	---	3.13	2.89	2.80
MIN	3.02	3.09	3.40	3.36	3.34	3.20	3.40	3.18	---	2.66	2.58	2.51

03351310 CROOKED CREEK AT INDIANAPOLIS, IN

LOCATION.--Lat 39°49'47", long 86°12'22", in NW¼ 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 mi².

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.--Records fair except those for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.79	3.2	18	58	11	13	14	12	9.5	1.5	.71	.58
2	.61	3.3	15	43	15	22	12	11	7.3	1.4	.66	.54
3	3.7	3.3	271	33	17	13	11	10	6.4	1.4	.62	.73
4	102	3.5	60	e25	16	11	11	16	5.4	1.3	.69	1.4
5	7.5	37	30	e23	41	11	17	15	4.6	1.6	.72	.98
6	3.3	15	24	e21	103	11	24	16	4.1	1.6	13	.60
7	30	6.4	19	e20	68	10	14	11	3.7	1.5	4.6	.56
8	17	4.9	16	e19	39	9.2	11	9.5	3.4	2.3	3.3	.56
9	34	4.0	13	e18	28	8.9	51	9.1	3.1	1.9	5.2	.65
10	181	4.3	12	e17	24	8.7	47	8.5	3.0	21	2.1	.75
11	31	3.4	11	57	17	8.1	18	16	2.8	5.3	1.2	.82
12	14	2.8	11	52	14	174	e10	17	5.8	10	.77	1.2
13	9.5	2.6	9.5	32	17	611	e19	11	3.4	5.0	.65	7.5
14	7.2	2.6	8.4	26	25	104	e45	9.3	2.7	2.8	.64	.86
15	5.7	2.6	74	27	17	51	e100	8.4	2.4	1.9	.70	.39
16	4.6	2.7	30	43	12	33	e58	16	9.9	1.5	.77	.33
17	4.6	2.8	32	38	e10	67	e33	17	4.6	1.5	1.7	.37
18	19	2.3	108	24	64	87	e18	42	2.6	1.5	3.4	.44
19	7.7	2.3	64	e19	67	44	e90	14	1.5	1.3	5.7	.50
20	5.0	2.2	35	e16	40	30	e68	9.9	1.2	1.3	4.1	.58
21	4.5	2.0	111	e14	27	25	e50	8.7	1.0	1.2	1.7	.68
22	13	17	70	e12	21	174	e38	8.0	5.0	1.2	1.0	1.2
23	8.3	8.2	38	e11	15	114	e28	30	19	1.2	.75	5.2
24	5.6	4.8	25	e10	14	47	22	25	4.4	1.1	.66	2.1
25	4.4	3.5	20	e9.8	12	30	15	11	3.0	1.0	.82	.74
26	3.8	3.0	16	e9.6	12	103	14	13	2.4	.88	.72	.75
27	3.5	86	14	e9.4	11	61	13	10	2.1	.76	.60	.47
28	3.2	182	e12	e9.2	11	35	13	8.3	2.0	.71	.62	.18
29	3.4	42	537	e9.6	---	25	14	7.7	1.7	.74	.63	.15
30	3.1	25	1140	18	---	19	12	33	1.6	.74	.64	.16
31	3.1	---	115	11	---	15	---	14	---	.72	.65	---
TOTAL	544.10	484.7	2958.9	734.6	768	1974.9	890	447.4	129.6	77.85	60.02	31.97
MEAN	17.6	16.2	95.4	23.7	27.4	63.7	29.7	14.4	4.32	2.51	1.94	1.07
MAX	181	182	1140	58	103	611	100	42	19	21	13	7.5
MIN	.61	2.0	8.4	9.2	10	8.1	10	7.7	1.0	.71	.60	.15
CFSM	.98	.90	5.33	1.32	1.53	3.56	1.66	.81	.24	.14	.11	.06
IN.	1.13	1.01	6.15	1.53	1.60	4.10	1.85	.93	.27	.16	.12	.07

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 1991, BY WATER YEAR (WY)

	9.13	18.3	25.2	17.4	27.4	34.2	29.5	25.4	16.3	11.6	8.51	7.96
MEAN	9.13	18.3	25.2	17.4	27.4	34.2	29.5	25.4	16.3	11.6	8.51	7.96
MAX	60.9	69.3	95.4	54.8	79.4	63.7	58.2	71.9	73.4	57.7	30.8	69.9
(WY)	1987	1973	1991	1974	1975	1991	1972	1990	1978	1979	1978	1989
MIN	1.86	.88	1.23	.94	4.17	5.65	5.63	4.31	1.59	2.51	1.94	1.07
(WY)	1983	1972	1977	1977	1978	1981	1971	1988	1988	1991	1991	1991

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1970 - 1991
ANNUAL TOTAL	11783.60	9102.04	
ANNUAL MEAN	32.3	24.9	19.2
HIGHEST ANNUAL MEAN			29.6
LOWEST ANNUAL MEAN			8.30
HIGHEST DAILY MEAN	1140	1140	1570
LOWEST DAILY MEAN	.61	.15	.15
ANNUAL SEVEN-DAY MINIMUM	1.3	.47	.47
INSTANTANEOUS PEAK FLOW		1860	5500
INSTANTANEOUS PEAK STAGE		8.94	13.31
ANNUAL RUNOFF (CFSM)	1.80	1.39	1.07
ANNUAL RUNOFF (INCHES)	24.49	18.92	14.57
10 PERCENT EXCEEDS	58	50	38
50 PERCENT EXCEEDS	13	9.9	7.5
90 PERCENT EXCEEDS	2.3	.74	1.8

03351500 FALL CREEK NEAR FORTVILLE, IN

LOCATION.--Lat 39°57'15", long 85°52'05", in NW1/4 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 mi².

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.--Records good except for estimated daily discharges, which are poor.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, about 12 ft March 1913 (information by local resident).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	100	143	296	1520	205	206	264	183	e350	77	37	46
2	94	136	257	754	208	227	239	176	e320	68	36	40
3	91	133	469	556	292	213	226	168	e282	65	35	39
4	484	134	612	448	377	195	222	177	210	65	37	50
5	507	151	377	398	519	183	266	182	164	62	36	45
6	307	220	301	372	771	182	266	197	143	58	38	39
7	240	184	258	342	1070	177	240	173	131	56	42	37
8	227	160	227	308	673	163	232	161	122	114	39	35
9	220	150	205	291	487	160	242	153	116	125	43	34
10	670	153	194	277	405	156	222	148	109	91	42	34
11	908	148	181	343	343	151	198	144	109	88	38	34
12	505	139	178	621	299	173	185	146	113	82	36	35
13	365	132	169	436	284	1010	283	143	107	79	34	37
14	300	129	154	354	286	1520	539	139	100	69	34	37
15	256	126	337	361	278	978	511	165	97	63	54	34
16	223	124	489	509	196	650	442	168	113	57	43	32
17	205	124	340	594	205	498	330	302	103	54	40	33
18	289	121	618	448	253	649	276	608	94	51	55	33
19	355	119	1060	369	567	529	404	503	88	49	47	35
20	267	116	642	345	600	407	565	296	78	48	53	35
21	232	115	559	335	430	355	401	235	76	69	47	33
22	227	136	991	e270	341	638	329	e210	83	113	42	34
23	241	192	682	e250	288	1180	283	e235	156	64	39	44
24	221	165	440	e230	265	780	273	e210	103	53	37	43
25	200	148	345	e210	243	475	242	e190	92	49	36	39
26	183	138	298	e200	228	479	232	e210	107	46	34	37
27	170	190	263	e195	219	644	223	e180	97	43	34	36
28	162	535	255	e190	209	461	214	e150	77	41	34	35
29	153	598	653	e185	---	363	207	e140	76	40	40	34
30	147	376	4540	242	---	310	193	e450	74	40	43	35
31	148	---	6140	238	---	278	---	e400	---	39	77	---
TOTAL	8697	5435	22530	12191	10541	14390	8749	6942	3890	2018	1282	1114
MEAN	281	181	727	393	376	464	292	224	130	65.1	41.4	37.1
MAX	908	598	6140	1520	1070	1520	565	608	350	125	77	50
MIN	91	115	154	185	196	151	185	139	74	39	34	32
CFSM	1.66	1.07	4.30	2.33	2.23	2.75	1.73	1.33	.77	.39	.24	.22
IN.	1.91	1.20	4.96	2.68	2.32	3.17	1.93	1.53	.86	.44	.28	.25

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 1991, BY WATER YEAR (WY)

	MEAN	65.4	104	174	211	260	309	293	218	171	109	78.0	58.4
MAX	353	441	727	1210	720	674	829	741	888	377	467	498	
(WY)	1987	1973	1991	1950	1950	1978	1964	1943	1958	1979	1979	1989	
MIN	20.1	30.1	24.2	24.4	42.1	71.2	70.3	71.4	39.2	24.7	16.0	15.6	
(WY)	1964	1945	1964	1977	1964	1981	1971	1955	1988	1966	1988	1954	

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1942 - 1991

ANNUAL TOTAL	120800	97779	170
ANNUAL MEAN	331	268	61.4
HIGHEST ANNUAL MEAN			298
LOWEST ANNUAL MEAN			61.4
HIGHEST DAILY MEAN	6140	6140	6950
LOWEST DAILY MEAN	71	32	5.0
ANNUAL SEVEN-DAY MINIMUM	83	34	9.7
INSTANTANEOUS PEAK FLOW		8450	8750
INSTANTANEOUS PEAK STAGE		9.83	9.88
ANNUAL RUNOFF (CFSM)	1.96	1.59	1.01
ANNUAL RUNOFF (INCHES)	26.59	21.52	13.69
10 PERCENT EXCEEDS	604	531	349
50 PERCENT EXCEEDS	215	185	89
90 PERCENT EXCEEDS	111	39	30

03352500 FALL CREEK AT MILLERSVILLE, IN

LOCATION.--Lat 39°51'07", long 86°05'15", in NE1/4 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 mi².

PERIOD OF RECORD.--October 1929 to current year. Monthly discharge only for October 1929, 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.--Records good. Flow regulated by Geist Reservoir.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 16.3 ft Mar. 26, 1913, from floodmarks, discharge, 22,000 ft³/s by slope-area measurement.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	101	159	545	4470	317	288	396	258	523	77	67	55
2	99	151	449	1810	316	307	367	236	420	79	67	54
3	98	149	895	1090	398	315	331	233	358	77	67	66
4	621	148	1170	819	491	266	325	249	325	83	69	70
5	813	195	806	691	728	250	378	262	225	80	69	57
6	577	264	567	620	1390	243	375	320	181	72	77	55
7	444	242	451	556	2000	238	353	281	147	72	60	53
8	410	209	375	489	1410	224	337	247	139	92	56	53
9	379	186	325	448	950	206	338	230	133	95	56	52
10	882	182	293	426	713	203	313	220	121	117	54	52
11	1320	168	268	528	561	202	301	212	117	84	51	52
12	997	160	246	929	474	388	266	213	150	83	51	116
13	644	149	233	815	431	2160	414	209	135	86	58	153
14	464	141	221	620	429	2620	743	197	117	85	61	75
15	374	135	436	593	398	1850	977	196	104	74	60	57
16	306	135	701	750	341	1230	866	230	130	70	51	52
17	256	137	613	933	332	946	624	316	131	69	60	52
18	298	131	993	806	411	1200	471	780	111	71	66	54
19	407	129	1560	639	783	998	1010	905	103	71	68	54
20	366	125	1250	559	977	746	1200	586	89	80	60	49
21	301	119	1060	529	778	593	829	409	95	81	48	52
22	305	180	1450	468	590	1190	604	327	91	79	50	60
23	287	210	1290	422	470	1920	483	332	135	78	56	75
24	274	209	827	380	392	1530	433	307	117	79	56	63
25	254	187	582	337	360	958	379	276	88	78	56	55
26	214	171	474	326	322	924	346	293	99	78	60	54
27	191	338	401	311	303	1050	319	270	99	77	70	52
28	183	1120	381	306	292	845	308	219	90	76	64	51
29	174	1140	986	298	---	669	296	199	83	76	60	50
30	160	772	5690	351	---	491	261	313	80	72	61	50
31	158	---	7290	348	---	417	---	562	---	63	56	---
TOTAL	12357	7741	32828	22667	17357	25467	14643	9887	4736	2454	1865	1843
MEAN	399	258	1059	731	620	822	488	319	158	79.2	60.2	61.4
MAX	1320	1140	7290	4470	2000	2620	1200	905	523	117	77	153
MIN	98	119	221	298	292	202	261	196	80	63	48	49
CFSM	1.34	.87	3.55	2.45	2.08	2.76	1.64	1.07	.53	.27	.20	.21
IN.	1.54	.97	4.10	2.83	2.17	3.18	1.83	1.23	.59	.31	.23	.23

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 1991, BY WATER YEAR (WY)

	MEAN	99.2	162	284	404	441	528	514	375	270	179	120	94.8
MAX	713	857	1059	2390	1278	1399	1503	1524	1449	796	739	965	
(WY)	1987	1973	1991	1950	1950	1963	1964	1943	1958	1979	1979	1989	
MIN	23.4	32.1	38.2	37.1	50.4	47.5	59.7	33.6	42.2	29.1	15.5	11.5	
(WY)	1941	1935	1935	1945	1935	1941	1941	1941	1934	1936	1941	1941	

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1930 - 1991

ANNUAL TOTAL	184681												
ANNUAL MEAN	506												
HIGHEST ANNUAL MEAN										289			
LOWEST ANNUAL MEAN										539			1950
HIGHEST DAILY MEAN	7290	Dec 31								44.0			1941
LOWEST DAILY MEAN	90	Jul 9								10600			May 18 1943
ANNUAL SEVEN-DAY MINIMUM	107	Jul 4								7.8			Sep 28 1941
INSTANTANEOUS PEAK FLOW										9.0			Sep 24 1941
INSTANTANEOUS PEAK STAGE										12900			May 28 1956
ANNUAL RUNOFF (CFSM)	1.70									13.53			May 28 1956
ANNUAL RUNOFF (INCHES)	23.05									.97			
10 PERCENT EXCEEDS	995									13.15			
50 PERCENT EXCEEDS	307									652			
90 PERCENT EXCEEDS	138									124			

03352875 FALL CREEK AT 16TH STREET AT INDIANAPOLIS, IN

LOCATION.--Lat 39°47'20", long 86°10'40", in SW1/4 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 mi².
 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.--Records fair except those for estimated daily discharges, which are poor. Natural flow affected by regulation of Geist Reservoir, and by diversion of municipal water supply by the Indianapolis Water Company.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	127	195	545	4760	303	290	368	272	355	64	28	40
2	116	185	440	3080	293	303	344	226	282	61	36	40
3	125	175	845	1320	338	306	331	214	236	68	43	43
4	635	170	1060	767	409	273	316	232	225	67	51	74
5	750	235	860	637	578	251	454	239	182	79	32	51
6	570	280	586	568	1230	250	444	283	147	47	98	41
7	450	285	461	507	1850	242	402	257	124	45	45	37
8	410	250	392	455	1470	229	425	232	119	70	48	29
9	380	220	353	416	916	222	416	212	122	86	49	28
10	800	220	318	394	684	213	375	185	108	124	29	28
11	1390	210	304	453	540	204	360	166	103	87	28	19
12	1090	195	287	765	459	463	331	166	123	84	24	55
13	663	185	269	717	413	2010	565	159	115	73	27	138
14	500	165	256	550	407	2380	930	147	100	70	25	66
15	404	160	438	515	e365	1860	1190	150	91	66	36	45
16	335	160	662	622	e330	1310	924	187	135	57	33	34
17	300	165	615	792	e290	995	605	206	122	57	51	28
18	325	165	932	720	396	1320	436	457	101	46	61	40
19	400	155	1560	564	670	1180	1140	627	87	49	66	33
20	390	150	1390	488	904	825	1540	444	81	52	50	30
21	330	150	1110	458	745	579	1000	329	87	56	31	28
22	325	190	1530	e425	573	1300	674	288	92	60	21	49
23	320	230	1500	392	461	1870	524	274	109	61	24	66
24	310	235	898	356	382	1690	457	260	102	69	32	43
25	295	225	630	319	355	1030	406	249	78	65	29	39
26	255	210	512	314	321	964	359	261	86	53	24	24
27	230	235	427	293	304	1060	344	244	78	59	39	18
28	210	1010	405	289	299	840	330	211	83	64	46	21
29	210	1080	980	289	---	641	316	192	71	53	49	20
30	190	770	4240	319	---	472	282	239	72	44	47	25
31	185	---	5550	320	---	399	---	391	---	30	48	---
TOTAL	13020	8260	30355	22864	16285	25971	16588	7999	3816	1966	1250	1232
MEAN	420	275	979	738	582	838	553	258	127	63.4	40.3	41.1
MAX	1390	1080	5550	4760	1850	2380	1540	627	355	124	98	138
MIN	116	150	256	289	290	204	282	147	71	30	21	18
CFSM	1.32	.87	3.09	2.33	1.83	2.64	1.74	.81	.40	.20	.13	.13
IN.	1.53	.97	3.56	2.68	1.91	3.05	1.95	.94	.45	.23	.15	.14

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1986 - 1991, BY WATER YEAR (WY)

	MEAN	252	273	421	318	523	526	462	471	234	198	129	243
MAX	807	688	979	738	1055	838	757	942	493	337	336	1053	
(WY)	1987	1986	1991	1991	1990	1991	1989	1990	1990	1987	1990	1989	
MIN	38.8	63.2	56.8	139	119	219	201	73.5	45.0	63.4	40.3	36.6	
(WY)	1988	1988	1989	1989	1989	1987	1987	1988	1988	1991	1991	1987	

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1986 - 1991

ANNUAL TOTAL	194609	149606	337
ANNUAL MEAN	533	410	182
HIGHEST ANNUAL MEAN			1990
LOWEST ANNUAL MEAN			1988
HIGHEST DAILY MEAN	5550	5550	5550
LOWEST DAILY MEAN	65	18	18
ANNUAL SEVEN-DAY MINIMUM	95	27	27
INSTANTANEOUS PEAK FLOW		5630	5630
INSTANTANEOUS PEAK STAGE		16.38	16.38
ANNUAL RUNOFF (CFSM)	1.68	1.29	1.06
ANNUAL RUNOFF (INCHES)	22.84	17.56	14.43
10 PERCENT EXCEEDS	1120	945	736
50 PERCENT EXCEEDS	329	260	188
90 PERCENT EXCEEDS	138	40	45

03353000 WHITE RIVER AT INDIANAPOLIS, IN

LOCATION.--Lat 39°45'05", long 86°10'30", in NW1/4 sec.14, T.15 N., R.3 E., Marion County, Hydrologic Unit 05120201, on downstream side of second pier from right bank of Morris Street bridge in Indianapolis, 2.6 mi downstream from Fall Creek, 3.4 mi upstream from Eagle Creek, 4.0 mi upstream from Indianapolis Power and Light Company dam, and at mile 230.3.

DRAINAGE AREA.--1,635 mi².

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.--Records good except for estimated daily discharges, which are poor. Natural flow affected by regulation of Morse Reservoir and Geist Reservoir, and by diversion of municipal water supply by the Indianapolis Water Company. Stage-discharge relation affected at times by large releases from Eagle Creek and by variable leakage at Indianapolis Power and Light Company dam.

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 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	500	739	3040	35400	1370	1450	2300	1420	4670	306	e100	99
2	478	711	2300	24100	1300	1550	2070	1290	5700	290	e98.0	85
3	509	681	4250	9130	1430	1520	1840	1200	4490	272	e130	83
4	2260	663	6990	4940	1690	1450	1810	1310	2830	246	e220	179
5	2740	943	6790	3860	2680	1340	1990	1290	1970	245	e310	145
6	2890	1040	4180	3280	4820	1240	1990	1410	1460	243	e465	132
7	2120	1250	2970	2800	6740	1250	1880	1260	1180	238	209	106
8	1760	1110	2450	2530	6600	1150	1940	1160	978	234	186	81
9	1710	945	2020	2230	4700	1120	2350	1080	840	315	192	71
10	3900	859	1790	2020	3410	1030	2110	1070	725	725	149	74
11	7020	815	1640	2260	2800	991	1820	1040	656	444	143	71
12	6800	766	1520	3220	2370	1900	1590	1040	642	463	116	143
13	4260	734	1370	3840	2120	8290	2440	1000	597	359	83	405
14	2910	693	1310	3000	2090	8480	3160	1060	523	e290	86	192
15	2310	665	2230	2680	2030	7320	5910	1070	468	e230	100	134
16	1890	670	3960	3430	1750	6530	6320	1530	799	e200	76	131
17	1610	670	4680	5110	1540	6610	4560	1550	641	e180	138	109
18	1680	651	4810	5100	2020	8240	3120	2890	640	e170	163	83
19	2010	621	6900	3590	2810	8700	4310	3840	481	e160	200	70
20	2230	609	7550	2950	4280	7870	5560	3070	383	e152	190	58
21	1840	614	6310	2810	4040	4990	5400	1990	340	e145	184	56
22	1660	857	7370	2590	3100	6200	3870	1740	314	e150	219	96
23	1510	819	8430	2260	2530	8120	2950	1850	418	e158	143	244
24	1360	845	6070	1980	2100	8510	2480	2000	1110	e150	113	152
25	1210	857	3920	1710	1870	6680	2180	1710	1010	e141	89	126
26	1080	784	e2900	1590	1690	5270	1930	1590	824	e137	76	127
27	969	1480	e2500	1510	1550	5730	1760	1410	525	e130	68	104
28	882	3850	e2350	1450	1450	5970	1660	1200	409	e123	89	73
29	844	5150	4900	1390	---	4550	1630	1100	334	e117	142	64
30	796	4700	26300	1530	---	3240	1470	1220	308	e110	127	81
31	760	---	36800	1390	---	2620	---	1520	---	e105	132	---
TOTAL	64498	35791	180600	145680	76880	139911	84400	47910	36265	7228	4736.0	3574
MEAN	2081	1193	5826	4699	2746	4513	2813	1545	1209	233	153	119
MAX	7020	5150	36800	35400	6740	8700	6320	3840	5700	725	465	405
MIN	478	609	1310	1390	1300	991	1470	1000	308	105	68	56
CFSM	1.27	.73	3.56	2.87	1.68	2.76	1.72	.95	.74	.14	.09	.07
IN.	1.47	.81	4.11	3.31	1.75	3.18	1.92	1.09	.83	.16	.11	.08

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 1991, BY WATER YEAR (WY)

	424	775	1405	1917	2209	2769	2704	1857	1368	814	534	410
MEAN	424	775	1405	1917	2209	2769	2704	1857	1368	814	534	410
MAX	2081	4518	5826	12120	6452	6610	7777	8594	7910	3149	3399	5063
(WY)	1991	1973	1991	1950	1950	1963	1964	1943	1958	1917	1979	1989
MIN	70.1	110	77.3	78.4	178	207	274	113	126	90.3	42.5	31.5
(WY)	1941	1935	1964	1977	1964	1941	1941	1941	1988	1936	1941	1941

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1931 - 1991
ANNUAL TOTAL	976776	827473.0	
ANNUAL MEAN	2676	2267	1428
HIGHEST ANNUAL MEAN			2698
LOWEST ANNUAL MEAN			233
HIGHEST DAILY MEAN	36800	Dec 31	36800
LOWEST DAILY MEAN	386	Aug 12	8.0
ANNUAL SEVEN-DAY MINIMUM	462	Jul 4	12
INSTANTANEOUS PEAK FLOW			38000
INSTANTANEOUS PEAK STAGE			20.51
ANNUAL RUNOFF (CFSM)	1.64		1.39
ANNUAL RUNOFF (INCHES)	22.22		18.83
10 PERCENT EXCEEDS	6440		5320
50 PERCENT EXCEEDS	1640		1410
90 PERCENT EXCEEDS	674		127

03353120 PLEASANT RUN AT ARLINGTON AVENUE AT INDIANAPOLIS, IN

LOCATION.--Lat 39°46'33", long 86°03'50", in SW1/4 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 mi².

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.--Records good except those for estimated daily discharges, which are fair.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in May 1956 reached a stage of 16.0 ft, from information by local resident.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.97	.99	4.3	11	7.0	4.8	2.1	1.4	.62	1.2	.22	.20
2	1.1	1.5	3.2	7.4	7.5	5.5	1.5	.87	.60	.68	.20	.14
3	32	2.7	69	5.3	6.1	2.2	1.3	.93	.56	1.3	.22	.92
4	105	3.6	11	e3.9	5.6	1.3	11	6.3	.47	.57	.30	3.2
5	6.0	30	6.2	e3.6	22	1.2	6.6	21	.46	.68	.34	.27
6	2.7	4.4	4.8	e3.4	104	3.6	2.4	6.4	.43	.47	42	.22
7	19	2.3	3.4	e3.2	27	1.3	1.6	1.4	.39	.58	1.7	.15
8	6.0	1.7	2.9	e3.1	11	1.0	9.5	.99	.38	1.9	9.5	.13
9	23	3.0	2.3	e3.0	7.0	.92	3.1	.84	.40	.40	2.0	.17
10	66	2.4	2.1	e2.9	4.9	.86	1.5	.93	.38	30	.85	.26
11	11	1.4	1.9	37	3.4	.86	1.2	2.1	.41	1.2	.35	.25
12	5.3	1.2	1.8	14	2.6	156	1.1	.89	.43	14	.27	56
13	3.4	1.1	1.6	7.3	5.9	149	61	.85	.36	.91	.26	17
14	2.5	1.7	1.4	5.7	6.7	20	15	.82	.37	.52	.26	1.4
15	2.3	1.2	59	8.3	3.2	9.1	33	.73	.39	.36	.23	.51
16	1.9	1.7	8.4	13	2.0	5.7	8.1	15	8.0	.45	.17	.56
17	2.1	1.3	27	11	1.9	51	5.6	2.6	.75	.28	7.0	.32
18	27	.99	81	5.8	46	23	2.8	69	.42	.30	.81	.31
19	2.5	1.0	21	e4.8	26	9.0	127	4.9	.36	.31	7.6	.31
20	1.5	.97	9.5	e4.0	12	5.4	18	1.5	.30	.30	4.4	.26
21	1.2	1.2	54	e3.3	6.6	4.0	8.4	.99	.28	.57	.45	.27
22	12	42	21	e2.8	4.4	174	5.1	1.1	.26	.36	.28	24
23	1.6	5.5	10	e2.4	2.8	37	6.5	2.5	.36	.43	.20	8.7
24	.77	3.4	6.7	e2.1	2.4	12	4.4	1.1	.22	.24	.13	1.2
25	.69	2.7	4.8	e1.8	1.9	7.0	2.2	2.0	.25	.22	.30	.59
26	.70	2.5	3.8	e1.6	1.5	67	1.9	26	62	.21	.20	1.5
27	.83	46	e3.1	e1.5	1.4	15	1.4	2.2	1.8	.19	.19	.32
28	1.6	104	e2.8	e3.0	1.3	7.4	1.7	1.0	.72	.51	2.3	.19
29	1.6	12	201	5.6	---	4.8	2.7	.93	.47	.28	.34	.21
30	1.2	6.2	379	16	---	3.2	1.1	1.4	2.0	.28	11	.22
31	1.0	---	24	4.7	---	2.6	---	.71	---	.18	1.4	---
TOTAL	344.46	290.65	1032.0	202.5	334.1	785.74	348.8	179.38	84.84	59.88	95.47	119.78
MEAN	11.1	9.69	33.3	6.53	11.9	25.3	11.6	5.79	2.83	1.93	3.08	3.99
MAX	105	104	379	37	104	174	127	69	62	30	42	56
MIN	.69	.97	1.4	1.5	1.3	.86	1.1	.71	.22	.18	.13	.13
CFSM	1.47	1.28	4.39	.86	1.57	3.34	1.53	.76	.37	.25	.41	.53
IN.	1.69	1.43	5.06	.99	1.64	3.86	1.71	.88	.42	.29	.47	.59

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 1991, BY WATER YEAR (WY)

	MEAN	4.32	7.63	9.48	7.33	9.49	13.8	11.0	9.33	6.40	8.50	5.28	3.96
	MAX	27.5	33.2	33.3	25.0	25.7	42.3	29.5	28.6	21.6	33.8	21.3	23.2
	(WY)	1987	1986	1991	1969	1971	1963	1961	1981	1973	1979	1979	1989
	MIN	.38	1.28	.72	.45	1.11	2.08	1.61	1.12	.69	.61	.67	.49
	(WY)	1964	1964	1964	1977	1978	1969	1971	1964	1967	1967	1967	1967

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1960 - 1991

ANNUAL TOTAL	4821.89	3877.60	8.06
ANNUAL MEAN	13.2	10.6	11.6
HIGHEST ANNUAL MEAN			3.25
LOWEST ANNUAL MEAN			1978
HIGHEST DAILY MEAN	379	379	574
LOWEST DAILY MEAN	.51	.13	.00
ANNUAL SEVEN-DAY MINIMUM	.73	.21	.00
INSTANTANEOUS PEAK FLOW		832	2600
INSTANTANEOUS PEAK STAGE		7.51	13.86
ANNUAL RUNOFF (CFSM)	1.74	1.40	1.06
ANNUAL RUNOFF (INCHES)	23.66	19.03	14.45
10 PERCENT EXCEEDS	31	24	16
50 PERCENT EXCEEDS	3.1	2.0	1.9
90 PERCENT EXCEEDS	.94	.28	.50

03353180 BEAN CREEK AT INDIANAPOLIS, IN

LOCATION.--Lat 39°43'45", long 86°07'14", in NW¼ 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 mi².

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.--Records good except for estimated daily discharges, which are fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	2.0	3.4	15	8.4	8.5	e8.4	2.5	1.9	.73	.63	.78
2	1.1	2.0	2.9	12	10	9.3	e7.7	2.3	1.7	1.1	.63	.71
3	8.9	1.9	20	10	7.9	7.2	e8.3	2.3	1.7	.89	.61	.74
4	34	1.8	5.5	8.5	7.7	7.0	e13	3.4	1.7	.78	.58	1.5
5	4.0	8.4	3.9	e8.4	14	6.9	10	9.4	1.6	.69	.59	.77
6	3.1	2.3	3.5	e7.8	38	8.5	8.5	4.6	1.5	.64	9.5	.72
7	7.4	1.9	3.0	e7.3	21	7.0	7.7	2.4	1.5	.63	1.2	.68
8	4.1	1.8	2.6	e7.0	14	6.6	11	2.1	1.4	.74	2.7	.56
9	9.6	2.2	2.3	e6.7	11	6.2	8.7	2.0	1.3	.55	1.3	.62
10	24	2.0	2.2	e8.0	9.6	5.9	7.5	2.0	1.3	5.0	1.0	.85
11	6.5	1.8	2.1	21	8.6	5.7	7.2	4.5	1.6	1.1	.80	.71
12	4.5	1.6	2.0	15	8.0	48	6.8	2.9	1.5	4.9	.81	11
13	3.5	1.6	1.9	11	9.4	56	26	1.8	1.3	.83	.87	4.2
14	2.9	1.6	2.0	9.6	e9.0	20	13	8.8	1.3	.64	.84	.95
15	2.6	1.6	14	10	e8.3	e15	22	3.1	1.3	.64	.83	.73
16	2.6	1.8	3.6	14	e7.7	e8.9	11	4.8	4.5	.60	.76	.75
17	2.6	1.6	11	13	7.2	e21	9.0	3.4	1.4	.59	3.3	.93
18	9.1	1.5	28	10	23	e21	8.3	13	1.3	.59	1.3	.99
19	2.7	1.5	9.1	9.0	18	e11	43	2.9	1.3	.55	2.5	.92
20	2.3	1.5	5.6	8.7	14	e7.8	9.2	2.4	1.2	.53	1.1	.92
21	2.0	1.5	19	8.1	11	e6.9	6.1	2.4	1.2	.50	.80	.85
22	5.5	13	9.7	7.8	9.5	e76	4.8	11	1.1	.53	.78	4.3
23	2.7	2.9	6.1	7.3	8.5	e26	5.1	7.3	.95	.64	.74	2.0
24	2.3	2.4	e5.0	7.0	8.0	e15	4.1	3.5	.94	.73	.72	.77
25	2.3	2.0	4.0	6.4	7.6	e9.6	3.2	3.3	1.1	.70	.68	.77
26	2.3	2.2	3.5	6.1	7.4	e34	3.2	12	1.5	.67	.69	.68
27	2.2	14	3.2	9.3	7.4	e13	3.0	3.3	.90	.62	.80	.66
28	2.0	33	3.2	6.2	7.1	e11	3.0	2.5	.75	.54	13	.64
29	2.0	5.7	70	7.1	---	e10	3.3	2.4	.73	.56	1.9	.60
30	2.1	4.1	201	12	---	e9.6	2.6	2.3	.73	.67	1.6	.59
31	2.0	---	24	7.5	---	e8.8	---	2.0	---	.65	1.2	---
TOTAL	164.0	123.2	477.3	296.8	321.3	507.4	284.7	132.6	42.20	29.53	54.76	41.89
MEAN	5.29	4.11	15.4	9.57	11.5	16.4	9.49	4.28	1.41	.95	1.77	1.40
MAX	34	33	201	21	38	76	43	13	4.5	5.0	13	11
MIN	1.1	1.5	1.9	6.1	7.1	5.7	2.6	1.8	.73	.50	.58	.56
CFSM	1.20	.93	3.50	2.18	2.61	3.72	2.16	.97	.32	.22	.40	.32
IN.	1.39	1.04	4.04	2.51	2.72	4.29	2.41	1.12	.36	.25	.46	.35

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1991, BY WATER YEAR (WY)

	3.20	5.03	6.12	4.55	6.78	8.43	6.61	6.66	4.34	5.03	3.89	2.81
MEAN	3.20	5.03	6.12	4.55	6.78	8.43	6.61	6.66	4.34	5.03	3.89	2.81
MAX	12.5	16.2	15.4	10.0	16.0	16.4	12.2	18.9	11.4	13.7	11.6	11.5
(WY)	1987	1986	1991	1975	1971	1991	1972	1981	1973	1979	1979	1989
MIN	1.37	1.57	1.49	.82	1.72	2.10	2.31	1.76	1.32	.95	1.23	.93
(WY)	1983	1982	1977	1977	1978	1981	1976	1988	1988	1991	1983	1983

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1971 - 1991

ANNUAL TOTAL	2536.6		2475.68									
ANNUAL MEAN	6.95		6.78							5.28		
HIGHEST ANNUAL MEAN										7.44		1973
LOWEST ANNUAL MEAN										3.51		1988
HIGHEST DAILY MEAN	201	Dec 30		201	Dec 30					201	Dec 30	1990
LOWEST DAILY MEAN	1.0	Jan 2		.50	Jul 21					.30	Dec 28	1989
ANNUAL SEVEN-DAY MINIMUM	1.2	Sep 2		.56	Jul 16					.56	Jul 16	1991
INSTANTANEOUS PEAK FLOW				414	Dec 30					770	Jun 25	1978
INSTANTANEOUS PEAK STAGE				5.90	Dec 30					7.77	Jun 25	1978
ANNUAL RUNOFF (CFSM)	1.58			1.54						1.20		
ANNUAL RUNOFF (INCHES)	21.45			20.93						16.32		
10 PERCENT EXCEEDS	13			13						11		
50 PERCENT EXCEEDS	3.3			3.0						2.7		
90 PERCENT EXCEEDS	1.4			.71						1.2		

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 mi².

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.--Records good, except those for estimated daily discharges, which are poor. Low flow affected by the Zionsville well field located on the right bank below the gage before 1989.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 28, 1957, reached a stage of 19.20 ft. from floodmark.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	17	125	427	e80	56	84	52	110	3.5	.07	.00
2	1.1	20	89	239	e80	78	72	48	72	3.1	.00	.00
3	1.5	16	905	167	e100	76	68	44	84	2.8	.00	.00
4	37	14	467	e120	e130	66	70	50	64	2.4	.00	.00
5	15	46	246	e100	172	57	91	50	43	2.4	.00	.00
6	6.4	90	182	88	346	59	82	50	33	2.3	.24	.00
7	7.7	52	139	77	358	51	73	43	27	2.2	.57	.00
8	19	37	110	70	211	43	104	38	24	2.0	.52	.00
9	55	32	91	e64	157	41	153	36	22	1.9	.66	.00
10	729	29	80	61	129	39	96	36	19	2.1	.65	.00
11	374	24	70	152	96	35	72	34	19	2.0	.50	.00
12	191	19	66	257	77	298	62	34	19	2.4	.41	.00
13	116	17	58	145	76	2650	259	34	18	2.2	.29	.00
14	79	15	47	123	84	898	386	88	15	2.0	.21	.00
15	57	15	461	223	e86	481	453	134	14	1.7	.19	.00
16	40	15	328	482	e76	315	242	62	19	1.7	.06	.00
17	35	15	230	371	e74	316	147	58	20	1.4	.19	.00
18	100	14	559	207	e88	568	109	421	15	1.4	.05	.00
19	82	13	486	166	392	305	296	162	12	1.2	.00	.00
20	56	13	284	e150	266	209	266	96	8.9	1.1	.00	.00
21	44	12	524	e135	180	165	163	69	7.6	.90	.00	.00
22	41	18	582	e120	137	508	125	55	13	.66	.00	.00
23	38	23	287	e105	102	679	103	63	12	.58	.00	e.00
24	34	20	e200	e95	90	289	90	118	8.9	.58	.00	e.00
25	29	17	e160	e86	73	184	76	74	7.1	.58	.00	e.00
26	26	15	e130	e82	63	449	71	101	6.5	.50	.00	e.00
27	24	86	e110	e80	60	392	67	63	5.2	.50	.00	e.00
28	26	649	e100	e77	56	246	63	47	4.6	.45	.00	e.00
29	23	319	1530	e75	---	157	63	40	4.4	.30	.00	e.00
30	19	180	6840	e90	---	112	58	85	3.7	.23	.00	e.00
31	17	---	944	e85	---	94	---	165	---	.19	.00	---
TOTAL	2324.0	1852	16430	4719	3839	9916	4064	2450	730.9	47.27	4.61	0.00
MEAN	75.0	61.7	530	152	137	320	135	79.0	24.4	1.52	.15	.000
MAX	729	649	6840	482	392	2650	453	421	110	3.5	.66	.00
MIN	1.1	12	47	61	56	35	58	34	3.7	.19	.00	.00
CFSM	.73	.60	5.15	1.48	1.33	3.11	1.32	.77	.24	.01	.00	.00
IN.	.84	.67	5.93	1.70	1.39	3.58	1.47	.88	.26	.02	.00	.00

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 1991, BY WATER YEAR (WY)

	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
MEAN	23.1	75.2	140	115	159	208	180	95.1	89.5	61.0	42.1	20.0																						
MAX	131	410	530	452	423	459	532	289	523	520	444	332																						
(WY)	1970	1986	1991	1974	1976	1963	1964	1974	1958	1979	1958	1989																						
MIN	.000	1.16	1.65	1.23	9.05	28.7	30.0	12.0	1.55	1.52	.000	.000																						
(WY)	1967	1965	1977	1977	1964	1966	1971	1988	1988	1966	1966	1966																						

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1958 - 1991

	1990	1991	1958-1991
ANNUAL TOTAL	62284.5	46376.78	100
ANNUAL MEAN	171	127	188
HIGHEST ANNUAL MEAN			22.2
LOWEST ANNUAL MEAN			1977
HIGHEST DAILY MEAN	6840	6840	6840
LOWEST DAILY MEAN	1.1	.00	.00
ANNUAL SEVEN-DAY MINIMUM	1.4	.00	.00
INSTANTANEOUS PEAK FLOW		9170	12400
INSTANTANEOUS PEAK STAGE		13.25	14.64
ANNUAL RUNOFF (CFSM)	1.66	1.23	.97
ANNUAL RUNOFF (INCHES)	22.49	16.75	13.23
10 PERCENT EXCEEDS	353	297	220
50 PERCENT EXCEEDS	66	51	30
90 PERCENT EXCEEDS	4.8	.00	1.4

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 mi².

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, 30,580 acre-ft Dec. 30, 1990, elevation, 794.61 ft; minimum, 13,370 acre-ft Sept. 30, 1991, elevation, 780.87 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 30,580 acre-ft Dec. 30, elevation, 794.61 ft; minimum, 13,370 acre-ft Sept. 30, elevation, 780.87 ft.

MONTHEND ELEVATION AND CONTENTS, AT 2400, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	788.24	21,710	
Oct. 31.....	789.94	23,920	+2,210
Nov. 30.....	790.21	24,290	+370
Dec. 31.....	792.76	27,860	+3,570
CAL YR 1990.....			+9,760
Jan. 31.....	790.07	24,100	-3,760
Feb. 28.....	790.01	24,010	-90
Mar. 31.....	790.07	24,100	+90
Apr. 30.....	790.07	24,100	0
May 31.....	790.06	24,080	-20
June 30.....	788.69	22,300	-1,780
July 31.....	785.99	18,890	-3,410
Aug. 31.....	783.54	16,090	-2,800
Sept. 30.....	780.87	13,370	-2,720
WTR YR 1991.....			-8,340

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 mi².

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.--Records good except for estimated daily discharges, which are fair. Flow regulated since November 1969 by Eagle Creek Reservoir, 4.7 mi upstream (see station 03353450).

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1913 reached a stage of 23.2 ft present datum, from information by local residents.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.4	30	281	859	128	132	193	156	173	24	16	20
2	7.9	30	160	775	47	169	167	38	225	24	16	20
3	13	31	1430	751	134	199	145	42	49	e21	16	25
4	51	30	1390	723	184	109	179	187	37	e23	16	23
5	11	48	358	663	395	193	187	41	37	e22	16	20
6	7.6	47	277	592	882	43	138	149	39	e21	39	19
7	29	105	146	233	831	147	145	38	45	e21	16	19
8	16	34	238	298	522	42	343	36	34	e19	20	19
9	21	33	35	46	379	141	361	36	28	e18	17	19
10	372	32	127	46	357	43	197	145	28	e30	16	19
11	761	31	113	320	181	41	117	39	28	e21	16	19
12	206	31	115	475	180	421	141	47	27	e23	16	22
13	377	31	68	329	260	4070	661	53	26	e22	15	21
14	35	31	64	203	181	2300	791	160	26	e21	22	19
15	31	30	589	288	185	700	933	138	29	e21	16	18
16	31	30	438	552	173	730	682	124	33	e21	15	18
17	30	31	345	785	50	769	389	79	28	e21	17	18
18	37	31	669	667	409	1170	225	531	27	e20	16	18
19	131	31	1140	e450	838	718	737	190	26	e19	22	18
20	33	30	373	293	635	385	612	157	25	19	16	18
21	133	30	662	263	404	381	331	32	24	18	15	18
22	35	41	1140	200	196	1020	325	134	25	18	15	30
23	31	34	504	190	262	1710	275	62	28	18	16	15
24	30	33	225	173	230	663	212	185	24	17	18	12
25	30	31	207	45	172	395	156	39	23	17	18	12
26	30	32	123	157	177	870	179	199	23	17	18	12
27	30	184	72	122	150	984	147	229	23	17	19	13
28	29	1290	96	121	126	552	154	37	23	17	19	13
29	30	559	1780	45	---	347	163	136	23	16	20	13
30	30	159	9890	169	---	209	40	176	23	16	20	17
31	30	---	5040	46	---	207	---	142	---	16	20	---
TOTAL	2645.9	3120	28095	10879	8668	19860	9325	3757	1209	618	557	547
MEAN	85.4	104	906	351	310	641	311	121	40.3	19.9	18.0	18.2
MAX	761	1290	9890	859	882	4070	933	531	225	30	39	30
MIN	7.4	30	35	45	47	41	40	32	23	16	15	12
CFSM	.49	.60	5.21	2.02	1.78	3.68	1.79	.70	.23	.11	.10	.10
IN.	.57	.67	6.01	2.33	1.85	4.25	1.99	.80	.26	.13	.12	.12

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1991, BY WATER YEAR (WY)

	34.0	95.5	171	203	251	319	310	205	144	83.3	42.0	37.6
MEAN	201	612	906	1485	765	900	906	1127	904	800	490	625
MAX	1970	1973	1991	1950	1976	1978	1964	1943	1957	1979	1958	1989
(WY)	1.52	3.05	3.48	4.06	20.6	27.7	28.0	14.3	4.66	3.69	.19	.40
MIN	1941	1941	1945	1945	1978	1941	1976	1976	1988	1968	1941	1941
(WY)												

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1939 - 1991

ANNUAL TOTAL	97059.1	89280.9	158
ANNUAL MEAN	266	245	316
HIGHEST ANNUAL MEAN			18.8
LOWEST ANNUAL MEAN			1974
HIGHEST DAILY MEAN	9890	9890	9890
LOWEST DAILY MEAN	5.9	7.4	.00
ANNUAL SEVEN-DAY MINIMUM	6.4	13	.01
INSTANTANEOUS PEAK FLOW		13400	28800
INSTANTANEOUS PEAK STAGE		11.23	23.59
ANNUAL RUNOFF (CFSM)	1.53	1.41	.91
ANNUAL RUNOFF (INCHES)	20.75	19.09	12.31
10 PERCENT EXCEEDS	535	662	355
50 PERCENT EXCEEDS	65	45	41
90 PERCENT EXCEEDS	13	17	5.6

03353551 LITTLE EAGLE CREEK AT 52ND STREET AT INDIANAPOLIS, IN

LOCATION.--lat 39°50'45", long 86°14'55", in NE1SW1 sec.7, T.16 N., R.2 E., Marion County, Hydrologic Unit 05120201, on right bank at downstream side of West 52nd Street, 0.4 mi east of Lafayette Road, 1.1 mi upstream from Guion Creek, and at mile 7.2.

DRAINAGE AREA.--6.94 mi².

PERIOD OF RECORD.--October 1989 to current year.

GAGE.--Water-stage recorder. Datum of gage is 766.34 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except for estimated daily discharges, and for discharges less than 10 ft³/s, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.27	1.1	5.5	13	5.7	e7.2	4.3	3.5	1.9	.48	.76	.66
2	.23	1.0	4.3	9.2	11	e9.0	3.6	2.4	2.5	.32	.87	.52
3	6.7	.97	171	6.8	8.0	e5.6	3.3	2.1	1.6	.38	.64	.70
4	90	.98	21	7.9	e6.8	e4.0	11	7.4	1.4	.45	.75	.74
5	2.7	39	9.8	6.8	e22	e2.9	11	6.3	.87	.54	1.7	.49
6	1.1	7.2	7.5	7.2	e82	e2.7	5.5	4.6	.75	.44	21	.69
7	38	2.9	5.9	5.0	e40	e2.3	4.1	2.3	.70	.37	2.5	.30
8	10	2.2	5.0	4.3	e17	e2.1	42	2.0	.67	1.9	4.2	.21
9	45	2.1	4.3	4.2	e11	e1.9	16	1.8	.67	1.0	3.1	.19
10	151	2.3	4.0	4.1	e7.8	e1.8	7.6	1.7	.64	31	.93	.21
11	14	1.7	3.9	41	e5.6	e1.8	5.2	5.8	.62	4.6	.51	.24
12	5.4	1.4	3.4	18	e4.7	e80	4.4	6.5	1.5	11	.35	.25
13	3.2	1.3	3.5	8.9	e5.7	240	64	3.0	.68	2.4	.29	7.5
14	2.3	1.3	2.9	8.2	e7.8	29	23	3.0	.58	1.1	.30	1.2
15	1.8	1.3	53	12	e5.3	13	76	2.5	1.3	.74	.42	.34
16	1.7	1.4	10	23	e4.1	8.6	14	9.6	10	.59	.44	.22
17	1.5	1.5	22	15	e3.9	42	8.7	6.0	1.7	.62	1.0	.69
18	12	1.3	71	8.0	e26	29	6.5	16	1.0	.65	.97	.54
19	2.2	1.3	24	6.8	e29	12	78	3.0	.71	.71	3.1	.23
20	1.7	1.2	12	7.3	e16	8.2	17	1.9	.61	.80	1.5	.20
21	1.5	1.1	69	6.2	e10	6.8	8.7	1.6	.74	.74	.49	.15
22	8.1	17	27	5.2	e7.6	99	6.3	1.4	8.6	.70	.28	2.7
23	2.9	4.4	13	e3.5	e6.0	35	5.5	16	3.7	.57	.23	8.2
24	1.9	2.6	10	e3.0	e4.8	12	5.9	6.8	1.2	.54	.20	1.2
25	1.5	2.1	6.6	e2.5	e4.2	8.0	3.7	3.6	.87	.81	.20	.44
26	1.3	1.8	5.3	e2.4	e4.0	67	3.6	6.1	.92	1.3	.22	.71
27	1.1	84	5.2	e2.3	e3.9	18	3.2	2.7	.59	.66	.34	.46
28	1.1	114	5.9	e2.2	e3.9	9.2	2.9	1.7	.50	.69	.77	.56
29	.98	14	385	e3.7	---	6.7	4.5	4.8	.54	.67	.83	.58
30	1.1	7.6	542	13	---	5.0	2.8	22	.85	.88	.85	.51
31	1.1	---	30	4.6	---	4.5	---	3.5	---	.75	1.0	---
TOTAL	413.38	322.05	1543.0	265.3	363.8	774.3	452.3	161.6	48.91	68.40	50.74	31.63
MEAN	13.3	10.7	49.8	8.56	13.0	25.0	15.1	5.21	1.63	2.21	1.64	1.05
MAX	151	114	542	41	82	240	78	22	10	31	21	8.2
MIN	.23	.97	2.9	2.2	3.9	1.8	2.8	1.4	.50	.32	.20	.15
CFSM	1.92	1.55	7.17	1.23	1.87	3.60	2.17	.75	.23	.32	.24	.15
IN.	2.22	1.73	8.27	1.42	1.95	4.15	2.42	.87	.26	.37	.27	.17

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1991, BY WATER YEAR (WY)

	7.51	9.61	25.5	7.85	22.1	19.1	11.7	18.1	3.58	3.84	3.10	2.47
MEAN	7.51	9.61	25.5	7.85	22.1	19.1	11.7	18.1	3.58	3.84	3.10	2.47
MAX	13.3	10.7	49.8	8.56	31.1	25.0	15.1	31.0	5.53	5.47	4.56	3.88
(WY)	1991	1991	1991	1991	1990	1991	1991	1990	1990	1990	1990	1990
MIN	1.69	8.49	1.15	7.13	13.0	13.2	8.38	5.21	1.63	2.21	1.64	1.05
(WY)	1990	1990	1990	1990	1991	1990	1990	1991	1991	1991	1991	1991

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1989 - 1991

ANNUAL TOTAL	5584.87	4495.41	
ANNUAL MEAN	15.3	12.3	
HIGHEST ANNUAL MEAN			11.2
LOWEST ANNUAL MEAN			12.3
HIGHEST DAILY MEAN	542	542	10.0
LOWEST DAILY MEAN	.23	.15	1991
ANNUAL SEVEN-DAY MINIMUM	.33	.28	1990
INSTANTANEOUS PEAK FLOW			542
INSTANTANEOUS PEAK STAGE			Dec 30 1990
ANNUAL RUNOFF (CFSM)	2.20	1.77	.15
ANNUAL RUNOFF (INCHES)	29.94	24.10	.28
10 PERCENT EXCEEDS	30	22	Sep 21 1991
50 PERCENT EXCEEDS	3.8	3.1	Aug 21 1991
90 PERCENT EXCEEDS	.81	.51	May 16 1990
			May 16 1990
			21.84
			21
			2.9
			.65

03353560 GUION CREEK ABOVE 52ND STREET AT INDIANAPOLIS, IN

LOCATION.--Lat 39°50'45", long 86°13'57", in NW¼SW¼ sec.08., T.16 N., R.3 E., Marion County, Hydrologic Unit 05120201, on right bank 25 ft upstream from private bridge, 0.2 mi north of West 52nd Street along Guion Road, and 1.25 mi upstream of the confluence with Little Eagle Creek.

DRAINAGE AREA.--3.91 mi².

PERIOD OF RECORD.--October 1989 to current year.

GAGE.--Water-stage recorder. Datum of gage is 760.11 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except for estimated daily discharges, and discharges less than 2.0 ft³/s, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.27	1.3	4.3	12	e2.0	2.0	2.2	1.7	2.4	.02	.02	.01
2	.48	2.5	3.1	7.9	e4.0	3.3	1.7	1.3	2.0	.02	.02	.01
3	2.9	3.0	57	5.2	e3.2	2.2	1.4	1.2	1.6	.03	.02	.01
4	19	3.4	14	3.6	e2.7	1.6	2.9	2.6	1.2	.05	.04	.04
5	3.2	9.8	7.4	3.4	11	1.2	3.8	2.1	.85	.08	.06	.01
6	1.5	5.0	5.3	3.0	37	1.4	3.1	2.0	.69	.04	2.7	.00
7	8.6	4.2	3.9	2.4	17	1.1	2.0	1.2	.65	.03	.24	.02
8	5.4	2.1	3.1	2.0	8.8	.87	13	1.0	.62	.05	.38	.44
9	12	1.3	2.6	1.8	6.0	.70	9.7	1.2	.57	.02	.33	.64
10	51	.86	2.2	1.6	4.4	.68	4.7	1.5	.52	4.3	.07	.77
11	11	.64	2.0	12	3.1	.62	3.2	5.1	.54	2.5	.02	.36
12	6.1	.56	1.8	10	2.4	34	2.4	5.1	.54	2.5	.01	.10
13	4.3	.52	1.5	5.2	3.0	108	22	3.1	.51	.25	.01	.32
14	3.3	.56	1.2	4.4	3.8	20	11	2.7	.47	.09	.01	.21
15	2.4	.59	16	5.8	3.0	9.3	40	2.2	.73	.03	.01	.18
16	1.9	1.6	6.7	11	2.0	6.1	11	4.8	1.1	.02	.01	.17
17	1.8	1.5	8.2	7.6	1.7	17	5.9	4.1	.42	.02	.16	.15
18	4.4	1.2	29	4.6	13	17	4.3	16	.25	.02	.03	.15
19	2.1	1.1	15	3.8	15	7.5	29	4.2	.18	.02	.24	.17
20	1.7	1.0	7.8	e3.0	8.4	5.2	11	2.8	.12	.02	.06	.08
21	1.5	.92	33	e2.4	5.4	4.4	6.4	2.3	.09	.02	.02	.02
22	3.6	5.0	18	e1.9	3.8	44	4.7	2.1	.10	.02	.01	.53
23	2.9	2.6	9.0	e1.5	2.8	23	4.2	8.0	.15	.02	.01	e.35
24	3.0	1.7	5.7	e1.3	2.2	8.1	3.4	5.4	.10	.02	.01	e.10
25	2.4	1.5	4.2	e1.1	1.9	5.5	2.6	3.5	.08	.02	.01	e.03
26	2.2	1.2	3.2	e.98	1.6	30	2.4	3.7	.07	.01	.01	e.08
27	2.6	24	2.7	e.92	1.5	14	2.2	2.8	.05	.01	.01	e.04
28	2.4	45	2.8	e1.3	1.1	6.0	1.9	2.3	.06	.01	.00	e.05
29	2.0	11	114	e1.8	---	4.6	2.5	2.4	.07	.02	.00	e.07
30	1.5	6.3	201	e4.5	---	4.0	1.7	8.9	.04	.01	.01	e.02
31	1.6	---	22	e1.5	---	2.9	---	3.4	---	.01	.02	---
TOTAL	169.05	141.95	607.7	129.50	171.8	386.27	216.3	110.7	16.75	10.28	4.55	5.13
MEAN	5.45	4.73	19.6	4.18	6.14	12.5	7.21	3.57	.56	.33	.15	.17
MAX	51	45	201	12	37	108	40	16	2.4	4.3	2.7	.77
MIN	.27	.52	1.2	.92	1.1	.62	1.4	1.0	.04	.01	.00	.00
CFSM	1.39	1.21	5.01	1.07	1.57	3.19	1.84	.91	.14	.08	.04	.04
IN.	1.61	1.35	5.78	1.23	1.63	3.67	2.06	1.05	.16	.10	.04	.05

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1991, BY WATER YEAR (WY)

	MEAN	4.17	10.1	4.03	11.2	9.38	5.38	10.1	1.70	1.15	.51	1.12
MAX	5.45	4.73	19.6	4.18	16.4	12.5	7.21	16.7	2.84	1.98	.87	2.08
(WY)	1991	1991	1991	1991	1990	1991	1991	1990	1990	1990	1990	1990
MIN	.68	3.61	.52	3.89	6.14	6.30	3.55	3.57	.56	.33	.15	.17
(WY)	1990	1990	1990	1990	1991	1990	1990	1991	1991	1991	1991	1991

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1990 - 1991

ANNUAL TOTAL	2551.59	1969.98	5.13
ANNUAL MEAN	6.99	5.40	5.40
HIGHEST ANNUAL MEAN			4.87
LOWEST ANNUAL MEAN			1991
HIGHEST DAILY MEAN	201	201	201
LOWEST DAILY MEAN	.11	.00	.00
ANNUAL SEVEN-DAY MINIMUM	.12	.01	.01
INSTANTANEOUS PEAK FLOW		347	421
INSTANTANEOUS PEAK STAGE		6.65	7.35
ANNUAL RUNOFF (CFSM)	1.79	1.38	1.31
ANNUAL RUNOFF (INCHES)	24.28	18.74	17.84
10 PERCENT EXCEEDS	14	11	11
50 PERCENT EXCEEDS	2.1	2.0	1.5
90 PERCENT EXCEEDS	.24	.02	.09

03353583 FALCON CREEK AT 30TH ST. AT INDIANAPOLIS, IN

LOCATION.--Lat 39°48'33", long 86°13'56", in NW¼NW¼ sec.29, T.16 N., R.03 E., Marion County, Hydrologic Unit 05120201, on left bank, 150 ft downstream from bridge on West 30th Street, 0.6 mi west of Lafayette Road, and 0.6 mi upstream of confluence with Little Eagle Creek.

DRAINAGE AREA.--2.95 mi².

PERIOD OF RECORD.--October 1989 to current year.

GAGE.--Water-stage recorder. Datum of gage is 727.27 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except for estimated daily discharges and for discharges less than 1 ft /s, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.37	e.31	3.3	8.5	2.7	4.4	2.2	2.3	.79	.26	.11	.16
2	.40	e.27	2.5	5.6	2.8	4.1	2.0	1.3	8.7	.25	.18	.15
3	11	e.25	60	4.0	3.0	2.8	1.9	1.8	2.4	.21	.19	3.2
4	22	e.25	12	2.9	3.1	2.3	5.0	3.8	.54	.34	.23	.77
5	1.5	e12	5.4	4.3	11	1.9	4.5	3.6	.36	.40	.24	.11
6	.51	e3.2	3.9	3.3	33	2.1	3.1	2.1	.34	.23	15	.04
7	15	e1.6	2.8	2.8	17	1.7	2.5	1.3	.32	.27	.32	.03
8	3.7	e1.1	2.3	2.5	8.0	1.3	14	1.2	.31	.32	5.2	.13
9	11	e.91	2.0	2.3	5.5	1.2	11	1.0	.31	.26	.60	.14
10	41	e.84	1.9	2.5	4.3	1.1	4.9	.84	.36	5.9	.26	.15
11	e8.3	e.66	1.7	14	3.2	.99	3.0	1.5	.34	2.4	.25	.08
12	e3.0	e.46	1.5	10	2.6	31	2.5	.86	.34	4.0	.22	2.0
13	e1.2	e.31	1.3	5.9	3.8	89	26	.66	.36	.27	.22	.49
14	e.80	e.16	1.1	4.8	4.2	19	14	1.1	.77	.24	1.1	.15
15	e.60	e.16	17	6.0	2.6	8.0	37	.54	1.7	.25	.18	.14
16	e.54	e.36	5.4	8.9	1.9	5.3	10	7.8	2.5	.26	.18	.14
17	e.48	e.61	9.0	6.8	1.8	18	5.5	1.8	.30	.20	1.5	.14
18	e4.1	e.45	26	4.6	18	16	3.8	19	.24	.19	.25	.12
19	e1.2	e.31	13	3.8	13	7.7	32	2.1	.25	.24	3.4	.07
20	e.64	e.21	6.0	4.0	7.6	5.1	12	5.5	.22	.23	.28	.02
21	e.52	e.18	26	3.0	5.0	4.0	6.3	1.9	.24	.25	.19	.00
22	e2.8	7.9	14	2.3	3.7	59	4.5	1.8	.30	.21	.16	5.7
23	e1.3	1.5	6.9	2.0	2.8	26	4.7	17	.30	.19	.16	1.0
24	e1.0	1.0	4.2	1.6	2.5	8.7	3.3	3.8	.32	.17	.16	.12
25	e.64	.55	3.1	1.3	2.2	5.3	2.5	2.7	.35	.17	.17	.09
26	e.43	.49	2.4	1.3	1.9	27	2.5	3.2	.27	.21	.17	.25
27	e.32	30	2.1	1.2	1.8	13	2.2	1.3	.25	.22	.18	.09
28	e.32	42	2.8	1.3	1.8	6.3	2.1	.64	.27	.24	.15	.07
29	e.26	9.0	107	3.0	---	4.1	3.7	1.2	.30	.24	.10	.04
30	e.31	4.8	185	4.0	---	2.9	1.8	5.7	.46	.24	.10	.03
31	e.31	---	20	2.1	---	2.5	---	1.8	---	.18	.17	---
TOTAL	135.55	121.84	551.6	130.6	170.8	381.79	230.5	101.14	24.51	19.04	31.62	15.62
MEAN	4.37	4.06	17.8	4.21	6.10	12.3	7.68	3.26	.82	.61	1.02	.52
MAX	41	42	185	14	33	89	37	19	8.7	5.9	15	5.7
MIN	.26	.16	1.1	1.2	1.8	.99	1.8	.54	.22	.17	.10	.00
CFSM	1.48	1.38	6.03	1.43	2.07	4.17	2.60	1.11	.28	.21	.35	.18
IN.	1.71	1.54	6.96	1.65	2.15	4.81	2.91	1.28	.31	.24	.40	.20

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1991, BY WATER YEAR (WY)

	MEAN	2.73	3.86	9.73	3.81	9.90	9.46	5.60	9.02	1.68	1.62	1.41	.89
MAX	4.37	4.06	17.8	4.21	13.7	12.3	7.68	14.8	2.54	2.63	1.79	1.26	
(WY)	1991	1991	1991	1991	1990	1991	1991	1990	1990	1990	1990	1990	
MIN	1.09	3.66	1.66	3.40	6.10	6.61	3.53	3.26	.82	.61	1.02	.52	
(WY)	1990	1990	1990	1990	1991	1990	1990	1991	1991	1991	1991	1991	

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1989 - 1991
ANNUAL TOTAL	2317.94	1914.61	
ANNUAL MEAN	6.35	5.25	4.96
HIGHEST ANNUAL MEAN			5.25
LOWEST ANNUAL MEAN			4.67
HIGHEST DAILY MEAN	185	185	185
LOWEST DAILY MEAN	.16	.00	.00
ANNUAL SEVEN-DAY MINIMUM	.25	.09	.09
INSTANTANEOUS PEAK FLOW			
INSTANTANEOUS PEAK STAGE			
ANNUAL RUNOFF (CFSM)	2.15	5.51	6.00
ANNUAL RUNOFF (INCHES)	29.23	1.78	1.68
10 PERCENT EXCEEDS	13	24.14	22.83
50 PERCENT EXCEEDS	1.8	12	11
90 PERCENT EXCEEDS	.29	1.8	1.5
		.17	.24

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 mi² including 5.57 mi² from Dry Run basin. Since June 1964 part of the flow from the 5.57 mi² 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.--Records fair except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	8.4	19	57	15	9.1	14	13	11	1.8	.90	.93
2	2.6	8.7	14	34	20	e20	12	10	38	1.1	.90	.71
3	15	8.7	330	23	21	e13	11	8.7	17	1.1	.90	6.4
4	204	8.7	86	16	17	e9.4	29	25	7.0	1.2	.90	11
5	18	81	36	23	68	e7.4	35	21	4.8	2.6	.97	1.0
6	7.9	25	24	23	199	e8.5	20	19	3.7	1.2	85	.64
7	94	13	18	17	97	e6.6	15	11	3.2	.91	7.5	.57
8	39	9.0	14	15	43	e5.3	87	8.8	2.8	1.5	23	.55
9	82	7.4	12	14	29	e4.2	62	7.8	2.5	2.5	11	.56
10	315	6.8	10	12	22	e4.1	26	8.0	2.0	81	3.0	.90
11	58	5.4	9.1	92	16	e3.8	17	19	1.9	17	1.8	.55
12	24	4.3	8.4	67	13	e220	13	26	2.6	50	1.3	2.8
13	15	3.5	7.8	32	17	e540	155	16	2.4	7.0	1.1	13
14	11	3.0	6.8	24	23	e110	78	14	2.3	3.7	6.4	2.3
15	8.2	3.0	117	27	18	e60	208	15	4.1	2.6	1.3	1.4
16	6.9	3.4	33	58	12	e37	61	41	40	2.1	.64	.80
17	6.3	5.1	47	45	10	e120	31	37	5.3	1.7	3.9	.59
18	30	4.4	171	27	105	e98	22	110	3.1	1.5	1.8	.50
19	9.6	3.8	85	21	88	42	180	33	2.4	1.8	17	.70
20	6.7	3.7	37	20	43	27	67	24	1.9	1.8	3.7	.53
21	5.6	3.5	158	19	27	21	34	17	1.6	1.7	1.2	3.1
22	22	45	101	15	20	287	24	15	1.9	1.6	.68	17
23	11	13	47	12	15	154	23	88	17	1.3	.50	23
24	8.1	6.8	28	11	13	51	21	56	2.9	1.3	.51	2.7
25	6.9	5.2	27	8.4	11	31	14	24	2.1	1.2	.49	1.0
26	6.0	4.4	19	8.2	9.8	164	14	32	1.9	1.1	.48	1.2
27	5.7	172	14	8.2	9.2	79	12	16	1.7	1.1	.48	.86
28	5.7	250	12	7.9	8.5	37	11	9.6	1.3	.91	.96	.57
29	5.3	58	561	11	---	24	18	18	1.2	.90	.63	.81
30	5.5	28	1230	29	---	20	12	72	2.3	.99	.73	.63
31	7.7	---	145	13	---	16	---	21	---	.99	1.3	---
TOTAL	1045.5	802.2	3427.1	789.7	989.5	2229.4	1326	835.9	191.9	197.20	180.97	97.30
MEAN	33.7	26.7	111	25.5	35.3	71.9	44.2	27.0	6.40	6.36	5.84	3.24
MAX	315	250	1230	92	199	540	208	110	40	81	85	23
MIN	2.6	3.0	6.8	7.9	8.5	3.8	11	7.8	1.2	.90	.48	.50
CFSM	1.41	1.12	4.63	1.07	1.48	3.01	1.85	1.13	.27	.27	.24	.14
IN.	1.63	1.25	5.33	1.23	1.54	3.47	2.06	1.30	.30	.31	.28	.15

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1991, BY WATER YEAR (WY)

	MEAN	20.4	31.9	23.6	33.0	39.6	33.5	30.3	15.1	15.3	11.1	9.07
MAX	88.9	113	111	78.3	75.5	87.8	68.3	103	63.4	92.3	44.7	101
(WY)	1987	1986	1991	1969	1990	1978	1972	1981	1978	1979	1979	1989
MIN	.81	1.50	.85	.32	3.82	4.84	5.51	4.84	.98	.67	.15	.20
(WY)	1967	1966	1977	1977	1978	1981	1976	1976	1988	1966	1966	1966

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1965 - 1991	
ANNUAL TOTAL	14537.0		12112.67		22.7	
ANNUAL MEAN	39.8		33.2		38.9	
HIGHEST ANNUAL MEAN					4.86	
LOWEST ANNUAL MEAN					1300	
HIGHEST DAILY MEAN	1230	Dec 30	1230	Dec 30	1300	Mar 14 1978
LOWEST DAILY MEAN	1.5	Sep 4	.48	Aug 26	.00	Jul 8 1966
ANNUAL SEVEN-DAY MINIMUM	1.8	Aug 31	.58	Aug 23	.07	Aug 2 1966
INSTANTANEOUS PEAK FLOW			1880	Dec 30	3330	Jul 28 1979
INSTANTANEOUS PEAK STAGE			8.49	Dec 30	12.13	Jul 28 1979
ANNUAL RUNOFF (CFSM)	1.67		1.39		.95	
ANNUAL RUNOFF (INCHES)	22.63		18.85		12.93	
10 PERCENT EXCEEDS	85		81		48	
50 PERCENT EXCEEDS	12		11		7.5	
90 PERCENT EXCEEDS	3.3		.99		1.2	

03353620 LICK CREEK AT INDIANAPOLIS, IN

LOCATION.--Lat 39°42'21", long 86°06'13", in NE1/4 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 mi².

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.--Records good except those for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	2.2	17	53	e11	9.1	8.9	6.5	3.8	1.7	.43	2.0
2	1.4	2.1	13	34	21	15	6.9	6.1	3.3	4.7	.43	.46
3	13	2.1	100	21	24	9.1	5.9	6.0	2.7	1.3	.34	1.7
4	140	2.2	33	e18	22	6.9	13	10	2.2	2.8	.35	.98
5	18	29	20	e16	53	5.8	14	37	1.5	1.2	.30	.85
6	8.5	14	16	e15	199	12	7.6	33	1.2	.69	27	.35
7	14	8.5	13	e12	93	8.4	6.1	11	1.2	.38	3.8	.19
8	12	4.5	10	e11	48	5.4	9.8	7.8	1.3	1.2	4.1	.13
9	30	4.7	8.4	e9.7	32	4.9	10	6.5	1.3	1.2	6.7	.10
10	111	6.2	7.6	e9.6	24	4.2	7.5	7.3	1.0	23	3.1	.14
11	35	3.9	6.8	71	16	3.8	5.9	8.4	.99	4.8	2.3	.16
12	18	3.1	6.4	55	12	181	3.5	8.9	1.1	23	.73	23
13	11	2.7	5.5	28	17	325	79	5.2	.89	4.9	.24	31
14	7.6	2.6	4.4	22	21	82	43	9.4	.73	1.8	1.0	2.2
15	5.4	2.5	64	26	e13	43	82	5.2	.59	1.5	.43	.61
16	4.0	6.6	21	46	e9.2	25	30	13	4.5	.84	.15	.37
17	3.6	3.0	47	42	e8.8	72	19	8.5	2.0	.55	8.5	.23
18	36	2.2	180	24	72	76	15	43	.75	.36	7.0	.16
19	12	2.2	69	18	69	37	194	8.8	.47	.34	8.5	.51
20	6.4	2.1	33	18	46	22	62	5.3	.34	.32	3.0	1.9
21	4.8	2.0	116	15	27	17	35	4.0	.44	.23	.90	1.1
22	16	49	70	e12	19	352	24	67	.34	.19	.38	5.7
23	8.6	18	35	e9.0	14	131	19	59	.34	.16	.25	12
24	6.0	11	e21	e7.2	12	49	19	26	.32	.16	.19	1.4
25	4.9	8.0	e15	e6.2	9.4	30	12	16	.32	.16	.15	.60
26	4.0	6.7	e12	e6.0	7.8	122	11	49	72	.14	.12	.41
27	3.5	61	e10	e6.3	7.3	60	10	20	11	.19	.12	.45
28	3.1	190	e15	e7.2	6.9	30	9.7	12	6.2	.19	47	.23
29	2.7	43	313	e8.8	---	19	11	7.8	4.6	.23	17	.19
30	2.9	25	981	e13	---	13	8.0	6.8	3.8	.42	2.8	.14
31	2.5	---	105	e11	---	11	---	5.0	---	.46	3.8	---
TOTAL	547.2	520.1	2368.1	651.0	914.4	1781.6	781.8	519.5	131.22	79.11	151.11	89.26
MEAN	17.7	17.3	76.4	21.0	32.7	57.5	26.1	16.8	4.37	2.55	4.87	2.98
MAX	140	190	981	71	199	352	194	67	72	23	47	31
MIN	1.3	2.0	4.4	6.0	6.9	3.8	3.5	4.0	.32	.14	.12	.10
CFSM	1.13	1.11	4.90	1.35	2.09	3.68	1.67	1.07	.28	.16	.31	.19
IN.	1.30	1.24	5.65	1.55	2.18	4.25	1.86	1.24	.31	.19	.36	.21

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1991, BY WATER YEAR (WY)

	8.32	17.4	26.3	18.6	30.1	34.5	25.3	24.5	13.7	16.2	12.6	7.59
MEAN	8.32	17.4	26.3	18.6	30.1	34.5	25.3	24.5	13.7	16.2	12.6	7.59
MAX	53.1	72.0	76.4	49.5	57.1	64.6	46.4	80.1	48.5	67.0	54.1	48.2
(WY)	1987	1986	1991	1975	1975	1978	1972	1981	1978	1979	1979	1989
MIN	1.03	1.44	2.14	1.00	4.67	7.43	3.92	1.87	.39	2.55	1.28	.53
(WY)	1983	1982	1981	1981	1978	1981	1971	1988	1988	1991	1986	1983

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1971 - 1991
ANNUAL TOTAL	10681.14	8534.40	
ANNUAL MEAN	29.3	23.4	19.5
HIGHEST ANNUAL MEAN			27.6
LOWEST ANNUAL MEAN			11.7
HIGHEST DAILY MEAN	981	981	981
LOWEST DAILY MEAN	.90	.10	.05
ANNUAL SEVEN-DAY MINIMUM	1.0	.17	.11
INSTANTANEOUS PEAK FLOW		1770	2500
INSTANTANEOUS PEAK STAGE		7.85	9.61
ANNUAL RUNOFF (CFSM)	1.88	1.50	1.25
ANNUAL RUNOFF (INCHES)	25.47	20.35	17.02
10 PERCENT EXCEEDS	61	53	42
50 PERCENT EXCEEDS	12	7.8	7.2
90 PERCENT EXCEEDS	2.2	.35	1.4

03353630 LITTLE BUCK CREEK NEAR SOUTHPORT, IN

LOCATION.--Lat 39°40'11", long 86°04'57", in SW1/4 sec.10, T.14 N., R.4 E., Marion County, Hydrologic Unit 05120201, on right bank 5 ft upstream from Emerson Avenue bridge in Indianapolis, 1.1 mi downstream from Bunker Creek, and 2.5 mi upstream from Derbyshire Creek.

DRAINAGE AREA.--5.73 mi².

PERIOD OF RECORD.--October 1989 to current year.

GAGE.--Water-stage recorder. Datum of gage is 783.17 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.79	1.5	6.8	e17	e6.8	3.8	4.5	2.3	.66	.00	.00	.33
2	.70	1.3	5.1	e13	e11	5.6	3.7	1.8	.56	.00	.00	.12
3	1.3	1.4	44	e9.0	12	4.0	3.2	1.5	.49	.00	.00	.06
4	45	1.4	14	e7.8	11	3.3	4.6	1.9	.35	.00	.00	.39
5	6.1	7.3	8.4	7.7	18	2.9	5.9	6.3	.66	.00	.00	.18
6	2.9	4.3	6.7	8.7	123	4.5	3.9	5.9	.29	.00	.00	.07
7	2.6	2.6	5.2	7.0	47	3.7	3.3	2.9	.21	.00	.11	.02
8	2.7	1.9	4.2	5.8	20	2.9	3.9	2.0	.21	.00	.00	.00
9	8.5	1.9	3.4	5.3	13	2.5	3.6	1.7	.19	.00	.06	.00
10	45	2.2	3.0	5.1	10	2.2	2.6	1.5	.19	3.5	.03	.00
11	14	1.8	2.7	41	7.5	2.2	2.3	1.4	.20	.66	.00	.00
12	7.8	1.6	2.6	26	6.0	50	1.9	1.6	.24	2.2	.00	.00
13	5.6	1.4	2.2	14	7.0	158	21	1.4	.16	.51	.00	.63
14	3.9	1.3	1.9	11	7.8	36	14	1.3	.13	.22	.28	.12
15	2.9	1.3	14	13	e5.7	16	29	1.3	.10	.11	.56	.04
16	2.3	1.2	7.2	22	e4.3	11	12	1.1	.14	.05	.06	.00
17	2.1	1.5	20	18	e4.3	32	7.1	1.7	.26	.00	.00	.00
18	12	1.2	92	11	15	34	5.2	7.8	.11	.00	.22	.00
19	4.8	1.2	35	9.6	22	15	76	2.8	.06	.00	1.1	.00
20	3.4	1.1	15	9.1	17	11	24	1.7	.03	.00	.57	.00
21	2.5	.99	63	7.6	10	8.3	13	1.1	.02	.00	.26	.00
22	4.8	10	39	e5.8	7.8	171	8.9	7.0	.02	.00	.15	.00
23	4.0	5.8	16	e4.9	6.0	70	7.1	19	.01	.00	.11	.00
24	3.1	3.8	11	e4.0	5.4	20	6.3	8.3	.01	.00	.10	.00
25	2.5	3.2	8.4	e3.2	4.4	11	4.4	4.4	.01	.00	.08	.00
26	2.1	2.9	5.4	e3.2	3.9	86	4.0	8.3	.01	.00	.07	.00
27	1.8	24	5.0	e3.2	3.8	33	3.6	4.4	.00	.00	.05	.00
28	1.6	85	4.9	e2.9	3.6	14	3.5	2.4	.00	.00	9.2	.00
29	1.6	18	150	e2.6	---	9.3	3.9	1.7	.00	.00	6.5	.00
30	1.6	9.9	418	e9.0	---	6.7	2.8	1.5	.00	.00	2.8	.00
31	1.6	---	49	e5.6	---	5.4	---	.97	---	.00	.50	---
TOTAL	201.59	202.99	1063.1	313.1	413.3	835.3	289.2	108.97	5.32	7.25	22.81	1.96
MEAN	6.50	6.77	34.3	10.1	14.8	26.9	9.64	3.52	.18	.23	.74	.065
MAX	45	85	418	41	123	171	76	19	.66	3.5	9.2	.63
MIN	.70	.99	1.9	2.6	3.6	2.2	1.9	.97	.00	.00	.00	.00
CFSM	1.13	1.18	5.98	1.76	2.58	4.70	1.68	.61	.03	.04	.13	.01
IN.	1.31	1.32	6.90	2.03	2.68	5.42	1.88	.71	.03	.05	.15	.01

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1991, BY WATER YEAR (WY)

	1990	1991	1990	1991	1990	1991	1990	1991	1990	1991	1990	1991
MEAN	3.73	6.68	18.3	8.75	19.0	19.7	8.83	17.0	1.40	3.73	2.84	.65
MAX	6.50	6.77	34.3	10.1	23.2	26.9	9.64	30.6	2.63	7.22	4.94	1.23
(WY)	1991	1991	1991	1991	1990	1991	1991	1990	1990	1990	1990	1990
MIN	.96	6.60	2.32	7.40	14.8	12.5	8.03	3.52	.18	.23	.74	.065
(WY)	1990	1990	1990	1990	1991	1990	1990	1991	1991	1991	1991	1991

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1990 - 1991

ANNUAL TOTAL	4414.88	3464.89	9.19
ANNUAL MEAN	12.1	9.49	9.49
HIGHEST ANNUAL MEAN			8.90
LOWEST ANNUAL MEAN			
HIGHEST DAILY MEAN	418	418	418
LOWEST DAILY MEAN	.01	.00	.00
ANNUAL SEVEN-DAY MINIMUM	.07	.00	.00
INSTANTANEOUS PEAK FLOW		700	700
INSTANTANEOUS PEAK STAGE		7.60	7.60
ANNUAL RUNOFF (CFSM)	2.11	1.66	1.60
ANNUAL RUNOFF (INCHES)	28.66	22.49	21.80
10 PERCENT EXCEEDS	25	18	19
50 PERCENT EXCEEDS	3.9	2.7	2.7
90 PERCENT EXCEEDS	.58	.00	.04

03353635 DERBYSHIRE CREEK AT SOUTHPORT, IN

LOCATION.--Lat 39°40'15", long 86°07'21", in NE1/4 sec.07, T.14 N., R.04 E., Marion County Hydrologic Unit 05120201, on left bank, 10 ft downstream from bridge on Derbyshire Road, and 0.3 mi upstream from mouth.

DRAINAGE AREA.--1.79 mi².

PERIOD OF RECORD.--September 1989 to current year.

GAGE.--Water-stage recorder. Datum of gage is 746.37 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.67	.65	2.0	5.2	2.2	2.1	1.4	.68	.54	.24	.15	.06
2	.65	.65	1.6	4.0	3.5	2.6	1.3	.55	.45	.25	.15	.06
3	3.9	.61	16	3.0	3.2	2.1	1.1	.54	.39	.25	.12	.05
4	18	.58	4.3	2.5	3.0	1.9	1.4	.60	.30	.25	.12	.05
5	1.6	1.6	2.6	2.7	4.7	1.8	1.5	4.4	.24	.25	.14	.05
6	1.0	.89	2.1	2.7	26	2.2	1.3	2.4	.31	.25	.63	.06
7	1.2	.70	1.7	2.5	10	1.9	1.1	1.3	.27	.25	.16	.05
8	1.0	.63	1.5	2.2	5.2	1.7	1.3	1.1	.25	.25	.13	.05
9	3.4	.69	1.3	2.1	4.1	1.6	1.2	1.0	.25	.25	.15	.05
10	15	.67	1.2	2.2	3.4	1.5	.99	.94	.25	1.7	.13	.06
11	3.4	.60	1.1	9.7	2.8	1.5	.92	.95	.25	.25	.14	.06
12	1.9	.58	1.0	6.2	2.7	15	.95	1.1	.25	.63	.15	.07
13	1.4	.57	.96	4.1	3.2	40	4.9	1.0	.25	.25	.15	.04
14	1.1	.55	1.0	3.5	3.3	6.6	2.7	1.7	.25	.25	.18	.03
15	.96	.51	5.3	3.8	2.5	4.0	11	1.1	.25	.25	.12	.04
16	.83	.52	2.1	4.9	2.1	3.0	3.2	1.1	.60	.23	.11	.06
17	.86	.50	8.8	4.4	2.1	12	1.9	1.0	.25	.18	.16	.04
18	6.9	.50	33	3.0	5.3	7.0	1.6	3.0	.25	.18	.12	.04
19	1.7	.46	9.9	2.7	6.4	4.1	29	1.2	.25	.16	.29	.04
20	1.3	.45	4.5	2.7	5.1	3.1	6.0	.90	.25	.16	.15	.04
21	1.1	.48	23	2.4	3.7	13	3.3	.70	.25	.15	.16	.04
22	1.7	3.1	10	2.0	2.9	70	2.4	11	.25	.16	.27	.13
23	1.2	1.3	5.0	1.9	2.7	12	2.1	8.0	.25	.12	.21	.06
24	1.0	.97	3.2	1.7	2.5	3.6	1.9	3.4	.25	.12	.20	.06
25	.87	.85	2.5	1.4	2.3	2.5	1.5	2.1	.25	.12	.19	.05
26	.82	.82	2.0	1.4	2.1	25	1.4	7.0	.25	.15	.19	.05
27	.81	7.9	1.8	1.4	2.1	5.8	1.2	2.7	.24	.13	.18	.04
28	.74	32	1.8	1.3	1.9	3.0	1.1	1.6	.25	.13	.19	.04
29	.73	4.7	92	1.5	---	2.1	1.0	1.2	.24	.12	.19	.04
30	.72	2.8	273	2.9	---	1.6	.78	.96	.19	.14	.08	.04
31	.68	---	12	1.9	---	1.4	---	.74	---	.13	.08	---
TOTAL	77.14	67.83	528.26	93.9	121.0	255.7	91.44	65.96	8.52	7.95	5.39	1.55
MEAN	2.49	2.26	17.0	3.03	4.32	8.25	3.05	2.13	.28	.26	.17	.052
MAX	18	32	273	9.7	26	70	29	11	.60	1.7	.63	.13
MIN	.65	.45	.96	1.3	1.9	1.4	.78	.54	.19	.12	.08	.03
CFSM	1.39	1.26	9.52	1.69	2.41	4.61	1.70	1.19	.16	.14	.10	.03
IN.	1.60	1.41	10.98	1.95	2.51	5.31	1.90	1.37	.18	.17	.11	.03

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1991, BY WATER YEAR (WY)

	MEAN	1.39	2.18	9.16	4.39	8.71	7.79	3.18	6.84	.84	.99	1.36	.63
MAX	2.49	2.26	17.0	5.74	13.1	8.25	3.31	11.5	1.40	1.73	2.54	1.21	
(WY)	1991	1991	1991	1990	1990	1991	1990	1990	1990	1990	1990	1990	
MIN	.30	2.11	1.27	3.03	4.32	7.33	3.05	2.13	.28	.26	.17	.052	
(WY)	1990	1990	1990	1991	1991	1990	1991	1991	1991	1991	1991	1991	

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1990 - 1991
ANNUAL TOTAL	2112.69	1324.64	
ANNUAL MEAN	5.79	3.63	3.94
HIGHEST ANNUAL MEAN			4.25
LOWEST ANNUAL MEAN			3.63
HIGHEST DAILY MEAN	273	Dec 30	273
LOWEST DAILY MEAN	.30	Aug 3	.03
ANNUAL SEVEN-DAY MINIMUM	.45	Jul 28	.04
INSTANTANEOUS PEAK FLOW			.04
INSTANTANEOUS PEAK STAGE			705
INSTANTANEOUS LOW FLOW			4.37
ANNUAL RUNOFF (CFSM)	3.23		.03
ANNUAL RUNOFF (INCHES)	43.91		2.03
10 PERCENT EXCEEDS	13		27.53
50 PERCENT EXCEEDS	1.6		5.3
90 PERCENT EXCEEDS	.61		1.1
			.12
			.20

03353636 LITTLE BUCK CREEK AT SOUTHPORT, IN

LOCATION.--Lat 39°39'54", long 86°08'11", in SW¼SW¼ sec.7, T.14 N., R.4 E., Marion County, Hydrologic Unit 05120201, on left bank 50 ft downstream from Southport Road bridge in Indianapolis.
 DRAINAGE AREA.--12.3 mi².
 PERIOD OF RECORD.--October 1989 to current year.
 GAGE.--Water-stage recorder. Datum of gage is 725.50 ft above National Geodetic Vertical Datum of 1929.
 REMARKS.--Records fair except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	e3.5	13	44	e8.8	13	14	6.5	3.8	.56	.23	.42
2	2.6	e2.9	11	25	15	18	11	5.7	3.3	.64	.24	.33
3	9.5	e2.6	72	17	16	14	9.6	5.2	2.9	.67	.21	.27
4	86	e2.6	27	13	14	12	12	6.2	2.3	.58	.23	.41
5	15	e12	16	14	25	11	16	24	2.1	.63	.23	.37
6	9.5	e6.4	13	15	192	15	11	19	1.8	.49	6.5	.25
7	9.6	e4.4	11	12	92	13	9.7	10	1.5	.44	1.3	.19
8	9.2	e4.3	9.1	10	45	10	12	7.1	1.3	.40	1.0	.16
9	19	e4.7	7.9	9.6	34	9.5	11	5.9	1.2	.41	.93	.16
10	78	e4.6	7.3	9.5	27	8.6	8.3	5.5	1.1	20	.57	.17
11	26	e4.3	6.6	62	22	8.2	7.5	5.0	1.5	4.0	.40	.18
12	16	e3.9	6.3	47	19	76	6.6	6.9	1.4	9.0	.35	.35
13	12	e3.6	6.0	22	21	264	40	5.2	1.1	2.8	.31	.41
14	9.4	e3.2	5.3	16	e23	69	31	11	.93	1.2	2.1	.48
15	7.6	e3.0	27	19	e18	38	58	6.5	.90	.76	.52	.24
16	6.6	e3.0	14	34	e14	27	28	7.1	5.7	.60	.45	.41
17	e7.0	e3.0	33	29	14	62	18	7.5	1.7	.55	.64	.26
18	e28	e3.0	139	17	33	73	14	22	1.1	.47	.41	.23
19	e10	e2.6	61	13	46	37	135	9.0	.80	.41	2.0	.21
20	e7.2	e2.2	28	e13	39	27	49	6.0	.72	.40	1.6	.26
21	e5.6	e2.0	94	e11	27	22	30	4.6	.70	.38	.54	.40
22	e9.9	19	66	e8.6	22	326	22	26	.70	.35	.46	1.8
23	e8.5	10	32	e8.0	18	138	18	45	.70	.32	.39	1.5
24	e6.4	6.8	19	e6.6	17	43	17	23	.64	.31	.35	.27
25	e5.8	5.4	15	e5.0	15	29	12	15	.77	.29	.34	.19
26	e5.0	5.0	12	e5.0	13	151	11	31	3.0	.27	.33	.18
27	e4.9	39	11	e5.0	13	64	9.8	17	3.3	.25	.34	.17
28	e4.6	129	11	e4.6	12	33	9.7	10	1.9	.25	4.6	.16
29	e4.4	33	271	e5.0	---	24	11	7.6	.91	.25	7.8	.14
30	e4.2	18	1110	e12	---	18	7.9	6.5	.68	.25	7.0	.13
31	e4.0	---	94	e8.3	---	16	---	4.8	---	.24	.86	---
TOTAL	433.9	347.0	2248.5	520.2	854.8	1669.3	650.1	371.8	50.45	48.17	43.23	10.70
MEAN	14.0	11.6	72.5	16.8	30.5	53.8	21.7	12.0	1.68	1.55	1.39	.36
MAX	86	129	1110	62	192	326	135	45	5.7	20	7.8	1.8
MIN	2.4	2.0	5.3	4.6	8.8	8.2	6.6	4.6	.64	.24	.21	.13
CFSM	1.14	.94	5.90	1.36	2.48	4.38	1.76	.98	.14	.13	.11	.03
IN.	1.31	1.05	6.80	1.57	2.59	5.05	1.97	1.12	.15	.15	.13	.03

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1991, BY WATER YEAR (WY)

	1990	1991	1990	1991	1990	1991	1990	1991	1990	1991	1990	1991
MEAN	8.74	12.9	38.8	15.3	39.3	40.7	19.1	35.2	3.68	7.48	7.16	2.45
MAX	14.0	14.2	72.5	16.8	48.1	53.8	21.7	58.3	5.67	13.4	12.9	4.54
(WY)	1991	1990	1991	1991	1990	1991	1991	1990	1990	1990	1990	1990
MIN	3.48	11.6	4.99	13.9	30.5	27.6	16.6	12.0	1.68	1.55	1.39	.36
(WY)	1990	1991	1990	1990	1991	1990	1990	1991	1991	1991	1991	1991

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1990 - 1991

ANNUAL TOTAL	9089.24	7248.15	
ANNUAL MEAN	24.9	19.9	19.2
HIGHEST ANNUAL MEAN			19.9
LOWEST ANNUAL MEAN			18.5
HIGHEST DAILY MEAN	1110	Dec 30	1110
LOWEST DAILY MEAN	.64	Jul 8	.13
ANNUAL SEVEN-DAY MINIMUM	.79	Jul 4	.18
INSTANTANEOUS PEAK FLOW			2120
INSTANTANEOUS PEAK STAGE			9.07
ANNUAL RUNOFF (CFSM)	2.02	1.61	1.56
ANNUAL RUNOFF (INCHES)	27.49	21.92	21.18
10 PERCENT EXCEEDS	48	37	38
50 PERCENT EXCEEDS	8.9	7.2	7.1
90 PERCENT EXCEEDS	2.2	.34	.64

03353637 LITTLE BUCK CREEK NEAR INDIANAPOLIS, IN

LOCATION.--Lat 39°40'00", long 86°11'48", in SW¼SW¼ sec.10, T.14 N., R.3 E., Marion County, Hydrologic Unit 05120201, on right bank, 10 ft upstream from bridge on South Belmont Street, and 2.2 mi above mouth.

DRAINAGE AREA.--16.6 mi².

PERIOD OF RECORD.--October 1989 to current year.

GAGE.--Handar Data Collection Platform and water-stage recorder. Datum of gage is 666.20 above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	6.9	23	e54	18	19	15	9.8	8.7	2.0	.24	.30
2	2.8	6.3	17	e42	26	27	14	9.4	7.8	2.0	.16	.10
3	3.1	5.9	105	e33	30	20	13	8.8	7.1	2.0	.13	.09
4	137	5.9	47	e28	26	17	14	9.8	6.3	1.8	.13	.41
5	23	19	28	e30	39	14	17	29	5.6	1.9	.13	.11
6	12	14	22	34	229	20	14	26	5.6	1.6	7.7	.07
7	12	9.5	18	28	131	18	13	13	4.9	1.2	2.4	.04
8	11	7.7	15	24	61	14	13	10	4.6	1.1	1.1	.00
9	23	7.4	13	23	49	13	14	9.2	4.2	1.1	1.7	.00
10	109	8.1	12	22	43	12	12	8.5	4.0	27	.99	.00
11	44	6.6	11	89	36	11	11	7.9	4.6	6.3	.60	.00
12	26	6.2	11	76	31	68	10	9.8	4.7	10	.38	.00
13	19	5.8	11	42	34	339	27	8.3	3.8	4.9	.28	.00
14	13	5.3	9.9	33	37	85	40	20	3.4	3.1	1.6	.00
15	11	5.2	41	34	30	44	64	11	3.2	2.3	1.4	.00
16	9.0	5.2	24	53	26	33	42	9.5	22	1.9	.51	.00
17	7.7	5.2	40	49	21	66	25	11	6.3	1.7	1.1	.00
18	41	5.2	208	32	44	91	19	28	4.4	1.5	.93	.00
19	15	5.0	104	27	64	48	151	13	3.7	1.4	2.9	.00
20	11	4.9	47	26	58	35	58	9.7	3.4	1.2	1.9	.00
21	10	4.7	131	24	43	29	38	8.1	3.1	1.1	.91	.00
22	15	26	108	20	36	388	27	68	3.0	.96	.48	.20
23	13	17	53	19	30	230	20	77	2.9	.75	.34	2.4
24	10	11	34	18	27	62	18	36	2.7	.70	.22	.06
25	9.2	9.8	27	15	24	37	15	22	2.6	.63	.16	.00
26	8.6	9.1	21	15	21	178	13	43	3.7	.53	.11	.00
27	8.7	56	17	15	20	86	12	24	4.6	.52	.10	.00
28	8.4	196	19	14	19	42	11	15	3.7	.44	.09	.00
29	8.0	56	316	14	---	26	11	12	2.7	.40	7.2	.00
30	7.9	32	1390	27	---	20	10	12	2.3	.34	4.7	.00
31	7.7	---	159	19	---	17	---	9.9	---	.31	1.4	---
TOTAL	639.0	562.9	3081.9	979	1253	2109	761	588.7	149.6	82.68	41.99	3.78
MEAN	20.6	18.8	99.4	31.6	44.7	68.0	25.4	19.0	4.99	2.67	1.35	.13
MAX	137	196	1390	89	229	388	151	77	22	27	7.7	2.4
MIN	2.8	4.7	9.9	14	18	11	10	7.9	2.3	.31	.09	.00
CFSM	1.24	1.13	5.99	1.90	2.70	4.10	1.53	1.14	.30	.16	.08	.01
IN.	1.43	1.26	6.91	2.19	2.81	4.73	1.71	1.32	.34	.19	.09	.01

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1991, BY WATER YEAR (WY)

	1990	1991	1990	1991	1990	1991	1990	1991	1990	1991	1990	1991
MEAN	13.4	18.8	53.8	23.8	49.6	51.2	23.9	42.9	7.89	10.6	9.84	3.32
MAX	20.6	18.9	99.4	31.6	54.5	68.0	25.4	66.9	10.8	18.5	18.3	6.51
(WY)	1991	1990	1991	1990	1991	1990	1991	1990	1990	1990	1990	1990
MIN	6.15	18.8	8.16	16.0	44.7	34.4	22.5	19.0	4.99	2.67	1.35	.13
(WY)	1990	1991	1990	1990	1991	1990	1990	1991	1991	1991	1991	1991

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1990 - 1991

ANNUAL TOTAL	11783.3		10252.55		25.7	
ANNUAL MEAN	32.3		28.1		28.1	1991
HIGHEST ANNUAL MEAN					23.3	1990
LOWEST ANNUAL MEAN						
HIGHEST DAILY MEAN	1390	Dec 30	1390	Dec 30	1390	Dec 30 1990
LOWEST DAILY MEAN	1.7	Jul 10	.00	Sep 8	.00	Sep 8 1991
ANNUAL SEVEN-DAY MINIMUM	2.3	Jul 4	.00	Sep 8	.00	Sep 8 1991
INSTANTANEOUS PEAK FLOW			2300	Dec 30	2300	Dec 30 1990
INSTANTANEOUS PEAK STAGE			9.10	Dec 30	9.10	Dec 30 1990
ANNUAL RUNOFF (CFSM)	1.94		1.69		1.55	
ANNUAL RUNOFF (INCHES)	26.41		22.98		21.04	
10 PERCENT EXCEEDS	57		53		52	
50 PERCENT EXCEEDS	14		11		11	
90 PERCENT EXCEEDS	4.3		.23		1.7	

03353700 WEST FORK WHITE LICK CREEK AT DANVILLE, IN

LOCATION.--Lat 39°45'36", long 86°30'47", in NW¼NE¼ sec.10, T.15 N., R.1 W., Hendricks County, Hydrologic Unit 05120201, on downstream side of bridge on U.S. Highway 36, 0.5 mi upstream from small left-bank tributary, and 7 mi west of Avon.

DRAINAGE AREA.--28.8 mi².

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.--Records fair except for estimated daily discharges, which are poor. Low flow affected by releases from Danville Filtration Plant.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 28, 1957, reached a stage of 16.0 ft, from floodmarks, discharge, 6,660 ft³/s, from contracted-opening measurement.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	.80	43	185	e17	23	27	18	4.9	.25	.00	.05
2	1.1	1.6	26	e120	e20	45	22	16	4.2	.21	.00	.07
3	9.0	1.2	337	e90	e31	32	21	15	3.8	.19	.00	.43
4	116	.83	170	e74	60	27	22	16	3.0	.17	.00	.22
5	31	43	82	e63	126	22	23	21	2.4	.21	.00	.06
6	6.6	33	58	e55	189	25	20	22	2.2	.11	.57	.03
7	39	10	39	e50	154	15	19	17	2.0	.09	.12	.02
8	59	4.5	29	e46	107	12	34	15	2.0	.07	.37	.02
9	74	3.7	19	e43	86	13	47	14	2.0	.07	.14	.03
10	378	2.3	15	e40	68	9.8	28	13	1.7	.96	.08	.03
11	160	1.5	12	116	50	10	21	13	2.0	.40	.06	.02
12	73	1.2	10	135	41	53	19	13	1.8	.49	.05	.01
13	38	1.0	7.1	91	44	347	139	12	1.6	.29	.04	.01
14	21	.93	4.6	84	42	163	166	11	1.4	.21	.16	.01
15	9.4	.89	93	117	e30	92	160	11	2.1	.17	.15	.01
16	4.6	1.2	56	179	e23	58	82	9.5	7.0	.11	.08	.00
17	4.0	.78	52	139	e29	88	54	11	1.9	.08	.05	.00
18	28	.72	218	101	92	152	39	13	1.1	.07	.02	.00
19	12	.71	160	90	173	82	83	11	.85	.06	.38	.00
20	6.2	.65	82	89	113	53	67	8.8	.70	.06	.07	.00
21	4.1	.62	199	78	83	40	47	8.1	.62	.04	.03	.00
22	5.9	4.3	196	e61	60	254	38	7.4	.60	.04	.02	.09
23	5.8	3.1	e80	e48	45	228	31	7.3	1.2	.03	.01	.14
24	3.8	1.6	e37	e37	39	93	26	7.2	.65	.02	.01	.09
25	2.2	1.5	e25	e31	30	56	23	7.7	.52	.02	.01	.04
26	2.2	1.0	e18	e26	24	210	23	7.4	.47	.02	.03	.02
27	1.5	118	e16	e21	22	149	22	6.3	.42	.02	.08	.02
28	1.1	340	e15	e19	20	76	21	5.2	.34	.01	.48	.02
29	.92	140	562	e17	---	53	21	8.4	.33	.01	.08	.01
30	.94	71	1310	e15	---	36	17	9.2	.30	.01	.03	.01
31	.89	---	e800	e15	---	30	---	6.6	---	.00	.04	---
TOTAL	1100.25	791.63	4770.7	2275	1818	2546.8	1362	361.1	54.10	4.49	3.16	1.46
MEAN	35.5	26.4	154	73.4	64.9	82.2	45.4	11.6	1.80	.14	.10	.049
MAX	378	340	1310	185	189	347	166	22	7.0	.96	.57	.43
MIN	.89	.62	4.6	15	17	9.8	17	5.2	.30	.00	.00	.00
CFSM	1.23	.92	5.34	2.55	2.25	2.85	1.58	.40	.06	.01	.00	.00
IN.	1.42	1.02	6.16	2.94	2.35	3.29	1.76	.47	.07	.01	.00	.00

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 1991, BY WATER YEAR (WY)

	MEAN	9.74	24.9	43.1	36.1	51.4	63.7	50.5	36.5	17.2	19.3	8.56	5.73
MAX	82.0	156	154	131	151	145	119	130	75.9	134	69.4	109	
(WY)	1987	1986	1991	1974	1990	1978	1964	1981	1974	1979	1979	1989	
MIN	.000	.053	.035	.062	2.82	11.2	9.14	3.87	.51	.14	.026	.003	
(WY)	1965	1965	1964	1977	1964	1981	1971	1976	1988	1991	1964	1963	

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1959 - 1991

ANNUAL TOTAL	20491.55	15088.69	30.5
ANNUAL MEAN	56.1	41.3	55.7
HIGHEST ANNUAL MEAN			6.35
LOWEST ANNUAL MEAN			1973
HIGHEST DAILY MEAN	1310	1310	1790
LOWEST DAILY MEAN	.18	.00	.00
ANNUAL SEVEN-DAY MINIMUM	.29	.00	.00
INSTANTANEOUS PEAK FLOW		1800	3330
INSTANTANEOUS PEAK STAGE		9.23	12.13
ANNUAL RUNOFF (CFSM)	1.95	1.44	1.06
ANNUAL RUNOFF (INCHES)	26.47	19.49	14.40
10 PERCENT EXCEEDS	136	114	71
50 PERCENT EXCEEDS	15	10	8.0
90 PERCENT EXCEEDS	1.0	.03	.17

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 mi².

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.--Records good except for estimated daily discharges for Dec. 24-28, which are fair and estimated daily discharges for Jan. 2-10 and Jan. 22 to Feb. 3, which are poor. Pumpage from a well field above gage affects low flows.

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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	60	315	1140	e150	174	240	148	110	17	8.6	4.9
2	19	58	263	e680	e170	230	211	141	96	18	8.2	3.9
3	21	58	1470	e520	e210	223	193	128	86	17	7.8	3.8
4	287	58	1050	e440	274	193	198	136	80	17	7.9	5.4
5	177	99	530	e380	490	176	245	144	74	20	7.4	6.3
6	83	229	380	e340	1190	174	203	171	68	17	23	4.8
7	100	146	296	e310	1060	165	178	141	61	15	35	3.8
8	242	110	247	e290	623	144	228	120	55	14	20	3.6
9	178	96	209	e270	459	136	366	112	50	13	23	3.1
10	1480	91	184	e270	374	131	246	107	46	215	19	2.9
11	911	82	165	498	308	125	192	102	44	86	13	2.5
12	439	74	156	847	258	220	168	123	46	109	10	2.2
13	279	68	144	502	250	2820	560	138	42	78	9.1	2.1
14	200	65	126	394	264	1300	760	243	37	49	8.7	2.0
15	151	63	377	458	e210	667	920	233	35	35	12	2.5
16	121	63	457	854	e162	440	585	181	48	28	9.7	2.2
17	105	63	345	822	e190	464	370	214	58	23	11	2.1
18	120	62	1100	530	372	1060	289	290	45	21	12	2.2
19	143	60	1100	424	933	582	793	218	37	19	12	2.1
20	117	58	576	397	682	412	632	171	31	17	13	1.7
21	102	57	622	385	449	340	404	146	29	16	10	1.9
22	106	112	1200	e280	349	2040	326	143	27	15	8.9	2.9
23	110	127	645	e240	281	2040	277	207	25	13	7.9	6.7
24	100	99	e360	e210	250	783	257	161	26	12	6.9	7.1
25	89	84	e280	e190	220	482	219	151	25	11	6.4	6.0
26	80	76	e220	e180	196	1240	205	157	23	11	5.5	5.4
27	75	430	e190	e170	187	1070	192	139	22	9.4	5.2	4.2
28	70	1610	e180	e165	178	569	184	121	21	9.7	5.6	3.4
29	67	810	1860	e160	---	396	185	113	20	9.4	5.5	2.0
30	65	437	12100	e156	---	313	167	137	19	9.1	6.1	1.6
31	62	---	3070	e153	---	266	---	124	---	8.8	5.3	---
TOTAL	6118	5505	30217	12655	10739	19375	9993	4860	1386	952.4	343.7	105.3
MEAN	197	183	975	408	384	625	333	157	46.2	30.7	11.1	3.51
MAX	1480	1610	12100	1140	1190	2820	920	290	110	215	35	7.1
MIN	19	57	126	153	150	125	167	102	19	8.8	5.2	1.6
CFSM	.93	.87	4.60	1.93	1.81	2.95	1.57	.74	.22	.14	.05	.02
IN.	1.07	.97	5.30	2.22	1.88	3.40	1.75	.85	.24	.17	.06	.02

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 1991, BY WATER YEAR (WY)

	MEAN	71.4	167	293	252	350	453	376	280	147	140	81.5	54.9
MAX	547	920	975	845	942	1154	1327	997	550	764	567	712	
(WY)	1987	1973	1991	1969	1971	1963	1964	1981	1974	1979	1979	1989	
MIN	5.97	9.86	8.83	9.60	35.7	98.2	83.1	46.3	12.9	11.7	5.10	3.51	
(WY)	1965	1968	1964	1977	1964	1966	1971	1976	1988	1966	1966	1991	

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1957 - 1991	
ANNUAL TOTAL	123967		102249.4			
ANNUAL MEAN	340		280		222	
HIGHEST ANNUAL MEAN					372	
LOWEST ANNUAL MEAN					51.1	
HIGHEST DAILY MEAN	12100		12100		12100	
LOWEST DAILY MEAN	19		1.6		.68	
ANNUAL SEVEN-DAY MINIMUM	19		2.1		1.8	
INSTANTANEOUS PEAK FLOW			15800		19000	
INSTANTANEOUS PEAK STAGE			22.15		23.31	
ANNUAL RUNOFF (CFSM)	1.60		1.32		1.05	
ANNUAL RUNOFF (INCHES)	21.75		17.94		14.26	
10 PERCENT EXCEEDS	628		622		472	
50 PERCENT EXCEEDS	158		141		86	
90 PERCENT EXCEEDS	34		6.8		13	

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 mi².

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.--Records good. Flow regulated by upstream reservoirs.
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 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	935	1360	5250	40600	2510	2530	4030	2300	3620	739	426	397
2	947	1320	4020	37200	2580	2740	3630	2210	6140	733	411	348
3	909	1270	6510	27500	2800	2730	3240	2040	6070	690	400	346
4	3280	1240	9780	13000	2960	2590	3090	2150	4340	706	379	423
5	3080	1340	9320	7790	4040	2370	3470	2110	3160	711	378	449
6	3820	2030	7220	6610	8630	2310	3350	2390	2420	705	562	415
7	2990	1970	4990	5660	11200	2260	3170	2170	1990	619	1030	395
8	3100	1900	4080	4860	9950	2080	2990	1970	1700	579	649	366
9	2510	1690	3370	e4200	8350	1970	4000	1850	1530	615	693	336
10	5730	1570	3030	e3900	6260	1900	3590	1810	1380	1560	595	335
11	8020	1460	2760	e4450	5050	1800	3110	1740	1300	1430	541	330
12	8710	1390	2550	6540	4300	1960	2760	1800	1290	1200	513	315
13	6550	1330	2390	6460	3810	12200	3710	1760	1230	1090	494	636
14	4570	1270	2250	5850	3760	15400	5770	1790	1150	860	450	616
15	3420	1210	3200	5010	3600	11600	7680	2160	1060	783	530	453
16	2850	1180	5040	6100	3120	9410	9320	2030	1220	730	467	402
17	2460	1180	6270	7650	2860	8900	7610	2670	1480	651	440	404
18	2500	1150	8830	8240	3220	11900	5510	3370	1250	605	600	357
19	2550	1110	10400	6660	5550	11500	6950	4760	1130	567	546	347
20	2890	1110	9830	5430	6420	11000	8950	4650	1000	550	663	328
21	2690	1080	9470	4970	6630	8640	7910	3320	896	523	561	312
22	2390	1450	11100	4520	5490	11800	6640	2640	845	516	567	306
23	2300	1710	10600	4110	4470	17100	5110	3440	829	511	556	512
24	2190	1500	9580	3640	3770	12500	4350	3640	1110	526	480	508
25	2070	1500	6480	3190	3310	10700	3720	2970	1540	492	427	429
26	1910	1420	4970	2980	3010	10500	3260	2720	1350	470	390	392
27	1740	1290	4110	2770	2760	10900	2950	2490	1150	453	384	385
28	1600	7360	3710	2720	2630	9100	2790	2190	937	436	375	353
29	1530	7840	7190	2570	---	7800	2690	1890	848	440	432	334
30	1460	7060	32100	2900	---	5940	2520	2110	775	439	410	321
31	1390	---	44800	2590	---	4650	---	2110	---	432	432	---
TOTAL	93091	61290	255200	250670	133040	228780	137870	77250	54740	21361	15781	11850
MEAN	3003	2043	8232	8086	4751	7380	4596	2492	1825	689	509	395
MAX	8710	7840	44800	40600	11200	17100	9320	4760	6140	1560	1030	636
MIN	909	1080	2250	2570	2510	1800	2520	1740	775	432	375	306
CFSM	1.23	.84	3.37	3.31	1.94	3.02	1.88	1.02	.75	.28	.21	.16
IN.	1.42	.93	3.88	3.82	2.02	3.48	2.10	1.18	.83	.33	.24	.18

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 1991, BY WATER YEAR (WY)

	835	1561	2678	3304	3976	4737	4367	2916	2256	1707	1111	877
MEAN	835	1561	2678	3304	3976	4737	4367	2916	2256	1707	1111	877
MAX	3709	7604	8248	17760	10430	10390	11530	7563	10270	6629	6001	8417
(WY)	1987	1973	1958	1950	1950	1963	1964	1981	1958	1979	1979	1989
MIN	281	320	305	302	460	1207	1097	799	419	344	338	213
(WY)	1964	1954	1964	1977	1964	1966	1971	1976	1988	1954	1966	1954

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1948 - 1991
ANNUAL TOTAL	1500566	1340923	2519
ANNUAL MEAN	4111	3674	4115
HIGHEST ANNUAL MEAN			812
LOWEST ANNUAL MEAN			1954
HIGHEST DAILY MEAN	44800	Dec 31	47100
LOWEST DAILY MEAN	852	Aug 12	138
ANNUAL SEVEN-DAY MINIMUM	1020	Sep 27	157
INSTANTANEOUS PEAK FLOW			50500
INSTANTANEOUS PEAK STAGE			18.38
ANNUAL RUNOFF (CFSM)	1.68	1.50	1.03
ANNUAL RUNOFF (INCHES)	22.84	20.41	14.00
10 PERCENT EXCEEDS	8760	8630	5700
50 PERCENT EXCEEDS	2580	2370	1330
90 PERCENT EXCEEDS	1270	432	400

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

WATER-QUALITY RECORDS

PERIOD OF RECORD.--

CHEMICAL ANALYSIS: October 1986 to current year.

WATER TEMPERATURE: September 1953 to April 1956, October 1966 to September 1967, May 1970 to September 1972, October 1977 to July 1980, October 1982 to June 1985.

SEDIMENT DISCHARGE: March 1965 to September 1977, October 1986 to current year (partial-record station).

EXTREMES FOR PERIOD OF RECORD.--Water temperature: Maximum, 33 °C July 3, 1970; minimum, -0.5 °C, several days during winters.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SPE- CIFIC CON- DUCT- ANCE PER (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)
OCT											
23...	1400	2380	707	717	8.1	8.0	14.5	13.5	757	9.5	92
JAN											
23...	1300	4070	672	687	7.7	7.9	4.5	2.0	744	12.5	93
MAR											
12...	1400	1710	821	830	8.1	8.0	2.5	7.0	740	11.2	95
APR											
30...	1545	2450	734	737	8.1	8.1	24.0	19.0	746	11.3	125
JUL											
16...	1330	742	887	892	8.5	8.5	29.0	27.0	752	16.8	215
AUG											
27...	1500	393	1140	1180	8.3	8.4	35.0	27.0	749	14.6	188
DATE	TUR- BID- ITY (NTU) (00076)	COLI- FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML) (31625)	STREP- TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML) (31673)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LITY WAT DIS FIX END FIELD CACO3 (MG/L) (39036)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)
OCT											
23...	13	560	72	290	50	77	24	33	3.9	240	241
JAN											
23...	18	1100	180	310	64	81	25	31	2.7	240	241
MAR											
12...	3.0	1600	170	340	77	88	29	47	3.2	260	262
APR											
30...	14	83	K7	320	66	85	26	35	2.3	250	253
JUL											
16...	12	490	87	300	59	78	25	78	6.7	240	239
AUG											
27...	1.5	43	27	330	72	81	30	120	8.0	250	253
DATE	ALKA- LITY LAB (MG/L AS CACO3) (90410)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	SOLIDS, DIS- SOLVED (TONS PER DAY) (70302)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)
OCT											
23...	243	294	0	53	50	0.2	8.5	417	406	2680	0.03
JAN											
23...	237	294	0	55	51	0.2	8.4	408	415	4490	0.03
MAR											
12...	261	320	0	82	67	0.3	4.6	482	493	2230	0.07
APR											
30...	251	309	0	63	50	0.2	4.6	434	431	2870	0.04
JUL											
16...	242	267	12	100	89	0.2	1.9	545	532	1090	0.12
AUG											
27...	255	287	11	150	130	0.6	6.2	692	695	734	0.04

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991										
DATE	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	BARIUM, DIS- SOLVED (UG/L AS BA) (01005)
OCT 23...	2.5	0.07	0.08	0.7	0.30	0.27	0.25	20	1	64
JAN 23...	3.5	0.30	0.31	0.9	0.19	0.15	0.16	--	--	--
MAR 12...	3.1	0.16	0.12	0.8	0.42	0.32	0.18	10	<1	67
APR 30...	2.8	<0.01	0.01	1.1	0.26	0.17	0.16	40	1	64
JUL 16...	1.8	<0.01	0.01	1.2	0.82	0.57	0.59	--	--	--
AUG 27...	3.2	<0.01	0.03	1.5	1.2	1.1	0.83	20	3	58
DATE	BERYL- LIUM, DIS- SOLVED (UG/L AS BE) (01010)	CADMIUM DIS- SOLVED (UG/L AS CD) (01025)	CHRO- MIUM, DIS- SOLVED (UG/L AS CR) (01030)	COBALT, DIS- SOLVED (UG/L AS CO) (01035)	COPPER, DIS- SOLVED (UG/L AS CU) (01040)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	LEAD, DIS- SOLVED (UG/L AS PB) (01049)	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)
OCT 23...	<0.5	1	1	<3	8	13	3	11	15	<0.1
JAN 23...	--	--	--	--	--	--	--	--	--	--
MAR 12...	<0.5	<1	<1	<3	3	14	<1	8	36	<0.1
APR 30...	<0.5	<1	<1	<3	4	5	1	6	11	<0.1
JUL 16...	--	--	--	--	--	--	--	--	--	--
AUG 27...	<0.5	<1	<1	<3	4	9	<1	12	25	<0.1
DATE	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	NICKEL, DIS- SOLVED (UG/L AS NI) (01065)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	SILVER, DIS- SOLVED (UG/L AS AG) (01075)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)	VANA- DIUM, DIS- SOLVED (UG/L AS V) (01085)	ZINC, DIS- SOLVED (UG/L AS ZN) (01090)	SEDI- MENT, SUS- PENDE (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDE (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT 23...	<10	4	<1	<1	240	<6	7	30	193	96
JAN 23...	--	--	--	--	--	--	--	35	385	70
MAR 12...	<10	4	<1	<1	270	<6	12	10	46	60
APR 30...	<10	4	<1	<1	230	<6	12	37	245	64
JUL 16...	--	--	--	--	--	--	--	27	54	44
AUG 27...	20	13	1	<1	270	<6	13	17	18	46

LOCATION.--Lat 39°15'45", long 86°14'55", in SW1/4 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 mi².

PERIOD OF RECORD.--October 1951 to current year. Prior to October 1965, published as Bean Blossom Creek at Bean Blossom.

REVISED RECORDS.--WSP 1555: 1952, 1953(M), 1956-57. WSP 1705: 1952(P). WDR IN-79-1: 1978.

GAGE.--Water-stage recorder. Datum of gage is 673.65 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for estimated daily discharges, which are fair.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.74	.80	9.5	40	10	9.6	14	6.7	3.9	.17	.00	.00
2	.68	.69	7.4	26	12	14	12	5.5	3.2	.16	.00	.00
3	.82	.66	46	18	14	12	10	4.9	2.4	.18	.04	2.7
4	11	.94	23	e14	15	10	15	5.0	1.9	.19	.11	27
5	3.1	2.2	14	e12	27	9.2	24	7.5	1.4	.37	.07	2.2
6	1.8	2.9	10	e16	211	11	18	8.7	1.1	.21	3.6	.81
7	1.3	1.9	8.1	18	76	11	15	6.1	.98	.13	1.4	.43
8	1.2	1.6	6.8	16	40	9.2	14	5.0	.86	.11	.36	.25
9	9.8	1.7	5.8	14	28	8.5	13	5.5	.74	.13	1.4	.21
10	29	2.2	5.2	13	21	7.7	11	4.8	.73	.56	.57	.18
11	10	1.8	4.7	61	16	7.3	9.6	4.3	.81	.42	.21	.18
12	5.8	1.6	4.3	53	13	11	8.7	5.9	1.3	11	.16	.13
13	4.0	1.4	3.9	32	16	113	48	9.0	.80	1.7	.15	.11
14	3.0	1.4	3.5	23	25	49	48	6.9	.59	.65	.15	.10
15	2.2	1.3	19	20	e18	29	42	5.0	.81	.42	.13	.09
16	1.8	1.1	13	30	e15	21	30	4.4	3.3	.30	.14	.08
17	1.6	1.1	78	28	e13	66	22	4.5	1.7	.23	.13	.15
18	4.1	.93	274	22	44	82	17	51	1.4	.19	.15	.15
19	2.8	.88	82	18	53	42	137	20	.62	.17	.17	.12
20	2.3	.88	36	16	45	29	58	11	.50	.17	.15	.09
21	2.0	.88	50	13	30	23	36	8.0	.48	.15	.11	.09
22	2.6	4.3	65	e10	22	252	26	6.5	.45	.14	.10	.13
23	2.6	4.4	39	e9.0	17	140	20	17	.41	.10	.09	.18
24	2.1	3.2	e21	e8.0	15	49	17	18	.31	.10	.07	.16
25	1.9	2.7	e15	e7.2	12	32	14	22	.27	.09	.04	.14
26	1.8	2.4	e11	e6.8	11	217	12	34	.25	.06	.01	.12
27	1.6	23	e10	e6.6	9.8	75	11	22	.23	.03	.00	.10
28	1.3	82	e9.8	e7.0	8.9	41	10	13	.19	.00	.00	.09
29	1.0	24	190	7.4	---	29	9.5	8.8	.19	.00	.00	.09
30	.96	13	850	14	---	21	7.7	7.0	.18	.00	.00	.08
31	.88	---	92	11	---	17	---	5.0	---	.00	.00	---
TOTAL	115.78	187.86	2007.0	590.0	837.7	1447.5	729.5	343.0	32.00	18.13	9.51	36.16
MEAN	3.73	6.26	64.7	19.0	29.9	46.7	24.3	11.1	1.07	.58	.31	1.21
MAX	29	82	850	61	211	252	137	51	3.9	11	3.6	27
MIN	.68	.66	3.5	6.6	8.9	7.3	7.7	4.3	.18	.00	.00	.00
CFSM	.26	.43	4.43	1.30	2.05	3.20	1.67	.76	.07	.04	.02	.08
IN.	.30	.48	5.11	1.50	2.13	3.69	1.86	.87	.08	.05	.02	.09

e Estimated

MEAN	1.42	9.92	22.0	19.2	27.1	34.9	32.8	26.2	9.00	6.51	1.93	2.01
MAX	8.03	56.0	115	73.3	66.6	80.9	77.8	90.6	58.6	57.5	14.1	18.7
(WY)	1987	1986	1952	1969	1971	1963	1972	1981	1958	1979	1989	1989
MIN	.000	.000	.026	.16	2.06	7.55	5.65	1.23	.081	.000	.000	.000
(WY)	1953	1954	1964	1977	1978	1954	1976	1988	1988	1954	1955	1954

ANNUAL TOTAL	8802.13		6354.14			
ANNUAL MEAN	24.1		17.4		16.0	
HIGHEST ANNUAL MEAN					29.9	1952
LOWEST ANNUAL MEAN					3.90	1954
HIGHEST DAILY MEAN	850	Dec 30	850	Dec 30	1220	Jun 23 1960
LOWEST DAILY MEAN	.66	Nov 3	.00	Jul 28	.00	Jul 21 1952
ANNUAL SEVEN-DAY MINIMUM	.85	Oct 29	.00	Aug 27	.00	Jul 21 1952
INSTANTANEOUS PEAK FLOW			1390	Dec 30	8140	Jun 23 1960
INSTANTANEOUS PEAK STAGE			9.59	Dec 30	11.78	Jun 23 1960
ANNUAL RUNOFF (CFSM)	1.65		1.19		1.10	
ANNUAL RUNOFF (INCHES)	22.43		16.19		14.91	
10 PERCENT EXCEEDS	43		39		34	
50 PERCENT EXCEEDS	10		5.0		3.4	
90 PERCENT EXCEEDS	1.6		.11		.00	

03357000 WHITE RIVER AT SPENCER, IN

LOCATION.--Lat 39°16'49", long 86°45'42", 1N NE 1/4 SEC. 29, T. 10 N., R. 3 W., Owen County, Hydrologic Unit 05120202, on right bank at downstream side of county road bridge at the south edge of Spencer, 3.3 mi upstream from McBrides Creek, and at mile 165.9.

DRAINAGE AREA.--2,980 mi².

PERIOD OF RECORD.--July 1925 to September 1971 (discharge), October 1971 to current year (gage heights only).

GAGE.--Data-Collection Platform. Datum of gage is 526.04 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 26, 1940, nonrecording gage at same site and datum.

REMARKS.--Records good.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 23.99 ft Jan. 1, 1991; minimum gage height, 0.88 ft Sept. 25, 30, and Oct. 1, 1941.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 28.5 ft Mar. 26, 1913, from flood marks.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 23.99 ft Jan. 1; minimum gage height, 2.23 ft Sept. 30.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.48	4.21	9.57	23.43	6.41	6.57	8.80	6.25	6.15	3.36	2.59	2.50
2	3.50	4.16	8.10	22.76	6.57	6.82	8.23	6.11	9.08	3.37	2.57	2.39
3	3.71	4.08	9.60	22.06	6.78	6.69	7.77	5.86	9.61	3.27	2.54	2.43
4	6.44	4.03	13.35	20.11	6.96	6.51	7.61	5.84	8.10	3.30	2.53	2.52
5	6.23	4.23	13.24	14.93	8.02	6.23	8.00	5.94	6.81	3.23	2.51	2.63
6	6.99	5.14	11.94	11.73	13.32	6.23	7.73	6.27	5.93	3.28	2.92	2.50
7	6.38	4.95	9.38	10.62	15.93	6.09	7.44	5.99	5.38	3.15	3.76	2.45
8	6.50	5.00	8.13	9.61	15.61	5.91	7.34	5.61	4.99	3.06	3.11	2.40
9	5.86	4.77	7.37	8.97	14.08	5.71	8.25	5.41	4.73	3.03	3.04	2.35
10	8.93	4.57	6.78	8.51	11.23	5.65	7.81	5.26	4.54	4.10	2.98	2.32
11	11.25	4.41	6.42	9.27	9.75	5.50	7.25	5.20	4.41	4.58	2.82	2.30
12	11.87	4.28	6.13	11.49	8.79	5.75	6.86	5.24	4.35	4.47	2.72	2.28
13	10.82	4.18	5.91	11.09	8.34	13.35	7.78	5.18	4.25	4.20	2.65	2.25
14	8.70	4.10	5.66	10.57	8.60	16.45	10.30	5.12	4.13	3.64	2.60	2.87
15	7.24	3.99	6.62	9.62	8.12	16.67	12.15	5.82	4.06	3.41	2.62	2.57
16	6.48	3.92	8.65	10.43	7.53	14.29	13.66	5.41	4.14	3.28	2.63	2.43
17	5.99	3.92	10.87	11.50	7.26	13.82	12.47	6.23	4.69	3.15	2.57	2.38
18	5.79	3.89	14.14	12.09	8.21	15.45	10.31	6.52	4.26	3.02	2.65	2.35
19	5.80	3.82	15.41	11.14	10.71	15.97	11.72	8.16	4.10	2.94	2.75	2.29
20	6.18	3.82	15.11	9.77	11.17	15.25	14.09	8.26	3.91	2.88	2.91	2.28
21	6.01	3.76	15.05	9.20	11.25	14.12	12.93	7.05	3.74	2.82	2.77	2.26
22	5.67	4.09	15.32	8.65	10.13	15.97	11.60	6.20	3.64	2.80	2.67	2.27
23	5.61	4.90	15.30	8.29	8.97	18.59	9.85	7.13	3.54	2.77	2.74	2.27
24	5.41	4.55	14.57	7.76	8.14	18.26	8.97	7.28	3.68	2.79	2.62	2.65
25	5.26	4.44	11.56	7.29	7.55	16.65	8.23	6.80	4.44	2.74	2.52	2.49
26	5.07	4.34	9.61	7.01	7.14	16.66	7.66	6.27	4.24	2.71	2.47	2.40
27	4.84	5.39	8.59	6.75	6.87	17.37	7.30	6.15	4.11	2.67	2.41	2.37
28	4.63	11.63	7.94	6.69	6.67	15.65	7.06	5.76	3.78	2.64	2.40	2.33
29	4.49	12.59	12.90	6.57	---	13.76	6.85	6.72	3.59	2.64	2.39	2.27
30	4.41	11.31	20.20	6.86	---	11.25	6.65	5.83	3.45	2.64	2.51	2.23
31	4.30	---	23.76	6.58	---	9.66	---	5.56	---	2.60	2.47	---
MEAN	6.25	5.08	11.20	11.01	9.29	11.70	9.09	6.14	4.86	3.18	2.69	2.40
MAX	11.87	12.59	23.76	23.43	15.93	18.59	14.09	8.26	9.61	4.58	3.76	2.87
MIN	3.48	3.76	5.66	6.57	6.41	5.50	6.65	5.12	3.45	2.60	2.39	2.23

03357350 PLUM CREEK NEAR BAINBRIDGE, IN

LOCATION.--Lat 39°45'42", long 86°43'46", in SW¼ 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 mi².
 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.--Records fair except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.13	.88	5.0	8.5	1.7	e3.3	4.3	2.1	1.2	.05	.00	.00
2	.13	.85	4.3	6.5	4.5	e4.4	3.7	1.6	.75	.05	.00	.00
3	1.7	.81	50	5.0	5.3	e4.0	3.3	1.6	.53	.05	.00	.00
4	14	.82	11	e3.8	5.3	e3.7	4.0	2.1	.40	.05	.00	.00
5	3.1	5.2	7.5	e3.5	8.8	e3.5	4.0	4.5	.32	.05	.00	.00
6	1.5	3.5	6.3	e3.2	17	e3.3	3.2	3.3	.27	.04	.01	.00
7	4.1	2.2	5.2	e2.9	12	e3.4	2.8	2.0	.24	.04	.00	.00
8	4.6	1.7	4.5	e2.7	8.2	e3.3	4.4	1.5	.22	.04	.01	.00
9	12	1.6	3.7	2.5	6.8	e3.1	4.8	1.3	.20	.03	.00	.00
10	35	1.4	3.2	2.4	5.7	e3.0	3.3	1.2	.18	.08	.00	.00
11	8.6	1.1	2.8	13	4.6	3.7	2.5	1.1	.17	.04	.00	.00
12	5.6	1.0	2.5	8.4	3.9	12	2.3	1.2	.17	.04	.00	.00
13	4.5	.91	1.9	5.6	e4.3	46	8.5	1.0	.13	.02	.00	.00
14	3.4	.87	1.6	5.8	e3.3	15	14	3.0	.11	.02	.00	.00
15	2.3	.90	11	7.8	e2.5	11	24	1.9	.11	.01	.00	.00
16	1.9	.89	6.7	15	e2.4	9.2	9.5	2.5	.22	.01	.00	.00
17	1.8	.78	8.9	10	e2.3	16	7.0	1.8	.14	.01	.00	.00
18	7.3	.77	24	7.1	10	16	5.7	1.4	.10	.01	.00	.00
19	3.9	.76	13	e5.6	17	11	8.0	1.0	.09	.01	.00	.00
20	2.8	.69	8.8	e4.5	9.6	9.7	6.4	.88	.08	.00	.00	.00
21	2.3	.69	32	e3.8	7.3	8.8	5.6	.73	.08	.00	.00	.00
22	2.5	2.5	14	e3.2	5.8	46	4.9	.64	.08	.00	.00	.00
23	2.1	1.6	8.3	e2.8	4.8	23	4.3	.59	.08	.00	.00	.00
24	1.8	1.2	e6.0	e2.5	e4.4	13	3.4	.58	.08	.00	.00	.00
25	1.5	1.0	e4.8	e2.3	e4.1	10	2.9	.57	.07	.00	.00	.00
26	1.3	.90	e4.0	e2.1	e3.8	37	2.9	.62	.07	.00	.00	.00
27	1.2	9.8	e3.3	e1.9	e3.6	13	2.9	.48	.07	.00	.00	.00
28	1.1	52	e2.9	e1.7	e3.5	8.3	2.6	.40	.06	.00	.00	.00
29	.99	9.3	149	e1.6	---	6.8	2.9	4.6	.06	.00	.00	.00
30	.98	6.2	149	e1.5	---	5.4	2.0	8.7	.06	.00	.00	.00
31	.94	---	14	1.4	---	5.0	---	3.2	---	.00	.00	---
TOTAL	135.07	112.82	569.2	148.6	172.5	360.9	160.1	58.09	6.34	0.65	0.02	0.00
MEAN	4.36	3.76	18.4	4.79	6.16	11.6	5.34	1.87	.21	.021	.001	.000
MAX	35	52	149	15	17	46	24	8.7	1.2	.08	.01	.00
MIN	.13	.69	1.6	1.4	1.7	3.0	2.0	.40	.06	.00	.00	.00
CFSM	1.45	1.25	6.12	1.60	2.05	3.88	1.78	.62	.07	.01	.00	.00
IN.	1.67	1.40	7.06	1.84	2.14	4.48	1.99	.72	.08	.01	.00	.00

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1991, BY WATER YEAR (WY)

	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
MEAN	1.29	3.62	5.74	3.53	6.36	7.27	5.12	4.05	2.00	2.49	1.44	.95											
MAX	5.80	20.6	18.3	13.5	17.1	19.1	9.71	16.1	6.53	12.9	7.90	12.8											
(WY)	1987	1986	1991	1974	1971	1978	1970	1981	1973	1979	1979	1989											
MIN	.000	.019	.011	.000	.76	1.46	.92	.14	.007	.019	.001	.000											
(WY)	1989	1977	1977	1977	1978	1981	1971	1976	1988	1988	1991	1988											

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1969 - 1991

	1990	1991	1969-1991
ANNUAL TOTAL	2164.72	1724.29	
ANNUAL MEAN	5.93	4.72	3.63
HIGHEST ANNUAL MEAN			5.71
LOWEST ANNUAL MEAN			1.60
HIGHEST DAILY MEAN	149	149	218
LOWEST DAILY MEAN	.10	.00	.00
ANNUAL SEVEN-DAY MINIMUM	.11	.00	.00
INSTANTANEOUS PEAK FLOW		343	940
INSTANTANEOUS PEAK STAGE		4.06	6.50
ANNUAL RUNOFF (CFSM)	1.98	1.57	1.21
ANNUAL RUNOFF (INCHES)	26.84	21.38	16.45
10 PERCENT EXCEEDS	9.5	9.9	7.5
50 PERCENT EXCEEDS	2.0	1.8	.99
90 PERCENT EXCEEDS	.20	.00	.02

LOCATION.--Lat 39°32'11", long 86°58'35", in NW1/4 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 mi².

DRAINAGE AREA. -- 326 mi²

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:--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.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	106	700	2810	e280	322	452	234	163	29	12	7.1
2	30	101	538	1870	322	449	395	227	137	28	12	7.1
3	35	97	2280	1370	385	452	353	212	117	27	11	6.1
4	764	93	1980	962	440	390	341	209	100	27	11	13
5	391	254	1060	830	660	350	418	222	88	45	11	11
6	196	447	774	765	986	333	358	272	78	28	27	7.8
7	282	309	611	679	1380	321	317	238	71	24	27	6.6
8	432	231	496	618	1010	289	465	211	67	23	19	5.9
9	557	197	422	574	774	272	572	193	65	22	18	5.8
10	2060	179	373	532	651	261	417	182	61	304	17	5.6
11	1500	159	337	707	549	254	330	173	59	125	15	5.3
12	875	142	311	1160	465	289	291	175	60	83	14	5.0
13	590	128	288	842	437	2240	720	175	57	57	13	5.0
14	414	119	261	697	460	2020	1310	169	53	45	12	5.0
15	309	113	577	726	414	1170	1880	199	46	38	11	5.0
16	246	110	790	1210	347	853	1330	172	100	34	11	4.5
17	213	105	660	1340	329	821	851	161	78	30	10	4.2
18	482	101	1470	972	490	1470	653	160	57	28	10	4.2
19	459	98	1750	778	1240	1080	587	147	48	25	12	4.2
20	327	95	1100	e700	1220	807	645	142	44	24	17	4.0
21	259	91	1750	e600	851	683	532	130	42	22	12	4.2
22	240	190	2410	e520	681	2050	449	122	41	21	11	4.6
23	221	210	1350	e460	551	2760	392	122	39	19	9.8	6.4
24	198	174	859	e410	478	1470	365	128	37	18	8.8	e8.0
25	175	149	634	e370	426	1010	314	124	36	17	8.2	e6.0
26	157	133	e500	e350	374	1780	293	123	35	16	7.8	e5.2
27	145	641	e400	e330	354	1880	278	117	34	15	7.5	e4.8
28	132	3020	e350	e320	337	1160	272	104	33	14	7.0	e4.5
29	120	1710	2960	e310	---	813	262	115	32	15	6.6	e4.4
30	116	954	11800	e300	---	634	256	200	31	14	6.5	e4.3
31	111	---	9870	e290	---	515	---	195	---	13	6.8	---
TOTAL	12068	10456	49661	24402	16891	29198	16098	5353	1909	1230	382.0	174.8
MEAN	389	349	1602	787	603	942	537	173	63.6	39.7	12.3	5.83
MAX	2060	3020	11800	2810	1380	2760	1880	272	163	304	27	13
MIN	30	91	261	290	280	254	256	104	31	13	6.5	4.0
CFSM	1.19	1.07	4.91	2.41	1.85	2.89	1.65	.53	.20	.12	.04	.02
IN.	1.38	1.19	5.67	2.78	1.93	3.33	1.84	.61	.22	.14	.04	.02

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 1991, BY WATER YEAR (WY)

MEAN	101	236	434	463	549	668	590	449	308	221	126	109
MAX	642	1655	1602	2947	1402	1636	1459	1423	2183	1221	1047	1248
(WY)	1987	1986	1991	1950	1950	1978	1957	1981	1957	1979	1979	1989
MIN	4.79	13.7	9.71	13.6	65.1	151	142	69.5	26.7	19.4	9.49	4.76
(WY)	1965	1964	1964	1977	1964	1966	1971	1976	1988	1954	1966	1954

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1950 - 1991

ANNUAL TOTAL	212644		167822.8			
ANNUAL MEAN	583		460		354	
HIGHEST ANNUAL MEAN					640	1950
LOWEST ANNUAL MEAN					76.0	1954
HIGHEST DAILY MEAN	11800	Dec 30	11800	Dec 30	18600	Jun 29 1957
LOWEST DAILY MEAN	30	Oct 2	4.0	Sep 20	1.4	Sep 8 1954
ANNUAL SEVEN-DAY MINIMUM	34	Sep 26	4.3	Sep 16	2.3	Oct 6 1988
INSTANTANEOUS PEAK FLOW			13800	Dec 30	27400	Jun 28 1957
INSTANTANEOUS PEAK STAGE			16.85	Dec 30	18.63	Jun 28 1957
ANNUAL RUNOFF (CFSM)	1.79		1.41		1.08	
ANNUAL RUNOFF (INCHES)	24.26		19.15		14.73	
10 PERCENT EXCEEDS	1220		1120		768	
50 PERCENT EXCEEDS	288		221		147	
90 PERCENT EXCEEDS	62		9.4		22	

03358000 MILL CREEK NEAR CATARACT, IN

LOCATION.--Lat 39°26'00", long 86°45'48", in NE¼SE¼ sec.32, T.12 N., R.3 W., Owen County, Hydrologic Unit 05120203, on left bank at downstream side of bridge on U.S. Highway 231, 3 mi east of Cataract, and at mile 17.5.

DRAINAGE AREA.--245 mi².

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.--Records fair except for estimated daily discharges, which are poor. Maximum instantaneous and mean daily discharges for period of record are estimated. Maximum gage height is unknown.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	77	e460	e1000	e140	182	244	e134	112	13	11	6.1
2	19	74	e360	e450	e170	276	211	e125	88	13	11	5.8
3	19	72	e1500	e360	e210	229	193	e113	105	12	10	5.1
4	808	69	e1000	e310	324	196	191	e120	67	12	10	7.7
5	445	e200	e600	e280	e700	178	294	e133	49	17	10	6.9
6	195	e400	e390	e250	e1300	182	e263	e180	41	18	38	6.1
7	261	e270	e310	e230	e1000	176	e212	e140	39	13	52	5.0
8	e850	e200	e260	e220	e630	146	263	e128	39	11	18	4.4
9	e430	e160	e220	e205	458	140	e560	e115	38	11	12	4.3
10	e1700	e132	e200	e200	361	132	e308	106	37	742	13	4.4
11	e1100	114	e185	e450	290	126	e227	98	36	533	11	4.3
12	e600	100	e180	e850	247	184	e194	96	36	420	8.9	4.2
13	e370	90	165	e520	253	e1800	e600	102	34	220	8.0	4.0
14	264	86	142	387	325	1140	e940	90	31	89	7.6	4.1
15	205	85	e430	516	244	590	e1300	e250	29	53	8.4	4.1
16	162	83	e570	e960	e195	389	e862	150	41	39	9.4	4.0
17	146	80	e460	e900	e240	466	e449	296	50	30	8.5	3.8
18	191	73	e1200	492	e600	e1200	e331	319	34	26	10	3.8
19	e180	74	e1300	395	e1100	657	e840	233	27	22	10	3.8
20	e143	71	e750	366	e770	432	e700	141	24	20	17	3.7
21	e125	68	e1000	325	483	350	e460	111	22	18	12	3.8
22	e132	e160	e1600	e280	359	e2000	e331	95	21	17	8.3	4.0
23	e162	e250	e900	e230	283	e1600	e251	85	20	15	6.6	5.5
24	e145	e190	e530	e204	257	913	e236	81	19	14	6.0	7.3
25	125	153	e330	e187	224	638	e190	81	18	14	5.9	5.7
26	109	125	e270	e175	201	1720	e184	105	17	13	5.7	4.8
27	103	861	e235	e165	193	2460	e170	85	16	12	5.5	4.2
28	95	e1900	e210	e158	186	759	e165	70	15	12	5.6	4.2
29	84	e1100	e2200	e152	---	460	e175	127	14	13	5.4	4.4
30	82	e620	e11500	e149	---	331	e157	450	14	24	5.2	4.4
31	81	---	e4000	e144	---	271	---	182	---	14	6.3	---
TOTAL	9351	7937	33457	11510	11743	20323	11501	4541	1133	2480	356.3	143.9
MEAN	302	265	1079	371	419	656	383	146	37.8	80.0	11.5	4.80
MAX	1700	1900	11500	1000	1300	2460	1300	450	112	742	52	7.7
MIN	19	68	142	144	140	126	157	70	14	11	5.2	3.7
CFSM	1.23	1.08	4.41	1.52	1.71	2.68	1.56	.60	.15	.33	.05	.02
IN.	1.42	1.21	5.08	1.75	1.78	3.09	1.75	.69	.17	.38	.05	.02

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 1991, BY WATER YEAR (WY)

	MEAN	59.2	199	333	338	434	523	405	312	217	192	93.3	74.9
MAX	435	1239	1135	2214	1088	1425	1064	1522	1120	1694	1059	918	
(WY)	1987	1986	1958	1950	1971	1963	1964	1981	1957	1979	1979	1989	
MIN	2.88	4.46	4.05	6.55	41.1	108	74.5	35.1	11.2	6.84	3.72	.91	
(WY)	1965	1965	1964	1977	1954	1969	1971	1954	1988	1954	1954	1954	

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1950 - 1991

ANNUAL TOTAL	142576			114476.2								
ANNUAL MEAN	391			314								
HIGHEST ANNUAL MEAN										264		
LOWEST ANNUAL MEAN										528		1979
HIGHEST DAILY MEAN	e11500	Dec 30		e11500	Dec 30					37.3		1954
LOWEST DAILY MEAN	17	Sep 18		3.7	Sep 20					.10		Sep 7 1954
ANNUAL SEVEN-DAY MINIMUM	21	Sep 27		3.8	Sep 16					.20		Sep 2 1954
INSTANTANEOUS PEAK FLOW				e12200	Dec 30					e12200		Dec 30 1990
INSTANTANEOUS PEAK STAGE				unknown	----					22.58		Jun 24 1960
ANNUAL RUNOFF (CFSM)	1.59			1.28						1.08		
ANNUAL RUNOFF (INCHES)	21.65			17.38						14.65		
10 PERCENT EXCEEDS	854			785						576		
50 PERCENT EXCEEDS	181			152						78		
90 PERCENT EXCEEDS	43			6.8						8.2		

e Estimated

03359000 MILL CREEK NEAR MANHATTAN, IN

LOCATION.--Lat 39°29'16", long 86°55'30", in SE¼SE¼ sec.11, T.12 N., R.5 W., Putnam County, Hydrologic Unit 05120203, on left bank 0.3 mi upstream from Cagles Mill dam, 0.4 mi downstream from Cagles Mill Lake, 1.3 mi upstream from Deer Creek, 5.0 mi south of Manhattan, and at mile 2.3.

DRAINAGE AREA.--294 mi².

PERIOD OF RECORD.--May to September 1931 (fragmentary), October 1938 to current year. Monthly discharge only for some periods, published in WSP 1305.

REVISED RECORDS.--WSP 1335: 1940-41. WSP 2109: Drainage area.

GAGE.--Data-Collection Platform. Datum of gage is 581.83 ft above National Geodetic Vertical Datum of 1929. May 12, 1941 to Sept. 30, 1974, water-stage recorder at site 0.3 mi downstream. Data-Collection Platform installed on Apr. 22, 1986. See WSP 1725 for history of changes prior to May 12, 1941.

REMARKS.--Flow regulated by Cagles Mill Lake since July 1953. Daily discharge computed from relation between discharge, head, and gate openings for Cagles Mill Lake beginning Oct. 1, 1974.

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

AVERAGE DISCHARGE.--53 years (1938 to current year), 315 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,960 ft³/s. Jan. 5, 1950, gage height, 18.38 ft; no flow Aug. 7, 1953.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 1,940 ft³/s Jan. 27; minimum daily, 18 ft³/s Aug. 12.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	68	103	182	102	1840	1650	1190	1670	90	20	20	20
2	68	103	364	104	1820	1630	1450	1650	162	20	20	20
3	68	102	239	104	1800	1610	1570	1620	209	20	20	20
4	280	102	110	105	1780	1590	1560	1600	124	20	20	20
5	715	103	111	105	1510	1310	1540	1570	89	20	20	20
6	835	139	237	105	919	1100	1530	1550	80	20	20	20
7	466	281	425	105	499	1090	1520	1520	63	20	20	20
8	209	414	806	105	284	1070	1130	1490	45	20	55	20
9	211	296	961	419	284	1060	509	1320	42	20	83	20
10	157	205	1240	590	285	858	679	512	42	20	47	20
11	103	205	1510	589	768	498	1090	70	42	283	25	20
12	105	156	1610	591	1050	223	1240	83	42	426	18	20
13	105	64	1580	592	1050	152	908	142	42	427	20	20
14	339	71	1560	592	1040	121	262	175	42	320	20	20
15	792	95	1120	877	1040	124	118	175	42	340	20	20
16	1100	102	886	1200	1030	124	120	277	42	422	20	20
17	941	102	809	1480	1020	125	254	317	42	252	20	20
18	782	90	265	1650	1020	127	520	317	53	93	20	20
19	873	82	83	1760	485	129	520	381	70	70	20	20
20	864	95	84	1750	282	129	523	262	69	70	20	19
21	855	100	85	1740	531	130	523	106	60	44	20	19
22	846	194	87	1730	615	132	872	107	42	33	20	19
23	837	253	88	1720	896	136	1040	171	42	24	20	19
24	579	365	89	1790	1030	112	1180	116	39	20	20	19
25	181	337	89	1830	1330	93	1260	70	24	20	20	19
26	80	185	305	1870	1560	94	1410	90	20	20	20	19
27	102	151	582	1940	1700	108	1490	214	20	20	20	19
28	131	130	361	1920	1680	97	1480	156	20	20	20	19
29	151	124	90	1900	---	97	1460	89	20	20	20	19
30	150	126	94	1880	---	357	1600	389	20	20	20	19
31	134	---	99	1860	---	881	---	470	---	20	20	---
TOTAL	13127	4875	16151	33105	29148	16957	30548	18679	1739	3164	748	589
MEAN	423	162	521	1068	1041	547	1018	603	58.0	102	24.1	19.6
MAX	1100	414	1610	1940	1840	1650	1600	1670	209	427	83	20
MIN	68	64	83	102	282	93	118	70	20	20	18	19

CAL YR 1990 TOTAL 165344 MEAN 453 MAX 1840 MIN 33
WTR YR 1991 TOTAL 168830 MEAN 463 MAX 1940 MIN 18

03360500 WHITE RIVER AT NEWBERRY, IN

LOCATION.--lat 38°55'39", long 87°00'41", in NE1/4 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 mi².

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.--Records good. Flow regulated by upstream reservoirs.

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 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1490	2240	13800	53100	6440	6300	9820	5970	3960	1380	741	616
2	1410	2140	9900	86000	6170	6430	8590	5710	3690	1310	726	626
3	1350	2050	8540	85900	6300	6660	7910	5480	5490	1260	707	604
4	2750	1990	11500	66900	6600	6560	7510	5230	6470	1250	695	637
5	4050	2020	14100	47900	7020	6200	7360	5120	5680	1200	671	696
6	4710	2540	14400	33100	10900	5920	7450	5290	4460	1190	767	704
7	4550	3000	12300	21900	15400	5640	7390	5440	3680	1260	1040	676
8	5400	3080	9450	13800	16600	5340	7070	5310	3130	1230	1180	617
9	5000	3070	7530	10500	17100	5060	8220	4870	2770	1110	1230	583
10	6150	2990	6820	9110	15700	4780	8150	4600	2520	1080	1110	574
11	9240	2680	6180	9350	12400	4620	7130	4210	2330	1190	1090	551
12	10600	2470	6020	11900	9460	4300	6570	3890	2200	4370	950	536
13	10000	2320	5830	12700	8510	6650	7400	3700	2100	5300	851	522
14	9220	2170	5540	12000	9720	11900	9610	3410	2040	3140	827	509
15	7160	2020	5800	11100	9900	15300	12300	3330	1950	2190	1110	615
16	5770	1940	7270	10500	8130	17200	14100	3650	2040	1760	818	708
17	5250	1880	8310	11200	7200	16900	14400	3490	2140	1660	760	613
18	4860	1850	14500	12100	7810	18600	13200	3690	2300	1590	747	568
19	4620	1830	18800	12600	11300	18700	11300	4180	2120	1390	718	546
20	4620	1770	19300	12300	12400	18000	11000	5120	1950	1200	786	514
21	4560	1710	19000	10800	12100	16900	12500	5580	1860	1090	791	495
22	4550	1880	19900	9570	11200	16400	12800	4890	1790	1030	807	494
23	4330	2880	20100	8830	10000	22100	11500	4050	1730	980	760	508
24	4160	3230	19400	8220	8690	25200	9820	4050	1570	932	736	508
25	3920	2900	17200	7640	7770	27500	8450	4650	1510	897	723	561
26	3460	2730	13900	7120	7050	26100	7680	4100	1720	868	674	629
27	3000	3520	9890	6710	6770	23900	7070	4010	1870	833	638	570
28	2740	10200	8280	6560	6540	23400	6780	3830	1770	803	614	530
29	2550	13800	10700	6440	---	22500	6450	3610	1610	789	599	518
30	2420	15000	22700	6580	---	18400	6220	4120	1470	780	608	497
31	2330	---	38100	6590	---	13000	---	4500	---	753	676	---
TOTAL	146220	103900	405060	629020	275180	426460	275750	139380	79920	45815	25150	17325
MEAN	4717	3463	13070	20290	9828	13760	9192	4496	2664	1478	811	577
MAX	10600	15000	38100	86000	17100	27500	14400	5970	6470	5300	1230	708
MIN	1350	1710	5540	6440	6170	4300	6220	3330	1470	753	599	494
CFSM	1.01	.74	2.79	4.33	2.10	2.93	1.96	.96	.57	.32	.17	.12
IN.	1.16	.82	3.21	4.99	2.18	3.38	2.19	1.11	.63	.36	.20	.14

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 1991, BY WATER YEAR (WY)

	MEAN	1393	2656	4637	6811	7152	8852	8860	6686	4359	3090	1877	1526
MAX	5542	13890	16780	36920	21870	19150	20340	25090	15080	13270	15900	13510	
(WY)	1987	1973	1958	1950	1950	1963	1944	1943	1958	1979	1979	1989	
MIN	259	408	386	405	705	686	1539	677	771	536	308	317	
(WY)	1941	1945	1945	1945	1931	1941	1941	1941	1988	1936	1941	1940	

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1929 - 1991

ANNUAL TOTAL	2786330	2569180	4813
ANNUAL MEAN	7634	7039	8752
HIGHEST ANNUAL MEAN			958
LOWEST ANNUAL MEAN			1950
HIGHEST DAILY MEAN	49900	May 20	86000
LOWEST DAILY MEAN	1350	Oct 3	200
ANNUAL SEVEN-DAY MINIMUM	1720	Sep 27	211
INSTANTANEOUS PEAK FLOW			94800
INSTANTANEOUS PEAK STAGE			25.36
ANNUAL RUNOFF (CFSM)	1.63		1.50
ANNUAL RUNOFF (INCHES)	22.11		20.39
10 PERCENT EXCEEDS	15200		11400
50 PERCENT EXCEEDS	5830		2450
90 PERCENT EXCEEDS	2240		613

LOCATION.--Lat 39°31'45", long 85°46'55", in SE1/4 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.
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.--Records good except for estimated daily discharges, which are poor.
EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1913 reached a stage of about 20.2 ft from floodmarks.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	167	228	692	6430	544	553	759	407	868	163	89	87
2	161	222	545	2370	566	584	679	388	653	156	83	81
3	161	215	914	1570	765	566	624	366	564	196	83	78
4	364	213	1600	1250	869	527	589	360	460	385	84	102
5	595	223	980	1080	1040	505	598	372	379	209	87	112
6	380	289	720	1040	2110	506	578	388	335	171	103	91
7	290	277	580	969	2730	517	539	355	307	154	112	82
8	254	249	497	876	1850	476	517	328	290	214	102	77
9	283	238	439	807	1360	456	521	311	275	337	102	74
10	1180	248	405	756	1100	444	486	306	261	254	99	75
11	1550	244	376	981	914	429	445	298	256	300	91	73
12	901	229	358	1720	782	483	430	291	268	250	86	88
13	630	218	340	1310	740	2440	600	296	252	257	81	234
14	491	213	312	1040	793	4010	1630	316	234	199	79	142
15	401	207	567	1010	745	2590	1440	326	223	173	96	102
16	334	205	998	1260	e580	1670	1200	296	224	158	96	88
17	304	203	736	1440	e570	1310	883	310	224	149	87	80
18	536	197	1910	1180	716	1900	717	824	209	142	130	79
19	733	194	3250	1010	1740	1540	846	1070	197	135	120	78
20	510	192	1980	917	1860	1150	1260	641	189	130	128	77
21	412	187	1470	878	1350	946	945	474	183	124	129	76
22	383	256	2420	e720	1050	1770	767	397	179	120	111	79
23	431	490	1890	e660	865	4230	665	590	184	117	100	87
24	391	394	1350	e620	765	3720	632	448	178	113	92	96
25	340	317	979	e580	692	1780	561	370	182	109	86	86
26	308	275	775	e550	632	1820	523	342	218	104	82	84
27	283	439	645	e520	598	2510	513	339	195	98	83	79
28	271	1380	598	e500	570	1840	484	301	178	93	84	77
29	253	1610	1430	e510	---	1340	464	279	167	93	85	75
30	242	969	7200	e580	---	1030	438	1720	162	93	91	76
31	236	---	11800	627	---	846	---	2790	---	93	96	---
TOTAL	13775	10821	48756	35761	28896	44488	21333	16299	8494	5289	2977	2715
MEAN	444	361	1573	1154	1032	1435	711	526	283	171	96.0	90.5
MAX	1550	1610	11800	6430	2730	4230	1630	2790	868	385	130	234
MIN	161	187	312	500	544	429	430	279	162	93	79	73
CFSM	1.06	.86	3.74	2.74	2.45	3.41	1.69	1.25	.67	.41	.23	.21
IN.	1.22	.96	4.31	3.16	2.55	3.93	1.89	1.44	.75	.47	.26	.24

MEAN	167	325	497	645	745	828	781	567	419	316	207	145
MAX	1199	1423	1575	4319	2208	1970	1973	1611	1574	1363	1404	953
(WY)	1987	1973	1967	1950	1950	1963	1964	1968	1958	1979	1979	1989
MIN	41.7	52.5	52.3	38.3	92.0	204	183	149	81.2	56.1	46.4	43.2
(WY)	1964	1954	1964	1977	1964	1957	1971	1976	1988	1954	1988	1953

ANNUAL TOTAL	253778		239604				
ANNUAL MEAN	695		656			469	
HIGHEST ANNUAL MEAN						908	1950
LOWEST ANNUAL MEAN						166	1954
HIGHEST DAILY MEAN	11800	Dec 31	11800	Dec 31		13800	Mar 5 1963
LOWEST DAILY MEAN	161	Oct 2	73	Sep 11		27	Jan 18 1977
ANNUAL SEVEN-DAY MINIMUM	174	Sep 27	79	Sep 17		32	Jan 16 1977
INSTANTANEOUS PEAK FLOW			12800	Dec 31		15800	Mar 5 1963
INSTANTANEOUS PEAK STAGE			18.03	Dec 31		18.03	Dec 31 1990
ANNUAL RUNOFF (CFSM)	1.65		1.56			1.11	
ANNUAL RUNOFF (INCHES)	22.42		21.17			15.13	
10 PERCENT EXCEEDS	1330		1450			1010	
50 PERCENT EXCEEDS	419		385			234	
90 PERCENT EXCEEDS	205		89			72	

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 mi².

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.--Records good except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	42	185	1250	e95	88	114	57	367	67	6.2	3.4
2	22	43	139	469	105	93	100	53	124	23	5.8	3.1
3	21	40	261	295	149	90	90	51	126	32	5.4	2.9
4	203	38	343	227	199	82	88	51	94	45	5.4	3.1
5	272	45	235	191	300	76	96	52	66	20	5.7	4.8
6	160	61	167	171	600	77	98	55	53	15	9.3	4.5
7	98	74	135	153	670	74	92	51	45	13	9.0	3.7
8	74	56	114	136	528	67	88	46	41	33	7.6	3.2
9	74	50	102	123	311	62	91	43	37	23	7.6	2.7
10	304	48	92	114	236	60	82	41	35	40	7.2	2.6
11	445	46	85	186	189	58	72	40	33	30	6.6	2.6
12	359	44	80	326	154	103	66	39	35	39	6.1	6.5
13	206	40	75	264	140	813	187	38	33	29	5.4	35
14	146	38	69	194	144	840	329	37	29	21	5.1	13
15	109	36	152	200	e125	706	311	36	27	17	5.0	7.9
16	85	35	270	282	e105	356	248	35	27	15	4.9	5.5
17	71	35	220	344	e94	280	174	117	26	13	5.6	5.0
18	117	35	458	268	155	390	133	266	24	12	9.1	4.6
19	206	34	615	204	357	324	221	407	22	11	8.6	4.1
20	143	32	528	182	412	229	276	221	20	10	8.1	3.9
21	98	32	409	172	294	186	203	129	19	10	7.0	3.8
22	88	59	566	e150	216	454	148	96	19	17	6.3	4.7
23	91	77	545	e130	169	785	117	123	21	18	5.4	6.4
24	90	79	303	e110	142	669	101	94	23	11	4.7	6.5
25	75	62	213	e98	123	345	85	75	21	9.7	4.3	5.7
26	65	52	165	e88	108	356	80	66	18	8.9	4.1	5.7
27	59	83	e140	e82	100	395	75	58	17	8.0	3.8	5.1
28	54	296	e125	e80	93	282	71	51	16	7.7	3.7	4.8
29	50	380	390	e82	---	206	69	47	14	7.3	3.8	4.4
30	46	272	1850	e94	---	158	63	137	16	6.8	4.4	4.3
31	43	---	1870	e110	---	128	---	486	---	6.6	4.1	---
TOTAL	3897	2264	10901	6775	6313	8832	3968	3098	1448	619.0	185.3	173.5
MEAN	126	75.5	352	219	225	285	132	99.9	48.3	20.0	5.98	5.78
MAX	445	380	1870	1250	670	840	329	486	367	67	9.3	35
MIN	21	32	69	80	93	58	63	35	14	6.6	3.7	2.6
CFSM	1.34	.80	3.74	2.33	2.40	3.03	1.41	1.06	.51	.21	.06	.06
IN.	1.54	.90	4.32	2.68	2.50	3.50	1.57	1.23	.57	.25	.07	.07

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1991, BY WATER YEAR (WY)

	MEAN	38.9	80.1	136	126	183	181	152	116	77.4	60.9	52.0	31.2
	MAX	309	328	352	345	439	413	279	321	232	241	306	314
	(WY)	1987	1973	1991	1969	1982	1978	1972	1990	1973	1969	1979	1989
	MIN	4.14	10.4	9.11	5.35	35.7	35.0	30.0	23.4	8.47	9.21	4.06	3.42
	(WY)	1989	1988	1977	1977	1978	1981	1971	1976	1988	1977	1988	1983

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1968 - 1991

ANNUAL TOTAL	56374	48473.8	102
ANNUAL MEAN	154	133	150
HIGHEST ANNUAL MEAN			37.7
LOWEST ANNUAL MEAN			1973
HIGHEST DAILY MEAN	1870	Dec 31	1870
LOWEST DAILY MEAN	17	Jul 10	2.4
ANNUAL SEVEN-DAY MINIMUM	20	Jul 5	3.4
INSTANTANEOUS PEAK FLOW			2220
INSTANTANEOUS PEAK STAGE			10.31
ANNUAL RUNOFF (CFSM)	1.64		1.41
ANNUAL RUNOFF (INCHES)	22.33		19.20
10 PERCENT EXCEEDS	321		244
50 PERCENT EXCEEDS	84		47
90 PERCENT EXCEEDS	31		9.4

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 mi².

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.--Records good above 20 ft³/s and fair below, except for estimated daily discharges, which are poor. Low flow is affected by regulation.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.5	21	122	e500	52	50	71	40	22	9.9	1.8	7.6
2	11	20	87	e250	71	60	60	35	19	8.5	1.8	6.8
3	8.1	19	434	e160	124	55	54	32	17	7.5	2.3	4.8
4	362	19	308	e130	128	48	54	34	15	6.4	3.5	4.8
5	171	46	154	e112	227	43	71	44	14	6.3	3.1	5.2
6	79	67	116	e96	811	47	61	95	12	5.8	5.2	4.2
7	51	41	90	e86	849	50	54	59	11	5.2	11	3.5
8	49	30	75	e76	357	40	60	41	11	5.4	7.2	2.8
9	64	28	63	e70	224	38	81	35	11	5.3	7.0	1.8
10	432	31	55	e65	158	36	60	33	10	11	6.3	1.1
11	296	22	51	e320	115	35	48	30	10	15	3.7	1.0
12	153	20	47	e235	90	191	45	31	10	16	2.7	2.3
13	96	21	43	e185	85	1720	240	31	10	16	2.2	72
14	67	20	36	e140	93	981	357	29	9.4	9.7	2.1	21
15	51	20	199	e220	78	380	286	28	9.0	6.9	2.4	6.4
16	40	20	176	e340	63	222	216	24	9.3	5.5	3.1	3.0
17	34	20	138	e240	60	206	121	24	9.9	4.7	4.0	2.1
18	120	19	714	e190	135	510	88	74	8.9	4.3	8.4	1.7
19	96	19	630	e140	386	260	463	142	7.8	4.0	12	1.4
20	62	18	275	e125	305	161	440	78	7.1	3.8	12	1.3
21	49	17	457	e100	186	121	203	46	6.5	3.5	9.6	1.3
22	57	86	599	e84	128	886	130	37	6.2	3.4	7.9	1.3
23	64	98	287	e72	95	1230	98	75	5.9	3.1	6.3	4.3
24	51	62	163	e62	81	385	86	57	5.7	2.8	5.6	6.4
25	41	47	114	e56	69	208	68	40	5.7	2.5	5.4	4.9
26	35	38	89	e52	61	494	61	36	20	2.3	4.7	4.4
27	31	161	e74	e50	56	459	57	36	17	2.0	4.8	3.8
28	28	673	e64	e49	52	227	52	27	9.8	1.9	4.2	3.5
29	25	351	e450	e54	---	141	50	23	7.2	2.1	3.3	4.7
30	23	181	e3200	87	---	102	46	24	10	2.3	7.8	5.5
31	22	---	e1000	76	---	81	---	25	---	1.9	8.8	---
TOTAL	2676.6	2235	10310	4422	5139	9467	3781	1365	327.4	185.0	170.2	194.9
MEAN	86.3	74.5	333	143	184	305	126	44.0	10.9	5.97	5.49	6.50
MAX	432	673	3200	500	849	1720	463	142	22	16	12	72
MIN	8.1	17	36	49	52	35	45	23	5.7	1.9	1.8	1.0
CFSM	1.10	.95	4.22	1.81	2.33	3.88	1.60	.56	.14	.08	.07	.08
IN.	1.26	1.06	4.87	2.09	2.43	4.47	1.78	.64	.15	.09	.08	.09

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1991, BY WATER YEAR (WY)

	MEAN	32.7	80.6	126	112	155	168	130	108	62.2	64.3	43.2	20.5
MAX	312	353	333	352	349	347	245	386	196	324	216	166	
(WY)	1987	1986	1991	1969	1971	1978	1972	1981	1974	1969	1979	1989	
MIN	4.08	6.90	8.11	4.09	18.8	27.8	18.5	17.4	6.04	5.97	3.74	2.42	
(WY)	1969	1972	1977	1977	1978	1969	1971	1976	1988	1991	1983	1983	

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1968 - 1991

ANNUAL TOTAL	50495.9	40273.1	91.6
ANNUAL MEAN	138	110	138
HIGHEST ANNUAL MEAN			1979
LOWEST ANNUAL MEAN			1977
HIGHEST DAILY MEAN	e3200	Dec 30	3490
LOWEST DAILY MEAN	8.1	Oct 3	.60
ANNUAL SEVEN-DAY MINIMUM	10	Sep 27	1.7
INSTANTANEOUS PEAK FLOW			7140
INSTANTANEOUS PEAK STAGE			14.99
ANNUAL RUNOFF (CFSM)	1.76		1.16
ANNUAL RUNOFF (INCHES)	23.84		15.80
10 PERCENT EXCEEDS	315	279	207
50 PERCENT EXCEEDS	57	44	31
90 PERCENT EXCEEDS	16	3.6	5.7

e Estimated

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 mi².

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.--Records good, except for Dec. 27-28; Jan. 5-6, 23-28; Feb. 15-17, which are fair, and estimated period July 9 to Aug. 5, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	24	145	650	73	82	121	53	42	8.8	e3.1	1.9
2	11	23	106	363	97	98	109	50	37	9.9	e3.0	1.7
3	11	23	388	237	151	83	98	47	35	15	e2.8	1.8
4	130	23	351	172	146	75	96	48	30	11	e2.7	3.5
5	84	31	172	e140	213	65	107	55	27	12	e2.5	3.5
6	44	55	128	e160	1190	71	96	71	24	10	17	2.9
7	30	38	101	177	1500	73	88	52	23	7.7	16	2.5
8	26	30	87	138	724	59	87	45	22	6.3	9.6	2.3
9	52	28	76	119	534	57	97	43	21	e5.4	11	2.1
10	333	33	70	109	269	52	81	41	21	e33	9.0	2.6
11	245	30	64	371	193	49	70	48	35	e27	5.4	2.3
12	121	26	60	681	156	59	66	84	65	e28	4.0	2.3
13	84	24	57	317	152	938	102	55	32	e16	3.7	2.4
14	64	22	49	229	165	722	245	48	24	e13	3.2	2.2
15	51	22	158	272	e130	323	206	68	21	e11	3.1	2.1
16	41	22	156	488	e100	209	164	45	25	e9.5	3.5	2.1
17	36	22	166	433	e95	222	124	40	30	e8.6	4.1	2.4
18	76	21	974	263	159	692	109	70	22	e7.8	7.0	2.7
19	72	21	947	203	345	331	384	65	17	e7.2	11	2.1
20	52	21	399	179	383	214	426	45	15	e6.8	8.9	2.1
21	44	21	363	153	235	169	198	39	14	e6.4	4.9	2.2
22	45	52	708	119	177	739	143	55	13	e6.0	4.2	1.9
23	53	90	365	e98	142	1850	114	165	12	e5.6	3.1	2.6
24	47	59	216	e83	128	603	97	197	12	e8.6	2.5	3.5
25	39	49	157	e75	110	299	82	114	11	e7.0	2.4	3.0
26	34	39	123	e70	99	669	77	93	12	e5.2	2.5	2.6
27	31	192	e100	e64	91	752	71	85	11	e4.6	2.6	2.6
28	29	689	e95	e65	85	354	68	65	9.5	e3.9	3.0	2.5
29	26	444	606	66	---	222	68	54	8.8	e3.6	2.5	2.1
30	26	219	4530	95	---	162	61	63	8.2	e3.4	2.2	1.7
31	25	---	2640	82	---	135	---	52	---	e3.3	2.1	---
TOTAL	1973	2393	14557	6671	7842	10428	3855	2055	679.5	311.6	162.6	72.2
MEAN	63.6	79.8	470	215	280	336	128	66.3	22.6	10.1	5.25	2.41
MAX	333	689	4530	681	1500	1850	426	197	65	33	17	3.5
MIN	11	21	49	64	73	49	61	39	8.2	3.3	2.1	1.7
CFSM	.59	.75	4.39	2.01	2.62	3.14	1.20	.62	.21	.09	.05	.02
IN.	.69	.83	5.06	2.32	2.73	3.63	1.34	.71	.24	.11	.06	.03

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 1991, BY WATER YEAR (WY)

	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955
MEAN	17.4	73.6	123	156	183	218	175	140	84.6	70.8	28.4	20.0
MAX	90.6	458	470	837	441	498	516	512	463	492	231	228
(WY)	1946	1986	1991	1950	1971	1963	1964	1981	1958	1979	1979	1989
MIN	1.82	3.91	2.90	3.13	15.1	40.9	28.3	20.7	6.73	2.03	2.43	2.36
(WY)	1954	1954	1964	1977	1954	1969	1971	1988	1988	1944	1954	1954

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1944 - 1991
ANNUAL TOTAL	59822	50999.9	
ANNUAL MEAN	164	140	107
HIGHEST ANNUAL MEAN			176
LOWEST ANNUAL MEAN			20.3
HIGHEST DAILY MEAN	4530	Dec 30	6260
LOWEST DAILY MEAN	10	Sep 18	.50
ANNUAL SEVEN-DAY MINIMUM	12	Sep 27	.73
INSTANTANEOUS PEAK FLOW			10700
INSTANTANEOUS PEAK STAGE			13.40
ANNUAL RUNOFF (CFSM)	1.53		1.00
ANNUAL RUNOFF (INCHES)	20.80		13.61
10 PERCENT EXCEEDS	316		244
50 PERCENT EXCEEDS	76		34
90 PERCENT EXCEEDS	21		4.3

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 mi².

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 Edinburgh".

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.--Records good except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	104	172	847	10300	521	405	646	355	684	116	53	e45
2	101	164	621	4200	547	424	556	334	425	187	51	e40
3	100	159	945	1710	772	413	491	319	295	149	50	e38
4	309	158	1840	1260	861	380	462	314	283	154	49	e39
5	815	160	1110	1050	1050	355	494	321	251	177	49	e40
6	501	220	778	1020	2800	350	488	370	222	126	74	e46
7	313	246	608	993	4700	362	450	379	203	107	87	e42
8	246	225	495	880	3140	333	421	323	188	97	84	e39
9	240	199	422	807	1760	313	450	300	178	101	83	e37
10	746	192	375	752	1260	299	420	287	170	170	79	e35
11	1530	189	343	1010	967	289	365	281	170	209	66	e34
12	1050	173	322	2270	770	294	333	330	265	187	60	e36
13	694	162	302	1690	695	2460	402	300	198	185	55	e45
14	471	156	276	1240	708	4830	1570	281	173	155	52	e110
15	359	153	389	1220	649	3620	1350	295	160	123	e51	e90
16	295	150	899	1590	518	1770	1250	275	160	108	e50	e72
17	256	145	756	1830	500	1220	844	263	161	99	e56	55
18	297	143	2100	1500	557	2270	638	373	152	93	e80	47
19	570	141	3530	1160	1450	1830	926	716	139	88	e76	42
20	463	139	2430	1020	1870	1240	1970	678	131	83	e72	39
21	352	136	1620	933	1400	949	1200	443	125	80	e70	38
22	304	162	2870	e790	1010	1830	863	383	120	75	e64	39
23	316	396	2340	e680	777	5120	698	546	116	73	e59	42
24	315	350	1460	e600	655	5170	605	585	116	80	e54	42
25	283	291	957	e520	565	2100	527	426	115	74	e50	45
26	251	245	732	e490	498	1910	473	364	125	67	e47	48
27	230	345	577	e470	458	3440	446	340	129	64	e45	44
28	214	1550	543	e450	426	2040	422	303	124	60	e43	41
29	199	2150	1120	e450	---	1310	407	274	111	58	e45	41
30	188	1260	6700	536	---	947	386	268	104	57	e47	39
31	180	---	15700	593	---	747	---	359	---	55	e50	---
TOTAL	12292	10331	54007	44014	31884	49020	20553	11385	5793	3457	1851	1390
MEAN	397	344	1742	1420	1139	1581	685	367	193	112	59.7	46.3
MAX	1530	2150	15700	10300	4700	5170	1970	716	684	209	87	110
MIN	100	136	276	450	426	289	333	263	104	55	43	34
CFSM	.84	.73	3.68	3.00	2.40	3.34	1.45	.77	.41	.24	.13	.10
IN.	.96	.81	4.24	3.45	2.50	3.85	1.61	.89	.45	.27	.15	.11

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 1991, BY WATER YEAR (WY)

	MEAN	124	328	531	703	833	975	827	651	409	313	182	117
MAX	983	1795	1742	4000	2192	2281	2076	2011	1608	1564	1348	1295	
(WY)	1987	1986	1991	1950	1950	1961	1964	1981	1958	1979	1979	1989	
MIN	22.2	33.4	30.4	36.5	74.8	215	170	120	58.7	29.5	25.4	13.4	
(WY)	1945	1954	1964	1977	1964	1981	1971	1976	1988	1954	1954	1954	

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1943 - 1991

ANNUAL TOTAL	275303		245977									
ANNUAL MEAN	754		674									
HIGHEST ANNUAL MEAN										497		
LOWEST ANNUAL MEAN										849		1950
HIGHEST DAILY MEAN	15700	Dec 31	15700	Dec 31						160		1954
LOWEST DAILY MEAN	100	Oct 3	e34	Sep 11						9.2		Sep 18 1954
ANNUAL SEVEN-DAY MINIMUM	110	Sep 27	38	Sep 7						10		Sep 13 1954
INSTANTANEOUS PEAK FLOW			17100	Dec 31						27600		May 29 1956
INSTANTANEOUS PEAK STAGE			16.27	Dec 31						18.38		May 29 1956
ANNUAL RUNOFF (CFSM)	1.59		1.42							1.05		
ANNUAL RUNOFF (INCHES)	21.61		19.30							14.25		
10 PERCENT EXCEEDS	1520		1580							1140		
50 PERCENT EXCEEDS	358		319							200		
90 PERCENT EXCEEDS	153		50							45		

e Estimated

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 mi².

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 Edinburgh".

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.--Records good except for estimated daily discharges, which are fair.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in March 1913 reached a stage of 20.3 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	395	e520	1740	25100	1170	1140	1760	931	2560	373	233	186
2	387	e510	1270	12300	1170	1160	1600	889	1270	417	228	178
3	380	e500	1530	5180	1420	1150	1470	852	962	391	224	171
4	527	e490	3620	3250	1660	1100	1400	834	883	499	221	187
5	1310	e510	2570	2560	1920	1050	1410	840	775	494	217	185
6	1030	e550	1660	2350	4790	1030	1390	878	696	402	252	186
7	718	e630	1280	2240	8200	1040	1320	878	645	364	258	174
8	595	e580	1060	2000	7410	996	1270	806	609	341	255	168
9	571	e560	918	1820	4400	951	1280	770	581	426	252	165
10	1210	e550	825	1690	2980	919	1240	749	556	469	248	163
11	3310	e550	764	1960	2260	891	1150	738	547	508	235	161
12	2400	e520	719	4360	1840	893	1090	766	650	493	227	159
13	1530	e490	682	3880	1650	3750	1170	739	567	466	220	171
14	1090	e480	637	2690	1650	8420	2930	720	527	433	215	347
15	855	e470	736	2410	1610	8590	3200	771	502	381	211	255
16	e712	e460	1680	2930	e1400	4970	2820	738	495	356	216	204
17	e710	e450	1550	3690	e1300	3070	2000	730	492	339	215	181
18	e1000	e440	3650	3260	1340	4490	1560	934	475	327	220	172
19	e1400	e430	6880	2440	2760	4360	1790	1810	455	316	250	166
20	e1200	424	6710	2100	4330	2910	3450	1580	439	307	252	162
21	e1000	420	4210	1940	3530	2190	2470	1140	427	298	247	161
22	e910	448	5520	e1750	2430	3200	1810	975	417	289	235	162
23	e1000	757	6000	e1580	1900	8410	1510	1120	408	281	221	168
24	e900	810	3850	e1430	1620	10700	1350	1180	412	279	211	171
25	e800	696	2350	e1300	1460	6550	1240	971	400	271	203	177
26	e730	611	1730	e1230	1330	4460	1150	863	407	262	198	174
27	e680	682	1410	e1160	1250	7070	1100	816	449	254	194	170
28	e650	2270	1230	e1160	1190	5380	1060	762	414	248	192	167
29	e610	4380	1930	e1100	---	3490	1020	710	391	243	190	164
30	e570	2800	10100	1180	---	2480	985	915	374	241	188	164
31	e540	---	26000	1290	---	1990	---	2420	---	235	188	---
TOTAL	29720	23988	104811	103330	69970	108800	48995	29825	18785	11003	6916	5419
MEAN	959	800	3381	3333	2499	3510	1633	962	626	355	223	181
MAX	3310	4380	26000	25100	8200	10700	3450	2420	2560	508	258	347
MIN	380	420	637	1100	1170	891	985	710	374	235	188	159
CFSM	.90	.75	3.19	3.14	2.36	3.31	1.54	.91	.59	.33	.21	.17
IN.	1.04	.84	3.68	3.63	2.46	3.82	1.72	1.05	.66	.39	.24	.19

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 1991, BY WATER YEAR (WY)

	MEAN	362	780	1208	1578	1935	2232	1977	1526	1066	794	496	334
MAX	2590	4035	3840	8315	5062	5011	4785	4125	3731	3180	3485	2815	
(WY)	1987	1956	1967	1950	1950	1961	1964	1968	1958	1979	1979	1989	
MIN	102	136	125	119	227	550	493	359	204	117	99.7	68.8	
(WY)	1965	1954	1964	1977	1964	1981	1971	1976	1988	1954	1954	1954	

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1942 - 1991	
ANNUAL TOTAL	619979		561562		1187	
ANNUAL MEAN	1699		1539		2039	
HIGHEST ANNUAL MEAN					411	
LOWEST ANNUAL MEAN					1950	
HIGHEST DAILY MEAN	26000		Dec 31		34500	
LOWEST DAILY MEAN	380		Oct 3		38	
ANNUAL SEVEN-DAY MINIMUM	408		Sep 27		58	
INSTANTANEOUS PEAK FLOW			29100		40500	
INSTANTANEOUS PEAK STAGE			16.20		16.97	
ANNUAL RUNOFF (CFSM)	1.60		1.45		1.12	
ANNUAL RUNOFF (INCHES)	21.76		19.71		15.21	
10 PERCENT EXCEEDS	3380		3470		2720	
50 PERCENT EXCEEDS	1020		852		579	
90 PERCENT EXCEEDS	495		211		162	

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 mi².

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.--Records good except for estimated daily discharges, which are poor.

EXTREMES OUTSIDE PERIOD OF RECORD.--flood in March 1913 reached a stage of approximately 20.5 ft, from information by local residents.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	110	383	3850	228	260	e460	e255	257	34	9.9	12
2	56	104	308	1650	256	272	e410	e240	319	29	9.7	8.1
3	55	97	618	965	356	263	e360	e230	247	28	8.7	6.9
4	168	94	1090	715	405	250	e345	230	208	30	8.3	10
5	269	102	864	565	506	242	319	226	163	34	10	7.6
6	207	118	537	568	1790	238	303	220	140	28	14	9.0
7	145	120	420	555	1940	240	289	215	124	25	17	7.6
8	119	111	350	453	1540	228	277	206	114	24	17	6.8
9	326	105	300	391	931	216	277	189	109	41	16	6.0
10	887	113	270	344	652	205	285	175	105	80	16	5.9
11	876	123	249	580	483	196	284	165	101	59	11	5.2
12	560	116	234	1180	383	208	275	162	108	69	10	4.9
13	373	107	222	972	357	e700	e340	156	102	56	8.5	36
14	283	97	195	671	415	e2300	e1100	171	91	45	7.6	43
15	231	93	363	608	e330	e1700	e850	279	85	36	9.2	18
16	190	91	779	803	e290	e1250	e700	189	82	31	12	12
17	163	91	668	946	e280	e950	e580	156	81	27	11	8.4
18	313	89	3000	820	372	e1200	e500	619	76	24	8.7	7.3
19	392	85	3080	605	1020	e1000	e530	1210	68	22	17	6.1
20	300	85	2410	515	1210	e860	e800	545	61	21	24	5.2
21	242	82	1640	e450	932	e700	709	317	58	19	19	4.6
22	224	141	1910	e350	618	e900	636	282	55	19	14	5.1
23	235	279	1970	e300	450	e2900	540	327	54	17	10	7.2
24	233	267	1510	e280	375	e2000	e430	270	54	19	9.6	7.6
25	199	210	932	e250	321	e1400	e400	234	46	16	7.9	8.2
26	170	174	651	e235	292	e1000	e350	419	43	15	8.7	8.3
27	151	161	509	e220	278	e1960	e330	513	40	14	6.7	7.2
28	142	399	452	e210	266	e1250	e300	291	38	12	6.0	5.8
29	129	736	1650	e210	---	e950	e280	240	37	11	7.9	6.2
30	118	543	10100	274	---	e700	e270	395	34	11	8.2	6.2
31	115	---	10900	275	---	e550	---	350	---	11	8.4	---
TOTAL	7931	5043	48564	20810	17276	27088	13529	9476	3100	907	352.0	292.4
MEAN	256	168	1567	671	617	874	451	306	103	29.3	11.4	9.75
MAX	887	736	10900	3850	1940	2900	1100	1210	319	80	24	43
MIN	55	82	195	210	228	196	270	156	34	11	6.0	4.6
CFSM	.84	.55	5.17	2.22	2.04	2.88	1.49	1.01	.34	.10	.04	.03
IN.	.97	.62	5.96	2.55	2.12	3.33	1.66	1.16	.38	.11	.04	.04

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 1991, BY WATER YEAR (WY)

	MEAN	83.4	205	354	498	545	604	558	427	257	185	95.6	68.1
	MAX	585	1115	1567	3450	1808	1605	1534	1284	991	915	716	392
	(WY)	1937	1956	1991	1937	1950	1961	1964	1968	1947	1979	1979	1989
	MIN	1.96	9.67	9.98	15.1	27.7	41.8	51.9	42.9	19.7	9.28	4.06	3.37
	(WY)	1964	1954	1964	1977	1935	1941	1941	1934	1934	1936	1988	1953

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1931 - 1991

ANNUAL TOTAL	195165	154368.4	322
ANNUAL MEAN	535	423	642
HIGHEST ANNUAL MEAN			40.6
LOWEST ANNUAL MEAN			1950
HIGHEST DAILY MEAN	10900	Dec 31	16500
LOWEST DAILY MEAN	50	Jul 10	.60
ANNUAL SEVEN-DAY MINIMUM	62	Aug 13	.80
INSTANTANEOUS PEAK FLOW			18500
INSTANTANEOUS PEAK STAGE			12.37
ANNUAL RUNOFF (CFSM)	1.76	1.40	1.06
ANNUAL RUNOFF (INCHES)	23.96	18.95	14.45
10 PERCENT EXCEEDS	1100	948	751
50 PERCENT EXCEEDS	263	228	130
90 PERCENT EXCEEDS	90	9.1	16

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 mi².

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.--Records good.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	143	220	666	12700	e650	706	862	516	507	106	48	35
2	135	213	537	4770	e630	707	785	488	443	101	47	36
3	131	206	578	2350	e710	706	721	461	474	105	47	37
4	142	199	1320	1750	897	674	687	445	382	101	47	58
5	286	198	1240	1500	958	646	675	438	335	97	44	46
6	356	206	879	1410	2250	627	653	453	294	99	54	42
7	280	216	683	1410	4630	622	626	442	267	89	59	40
8	238	214	570	1290	3220	599	608	436	246	82	57	38
9	232	206	496	1180	2170	571	613	414	231	77	56	37
10	844	203	435	1100	1550	551	608	392	221	92	55	37
11	1310	211	396	1170	1260	532	583	376	209	134	53	36
12	980	217	368	2160	1070	525	543	366	276	153	51	36
13	675	209	347	2030	968	1300	701	356	244	137	49	36
14	515	197	321	1550	1010	3590	1750	344	219	120	46	35
15	406	191	322	1360	e950	3260	1620	521	199	106	44	58
16	337	188	799	1440	e780	2120	1360	473	193	96	43	55
17	293	185	854	1620	e760	1500	1030	401	186	87	45	45
18	325	182	2090	1550	e800	1800	844	430	178	79	46	40
19	617	177	5380	1310	1400	1830	908	1350	168	73	50	37
20	554	173	4390	1180	1970	1420	1230	1080	158	70	49	34
21	436	169	2930	1090	1740	1120	1030	680	148	68	50	33
22	376	179	2990	e940	1340	1240	869	556	146	65	53	33
23	365	315	3020	e850	1090	3460	773	611	142	62	49	33
24	376	421	2620	e780	950	3950	703	551	139	60	46	33
25	346	355	1760	e720	868	2660	647	477	137	58	43	32
26	309	298	1240	e660	806	1750	616	436	127	58	41	32
27	281	276	965	e630	767	3380	596	711	120	55	40	32
28	264	402	834	e620	733	2670	580	605	115	53	39	32
29	249	982	1260	e610	---	1640	563	475	115	53	38	31
30	236	911	6350	e630	---	1210	541	468	112	51	37	31
31	227	---	18200	e670	---	979	---	608	---	49	35	---
TOTAL	12264	8319	64840	53030	36927	48345	24325	16360	6731	2636	1461	1140
MEAN	396	277	2092	1711	1319	1560	811	528	224	85.0	47.1	38.0
MAX	1310	982	18200	12700	4630	3950	1750	1350	507	153	59	58
MIN	131	169	321	610	630	525	541	344	112	49	35	31
CFSM	.74	.52	3.92	3.20	2.47	2.92	1.52	.99	.42	.16	.09	.07
IN.	.85	.58	4.52	3.69	2.57	3.37	1.69	1.14	.47	.18	.10	.08

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1991, BY WATER YEAR (WY)

	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
MEAN	151	417	754	732	1063	1034	936	843	462	399	281	159												
MAX	547	1452	2092	1827	2524	2223	1768	2281	1100	1556	1296	837												
(WY)	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
MIN	35.8	47.6	44.8	30.6	215	261	251	132	77.2	50.8	35.0	30.1												
(WY)	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1968 - 1991
ANNUAL TOTAL	317521	276378	
ANNUAL MEAN	870	757	600
HIGHEST ANNUAL MEAN			842
LOWEST ANNUAL MEAN			271
HIGHEST DAILY MEAN	18200	18200	18200
LOWEST DAILY MEAN	118	31	22
ANNUAL SEVEN-DAY MINIMUM	138	32	23
INSTANTANEOUS PEAK FLOW		19400	20000
INSTANTANEOUS PEAK STAGE		15.77	15.87
ANNUAL RUNOFF (CFSM)	1.63	1.42	1.12
ANNUAL RUNOFF (INCHES)	22.12	19.25	15.28
10 PERCENT EXCEEDS	1760	1620	1350
50 PERCENT EXCEEDS	498	430	319
90 PERCENT EXCEEDS	190	45	60

03364000 EAST FORK WHITE RIVER AT COLUMBUS, IN

LOCATION.--Lat 39°12'00", long 85°55'32", in NE1/4 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 mi².

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.--Records good.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	472	837	3260	44500	2060	2080	3150	1710	3750	408	261	204
2	473	807	2420	24800	2010	2110	2820	1640	2370	483	255	198
3	425	778	2670	9820	2310	2110	2540	1600	1900	476	252	198
4	564	754	5400	5450	2810	1980	2420	1580	1650	547	254	388
5	1530	763	5090	4410	3190	1870	2450	1570	1440	716	238	264
6	1620	802	3490	4060	6820	1820	2330	1610	1230	523	302	253
7	1180	967	2640	4000	12000	1830	2190	1620	1100	421	335	236
8	929	925	2170	3600	11600	1760	2130	1550	993	371	312	221
9	880	868	1860	3270	7410	1660	2110	1470	925	423	312	214
10	1870	836	1640	2990	5270	1590	2050	1400	868	649	299	211
11	4820	843	1510	3370	4210	1540	1910	1340	817	800	281	206
12	4270	827	1430	6000	3510	1550	1780	1370	1120	1090	263	201
13	2840	787	1350	6220	3140	4310	3200	1330	959	815	249	203
14	2020	754	1270	4830	3220	10100	4930	1410	839	755	239	349
15	1600	732	1330	4150	3140	12200	5460	1650	758	628	231	413
16	1370	718	2880	4530	2560	8420	4850	1490	747	548	228	321
17	1200	702	3230	5430	2460	5540	3830	1370	716	500	246	274
18	1240	696	6190	5280	2740	6370	3060	1520	697	458	246	246
19	2060	678	11900	4290	4280	6600	3710	3030	639	428	265	229
20	2050	668	12100	3740	6210	5270	5010	3050	591	402	301	218
21	1630	652	8300	3430	5890	4160	4310	2220	548	382	285	212
22	1420	697	8220	3090	4550	5320	3410	1840	518	361	280	214
23	1360	1120	9540	2760	3660	10900	2880	2200	496	346	257	222
24	1400	1500	7380	2610	3130	14200	2530	2160	491	336	234	220
25	1300	1310	5310	2280	2780	11700	2270	1860	505	332	220	228
26	1190	1140	3890	2130	2490	7230	2100	1740	479	310	210	224
27	1100	1110	3030	2010	2310	9960	2010	1870	540	291	206	219
28	1020	2550	2630	2030	2170	8990	1940	1720	503	281	202	215
29	964	5590	3730	1940	---	6000	1880	1470	454	275	200	212
30	908	4880	15900	2010	---	4490	1790	1430	424	274	197	209
31	868	---	40800	2230	---	3620	---	3070	---	265	210	---
TOTAL	46573	36291	182560	181260	117930	167280	87050	54890	29067	14894	7870	7222
MEAN	1502	1210	5889	5847	4212	5396	2902	1771	969	480	254	241
MAX	4820	5590	40800	44500	12000	14200	5460	3070	3750	1090	335	413
MIN	425	652	1270	1940	2010	1540	1780	1330	424	265	197	198
CFSM	.88	.71	3.45	3.43	2.47	3.16	1.70	1.04	.57	.28	.15	.14
IN.	1.01	.79	3.98	3.95	2.57	3.65	1.90	1.20	.63	.32	.17	.16

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 1991, BY WATER YEAR (WY)

	MEAN	523	1239	2057	2673	3185	3370	3006	2407	1489	1263	785	515
MAX	2957	5284	6004	14400	8640	8014	7466	6501	5565	4990	5185	3696	
(WY)	1987	1956	1967	1950	1950	1963	1964	1968	1958	1958	1979	1989	
MIN	138	172	191	163	342	829	852	532	325	161	136	101	
(WY)	1965	1955	1964	1977	1964	1954	1971	1976	1988	1954	1954	1954	

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1949 - 1991

ANNUAL TOTAL	1007353	932887	1869
ANNUAL MEAN	2760	2556	3304
HIGHEST ANNUAL MEAN			534
LOWEST ANNUAL MEAN			1950
HIGHEST DAILY MEAN	40800	Dec 31	49000
LOWEST DAILY MEAN	425	Oct 3	87
ANNUAL SEVEN-DAY MINIMUM	503	Sep 28	90
INSTANTANEOUS PEAK FLOW			52300
INSTANTANEOUS PEAK STAGE			16.23
ANNUAL RUNOFF (CFSM)	1.62		1.10
ANNUAL RUNOFF (INCHES)	21.95		14.88
10 PERCENT EXCEEDS	5370	5440	4240
50 PERCENT EXCEEDS	1630	1540	943
90 PERCENT EXCEEDS	697	246	250

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 mi².
 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.--Records good except for estimated daily discharges and Mar. 13-22 and Apr. 13-26, which are fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.5	15	35	e180	e40	39	52	33	19	8.0	3.7	e6.0
2	3.7	14	29	e120	e42	44	47	30	18	7.0	3.6	e4.5
3	3.7	13	177	e95	e46	40	45	28	17	7.6	3.5	e3.9
4	63	13	109	e80	e51	38	42	27	16	7.4	3.3	89
5	37	15	60	e77	e60	e37	41	31	14	7.0	3.3	21
6	24	16	47	102	e700	e38	38	40	13	6.7	6.9	8.8
7	17	15	38	103	e450	e37	34	31	13	6.4	5.0	6.3
8	15	13	34	89	e200	e30	34	27	13	6.1	3.4	e5.0
9	166	13	31	80	e130	29	38	26	12	5.7	3.1	e4.3
10	250	18	28	78	e100	28	33	26	12	5.8	3.1	e3.9
11	122	18	27	246	e76	26	29	26	18	5.9	3.1	e3.6
12	67	15	26	273	e62	27	28	36	127	31	3.1	e3.4
13	44	13	24	144	e62	232	349	34	38	15	3.1	e3.3
14	34	13	22	102	e87	161	279	31	23	9.5	3.1	e3.2
15	29	12	36	96	e68	90	205	40	19	7.6	3.1	e3.1
16	23	12	38	129	e47	70	120	31	18	6.8	3.1	e6.0
17	20	12	47	106	e50	89	89	31	17	6.1	4.7	e4.8
18	64	13	797	84	e100	229	72	30	14	5.8	7.1	e4.1
19	47	12	431	77	e210	113	254	30	12	5.5	7.3	e3.5
20	32	11	181	70	130	80	164	25	10	5.2	5.6	e3.2
21	26	9.8	231	e54	89	73	94	23	9.4	5.0	4.4	e3.0
22	27	28	361	e46	73	662	75	43	9.2	4.9	e4.1	e2.9
23	32	43	e220	e45	61	619	65	67	8.5	4.7	e3.8	e3.5
24	29	30	e100	e41	55	157	58	42	7.8	4.6	e3.5	e3.2
25	24	25	e76	e37	49	98	56	32	8.3	4.4	e3.3	e3.0
26	22	22	e64	e35	46	372	52	31	7.5	4.4	e3.1	e2.9
27	20	22	e57	e34	43	193	47	35	7.0	4.2	e3.0	e2.8
28	18	76	e53	e33	40	111	43	27	6.8	4.1	e2.9	e2.7
29	16	62	e500	e33	---	83	41	24	6.8	4.1	e2.8	e2.7
30	17	42	e1300	e43	---	66	36	23	6.8	4.0	e2.8	e2.6
31	15	---	e300	e41	---	59	---	21	---	3.8	e2.7	---
TOTAL	1311.9	635.8	5479	2773	3167	3970	2560	981	521.1	214.3	118.6	220.2
MEAN	42.3	21.2	177	89.5	113	128	85.3	31.6	17.4	6.91	3.83	7.34
MAX	250	76	1300	273	700	662	349	67	127	31	7.3	89
MIN	3.7	9.8	22	33	40	26	28	21	6.8	3.8	2.7	2.6
CFSM	.89	.45	3.72	1.88	2.38	2.70	1.80	.67	.37	.15	.08	.15
IN.	1.03	.50	4.29	2.17	2.48	3.11	2.00	.77	.41	.17	.09	.17

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1991, BY WATER YEAR (WY)

	MEAN	10.5	37.8	69.2	63.3	82.5	90.9	86.5	69.2	26.8	27.9	18.3	14.3
MAX	42.3	189	177	205	201	205	192	209	76.7	122	93.5	171	171
(WY)	1991	1986	1991	1982	1975	1978	1989	1968	1973	1979	1978	1974	1974
MIN	.73	1.92	3.55	.96	11.8	14.5	11.7	7.16	2.92	1.77	1.47	.56	.56
(WY)	1968	1988	1977	1977	1987	1983	1976	1976	1988	1988	1988	1988	1988

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1968 - 1991

ANNUAL TOTAL	22191.0	21951.9	
ANNUAL MEAN	60.8	60.1	
HIGHEST ANNUAL MEAN			49.6
LOWEST ANNUAL MEAN			75.2
HIGHEST DAILY MEAN	e1300	Dec 30	22.7
LOWEST DAILY MEAN	1.7	Sep 8	2140
ANNUAL SEVEN-DAY MINIMUM	2.0	Sep 2	.00
INSTANTANEOUS PEAK FLOW			.40
INSTANTANEOUS PEAK STAGE			2560
ANNUAL RUNOFF (CFSM)	1.28	Dec 30	14.87
ANNUAL RUNOFF (INCHES)	17.38		1.04
10 PERCENT EXCEEDS	111		14.19
50 PERCENT EXCEEDS	28		104
90 PERCENT EXCEEDS	4.6		19
			2.4

e Estimated

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 mi².

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.--Records good, except for estimated daily discharges which are fair.

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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.8	24	106	357	e66	66	90	44	17	4.8	.00	.05
2	4.3	24	87	234	e70	76	77	41	16	3.8	.00	.00
3	3.7	24	342	170	e74	66	69	38	17	2.1	.00	.00
4	156	23	359	132	e85	58	66	39	16	1.6	.00	.28
5	132	27	195	123	e100	53	72	40	13	2.3	.00	2.6
6	38	35	147	160	1310	56	65	46	11	1.8	.48	.62
7	21	35	116	172	922	55	59	35	9.4	1.2	.64	.79
8	14	27	98	133	401	44	58	31	8.8	.99	.18	.45
9	262	26	87	115	257	42	77	31	8.6	.83	.10	.29
10	606	35	76	102	190	40	69	30	8.3	1.6	.09	.21
11	302	50	69	260	145	38	56	29	78	4.3	.06	.13
12	137	38	66	513	117	49	48	30	80	12	.01	.10
13	82	32	61	265	116	805	1060	29	18	6.1	.00	.06
14	58	27	53	186	168	557	781	31	11	3.7	.00	1.4
15	44	25	89	183	144	264	440	304	8.9	2.4	.00	7.5
16	34	24	152	255	e90	170	260	87	8.3	1.7	.00	3.9
17	28	24	128	250	e94	173	171	53	8.6	1.3	.00	2.2
18	175	22	1640	187	172	416	128	146	8.2	.91	.01	1.1
19	173	21	1320	149	410	246	215	120	6.4	.67	.40	.79
20	86	21	460	135	293	167	190	60	5.0	.52	.18	.54
21	62	19	510	e100	195	135	136	43	4.3	.37	.15	.38
22	63	48	941	e76	148	828	113	35	4.2	.26	e.05	.28
23	79	140	e500	e73	117	1250	97	69	3.7	.15	e.00	.35
24	66	86	e250	e67	105	354	83	40	3.0	.06	e.00	.29
25	54	63	e170	e60	89	202	70	31	2.7	.01	e.00	.17
26	44	50	e130	e56	79	452	66	35	2.5	.00	e.00	.09
27	37	51	e120	e55	74	430	62	54	2.3	.00	e.00	.04
28	34	174	e115	e54	67	242	59	34	2.0	.00	e.00	.01
29	30	224	1040	e54	---	166	57	25	2.7	.00	.00	.00
30	27	134	4830	e70	---	124	50	22	2.2	.00	.00	.00
31	26	---	1700	e68	---	100	---	20	---	.00	.04	---
TOTAL	2881.8	1553	15957	4814	6098	7724	4844	1672	387.1	55.47	2.39	52.34
MEAN	93.0	51.8	515	155	218	249	161	53.9	12.9	1.79	.077	1.74
MAX	606	224	4830	513	1310	1250	1060	304	80	12	.64	.28
MIN	3.7	19	53	54	66	38	48	20	2.0	.00	.00	.00
CFSM	1.02	.57	5.63	1.70	2.38	2.73	1.77	.59	.14	.02	.00	.02
IN.	1.17	.63	6.49	1.96	2.48	3.14	1.97	.68	.16	.02	.00	.02

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 1991, BY WATER YEAR (WY)

	MEAN	18.6	70.3	124	160	176	189	147	127	60.3	54.0	29.0	19.5
MAX	183	431	515	874	551	465	360	424	209	231	194	261	
(WY)	1978	1986	1991	1949	1950	1961	1964	1968	1958	1979	1978	1974	
MIN	.000	.000	.13	1.47	7.17	21.1	17.7	10.9	1.16	.000	.000	.000	
(WY)	1954	1954	1954	1977	1954	1954	1976	1976	1988	1954	1954	1953	

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1949 - 1991

ANNUAL TOTAL	52348.6	46041.10	97.6
ANNUAL MEAN	143	126	197
HIGHEST ANNUAL MEAN			1950
LOWEST ANNUAL MEAN			1954
HIGHEST DAILY MEAN	4830	4830	6180
LOWEST DAILY MEAN	2.3	.00	.00
ANNUAL SEVEN-DAY MINIMUM	3.1	.00	.00
INSTANTANEOUS PEAK FLOW		6330	11300
INSTANTANEOUS PEAK STAGE		11.25	14.29
ANNUAL RUNOFF (CFSM)	1.57	1.38	1.07
ANNUAL RUNOFF (INCHES)	21.31	18.74	14.51
10 PERCENT EXCEEDS	266	260	217
50 PERCENT EXCEEDS	60	48	30
90 PERCENT EXCEEDS	5.6	.06	.70

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 mi².

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.--Records good.

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 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	643	1080	4080	50400	2890	2680	4570	2300	3320	577	365	296
2	620	1040	3040	42700	2650	2700	4040	2150	3040	572	357	282
3	609	996	3560	24600	2680	2710	3630	2040	2260	634	352	271
4	958	962	6330	10400	3060	2570	3350	1960	1820	605	363	393
5	1940	955	6240	6660	3410	2400	3320	1920	1590	688	338	1590
6	2020	964	4780	5600	6910	2300	3300	1960	1390	688	353	622
7	1680	1060	3540	5770	17400	2270	3100	1990	1240	601	428	453
8	1320	1120	2880	5180	17600	2220	2920	1910	1140	552	416	385
9	1350	1070	2470	4540	13400	2100	2850	1800	1070	522	438	352
10	4480	1040	2200	4140	9120	2000	4550	1720	1010	587	409	336
11	4780	1080	2010	4330	6420	1930	2970	1660	970	677	401	320
12	5090	1090	1870	7430	4990	1880	2600	1640	1120	898	377	309
13	3960	1030	1760	8830	4220	3290	4170	1720	1410	1210	355	302
14	2890	971	1660	7800	4690	9290	11300	1630	1100	865	341	295
15	2260	932	1680	5860	4730	12600	9690	1990	970	739	332	412
16	1890	910	2510	5460	3810	13300	8530	2170	904	650	323	431
17	1640	889	3450	6150	3300	9260	6510	1770	875	597	338	385
18	1720	865	5960	6640	3990	8710	4870	1700	849	564	907	350
19	2490	851	17200	6010	7400	9760	4350	2410	812	534	615	329
20	2670	831	19000	4990	7740	8420	6400	3740	773	512	497	307
21	2270	815	14400	4450	8280	6160	6590	3040	735	496	497	299
22	1950	866	12600	4000	6920	6130	5230	2320	714	476	420	294
23	1870	1320	14100	3550	5200	16700	4250	2830	688	462	385	297
24	1870	1740	13500	3380	4280	19300	3700	2670	666	448	352	292
25	1770	1670	9570	3100	3770	18300	3310	2340	666	440	330	289
26	1610	1450	6380	2800	3320	12800	3010	2050	701	430	312	292
27	1460	1320	4720	2670	3010	17400	2800	2100	655	414	303	288
28	1350	1780	4010	2570	2820	14200	2660	2170	669	398	294	283
29	1250	4360	5240	2570	---	10700	2560	1800	633	387	286	278
30	1180	5320	19100	2920	---	7450	2440	1560	603	383	280	275
31	1120	---	55500	3320	---	5520	---	1990	---	374	275	---
TOTAL	62710	40377	255340	258820	168010	237050	133570	65050	34393	17980	12039	11307
MEAN	2023	1346	8237	8349	6000	7647	4452	2098	1146	580	388	377
MAX	5090	5320	55500	50400	17600	19300	11300	3740	3320	1210	907	1590
MIN	609	815	1660	2570	2650	1880	2440	1560	603	374	275	271
CFSM	.86	.57	3.52	3.57	2.56	3.27	1.90	.90	.49	.25	.17	.16
IN.	1.00	.64	4.06	4.11	2.67	3.77	2.12	1.03	.55	.29	.19	.18

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1991, BY WATER YEAR (WY)

	MEAN	682	1487	2589	3843	4103	4681	4235	3263	2021	1542	941	630
MAX	3271	8564	9245	19560	12290	10690	9211	9379	7164	6040	8795	4244	
(WY)	1987	1986	1928	1950	1950	1963	1944	1968	1947	1979	1979	1989	
MIN	162	182	207	192	373	299	356	264	394	199	148	136	
(WY)	1941	1935	1964	1977	1931	1941	1941	1941	1941	1931	1941	1941	

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1928 - 1991

ANNUAL TOTAL	1372626	1296646	
ANNUAL MEAN	3761	3552	
HIGHEST ANNUAL MEAN			2494
LOWEST ANNUAL MEAN			4575
HIGHEST DAILY MEAN	55500	Dec 31	287
LOWEST DAILY MEAN	609	Oct 3	63500
ANNUAL SEVEN-DAY MINIMUM	685	Sep 27	86
INSTANTANEOUS PEAK FLOW			93
INSTANTANEOUS PEAK STAGE			78500
ANNUAL RUNOFF (CFSM)	1.61		18.97
ANNUAL RUNOFF (INCHES)	21.81		1.52
10 PERCENT EXCEEDS	7000		20.60
50 PERCENT EXCEEDS	2250		7990
90 PERCENT EXCEEDS	948		1920
			353
			292

0336200 HARBERTS CREEK NEAR MADISON, IN

LOCATION.--Lat 38°46'55", long 85°29'08", in SW¼ 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 mi².
 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.--Records fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.34	1.5	4.5	24	11	3.7	8.3	1.5	.95	.00	.00	.00
2	.21	1.4	3.7	17	10	9.8	6.7	1.2	8.8	.00	.00	.00
3	.24	1.3	152	14	10	6.6	5.5	.94	23	.00	.00	.00
4	56	1.3	27	11	11	4.7	5.0	1.1	3.6	.00	.00	13
5	7.2	1.8	11	13	21	3.5	5.2	2.1	1.4	.00	.00	5.3
6	3.4	2.8	7.9	110	261	6.9	4.5	4.1	.84	.00	.74	.68
7	2.3	1.9	5.9	64	80	11	3.8	1.7	.53	.00	.74	.22
8	1.9	1.5	4.6	35	25	5.3	4.2	1.1	.46	3.3	.36	.08
9	54	6.2	3.7	27	16	3.8	92	2.8	.35	1.8	7.3	.04
10	62	24	3.1	23	12	2.9	38	9.4	.26	.85	1.2	.03
11	14	7.4	2.9	99	9.4	2.5	14	5.2	.17	.45	.61	.02
12	7.9	4.5	2.5	48	7.3	3.7	12	5.8	.19	.09	.26	.00
13	6.0	3.1	2.2	24	27	130	382	3.9	.14	.04	.07	.00
14	5.1	2.4	2.1	17	122	35	78	2.4	.09	.02	.02	.00
15	4.5	2.0	91	15	24	17	51	1.8	.08	.00	.00	.00
16	3.7	2.0	19	25	e12	12	21	1.4	.59	.00	.00	.00
17	3.2	1.9	39	23	10	28	13	1.2	.90	.00	.05	.00
18	247	1.7	616	15	71	67	9.7	1.1	1.1	.00	3.3	.00
19	16	1.5	77	12	35	24	9.0	1.5	7.6	.00	.68	.00
20	7.8	1.3	28	12	21	15	7.8	1.0	.87	.00	1.9	.00
21	5.3	1.2	54	e10	13	12	6.0	.71	.24	.00	.21	.00
22	31	38	102	e9.0	11	213	4.9	.59	.14	.00	.06	.00
23	18	20	91	e8.0	7.9	132	4.0	.99	.10	.00	.02	.00
24	8.6	8.9	29	e7.0	6.6	24	3.7	14	.06	.00	.00	.00
25	5.9	5.8	18	e6.0	5.4	15	2.9	6.3	.05	.00	.00	.00
26	4.7	4.4	14	5.3	4.5	109	2.5	5.9	.04	.00	.00	.00
27	3.8	4.0	e12	7.6	4.0	93	2.2	8.7	.03	.00	.00	.00
28	3.1	21	e10	21	3.5	48	2.1	5.6	.02	.00	.00	.00
29	2.6	11	169	13	---	19	2.3	3.3	.01	.00	.00	.00
30	2.3	5.8	327	54	---	13	2.0	1.9	.01	.00	.00	.00
31	1.9	---	59	19	---	10	---	1.4	---	.00	.00	---
TOTAL	589.99	191.6	1988.1	787.9	851.6	1080.4	803.3	100.63	52.62	6.55	17.52	19.37
MEAN	19.0	6.39	64.1	25.4	30.4	34.9	26.8	3.25	1.75	.21	.57	.65
MAX	247	38	616	110	261	213	382	14	23	3.3	7.3	13
MIN	.21	1.2	2.1	5.3	3.5	2.5	2.0	.59	.01	.00	.00	.00
CFSM	2.04	.69	6.89	2.73	3.27	3.74	2.88	.35	.19	.02	.06	.07
IN.	2.36	.77	7.94	3.15	3.40	4.32	3.21	.40	.21	.03	.07	.08

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1991, BY WATER YEAR (WY)

	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
MEAN	4.44	13.9	19.7	17.7	22.4	26.6	23.0	15.2	6.33	3.68	3.15	1.97											
MAX	28.8	48.6	64.1	57.5	51.9	52.0	44.1	61.1	27.2	12.3	21.4	18.7											
(WY)	1984	1980	1991	1982	1971	1975	1972	1983	1982	1971	1979	1979											
MIN	.081	.29	1.52	.49	1.95	4.72	2.65	1.12	.083	.21	.11	.003											
(WY)	1970	1982	1977	1977	1978	1969	1976	1976	1988	1991	1975	1983											

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1969 - 1991

ANNUAL TOTAL	8091.25	6489.58	13.1
ANNUAL MEAN	22.2	17.8	21.0
HIGHEST ANNUAL MEAN			6.13
LOWEST ANNUAL MEAN			1979
HIGHEST DAILY MEAN	616 Dec 18	616 Dec 18	686 Mar 30 1985
LOWEST DAILY MEAN	.13 Jul 10	.00 Jul 1	.00 Oct 1 1968
ANNUAL SEVEN-DAY MINIMUM	.35 Aug 6	.00 Jul 1	.00 Aug 26 1969
INSTANTANEOUS PEAK FLOW		898 Dec 18	2150 May 16 1990
INSTANTANEOUS PEAK STAGE		6.68 Dec 18	8.96 May 16 1990
ANNUAL RUNOFF (CFSM)	2.38	1.91	1.41
ANNUAL RUNOFF (INCHES)	32.33	25.93	19.15
10 PERCENT EXCEEDS	41	38	26
50 PERCENT EXCEEDS	5.3	3.7	2.5
90 PERCENT EXCEEDS	.56	.00	.08

03366500 MUSCATATUCK RIVER NEAR DEPUTY, IN

LOCATION.--Lat 38°48'15", long 85°40'26", in SW1/4 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 mi².

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.--Records good.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.3	53	163	1130	362	155	265	91	42	7.6	.41	1.5
2	3.5	46	126	624	273	192	219	82	919	6.5	.44	1.1
3	4.4	41	1430	451	233	212	187	74	500	5.8	.57	1.1
4	413	37	1910	339	229	186	168	72	175	5.1	.69	.79
5	362	40	523	281	250	156	165	73	91	4.5	.72	136
6	133	47	294	1300	4290	159	160	90	63	4.1	.97	43
7	71	48	212	2590	6230	288	150	81	49	3.6	4.7	22
8	47	48	163	1290	1670	227	137	72	42	89	14	14
9	240	51	133	764	778	173	564	78	36	163	15	9.6
10	1280	211	114	603	531	143	2020	96	30	43	41	6.5
11	592	254	101	1380	396	127	610	110	25	39	29	6.0
12	220	159	93	2320	305	124	337	135	21	26	18	4.9
13	129	107	87	908	302	1970	5200	95	19	20	14	3.9
14	94	85	80	559	2540	2070	3660	98	17	18	11	3.3
15	72	73	740	429	1480	714	1780	83	15	14	7.1	2.5
16	58	65	1350	493	586	416	1280	70	19	10	4.1	1.7
17	48	62	501	578	420	351	567	70	84	8.1	3.7	1.3
18	2510	58	11800	460	1380	1880	379	123	65	6.8	15	1.1
19	1100	54	6770	334	2590	1110	306	105	100	5.5	16	1.2
20	312	52	1320	287	1100	557	286	71	51	15	42	.91
21	176	49	754	286	636	391	253	65	34	7.0	41	.62
22	216	202	2440	242	444	2010	205	55	27	3.7	31	.48
23	572	782	2740	204	339	6400	175	50	27	2.6	19	.61
24	325	379	1600	200	275	1430	157	129	21	1.9	12	.69
25	182	208	663	165	234	608	138	118	15	1.5	7.9	.69
26	127	143	437	161	201	1290	126	138	13	1.3	5.3	.48
27	100	115	323	131	179	2640	115	131	13	.92	3.5	.32
28	83	211	312	266	165	1920	109	107	12	.64	2.0	.28
29	73	486	3080	282	---	773	107	79	10	.59	2.0	.31
30	66	259	7780	727	---	468	100	62	8.9	.58	1.9	.33
31	59	---	5360	822	---	330	---	50	---	.44	1.9	---
TOTAL	9671.2	4425	53399	20606	28418	29470	19925	2753	2543.9	515.77	365.90	345.42
MEAN	312	147	1723	665	1015	951	664	88.8	84.8	16.6	11.8	11.5
MAX	2510	782	11800	2590	6230	6400	5200	138	919	163	42	136
MIN	3.3	37	80	131	165	124	100	50	8.9	.44	.41	.28
CFSM	1.06	.50	5.88	2.27	3.46	3.24	2.27	.30	.29	.06	.04	.04
IN.	1.23	.56	6.78	2.62	3.61	3.74	2.53	.35	.32	.07	.05	.04

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 1991, BY WATER YEAR (WY)

	MEAN	64.1	259	453	617	672	747	543	416	201	149	72.7	47.6
MAX	720	1438	1723	2896	1826	2055	1497	1967	879	661	533	480	
(WY)	1984	1980	1991	1950	1950	1964	1972	1983	1960	1958	1979	1974	
MIN	.000	.15	.21	9.24	18.1	65.2	73.2	23.8	9.46	.42	.000	.000	
(WY)	1954	1964	1964	1977	1954	1954	1976	1976	1988	1954	1954	1954	

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1949 - 1991

ANNUAL TOTAL	232265.7	172438.19	
ANNUAL MEAN	636	472	352
HIGHEST ANNUAL MEAN			636
LOWEST ANNUAL MEAN			25.3
HIGHEST DAILY MEAN	20400	May 17	11800
LOWEST DAILY MEAN	3.3	Oct 1	.28
ANNUAL SEVEN-DAY MINIMUM	4.9	Sep 27	.44
INSTANTANEOUS PEAK FLOW			17000
INSTANTANEOUS PEAK STAGE			25.06
ANNUAL RUNOFF (CFSM)	2.17		1.61
ANNUAL RUNOFF (INCHES)	29.49		21.89
10 PERCENT EXCEEDS	1360		1290
50 PERCENT EXCEEDS	197		115
90 PERCENT EXCEEDS	15		2.3
			3.1

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 mi².

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.--Records fair, except those for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.04	1.6	2.8	17	8.5	4.2	7.2	2.9	14	.13	.00	.28
2	.03	1.8	163	12	7.6	6.2	6.1	2.7	367	.11	.00	.23
3	.02	1.8	18	9.2	7.4	5.0	5.4	2.5	7.8	.09	.00	.42
4	44	3.9	8.7	6.4	8.4	4.1	5.4	2.6	3.5	.08	.00	63
5	1.7	6.6	6.0	6.3	31	3.5	8.4	4.0	2.3	.07	.00	4.4
6	.65	4.7	4.4	58	341	3.9	6.1	3.2	1.7	.05	.00	1.8
7	.51	4.4	3.5	29	116	3.6	5.3	2.5	1.4	.04	.00	1.2
8	.64	6.8	3.0	16	27	3.0	5.5	2.3	1.2	.05	.00	.93
9	17	11	2.7	15	16	2.9	185	2.7	1.1	.05	.01	.81
10	15	2.8	2.4	14	12	2.6	41	2.4	.88	.06	.01	.72
11	3.1	1.8	2.3	103	9.3	2.5	15	2.3	.83	.05	.00	.65
12	1.3	1.3	2.1	38	7.3	5.0	11	3.1	.81	8.6	.00	.54
13	.90	1.1	1.8	17	28	200	257	2.2	.74	1.3	.00	.62
14	.77	1.0	40	12	79	35	68	2.1	.65	.49	.00	.79
15	.81	1.1	11	11	19	15	62	3.1	.64	.24	.00	.48
16	.72	1.1	43	23	11	11	18	1.9	1.0	.16	.00	.35
17	1.3	.96	e710	19	9.8	73	12	1.6	1.1	.13	117	.27
18	46	.91	e400	10	182	68	8.8	1.9	.75	.10	78	.25
19	2.1	.85	e72	8.0	47	20	16	1.6	.65	.08	26	.23
20	.75	.77	e20	e7.0	22	13	11	1.4	.55	.07	4.3	.21
21	.49	12	53	e5.8	14	10	8.1	1.3	.48	.05	1.8	.20
22	3.2	7.4	90	e4.9	11	259	6.8	16	.72	.04	1.2	.19
23	1.9	3.5	112	e4.5	8.4	111	5.9	6.2	.81	.03	.86	.19
24	.73	2.6	23	e3.7	7.2	21	5.8	2.9	.46	.02	.66	.17
25	.63	2.2	12	e3.2	6.0	13	4.7	2.0	.34	.01	.53	.17
26	.79	2.7	8.5	e2.9	5.0	277	4.4	5.1	.30	.01	.47	.16
27	.88	25	6.3	e2.8	4.6	63	4.0	3.1	.26	.00	.42	.15
28	1.1	8.1	8.0	e3.1	4.2	30	3.9	2.1	.23	.00	.38	.14
29	1.1	4.4	299	e3.8	---	15	3.7	1.8	.20	.00	.34	.13
30	.98	3.4	523	82	---	11	3.2	1.7	.17	.00	.33	.13
31	1.2	---	43	14	---	8.4	---	1.4	---	.00	.30	---
TOTAL	150.34	127.59	2694.5	561.6	1049.7	1299.9	804.7	92.6	412.57	12.11	232.61	79.81
MEAN	4.85	4.25	86.9	18.1	37.5	41.9	26.8	2.99	13.8	.39	7.50	2.66
MAX	46	25	710	103	341	277	257	16	367	8.6	117	63
MIN	.02	.77	1.8	2.8	4.2	2.5	3.2	1.3	.17	.00	.00	.13
CFSM	.43	.37	7.62	1.59	3.29	3.68	2.35	.26	1.21	.03	.66	.23
IN.	.49	.42	8.79	1.83	3.43	4.24	2.63	.30	1.35	.04	.76	.26

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 1991, BY WATER YEAR (WY)

	MEAN	2.34	9.78	17.7	18.2	23.0	29.4	22.7	18.6	7.29	7.03	3.46	1.69
MAX	19.7	64.5	86.9	70.4	51.8	89.6	59.8	80.7	45.2	72.0	41.9	11.0	
(WY)	1984	1986	1991	1959	1971	1963	1972	1968	1981	1962	1978	1974	
MIN	.000	.000	.000	.063	1.44	4.22	2.12	.76	.12	.025	.000	.000	
(WY)	1958	1964	1964	1977	1964	1969	1976	1976	1965	1970	1964	1957	

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1956 - 1991

ANNUAL TOTAL	8510.71	7518.03	13.4	
ANNUAL MEAN	23.3	20.6	23.3	1973
HIGHEST ANNUAL MEAN			5.92	1977
LOWEST ANNUAL MEAN			1460	Jan 21 1959
HIGHEST DAILY MEAN	e710	Dec 17	.00	Oct 4 1955
LOWEST DAILY MEAN	.00	Aug 11	.00	Aug 6 1956
ANNUAL SEVEN-DAY MINIMUM	.00	Aug 11	.00	Jun 10 1981
INSTANTANEOUS PEAK FLOW		2140	9360	Jun 10 1981
INSTANTANEOUS PEAK STAGE		9.82	12.99	Jun 10 1981
ANNUAL RUNOFF (CFSM)	2.05	1.81	1.17	
ANNUAL RUNOFF (INCHES)	27.77	24.53	15.96	
10 PERCENT EXCEEDS	39	42	23	
50 PERCENT EXCEEDS	4.2	2.8	2.0	
90 PERCENT EXCEEDS	.17	.07	.00	

e Estimated

03369000 VERNON FORK MUSCATATUCK RIVER NEAR BUTLERVILLE, IN

LOCATION.--Lat 39°02'55", long 85°32'40", in NW1/4 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 mi².

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.--Records good. Water supply for the Muscatatuck State School is diverted and the sewage effluent returned above station. Flow regulated by Brush Creek Reservoir.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	11	51	201	e80	48	75	24	9.5	1.4	68	4.0
2	3.8	10	41	139	e71	59	63	21	689	1.5	55	4.9
3	3.6	9.6	1040	106	71	56	54	19	122	1.6	5.1	7.9
4	549	9.3	264	e72	72	47	52	19	39	1.5	4.8	741
5	97	11	120	e68	129	42	72	26	19	1.4	5.0	124
6	42	28	82	204	1720	41	60	45	12	1.1	11	34
7	24	22	62	212	1200	44	50	24	9.5	1.2	12	17
8	16	14	48	136	268	36	47	19	7.6	2.8	13	12
9	702	13	40	111	169	33	838	19	6.5	2.3	21	8.5
10	416	68	35	105	130	30	520	19	5.4	5.0	16	7.6
11	131	43	31	560	101	29	168	17	4.8	4.6	7.8	7.0
12	68	26	28	407	81	33	112	24	6.8	186	5.5	6.3
13	45	20	26	178	95	1180	1800	17	8.0	26	4.2	87
14	31	17	23	129	413	361	551	16	5.3	8.1	2.8	24
15	22	15	182	119	e170	159	439	32	4.1	4.6	2.5	11
16	17	14	129	177	e90	111	197	17	5.7	2.9	2.3	8.0
17	15	14	132	174	e86	230	129	13	4.4	2.3	177	6.5
18	375	13	2870	114	1010	708	97	41	4.2	1.9	686	6.0
19	111	13	727	89	489	213	139	30	4.0	1.7	145	5.2
20	61	13	204	83	230	138	128	15	3.2	1.6	69	4.8
21	43	12	260	e72	150	109	90	11	2.7	1.5	20	4.7
22	57	89	674	e50	117	1170	75	21	4.8	1.5	11	4.9
23	76	112	779	e45	93	1190	63	37	4.6	1.5	8.0	4.8
24	46	57	242	e42	80	230	59	23	2.1	1.3	6.4	4.4
25	32	40	e130	e34	69	140	48	16	2.2	1.1	5.5	4.4
26	25	32	e86	e32	59	1300	44	46	2.2	1.0	4.7	4.2
27	21	35	e64	e32	54	546	39	46	1.7	.99	4.6	4.0
28	18	218	e68	e36	50	322	37	22	1.7	.99	4.6	4.4
29	15	122	e1200	e43	---	162	35	15	1.7	17	4.1	4.6
30	14	69	e2000	397	---	115	30	13	1.6	70	4.1	4.2
31	12	---	592	e130	---	88	---	11	---	70	4.2	---
TOTAL	3091.8	1169.9	12230	4297	7347	8970	6111	718	995.3	426.38	1390.2	1171.3
MEAN	99.7	39.0	395	139	262	289	204	23.2	33.2	13.8	44.8	39.0
MAX	702	218	2870	560	1720	1300	1800	46	689	186	686	741
MIN	3.4	9.3	23	32	50	29	30	11	1.6	.99	2.3	4.0
CFSM	1.16	.45	4.59	1.61	3.05	3.37	2.37	.27	.39	.16	.52	.45
IN.	1.34	.51	5.30	1.86	3.18	3.88	2.65	.31	.43	.18	.60	.51

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 1991, BY WATER YEAR (WY)

	MEAN	15.1	60.3	109	154	168	213	161	123	54.6	42.3	24.8	15.8
MAX	99.7	441	395	763	492	604	446	554	297	240	308	126	
(WY)	1991	1986	1991	1950	1950	1945	1947	1968	1960	1962	1978	1950	
MIN	.33	.34	.37	1.28	11.3	29.3	18.4	6.91	1.56	1.22	1.32	.37	
(WY)	1952	1944	1944	1977	1964	1983	1976	1949	1965	1954	1951	1943	

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1943 - 1991

ANNUAL TOTAL	55060.3	47917.88	
ANNUAL MEAN	151	131	94.8
HIGHEST ANNUAL MEAN			188
LOWEST ANNUAL MEAN			13.1
HIGHEST DAILY MEAN	3840	May 16	13200
LOWEST DAILY MEAN	1.3	Aug 18	.00
ANNUAL SEVEN-DAY MINIMUM	1.5	Aug 14	.00
INSTANTANEOUS PEAK FLOW			26200
INSTANTANEOUS PEAK STAGE			25.41
ANNUAL RUNOFF (CFSM)	1.76		1.10
ANNUAL RUNOFF (INCHES)	23.84		15.00
10 PERCENT EXCEEDS	314		185
50 PERCENT EXCEEDS	45		19
90 PERCENT EXCEEDS	4.5		1.2

03369500 VERNON FORK MUSCATATUCK RIVER AT VERNON, IN

LOCATION.--Lat 38°58'34", long 85°37'13", in NW1/4 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 mi².

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. WDR IN-91-1: 1990.

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.--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 and Brush Creek Reservoir.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.2	15	38	665	342	220	326	147	56	15	5.7	76
2	2.1	14	35	255	917	178	421	195	55	14	5.9	38
3	2.8	13	32	207	665	169	243	140	344	12	4.6	25
4	3.2	13	30	276	2800	142	190	2390	147	11	4.2	19
5	2.5	12	30	392	953	128	163	2340	78	9.4	6.2	14
6	2.9	24	31	209	420	117	139	1010	92	36	9.0	11
7	5.6	90	32	155	366	104	119	583	954	68	19	8.8
8	3.9	342	32	133	315	97	106	315	416	23	11	6.8
9	2.3	356	30	121	889	101	98	223	209	14	7.0	6.0
10	2.0	129	28	116	1140	112	2000	195	147	11	5.6	123
11	2.8	71	29	112	438	498	2190	147	103	9.5	4.1	39
12	3.0	52	29	99	296	264	495	186	78	597	2.9	137
13	2.9	44	25	85	226	177	294	3130	61	393	2.6	238
14	3.1	38	21	76	187	150	228	704	67	113	2.7	48
15	4.6	690	20	77	3450	136	201	1890	160	55	2.6	198
16	9.1	2220	18	77	3710	1270	167	8300	68	37	2.6	102
17	79	404	16	85	685	548	149	6270	42	29	2.5	34
18	87	209	14	394	398	286	127	876	38	23	2.5	19
19	63	125	13	227	290	207	108	465	38	20	2.3	234
20	93	91	12	2380	196	171	103	362	89	25	42	316
21	83	77	11	882	162	146	1090	294	167	185	345	96
22	61	65	10	380	161	132	472	285	93	87	692	47
23	46	56	9.0	235	165	122	260	209	54	81	167	33
24	35	49	8.4	190	149	124	191	157	41	45	66	25
25	28	44	8.4	162	126	159	152	136	37	24	32	19
26	22	46	8.6	141	103	221	129	127	30	17	22	14
27	21	47	10	122	135	171	110	118	27	14	16	11
28	14	48	13	109	407	140	101	100	22	10	13	8.2
29	13	45	16	188	---	129	152	87	18	7.7	897	7.1
30	13	44	43	332	---	148	121	75	16	6.4	437	5.9
31	11	---	1390	354	---	397	---	63	---	6.0	167	---
TOTAL	724.0	5473	2042.4	9236	20091	6964	10645	31519	3747	1998.0	2999.0	1958.8
MEAN	23.4	182	65.9	298	718	225	355	1017	125	64.5	96.7	65.3
MAX	93	2220	1390	2380	3710	1270	2190	8300	954	597	897	316
MIN	2.0	12	8.4	76	103	97	98	63	16	6.0	2.3	5.9
CFSM	.12	.92	.33	1.50	3.62	1.13	1.79	5.14	.63	.33	.49	.33
IN.	.14	1.03	.38	1.74	3.77	1.31	2.00	5.92	.70	.38	.56	.37

CAL YR 1989 TOTAL 106795.8 MEAN 293 MAX 5510 MIN 1.1 CFSM 1.48 IN. 20.06
WTR YR 1990 TOTAL 97397.2 MEAN 267 MAX 8300 MIN 2.0 CFSM 1.35 IN. 18.30

03369500 VERNON FORK MUSCATATUCK RIVER AT VERNON, IN --Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	25	120	553	e210	117	172	77	25	4.3	69	12
2	4.2	23	101	362	e180	132	148	67	1690	4.5	62	7.7
3	4.1	20	1590	261	169	138	132	60	436	6.0	40	5.2
4	803	18	740	e170	168	121	124	57	214	5.0	12	792
5	315	21	278	e160	228	108	147	60	116	4.0	5.1	390
6	132	24	187	512	3170	105	147	87	69	3.4	6.6	141
7	66	58	150	711	3130	110	125	69	44	3.0	18	50
8	38	45	124	379	724	101	118	52	33	2.9	14	30
9	524	32	106	285	424	89	1320	51	27	7.7	26	21
10	926	89	94	264	310	84	1600	49	23	9.0	25	16
11	327	140	85	933	239	79	419	48	19	13	18	11
12	176	78	79	1130	193	82	262	44	17	126	10	9.0
13	121	54	74	441	202	2120	3330	52	15	173	6.5	74
14	86	43	68	300	1100	995	1440	79	17	39	4.9	124
15	60	37	337	254	e470	395	944	108	15	18	4.1	37
16	41	33	378	351	e220	259	519	67	137	11	3.1	19
17	30	32	218	384	e210	292	313	42	128	7.1	77	12
18	743	30	5390	264	1890	1580	229	56	26	5.0	1540	e10
19	309	29	2170	202	1300	543	244	104	15	3.9	302	e8.4
20	160	28	573	186	605	331	300	52	12	3.0	374	e7.4
21	115	29	451	e170	362	253	203	35	9.9	2.5	101	e6.7
22	111	72	1600	e130	268	1830	172	42	8.3	2.3	42	e7.0
23	176	291	1690	e110	212	3130	149	199	38	2.3	25	e6.5
24	132	145	685	e105	182	613	139	88	24	2.8	17	e6.0
25	95	101	e290	e84	163	348	126	54	11	2.7	13	e5.7
26	70	80	e200	e80	144	1990	112	63	7.8	2.5	10	e5.5
27	56	71	e150	e80	132	1300	105	154	6.1	2.4	8.1	e5.4
28	45	274	e160	e91	123	873	101	84	5.3	2.3	6.3	e6.0
29	40	311	3040	e110	---	394	97	47	5.0	1.9	5.3	e6.0
30	31	156	6970	826	---	264	89	36	4.4	1.9	4.6	e5.6
31	27	---	1710	e330	---	201	---	31	---	65	4.8	---
TOTAL	5767.3	2389	29808	10218	16728	18977	13326	2114	3197.8	537.4	2854.4	1837.1
MEAN	186	79.6	962	330	597	612	444	68.2	107	17.3	92.1	61.2
MAX	926	311	6970	1130	3170	3130	3330	199	1690	173	1540	792
MIN	4.0	18	68	80	123	79	89	31	4.4	1.9	3.1	5.2
CFSM	.94	.40	4.86	1.66	3.02	3.09	2.24	.34	.54	.09	.47	.31
IN.	1.08	.45	5.60	1.92	3.14	3.57	2.50	.40	.60	.10	.54	.35

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1991, BY WATER YEAR (WY)

	MEAN	35.9	140	261	356	405	494	383	280	142	95.5	57.8	34.8
MAX	292	986	962	2049	1188	1798	1014	1440	963	581	639	284	
(WY)	1984	1986	1991	1950	1950	1945	1947	1968	1960	1962	1978	1974	
MIN	.22	.61	1.03	4.23	24.4	19.0	37.3	8.77	1.80	.63	.003	.19	
(WY)	1941	1954	1944	1977	1964	1941	1941	1941	1988	1954	1940	1943	

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1940 - 1991

ANNUAL TOTAL	127122.1	107754.0	
ANNUAL MEAN	348	295	223
HIGHEST ANNUAL MEAN			468
LOWEST ANNUAL MEAN			32.8
HIGHEST DAILY MEAN	8300	6970	31900
LOWEST DAILY MEAN	2.3	1.9	.00
ANNUAL SEVEN-DAY MINIMUM	2.5	2.4	.00
INSTANTANEOUS PEAK FLOW		11600	56800
INSTANTANEOUS PEAK STAGE		18.35	35.13
ANNUAL RUNOFF (CFSM)	1.76	1.49	1.13
ANNUAL RUNOFF (INCHES)	23.88	20.24	15.30
10 PERCENT EXCEEDS	697	730	458
50 PERCENT EXCEEDS	124	89	45
90 PERCENT EXCEEDS	11	5.6	2.4

LOCATION.--Lat 38°46'10", long 86°24'30", in SW1/4 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.

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 ft³/s, at former site.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1991, BY WATER YEAR (WY)

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1940 - 1991	
ANNUAL TOTAL	2284514		2043776			
ANNUAL MEAN	6259		5599		4054	
HIGHEST ANNUAL MEAN					6710	1979
LOWEST ANNUAL MEAN					643	1941
HIGHEST DAILY MEAN	53700	May 20	53900	Jan 3	73100	Mar 12 1964
LOWEST DAILY MEAN	868	Oct 3	414	Sep 30	138	Sep 7 1941
ANNUAL SEVEN-DAY MINIMUM	991	Sep 28	431	Sep 24	196	Sep 5 1941
INSTANTANEOUS PEAK FLOW			54900	Jan 3	75700	Mar 12 1964
INSTANTANEOUS PEAK STAGE			32.34	Jan 3	35.97	May 11 1961
ANNUAL RUNOFF (CFSM)	1.62		1.45		1.05	
ANNUAL RUNOFF (INCHES)	22.01		19.69		14.27	
10 PERCENT EXCEEDS	12900		14300		10100	
50 PERCENT EXCEEDS	4120		2920		2040	
90 PERCENT EXCEEDS	1410		574		466	

03371520 BACK CREEK AT LEESVILLE, IN

LOCATION.--Lat 38°50'48", long 86°18'06", in SW 1/4 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 mi².
 PERIOD OF RECORD.--October 1970 to current year.
 REVISED RECORDS.--WDR IN-72-1: 1971.
 GAGE.--Water-stage recorder. Datum of gage is 575.00 ft above National Geodetic Vertical Datum of 1929.
 REMARKS.--Records good, except for estimated daily discharges, which are poor.
 EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1913 reached a stage of 18.1 ft from information by local resident.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.15	4.2	8.8	72	22	16	30	8.7	1.6	.02	.00	.00
2	.13	3.8	6.4	50	18	20	24	7.6	1.6	.02	.00	.00
3	.13	3.4	170	36	17	16	20	6.9	6.3	.01	.00	.00
4	71	3.5	58	26	16	14	24	7.3	2.5	.01	.00	81
5	2.5	4.1	32	24	29	13	38	8.3	1.6	.01	.00	6.2
6	1.3	6.3	18	77	536	14	29	7.8	1.1	.02	24	1.4
7	1.2	6.7	11	70	158	13	25	6.1	.85	.01	3.1	.55
8	1.1	5.7	7.7	54	79	11	24	5.3	.69	.01	.25	.23
9	49	5.9	6.4	44	56	10	25	5.7	.53	.09	3.7	.12
10	28	7.8	5.6	38	45	9.6	22	5.4	.40	.10	3.6	.09
11	7.9	8.0	4.9	94	36	9.2	19	5.0	.32	.04	.75	.08
12	3.8	6.7	4.5	78	29	11	17	4.7	.29	.03	.19	.07
13	2.6	5.9	4.0	53	38	104	224	4.4	.21	.02	.05	.07
14	1.9	5.3	3.4	42	127	70	121	4.1	.17	.01	.02	.07
15	1.8	5.0	33	35	65	50	107	4.0	.11	.01	.02	.06
16	1.6	4.7	19	44	e45	40	74	3.9	.10	.01	.02	.05
17	1.4	4.7	30	38	39	99	55	6.7	.09	.01	.01	.03
18	30	4.4	513	31	140	135	44	5.3	.10	.01	.01	.04
19	6.3	4.2	134	27	103	73	65	4.4	.11	.00	.01	.03
20	3.8	3.9	60	25	72	54	52	3.4	.08	.00	.00	.03
21	2.9	3.6	124	e18	56	45	44	2.9	.07	.00	.00	.03
22	5.3	25	135	e15	46	334	36	2.6	.07	.00	.00	.03
23	5.6	17	e60	e13	37	244	30	2.4	.06	.00	.00	.03
24	4.6	7.9	e35	e11	31	99	25	2.4	.05	.00	.00	.03
25	4.9	5.6	e24	e10	25	68	20	2.6	.03	.00	.00	.02
26	4.9	4.6	e17	e9.5	20	97	18	6.7	.03	.00	.00	.02
27	5.1	9.7	e16	e9.1	18	89	16	5.7	.03	.00	.00	.02
28	5.6	89	e15	e8.8	16	71	14	3.8	.03	.00	.00	.02
29	5.4	30	278	e10	---	56	13	2.9	.03	.00	.00	.02
30	5.1	14	1130	52	---	44	10	2.4	.02	.00	.00	.02
31	4.6	---	142	30	---	36	---	2.0	---	.00	.00	---
TOTAL	269.61	310.6	3105.7	1144.4	1919	1964.8	1265	151.4	19.17	0.44	35.73	90.36
MEAN	8.70	10.4	100	36.9	68.5	63.4	42.2	4.88	.64	.014	1.15	3.01
MAX	71	89	1130	94	536	334	224	8.7	6.3	.10	24	81
MIN	.13	3.4	3.4	8.8	16	9.2	10	2.0	.02	.00	.00	.00
CFSM	.36	.43	4.16	1.53	2.84	2.63	1.75	.20	.03	.00	.05	.12
IN.	.42	.48	4.79	1.77	2.96	3.03	1.95	.23	.03	.00	.06	.14

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1991, BY WATER YEAR (WY)

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
MEAN	9.26	31.2	44.2	37.9	54.0	68.5	57.8	36.9	15.2	21.2	13.2	5.92									
MAX	48.0	132	101	147	105	168	176	150	63.3	195	92.4	60.9									
(WY)	1984	1986	1983	1982	1979	1989	1972	1990	1973	1973	1979	1974									
MIN	.000	1.05	2.37	.98	10.3	9.74	8.62	2.70	.25	.014	.080	.000									
(WY)	1989	1988	1990	1977	1978	1981	1976	1988	1988	1991	1988	1988									

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1971 - 1991

ANNUAL TOTAL	14981.30	10276.21	32.9
ANNUAL MEAN	41.0	28.2	64.6
HIGHEST ANNUAL MEAN			14.4
LOWEST ANNUAL MEAN			1973
HIGHEST DAILY MEAN	1500	1130	5000
LOWEST DAILY MEAN	.13	.00	.00
ANNUAL SEVEN-DAY MINIMUM	.18	.00	.00
INSTANTANEOUS PEAK FLOW		2890	15300
INSTANTANEOUS PEAK STAGE		7.08	14.00
ANNUAL RUNOFF (CFSM)	1.70	1.17	1.36
ANNUAL RUNOFF (INCHES)	23.12	15.86	18.52
10 PERCENT EXCEEDS	89	70	72
50 PERCENT EXCEEDS	7.7	5.6	9.3
90 PERCENT EXCEEDS	.69	.01	.33

03372300 STEPHENS CREEK NEAR BLOOMINGTON, IN

LOCATION.--lat 39°10'11", long 86°25'07", in NE1/4 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 mi².
 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.--Records poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.60	e.53	6.9	e45	e8.4	6.2	13	4.9	.51	.16	e.09	e.04
2	e.86	e.48	5.2	e22	e9.4	9.0	11	4.1	.79	.22	e.08	e.03
3	e1.4	e.49	26	e16	e11	7.4	9.5	3.6	.91	.17	e.06	e.05
4	8.2	e.94	16	e11	13	6.8	12	3.5	.57	.19	e.11	.10
5	3.1	e1.8	9.7	e9.0	16	6.3	17	3.5	.46	.21	e.08	.08
6	2.5	e2.2	7.1	e13	174	6.7	15	3.5	.42	.29	e.15	e.06
7	2.3	e1.5	5.4	15	59	6.2	14	3.2	.38	.17	e.24	e.05
8	2.1	e1.3	4.3	14	28	5.5	14	3.0	.35	.15	e.14	e.04
9	6.3	e1.5	3.6	13	19	5.1	15	3.0	.33	.16	e.20	e.03
10	19	e1.7	3.1	12	15	4.8	13	2.8	.32	.17	e.23	e.03
11	8.1	e1.5	2.8	35	11	4.4	12	2.7	.90	.18	e.16	e.02
12	4.7	e1.3	2.6	38	9.1	5.3	10	2.6	.83	.11	e.11	e.02
13	3.4	e1.2	2.5	24	10	39	27	2.5	.47	.27	e.10	e.01
14	e2.8	e1.0	2.3	19	37	25	31	2.4	.40	e.23	e.09	e.00
15	e2.0	e.90	10	16	e25	17	37	2.3	.36	e.21	e.08	e.00
16	e1.5	e.80	8.4	22	e15	13	30	2.1	.41	.19	e.07	.00
17	e3.1	e.90	58	20	e14	50	23	2.1	.37	.29	e.10	.00
18	e7.0	e.78	192	17	46	64	18	6.2	.32	.36	e.16	.00
19	e5.5	e.73	56	15	45	28	115	3.2	.27	e.32	e.10	.00
20	e3.0	e.72	25	13	31	19	45	2.7	.26	e.25	e.13	.00
21	e1.5	e1.2	40	e11	22	15	27	2.4	.25	e.19	e.10	.00
22	e1.7	e3.6	47	e9.5	16	127	20	2.2	.23	e.16	e.09	.00
23	e1.8	e3.3	27	e8.2	13	114	17	2.1	.24	e.14	e.08	.00
24	e1.4	e2.6	e21	e7.0	10	36	14	2.1	.22	e.15	e.07	.00
25	e1.7	e2.2	e16	e6.4	8.6	22	12	2.5	.21	e.15	e.06	.00
26	e2.0	e4.5	e10	e5.6	7.3	239	10	3.6	.21	e.12	e.06	.00
27	e2.1	18	e8.2	e5.2	6.4	79	8.8	e3.0	.20	e.10	e.05	.00
28	e1.3	59	e18	e5.2	5.8	37	7.5	e2.0	.18	e.09	e.05	.00
29	e1.0	17	180	e5.7	---	25	6.7	e1.4	.18	e.08	e.07	.00
30	e.74	9.7	691	e10	---	19	5.8	e1.0	.17	e.09	e.06	.00
31	e.62	---	e81	e9.0	---	15	---	.69	---	e.10	e.05	---
TOTAL	103.32	143.37	1586.1	471.8	685.0	1056.7	610.3	86.89	11.72	16.56	3.22	0.56
MEAN	3.33	4.78	51.2	15.2	24.5	34.1	20.3	2.80	.39	.53	.10	.019
MAX	19	59	691	45	174	239	115	6.2	.91	.11	.24	.10
MIN	.60	.48	2.3	5.2	5.8	4.4	5.8	.69	.17	.08	.05	.00
CFSM	.31	.44	4.69	1.40	2.24	3.13	1.87	.26	.04	.05	.01	.00
IN.	.35	.49	5.41	1.61	2.34	3.61	2.08	.30	.04	.06	.01	.00

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1991, BY WATER YEAR (WY)

	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
MEAN	2.70	13.6	20.1	14.4	24.2	31.4	27.9	19.7	4.47	4.95	2.46	2.55									
MAX	8.19	55.4	59.1	39.9	50.2	52.3	56.0	62.3	13.4	48.6	13.3	15.9									
(WY)	1986	1986	1983	1982	1990	1973	1984	1981	1975	1979	1979	1974									
MIN	.000	.47	.24	.078	3.68	11.9	5.01	.91	.073	.10	.005	.015									
(WY)	1988	1988	1977	1977	1978	1987	1976	1988	1988	1988	1988	1988									

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1971 - 1991

	1990	1991	1971-1991
ANNUAL TOTAL	6716.08	4775.54	14.0
ANNUAL MEAN	18.4	13.1	21.1
HIGHEST ANNUAL MEAN			6.30
LOWEST ANNUAL MEAN			1979
HIGHEST DAILY MEAN	691	691	691
LOWEST DAILY MEAN	.13	.00	.00
ANNUAL SEVEN-DAY MINIMUM	.14	.00	.00
INSTANTANEOUS PEAK FLOW		1230	5400
INSTANTANEOUS PEAK STAGE		10.07	13.18
ANNUAL RUNOFF (CFSM)	1.69	1.20	1.28
ANNUAL RUNOFF (INCHES)	22.92	16.30	17.44
10 PERCENT EXCEEDS	33	27	33
50 PERCENT EXCEEDS	4.9	2.7	3.8
90 PERCENT EXCEEDS	.30	.07	.14

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 mi².

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

REVISED RECORDS.--WSP 1705: 1959. WSP 1725: 1956(M). WSP 2109: Drainage area.

GAGE.--Data-Collection Platform installed on May 13, 1988. Datum of gage was 480.00 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Oct. 1, 1960, to Sept. 30, 1974, water-stage recorder at site described in "LOCATION" paragraph. Prior to Oct. 1, 1960, nonrecording gage at site 0.7 mi upstream at datum 2.41 ft higher.

REMARKS.--Flow regulated by Monroe Lake since April 1966. Daily discharge computed from relation between discharge, head, and gate openings for Monroe Lake beginning Oct. 1, 1974.

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

AVERAGE DISCHARGE.--36 years, 493 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 22,000 ft³/s June 25, 1960, gage height, 32.76 ft site and datum then in use; maximum gage height at present site and datum, 35.35 ft May 9, 1961; no flow Sept. 29 to Dec. 2, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 2,160 ft³/s Jan. 24; minimum daily, 50 ft³/s Aug. 21 to Sept. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	367	56	231	2090	1970	980	2060	135	51	51	50
2	51	366	57	231	2080	1960	1100	2050	135	51	51	50
3	51	366	106	232	2070	1950	1500	2050	135	51	51	50
4	51	311	204	232	2060	1940	1490	2040	135	51	51	50
5	51	200	332	232	2060	1940	1490	2030	135	51	51	50
6	51	201	565	232	1510	1930	1710	2020	135	51	51	50
7	51	149	564	232	437	1920	2030	2010	135	51	51	50
8	51	56	563	232	224	1910	2110	1890	135	51	51	50
9	51	56	561	496	224	1900	2100	1710	134	51	51	50
10	51	56	560	514	225	1900	2100	1350	134	51	51	50
11	51	56	559	232	225	1890	2090	713	134	51	51	50
12	51	56	494	233	225	1880	2080	371	134	51	51	50
13	51	56	366	482	225	1880	1450	371	93	51	51	50
14	51	56	310	893	386	1880	1140	371	51	51	51	50
15	51	56	200	1010	630	1270	1140	371	51	51	51	50
16	51	56	201	1330	815	590	1140	371	51	51	51	50
17	51	56	201	1810	1160	590	1140	371	51	51	51	50
18	51	56	203	2040	931	596	1140	371	51	51	51	50
19	51	56	208	1810	634	600	1150	275	51	51	51	50
20	51	56	210	1800	636	601	1150	205	51	51	51	50
21	51	56	211	2030	858	602	1150	154	51	51	50	50
22	51	56	212	2020	979	604	1530	51	51	51	50	50
23	51	56	213	2100	979	389	1830	51	51	51	50	50
24	51	56	213	2160	1250	221	1820	51	51	51	50	50
25	51	56	213	2150	1500	222	1810	51	51	51	50	50
26	51	56	213	2140	1740	224	1810	52	51	51	50	50
27	51	56	644	2130	1980	226	1800	52	51	51	50	50
28	51	56	617	2120	1970	228	1800	52	51	51	50	50
29	210	56	213	2110	---	228	1790	73	51	51	50	50
30	368	56	220	2100	---	433	1960	93	51	51	50	50
31	367	---	229	2100	---	838	---	107	---	51	50	---
TOTAL	2373	3248	9718	37664	30103	35312	47530	23787	2576	1581	1570	1500
MEAN	76.5	108	313	1215	1075	1139	1584	767	85.9	51.0	50.6	50.0
MAX	368	367	644	2160	2090	1970	2110	2060	135	51	51	50
MIN	51	56	56	231	224	221	980	51	51	51	50	50

CAL YR 1990 TOTAL 206128 MEAN 565 MAX 2060 MIN 51
WTR YR 1991 TOTAL 196962 MEAN 540 MAX 2160 MIN 50

03373500 EAST FORK WHITE RIVER AT SHOALS, IN

LOCATION (Revised).--Lat 38°39'58", long 86°47'35", in SW1/4 sec.30, T.3 N., R.3 W., Martin County, Hydrologic Unit 05120208, on left bank 100 feet downstream of Baltimore and Ohio Railroad bridge, 440 feet downstream from U.S. Highway 50 bridge at Shoals, 0.9 mi upstream from Beaver Creek, 6.6 mi downstream from Indian Creek, and at mile 105.2.

DRAINAGE AREA.--4,927 mi².

PERIOD OF RECORD.--June 1903 to July 1906, October 1908 to September 1916, June 1923 to current year. Monthly discharge only for some periods, published in WSP 1305. Published as East Branch White River at Shoals, 1903-06, 1908-16. Gage-height records collected at same site since May 1908 are contained in reports of the National Weather Service.

REVISED RECORDS.--WSP 353: 1912. WSP 1335: 1903-6. WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 442.25 ft above National Geodetic Vertical Datum of 1929. Oct. 26, 1932 to Dec. 13, 1989, water-stage recorder located at U.S. Highway 50 bridge 440 ft upstream. See WSP 1725 for history of changes prior to Oct. 26, 1932.

REMARKS.--Records good except for estimated daily discharges, which are poor. Flow partially regulated by upstream reservoirs.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1190	2750	5470	29500	7940	7420	20300	5980	3360	1230	e610	459
2	1200	2620	6180	31200	8590	7170	16300	5940	3280	1180	564	430
3	1150	2520	6370	38800	8040	7050	12600	5800	4120	1140	548	410
4	1580	2440	7790	47200	7260	6900	9790	5600	4690	1110	532	480
5	2160	2360	8050	50100	7000	6770	8330	5580	5060	1130	531	645
6	2080	2160	9280	47300	11900	6570	7750	5490	4320	1250	551	1150
7	2960	2060	10300	41000	19200	6340	7530	5420	3520	1250	602	2020
8	3260	2000	9800	31500	18800	6180	7590	5370	3010	1240	647	2070
9	3040	1880	7650	21500	18500	6060	7450	5310	2670	1200	699	1470
10	3900	1900	6180	16000	20900	5970	7120	5120	2360	1090	813	1060
11	4680	1950	5540	14400	23100	5800	7730	4600	2190	1020	806	821
12	5880	1940	5150	14900	23100	5660	9510	4030	2240	1150	868	672
13	6510	2070	4670	14400	20600	6640	11600	3420	2220	1360	823	588
14	6230	2080	4190	14300	17800	9760	16300	3300	2060	1420	729	523
15	5420	1930	4040	e15100	15700	11300	16300	3300	2130	1540	651	481
16	4470	1820	4190	e15900	13500	12700	17500	3270	2090	1670	608	456
17	3710	1750	4700	e15600	12600	15000	19000	3680	2010	1500	572	443
18	3350	1780	9690	e14400	13100	19900	19400	3970	2060	1320	535	506
19	3260	1720	19000	e13600	15400	21000	19200	3740	1880	1160	503	563
20	3790	1660	17800	e12800	14200	18900	18400	3510	1890	1040	888	517
21	5000	1650	16500	e11700	14100	17300	15100	3650	1880	972	1830	460
22	5170	1790	20900	e9300	15100	17700	13200	4400	1780	912	1590	432
23	4550	2000	24900	e8500	15700	20500	12300	4240	1650	869	1290	434
24	4000	2210	26600	e7800	15200	20100	10800	3870	1510	855	1070	409
25	3750	2710	26600	e7250	13400	19000	9140	4420	1410	820	881	395
26	3650	3370	25700	e7000	10800	21100	8030	4730	1340	766	748	379
27	3410	3430	24100	e6800	8850	24300	7380	4420	1300	e720	662	357
28	2990	3850	21400	e6750	7990	26000	6890	4070	1350	e700	597	344
29	2700	5210	19200	6790	---	25400	6500	3860	1360	e670	545	337
30	2540	4530	23500	6980	---	24300	6170	3910	1290	e650	500	336
31	2730	---	29100	7420	---	23000	---	3750	---	e630	483	---
TOTAL	110310	72140	414540	585790	398370	431790	355210	137750	72030	33564	23276	19647
MEAN	3558	2405	13370	18900	14230	13930	11840	4444	2401	1083	751	655
MAX	6510	5210	29100	50100	23100	26000	20300	5980	5060	1670	1830	2070
MIN	1150	1650	4040	6750	7000	5660	6170	3270	1290	630	483	336
CFSM	.72	.49	2.71	3.84	2.89	2.83	2.40	.90	.49	.22	.15	.13
IN.	.83	.54	3.13	4.42	3.01	3.26	2.68	1.04	.54	.25	.18	.15

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1904 - 1991, BY WATER YEAR (WY)

	1991	2798	5341	8835	8802	11310	10070	7165	4146	2841	1837	1355
MEAN	1591	2798	5341	8835	8802	11310	10070	7165	4146	2841	1837	1355
MAX	12520	13390	17890	47640	30870	34300	24000	24990	14840	13520	15220	9154
(WY)	1911	1986	1928	1937	1950	1945	1913	1961	1947	1958	1979	1926
MIN	262	293	305	432	589	562	1029	529	696	365	265	233
(WY)	1941	1955	1964	1931	1931	1941	1915	1941	1936	1954	1936	1954

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1904 - 1991
ANNUAL TOTAL	2748180	2654417	5484
ANNUAL MEAN	7529	7272	10370
HIGHEST ANNUAL MEAN			855
LOWEST ANNUAL MEAN			155000
HIGHEST DAILY MEAN	47600	May 22	50100
LOWEST DAILY MEAN	1010	Aug 22	336
ANNUAL SEVEN-DAY MINIMUM	1150	Aug 16	365
INSTANTANEOUS PEAK FLOW			50400
INSTANTANEOUS PEAK STAGE			27.28
ANNUAL RUNOFF (CFSM)	1.53		1.48
ANNUAL RUNOFF (INCHES)	20.75		20.04
10 PERCENT EXCEEDS	17800		19200
50 PERCENT EXCEEDS	4680		4040
90 PERCENT EXCEEDS	1500		609

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 mi².

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.--Records poor.

EXTREMES OUTSIDE PERIOD OF RECORDS.--Flood in March 1964 reached a stage of 28.1 ft, from floodmarks, discharge, 14,500 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	60	219	2870	392	e270	e500	178	136	26	15	12
2	31	60	171	2080	322	e255	e440	158	114	25	15	11
3	33	59	747	1490	295	e280	e380	142	137	25	15	11
4	93	58	1100	e1100	281	e260	e340	135	108	26	14	13
5	201	64	682	e740	280	e240	e320	132	89	26	14	24
6	79	69	499	e480	1240	e220	e310	134	79	24	14	35
7	42	70	384	1780	2210	e200	e275	117	71	23	15	23
8	31	65	306	1780	e1700	e220	e240	105	67	22	14	17
9	283	62	253	1450	e1300	e200	e270	102	63	21	16	14
10	718	73	218	1040	e970	e180	e300	100	59	25	22	15
11	515	80	190	1030	e720	e160	e250	93	56	25	22	13
12	255	78	170	1450	e630	e150	e210	90	54	23	21	12
13	148	71	153	1290	e580	e360	e415	87	51	22	16	11
14	104	64	135	938	e900	e740	e1070	88	49	22	15	10
15	78	59	221	714	e1600	e680	e910	81	46	20	15	10
16	65	57	443	650	e1100	e600	e760	78	46	19	13	9.8
17	54	56	399	628	e800	e560	e620	91	49	19	14	10
18	117	53	1890	560	e900	e780	e540	87	55	19	15	10
19	227	51	3470	506	e1150	e1000	e465	73	51	19	14	11
20	165	49	e2900	479	e975	e910	e420	68	48	18	15	9.8
21	107	47	e1380	443	e830	e700	e375	75	43	17	15	10
22	101	141	e1800	387	e640	1480	e335	72	45	17	13	9.8
23	126	353	e2210	346	e520	3080	e305	64	43	16	13	10
24	128	258	e1810	328	e430	2760	e265	249	38	16	12	10
25	110	166	e1450	297	e380	2100	e250	517	34	16	12	10
26	92	126	e940	282	e340	1480	e228	360	32	16	11	10
27	81	107	e650	268	e315	e690	e210	423	30	15	11	10
28	75	288	e530	307	e290	e800	e200	320	29	16	11	9.8
29	71	459	e460	312	---	e710	e185	237	28	15	11	9.2
30	68	318	2830	388	---	e640	e170	207	27	15	13	9.0
31	64	---	3860	470	---	e560	---	203	---	15	13	---
TOTAL	4283	3521	32470	26883	22090	23265	11558	4866	1777	623	449	379.4
MEAN	138	117	1047	867	789	750	385	157	59.2	20.1	14.5	12.6
MAX	718	459	3860	2870	2210	3080	1070	517	137	26	22	35
MIN	21	47	135	268	280	150	170	64	27	15	11	9.0
CFSM	.48	.41	3.65	3.02	2.75	2.61	1.34	.55	.21	.07	.05	.04
IN.	.56	.46	4.21	3.48	2.86	3.02	1.50	.63	.23	.08	.06	.05

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1991, BY WATER YEAR (WY)

	MEAN	304	468	463	583	692	690	498	259	187	135	76.8
MAX	203	1463	1069	1123	1166	1306	1402	2326	935	969	739	543
(WY)	1984	1986	1978	1982	1982	1978	1972	1983	1990	1973	1979	1974
MIN	10.9	14.7	19.5	12.7	110	112	97.1	52.9	18.6	19.7	14.2	11.3
(WY)	1988	1988	1981	1981	1978	1981	1976	1988	1988	1991	1991	1988

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1966 - 1991

ANNUAL TOTAL	200692	132164.4	368
ANNUAL MEAN	550	362	657
HIGHEST ANNUAL MEAN			1979
LOWEST ANNUAL MEAN			153
HIGHEST DAILY MEAN	12800	3860	12800
LOWEST DAILY MEAN	17	9.0	5.9
ANNUAL SEVEN-DAY MINIMUM	19	9.7	6.5
INSTANTANEOUS PEAK FLOW		4090	14000
INSTANTANEOUS PEAK STAGE		22.67	27.21
ANNUAL RUNOFF (CFSM)	1.92	1.26	1.28
ANNUAL RUNOFF (INCHES)	26.01	17.13	17.44
10 PERCENT EXCEEDS	1440	985	932
50 PERCENT EXCEEDS	236	128	149
90 PERCENT EXCEEDS	29	14	22

LOCATION.--Lat 38°31'42", long 87°15'12", in NE1/4 sec.12, T.1 N., R.8 W., Pike County, Hydrologic Unit 05120202, on left bank 300 ft upstream from intake structure of Indianapolis Power and Light Company's generating plant, 1.5 mi downstream from East Fork White River, 2.2 mi upstream from State Highway 61, 2.9 mi northeast of Petersburg, and at mile 48.0.

REMARKS.--Discharges below 1,500 ft³/s only published. Records poor. For a complete record of White River in this vicinity use records of White River at Petersburg, IN (sta. 03374000), 2.3 mi downstream.

[illegible]

03374000 WHITE RIVER AT PETERSBURG, IN

LOCATION.--Lat 38°30'39", long 87°17'22", in SE1SW1 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 mi².

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.--Records good. Flow partially regulated by upstream reservoirs.

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 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2690	5190	18400	61700	15700	16500	48100	14100	8920	3540	1840	1600
2	2580	5060	19500	73300	15900	15900	41700	13600	8300	3430	1810	1570
3	2490	4900	19400	88300	15900	15600	32800	13100	7870	3580	1780	1510
4	4600	4720	18500	104000	15600	15500	24800	12600	9270	3260	1760	1620
5	5090	4670	19700	109000	15400	15100	20400	12200	11000	3130	1740	1580
6	5460	4720	21100	106000	21900	14700	18200	11900	11000	3050	1740	1590
7	6050	4720	22600	98800	30300	14100	17300	11700	9670	3040	1790	1830
8	6440	4910	23000	87300	34700	13500	16900	11700	8270	3050	1920	2380
9	8000	5060	20900	73100	37000	13100	16800	11600	7270	3050	2110	2750
10	10300	5030	17200	57800	38300	12600	17100	11200	6590	3050	2260	2470
11	11600	4970	14300	44600	40200	12200	17000	10800	6070	2920	2230	2130
12	13600	4790	12400	37200	41400	11800	16900	10500	5660	2800	2200	1860
13	15600	4570	11500	32700	40100	13400	17900	9510	5420	4110	2170	1680
14	16100	4480	10800	30700	38400	17600	21000	8660	5250	6230	2150	1540
15	15500	4480	10400	29900	35000	22000	26200	8210	5050	5190	2130	1460
16	13500	4400	10600	29800	30400	24900	28500	8040	5000	4320	2040	1420
17	10800	4170	11700	29400	26100	28000	30900	8350	4940	3850	2030	1460
18	9180	3970	18400	28300	24300	36000	33200	8340	4930	3540	1870	1510
19	8350	3830	29300	27300	26300	40700	34600	8520	4970	3310	1780	1460
20	7960	3730	34500	26800	28100	42900	34500	8700	4870	3080	1730	1430
21	8230	3630	37500	26200	28400	42500	32700	9090	4820	2830	1730	1410
22	9170	3820	40800	24600	28400	42400	29400	9660	4670	2630	2330	1370
23	9520	4550	44600	22300	28300	46000	27400	9940	4510	2510	2530	1370
24	8840	4970	47800	20200	27700	46800	26000	9240	4290	2410	2330	1340
25	8120	5530	50200	18600	25900	47400	23300	8840	4010	2310	2150	1300
26	7640	5640	51100	17400	23000	49000	20300	10100	3810	2230	2010	1280
27	7200	6040	49700	16400	19900	52400	18000	10300	3720	2160	1870	1310
28	6620	9600	45500	15600	17700	54700	16600	9510	3830	2090	1770	1320
29	6020	15500	40900	15100	---	54600	15600	8910	3810	2010	1690	1290
30	5590	18000	45500	15400	---	53600	14800	8460	3710	1960	1640	1240
31	5270	---	54500	15500	---	51600	---	8550	---	1900	1590	---
TOTAL	258110	169650	872300	1383300	770300	937100	738900	315930	181500	96570	60720	48080
MEAN	8326	5655	28140	44620	27510	30230	24630	10190	6050	3115	1959	1603
MAX	16100	18000	54500	109000	41400	54700	48100	14100	11000	6230	2530	2750
MIN	2490	3630	10400	15100	15400	11800	14800	8040	3710	1900	1590	1240
CFSM	.75	.51	2.53	4.01	2.47	2.72	2.21	.92	.54	.28	.18	.14
IN.	.86	.57	2.92	4.63	2.58	3.13	2.47	1.06	.61	.32	.20	.16

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1991, BY WATER YEAR (WY)

	MEAN	3130	6014	11040	17580	18620	23150	22130	16770	10510	7144	4504	3309
MAX	12310	31940	38140	86440	67070	55340	42900	53820	30850	25620	39590	19640	
(WY)	1946	1986	1986	1950	1950	1945	1944	1961	1947	1958	1979	1989	
MIN	653	884	861	981	1388	1597	3767	1597	1950	1118	870	878	
(WY)	1941	1954	1964	1977	1931	1941	1941	1941	1988	1954	1936	1936	

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1928 - 1991

ANNUAL TOTAL	6636520	5832460		
ANNUAL MEAN	18180	15980		
HIGHEST ANNUAL MEAN			11960	
LOWEST ANNUAL MEAN			22760	1950
HIGHEST DAILY MEAN	119000	May 22	2138	1941
LOWEST DAILY MEAN	2490	Oct 3	182000	Jan 22 1937
ANNUAL SEVEN-DAY MINIMUM	2840	Sep 27	573	Oct 1 1941
INSTANTANEOUS PEAK FLOW			598	Sep 26 1941
INSTANTANEOUS PEAK STAGE			183000	Jan 22 1937
ANNUAL RUNOFF (CFSM)	1.63		25.41	Jan 22 1937
ANNUAL RUNOFF (INCHES)	22.19		1.44	
10 PERCENT EXCEEDS	40300		19.50	
50 PERCENT EXCEEDS	13300			
90 PERCENT EXCEEDS	4360			

03374455 PATOKA RIVER NEAR HARDINSBURG, IN

LOCATION.--Lat 38°26'41", long 86°23'14", in NW¼ 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 mi².

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.--Records good except for estimated daily discharges, which are fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.14	3.8	12	68	15	8.6	16	8.9	4.1	.44	.00	.00
2	.14	3.8	8.9	39	12	18	13	7.6	3.5	.72	.00	.00
3	.14	3.9	188	25	11	13	11	7.1	3.1	.92	.00	.00
4	9.2	3.9	63	18	10	11	11	6.9	2.7	.61	.00	.02
5	2.9	5.2	27	21	11	9.0	15	6.8	2.2	.52	.00	.02
6	1.3	5.7	18	178	345	9.3	13	6.4	2.0	.47	.00	.00
7	1.1	5.0	12	202	189	10	11	5.7	1.9	.36	.00	.02
8	.88	4.4	9.5	98	73	8.7	13	5.3	1.7	.56	.00	.03
9	31	4.8	7.7	52	40	7.8	47	5.8	1.5	.77	.00	.00
10	30	11	6.7	36	27	6.9	57	5.5	1.4	.58	.00	.00
11	11	7.0	5.8	144	19	6.4	27	5.0	1.3	.55	.00	.00
12	5.7	5.5	5.4	115	15	6.9	20	5.1	1.2	.98	.00	.00
13	3.8	4.3	5.0	52	53	107	142	5.1	1.2	.60	.00	.00
14	3.0	4.0	4.4	34	274	72	144	4.6	1.1	.44	.00	.00
15	2.5	3.8	38	25	88	38	64	4.3	1.0	.34	.00	.00
16	2.3	3.7	28	35	e35	25	37	4.0	1.3	.29	.00	.00
17	6.9	3.5	79	28	e29	56	27	3.7	1.3	.22	.00	.00
18	139	3.1	942	21	168	170	22	3.4	1.2	.19	.00	.00
19	23	3.1	207	18	99	67	27	3.2	1.5	.17	.00	.00
20	11	2.9	77	17	49	37	24	3.2	1.2	.14	.00	.00
21	7.4	2.8	93	13	32	27	20	3.0	1.3	.12	.00	.00
22	12	91	216	11	23	839	17	2.8	1.3	.10	.00	.00
23	15	48	156	9.6	17	301	16	2.9	1.1	.08	.00	.00
24	9.7	19	68	8.4	15	94	16	7.5	.86	.07	.00	.00
25	8.2	12	e30	7.3	12	46	15	6.2	.69	.05	.00	.00
26	6.0	8.3	e21	6.8	10	34	13	44	.64	.03	.00	.00
27	5.9	7.3	e17	7.0	9.3	76	12	16	.56	.02	.00	.00
28	5.5	66	e15	12	8.3	87	12	7.6	.53	.00	.00	.00
29	4.8	31	324	13	---	42	12	9.6	.48	.00	.00	.00
30	4.3	16	523	31	---	26	10	9.9	.46	.00	.00	.00
31	4.0	---	167	22	---	19	---	5.7	---	.00	.00	---
TOTAL	367.80	393.8	3374.4	1367.1	1688.6	2278.6	884	222.8	44.32	10.34	0.00	0.09
MEAN	11.9	13.1	109	44.1	60.3	73.5	29.5	7.19	1.48	.33	.000	.003
MAX	139	91	942	202	345	839	144	44	4.1	.98	.00	.03
MIN	.14	2.8	4.4	6.8	8.3	6.4	10	2.8	.46	.00	.00	.00
CFSM	.93	1.03	8.50	3.45	4.71	5.74	2.30	.56	.12	.03	.00	.00
IN.	1.07	1.14	9.81	3.97	4.91	6.62	2.57	.65	.13	.03	.00	.00

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1991, BY WATER YEAR (WY)

	MEAN	3.83	21.6	34.8	33.8	41.9	51.0	48.3	31.5	15.2	10.7	5.22	3.68
MAX	11.9	77.3	109	107	89.6	101	102	138	59.0	89.6	33.4	18.9	
(WY)	1991	1980	1991	1982	1990	1973	1972	1983	1990	1979	1977	1981	
MIN	.021	.54	1.17	.61	6.92	8.80	6.79	2.66	.46	.26	.000	.003	
(WY)	1988	1988	1981	1981	1978	1981	1976	1988	1988	1983	1991	1991	

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1969 - 1991

ANNUAL TOTAL	14469.24	10631.85	25.0	
ANNUAL MEAN	39.6	29.1	43.6	1979
HIGHEST ANNUAL MEAN			8.82	1987
LOWEST ANNUAL MEAN			1770	Jul 26 1979
HIGHEST DAILY MEAN	1120 Jun 7	942 Dec 18	.00	Oct 4 1970
LOWEST DAILY MEAN	.10 Aug 21	.00 Jul 28	.00	Sep 11 1972
ANNUAL SEVEN-DAY MINIMUM	.11 Aug 21	.00 Jul 28	.00	Jul 26 1979
INSTANTANEOUS PEAK FLOW		1670 Mar 22	9270	Jul 26 1979
INSTANTANEOUS PEAK STAGE		7.82 Mar 22	11.35	Jul 26 1979
ANNUAL RUNOFF (CFSM)	3.10	2.28	1.96	
ANNUAL RUNOFF (INCHES)	42.05	30.90	26.57	
10 PERCENT EXCEEDS	76	68	52	
50 PERCENT EXCEEDS	12	6.4	5.7	
90 PERCENT EXCEEDS	.37	.00	.40	

03J74500 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 mi².

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

GAGE.--Data-Collection Platform. Datum of gage is 477.00 ft above National Geodetic Vertical Datum of 1929 (levels by State of Indiana, Department of Natural Resources). Prior to Oct. 1, 1961, nonrecording gage on downstream side of bridge, 1.7 mi downstream at same datum. Oct. 1, 1961 to Sept. 30, 1981, water-stage recorder at site described above. Prior to October 1979, published as "near Ellsworth". Data-Collection Platform installed on July 25, 1985.

REMARKS.--Flow regulated by Patoka lake since February 1978. Daily discharge computed from relation between discharge, head, and gate openings for Patoka Lake beginning Oct. 1, 1981.

COOPERATION.--Records of daily discharge provided by U.S. Army Corps of Engineers beginning Oct. 1, 1981.

AVERAGE DISCHARGE.--30 years, 225 ft³/s.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge 14,700 ft³/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 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 1,830 ft³/s Jan. 26; minimum daily, 25 ft³/s June 16-20 and June 28 to Sept. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	412	266	451	112	1720	681	894	64	26	25	25	25
2	411	299	346	112	1720	601	893	64	26	25	25	25
3	335	298	99	194	1720	600	1030	64	26	25	25	25
4	207	298	99	409	1710	599	1070	64	26	25	25	25
5	207	298	166	533	1710	598	1010	64	26	25	25	25
6	207	298	144	534	1450	597	1010	64	26	25	25	25
7	167	298	99	536	1210	474	1010	64	26	25	25	25
8	176	247	282	447	1210	184	1010	64	26	25	25	25
9	132	198	517	402	1210	50	1000	64	26	25	25	25
10	101	263	665	276	1200	50	1000	64	26	25	25	25
11	101	297	763	202	1200	50	1000	64	26	25	25	25
12	101	297	790	328	1380	50	1000	64	26	25	25	25
13	101	297	673	518	1470	51	998	43	26	25	25	25
14	101	297	490	653	1470	51	998	32	26	25	25	25
15	175	296	358	715	1470	51	956	32	26	25	25	25
16	239	339	299	715	1480	51	845	32	25	25	25	25
17	181	393	173	773	1480	51	741	32	25	25	25	25
18	101	392	99	875	1110	51	506	32	25	25	25	25
19	167	392	100	911	797	331	404	32	25	25	25	25
20	200	392	101	909	796	501	267	32	25	25	25	25
21	200	391	101	908	925	501	205	32	26	25	25	25
22	200	252	101	965	1000	247	135	32	26	25	25	25
23	200	197	102	992	801	105	103	32	26	25	25	25
24	200	246	226	1200	118	105	103	32	26	25	25	25
25	118	295	364	1750	429	105	103	32	26	25	25	25
26	54	295	395	1830	960	240	103	32	26	25	25	25
27	109	226	394	1750	1030	308	103	32	26	25	25	25
28	200	197	313	1740	956	432	103	32	25	25	25	25
29	200	197	199	1740	---	506	103	28	25	25	25	25
30	199	329	141	1730	---	636	78	26	25	25	25	25
31	199	---	112	1730	---	825	---	26	---	25	25	---
TOTAL	5701	8780	9162	26489	33732	9682	18781	1371	772	775	775	750
MEAN	184	293	296	854	1205	312	626	44.2	25.7	25.0	25.0	25.0
MAX	412	393	790	1830	1720	825	1070	64	26	25	25	25
MIN	54	197	99	112	118	50	78	26	25	25	25	25

CAL YR 1990 TOTAL 101214 MEAN 277 MAX 967 MIN 32
WTR YR 1991 TOTAL 116770 MEAN 320 MAX 1830 MIN 25

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 mi².

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 ft³/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.--Records good. Flow regulated by Beaver Creek Reservoir beginning Oct. 11, 1955, and by Patoka Lake beginning Feb. 13, 1978.

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 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	409	233	454	1770	1880	1060	908	133	50	36	31	30
2	411	297	533	940	1870	933	966	112	49	39	30	30
3	413	326	790	406	1850	799	977	107	48	39	21	28
4	530	326	698	432	1840	754	1030	107	48	35	22	38
5	333	348	330	726	1840	736	1100	109	45	34	25	53
6	242	361	317	1100	1980	730	1110	111	44	34	27	35
7	230	343	258	1360	2110	720	1110	103	43	34	30	28
8	189	334	194	1480	2100	593	1100	100	43	34	28	28
9	490	287	376	1350	1930	255	1090	101	43	36	30	28
10	925	269	573	1000	1770	124	1090	101	42	155	29	29
11	507	324	763	785	1630	115	1080	128	37	44	27	30
12	245	341	864	892	1510	119	1070	147	36	45	27	30
13	188	334	892	807	1470	521	1070	111	36	44	27	29
14	166	330	799	878	1650	754	1080	95	36	36	28	29
15	153	328	766	937	1820	403	1100	70	36	34	32	29
16	197	327	638	1000	1880	255	1100	65	37	36	30	28
17	254	380	530	1030	1820	325	1040	67	37	33	29	28
18	295	415	1290	1030	1800	992	905	63	36	33	29	30
19	224	413	1710	1050	1820	690	643	59	36	32	29	30
20	225	409	1910	1070	1770	601	558	57	36	32	28	28
21	244	407	1260	1070	1570	638	371	56	36	31	28	28
22	275	624	1000	1060	1360	1360	300	56	48	31	28	28
23	319	662	785	1070	1260	1920	222	55	46	31	28	29
24	281	383	492	1100	1070	1940	201	54	48	31	28	29
25	261	354	529	1140	369	1240	186	86	38	31	28	28
26	183	367	642	1220	665	514	176	120	36	31	28	28
27	106	356	637	1330	975	450	169	90	35	31	28	27
28	142	630	632	1500	1050	462	165	71	35	31	28	28
29	234	604	1070	1710	---	547	165	63	34	31	28	28
30	237	376	1590	1840	---	574	159	58	35	31	28	28
31	235	---	1890	1870	---	768	---	55	---	31	29	---
TOTAL	9143	11488	25212	34953	44659	21892	22241	2710	1209	1186	868	899
MEAN	295	383	813	1128	1595	706	741	87.4	40.3	38.3	28.0	30.0
MAX	925	662	1910	1870	2110	1940	1110	147	50	155	32	53
MIN	106	233	194	406	369	115	159	54	34	31	21	27
CFSM	1.13	1.46	3.10	4.30	6.09	2.70	2.83	.33	.15	.15	.11	.11
IN.	1.30	1.63	3.58	4.96	6.34	3.11	3.16	.38	.17	.17	.12	.13

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 1991, BY WATER YEAR (WY)

	MEAN	93.4	242	428	625	688	814	633	418	198	118	92.9	76.4
MAX	494	800	1506	2742	1898	2543	1574	2001	668	787	530	484	
(WY)	1980	1975	1952	1950	1950	1964	1972	1961	1949	1958	1977	1979	
MIN	.000	.000	.17	17.5	27.7	187	130	37.5	8.66	.074	.000	.000	
(WY)	1949	1954	1954	1964	1964	1957	1976	1952	1953	1954	1952	1953	

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1949 - 1991

ANNUAL TOTAL	189294	176460	367
ANNUAL MEAN	519	483	673
HIGHEST ANNUAL MEAN			63.6
LOWEST ANNUAL MEAN			1950
HIGHEST DAILY MEAN	3560	Jun 8	2110
LOWEST DAILY MEAN	106	Oct 27	21
ANNUAL SEVEN-DAY MINIMUM	169	Jun 13	26
INSTANTANEOUS PEAK FLOW			2160
INSTANTANEOUS PEAK STAGE			14.82
ANNUAL RUNOFF (CFSM)	1.98		1.85
ANNUAL RUNOFF (INCHES)	26.88		25.05
10 PERCENT EXCEEDS	976	1350	1100
50 PERCENT EXCEEDS	380	245	118
90 PERCENT EXCEEDS	196	29	5.3

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 mi².

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.--Records fair except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.09	2.0	19	57	21	20	15	7.5	1.9	.09	.04	.06
2	.08	2.3	15	38	18	24	12	5.3	1.4	.10	.03	.01
3	.12	4.7	233	27	17	15	12	4.4	12	.13	.01	.00
4	58	5.3	46	19	16	13	20	4.1	1.8	.13	.00	27
5	2.4	10	25	56	26	12	25	13	1.1	.28	.00	4.8
6	.91	8.3	20	318	468	14	15	6.1	.69	.16	.00	.24
7	.52	5.0	17	240	169	13	12	3.6	.47	.13	.00	.07
8	.45	4.0	14	81	71	11	19	2.8	.33	1.5	.00	.03
9	282	8.6	12	52	46	10	33	4.9	.32	16	.00	.02
10	130	15	10	45	33	9.5	29	3.6	.29	340	.00	.01
11	28	8.7	8.9	179	23	9.1	15	48	.33	15	.00	.00
12	14	6.7	8.2	89	19	21	16	23	.28	7.9	.00	.00
13	7.7	5.4	7.4	51	139	203	71	8.1	.33	3.1	.62	.00
14	4.6	4.8	6.3	37	332	123	71	7.5	.24	1.7	.11	.00
15	2.8	4.4	65	35	77	59	70	6.6	.18	1.3	.03	.00
16	1.9	4.4	29	58	e43	35	51	7.9	.32	.86	.00	.00
17	1.6	4.2	159	41	36	139	37	6.6	.41	.80	.00	.00
18	31	3.7	1180	30	218	153	30	3.7	.34	.68	.00	.01
19	7.2	3.5	156	25	82	56	77	3.0	.37	.59	.00	.00
20	4.7	3.1	68	24	49	37	44	2.8	.43	.49	.00	.00
21	3.4	3.0	104	18	35	31	35	9.7	.58	.43	.00	.01
22	18	160	192	e16.3	27	1120	26	2.9	1.1	.41	.00	.04
23	13	45	146	e15	21	280	30	2.5	.52	.41	.00	.04
24	7.4	23	58	e13.5	18	99	69	2.3	.37	.36	.00	.02
25	5.7	18	e37	e12	15	62	29	21	.33	.35	.00	.01
26	4.4	14	e26	e9.40	13	50	21	38	.37	.35	.00	.00
27	3.5	12	e23	e16	12	71	15	17	.25	.32	.00	.00
28	2.8	156	e22	25	12	47	14	5.2	.19	.32	.00	.00
29	2.2	36	517	20	---	32	16	3.0	.15	.32	.00	.00
30	2.0	23	544	80	---	22	9.1	2.2	.13	.19	.00	.00
31	1.8	---	116	32	---	18	---	1.9	---	.07	.39	---
TOTAL	642.27	604.1	3883.8	1759.20	2056	2808.6	938.1	278.2	27.52	394.47	1.23	32.37
MEAN	20.7	20.1	125	56.7	73.4	90.6	31.3	8.97	.92	12.7	.040	1.08
MAX	282	160	1180	318	468	1120	77	48	12	340	.62	27
MIN	.08	2.0	6.3	9.4	12	9.1	9.1	1.9	.13	.07	.00	.00
CFSM	.95	.92	5.75	2.60	3.37	4.16	1.43	.41	.04	.58	.00	.05
IN.	1.10	1.03	6.63	3.00	3.51	4.79	1.60	.47	.05	.67	.00	.06

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 1991, BY WATER YEAR (WY)

	9.99	37.2	45.1	39.9	63.9	64.7	53.4	30.9	19.4	21.8	13.0	11.5
MEAN	9.99	37.2	45.1	39.9	63.9	64.7	53.4	30.9	19.4	21.8	13.0	11.5
MAX	34.1	147	125	154	131	131	142	153	73.7	247	52.5	68.0
(WY)	1978	1980	1991	1982	1985	1989	1972	1983	1979	1979	1979	1986
MIN	.003	.38	3.28	.17	8.50	13.9	5.83	.35	.003	.32	.040	.022
(WY)	1988	1988	1977	1977	1978	1981	1986	1988	1988	1983	1991	1987

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1971 - 1991

ANNUAL TOTAL	19024.45	13425.86	
ANNUAL MEAN	52.1	36.8	34.1
HIGHEST ANNUAL MEAN			78.4
LOWEST ANNUAL MEAN			12.5
HIGHEST DAILY MEAN	1310	1180	5110
LOWEST DAILY MEAN	.03	.00	.00
ANNUAL SEVEN-DAY MINIMUM	.07	.00	.00
INSTANTANEOUS PEAK FLOW		2340	11500
INSTANTANEOUS PEAK STAGE		11.92	15.30
ANNUAL RUNOFF (CFSM)	2.39	1.69	1.56
ANNUAL RUNOFF (INCHES)	32.46	22.91	21.22
10 PERCENT EXCEEDS	116	73	66
50 PERCENT EXCEEDS	12	8.2	7.4
90 PERCENT EXCEEDS	.24	.00	.29

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 mi².

PERIOD OF RECORD.--October 1963 to September 1974, May 1986 to current year. Discharge measurements and gage readings June 1961 to September 1963, obtained by State of Indiana, Department of Natural Resources, are available in the district office.

GAGE.--Water-stage recorder. Datum of gage is 400.00 ft above National Geodetic Vertical Datum of 1929 (levels by State of Indiana, Department of Natural Resources). Prior to Nov. 21, 1963, nonrecording gage on downstream side of bridge 65 ft downstream at same datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. An average 0.13 ft³/s is diverted for municipal water supply 100 ft above gage.

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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	402	306	1240	4090	1610	1750	1870	323	107	43	32	37
2	398	302	1020	4420	1650	1700	1600	278	94	45	32	35
3	398	304	1190	4450	1700	1600	1460	222	92	52	30	36
4	744	358	1430	4160	1750	1510	1380	189	431	141	29	47
5	948	405	1430	3730	1820	1400	1370	187	261	100	28	82
6	721	485	1390	3520	2430	1290	1340	208	175	57	27	247
7	438	520	1180	3490	2660	1190	1310	236	93	46	25	154
8	306	473	895	3270	2780	1110	1320	197	69	44	27	70
9	542	439	644	3100	3170	1010	1320	174	60	44	31	47
10	1280	448	529	3090	3520	824	1280	166	55	46	32	e40
11	1400	473	632	3220	3650	556	1270	182	52	260	32	e34
12	1380	446	776	3290	3590	398	1260	364	51	290	33	e31
13	1280	450	887	3160	3440	749	1280	452	48	134	33	e29
14	940	452	941	2930	3620	1440	1300	311	44	85	34	e29
15	587	440	1040	2650	3530	1530	1370	226	43	e54	34	e28
16	379	426	1140	2410	3410	1530	1370	215	43	e46	32	e28
17	286	416	1170	2220	3350	1570	1350	190	43	e41	32	e30
18	324	424	2400	2070	3410	2050	1320	184	52	e38	34	e31
19	523	473	2860	1960	3430	1950	1400	154	51	e37	34	e30
20	495	490	2620	1870	3360	1890	1380	124	48	e36	35	e29
21	372	489	2990	1760	3300	1870	1260	111	59	e37	35	e30
22	387	712	3650	1660	3210	2930	1040	106	88	e39	33	e29
23	527	1170	4070	1590	3060	3690	819	101	157	e37	32	e30
24	584	1230	4160	1520	2850	3720	739	94	97	e36	31	e28
25	510	1130	3950	1450	2600	4290	668	145	65	e35	31	e27
26	433	879	3580	1410	2350	4940	537	595	59	e34	31	e27
27	376	690	3050	1380	2140	4840	440	574	51	e33	31	e27
28	281	1060	2520	1410	1920	4300	386	381	46	33	32	e26
29	202	1390	2670	1430	---	3620	371	228	43	33	32	e24
30	222	1370	3560	1550	---	2850	357	160	43	32	38	e23
31	297	---	3880	1590	---	2220	---	127	---	32	39	---
TOTAL	17962	18650	63494	79850	79310	66317	34167	7204	2620	2020	991	1365
MEAN	579	622	2048	2576	2832	2139	1139	232	87.3	65.2	32.0	45.5
MAX	1400	1390	4160	4450	3650	4940	1870	595	431	290	39	247
MIN	202	302	529	1380	1610	398	357	94	43	32	25	23
CFSM	.96	1.03	3.40	4.27	4.70	3.55	1.89	.39	.14	.11	.05	.08
IN.	1.11	1.15	3.92	4.93	4.89	4.09	2.11	.44	.16	.12	.06	.08

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1991, BY WATER YEAR (WY)

	120	316	709	985	1414	1706	1510	924	410	269	148	147
MEAN	120	316	709	985	1414	1706	1510	924	410	269	148	147
MAX	579	959	2048	2576	2832	5126	3426	2909	1360	1305	457	408
(WY)	1991	1989	1991	1991	1991	1964	1972	1990	1990	1969	1990	1974
MIN	2.84	6.83	13.8	56.3	45.5	428	349	85.7	13.4	13.5	7.46	.94
(WY)	1965	1964	1964	1964	1964	1969	1967	1988	1972	1966	1965	1972

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1964 - 1991
ANNUAL TOTAL	444409	373950	716
ANNUAL MEAN	1218	1025	1064
HIGHEST ANNUAL MEAN			401
LOWEST ANNUAL MEAN			15200
HIGHEST DAILY MEAN	7590	4940	15200
LOWEST DAILY MEAN	169	23	.50
ANNUAL SEVEN-DAY MINIMUM	237	26	.61
INSTANTANEOUS PEAK FLOW		5050	15500
INSTANTANEOUS PEAK STAGE		23.95	28.84
ANNUAL RUNOFF (CFSM)	2.02	1.70	1.19
ANNUAL RUNOFF (INCHES)	27.42	23.07	16.12
10 PERCENT EXCEEDS	2710	3210	1960
50 PERCENT EXCEEDS	806	448	265
90 PERCENT EXCEEDS	336	32	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 mi².

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.--Records good except for estimated daily discharges, which are fair. Flow regulated by Patoka Lake.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	420	328	1520	4880	1820	2840	3840	443	182	75	54	70
2	419	330	1480	4830	1830	2700	3510	388	176	114	52	66
3	421	322	1460	e4810	1840	2550	3130	332	211	150	52	56
4	1210	345	1470	e4780	1850	2400	2770	290	937	143	52	106
5	1120	422	1510	e4870	1910	2270	2510	285	688	168	53	146
6	1060	522	1530	e4950	2450	2130	2280	309	390	114	56	216
7	735	556	1530	e4900	2530	1940	2060	314	244	88	50	224
8	454	540	1450	4880	2590	1750	1900	293	172	78	47	126
9	720	491	1200	4740	2670	1570	1760	257	144	73	49	81
10	1450	480	824	4580	2750	1410	1640	241	132	233	56	71
11	1470	493	673	4530	2840	1180	1560	248	128	116	55	66
12	1480	492	771	4400	2980	886	1510	531	120	351	55	57
13	1490	473	889	4200	3180	1200	1520	571	113	227	55	53
14	1450	475	962	4070	3670	1620	1520	497	107	124	68	54
15	1210	466	1090	3910	3720	1660	1610	378	103	95	94	54
16	826	455	1200	3750	3790	1730	1590	318	99	84	65	52
17	491	441	1310	3570	3880	2000	1590	308	100	73	58	51
18	386	433	1950	3390	3990	2380	1560	269	102	66	65	51
19	447	459	2130	3170	4050	2340	1540	252	109	63	60	57
20	567	501	2260	2970	3980	2370	1550	218	107	62	56	54
21	475	509	2550	2750	3920	2400	1560	193	179	60	58	55
22	416	785	2860	2600	3820	2920	1510	181	209	60	58	56
23	514	1170	3060	2470	3690	3470	1370	174	222	62	54	55
24	621	1260	3240	2340	3590	3680	1210	170	182	61	51	56
25	609	1290	3430	2200	3460	3890	1040	198	127	58	50	53
26	520	1230	3590	2050	3320	4050	834	499	105	56	49	51
27	450	1010	3670	1910	3180	4120	671	717	97	54	49	52
28	382	1470	3680	1830	3010	4160	586	560	88	52	53	49
29	288	1490	4000	1760	---	4200	548	366	81	53	53	46
30	235	1510	e4850	1850	---	4140	515	258	78	53	54	45
31	283	---	4930	1810	---	4060	---	207	---	53	60	---
TOTAL	22619	20748	67069	109750	86310	80016	50794	10265	5732	3119	1741	2229
MEAN	730	692	2164	3540	3082	2581	1693	331	191	101	56.2	74.3
MAX	1490	1510	4930	4950	4050	4200	3840	717	937	351	94	224
MIN	235	322	673	1760	1820	886	515	170	78	52	47	45
CFSM	.89	.84	2.63	4.31	3.75	3.14	2.06	.40	.23	.12	.07	.09
IN.	1.02	.94	3.04	4.97	3.91	3.62	2.30	.46	.26	.14	.08	.10

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 1991, BY WATER YEAR (WY)

	MEAN	248	493	963	1547	1837	2279	2015	1409	749	437	314	214
MAX	2573	2501	3735	8365	5570	8531	4664	6810	3172	3075	3915	1125	
(WY)	1946	1986	1952	1937	1950	1945	1989	1961	1957	1958	1979	1979	
MIN	1.53	9.83	10.2	44.3	64.2	61.5	373	117	7.93	15.0	4.60	8.12	
(WY)	1943	1944	1944	1944	1964	1941	1976	1941	1936	1944	1936	1942	

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1935 - 1991

ANNUAL TOTAL	568324		460392										
ANNUAL MEAN	1557		1261										
HIGHEST ANNUAL MEAN													
LOWEST ANNUAL MEAN													
HIGHEST DAILY MEAN	8540	May 24	e4950	Jan 6									
LOWEST DAILY MEAN	229	Sep 12	45	Sep 30									
ANNUAL SEVEN-DAY MINIMUM	291	Sep 10	50	Sep 24									
INSTANTANEOUS PEAK FLOW			e5160	Dec 30									
INSTANTANEOUS PEAK STAGE			unknown	Dec 30									
ANNUAL RUNOFF (CFSM)	1.89		1.53										
ANNUAL RUNOFF (INCHES)	25.72		20.84										
10 PERCENT EXCEEDS	3210		3680										
50 PERCENT EXCEEDS	1140		522										
90 PERCENT EXCEEDS	414		55										

e Estimated

03377500 WABASH RIVER AT MOUNT CARMEL, IL

LOCATION.--Lat 38°24'07", long 87°45'10", in SE1/4 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 mi².

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.--Records good. Flow partially regulated by upstream reservoirs.

EXTREMES OUTSIDE THE PERIOD OF RECORD.--(1874-78, 1884 to 1985) Maximum discharge, 428,000 ft³/s Mar. 30, 1913, from rating curve extended above 310,000 ft³/s, gage height, 33.0 ft, present site and datum.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9000	19300	51100	e112000	48000	39900	99800	30900	25100	8280	4790	4210
2	8690	18500	52700	e128000	45500	37400	95200	29200	24600	8090	4710	3960
3	8500	17700	53800	e151000	43200	36400	87900	27800	25500	8250	4580	3960
4	10600	16500	52800	e178000	41300	36400	76900	26700	29400	8140	4570	4620
5	13300	15400	52500	e205000	40300	35700	63600	25600	32100	7650	4480	4220
6	13800	14700	54000	e221000	46700	35100	51100	25000	32300	7500	4390	4520
7	13300	15800	54300	e224000	58800	34200	43600	25100	29900	7580	4600	4470
8	13600	20100	54500	e218000	65000	32700	40000	25800	26500	7700	5620	4430
9	14900	24600	53600	e200000	68800	31000	39700	26200	23500	7620	6930	4820
10	21200	26500	49600	178000	71300	29400	38500	25800	21300	7800	5870	5270
11	28700	25600	43600	154000	72600	27700	37600	24300	19400	7550	5730	4860
12	36700	23300	38500	132000	73700	26400	36100	23800	17400	7660	5710	4450
13	42000	21200	34800	114000	74900	28800	35900	23500	15500	9960	5590	4150
14	45100	19800	31700	102000	76600	39000	37900	21900	14100	12800	5420	3910
15	46500	18700	29400	94100	74900	48000	42500	20800	13100	13200	5360	3750
16	46500	17700	28000	88500	70500	54400	47800	20400	12500	11300	5300	3650
17	45300	16900	29000	84600	63500	57600	51100	21400	12100	9670	5280	3530
18	43600	16200	37700	82400	55900	65300	54700	22500	11700	8540	4980	3690
19	42600	15700	53500	80600	53900	71100	58600	22900	11500	7860	4740	3780
20	41800	15400	62000	78900	55700	75700	61300	26900	11700	7370	4470	3790
21	40100	15100	67100	77300	57500	79600	62100	30600	11800	6910	4340	3830
22	38400	15000	73300	75600	57600	82200	60300	31300	11800	6580	4330	3860
23	37300	15600	78500	73200	57500	86100	55900	29500	10900	6290	4720	3890
24	35100	16100	82400	70100	58100	90800	52600	26600	10800	6020	5190	3890
25	31800	16400	86200	66800	57900	94500	50400	23800	10600	5730	5120	3890
26	29000	16500	89800	63500	55700	98300	46800	23200	10200	5480	4800	3850
27	27000	17000	92700	60400	51000	102000	42400	25000	9480	5300	4600	3870
28	25100	24500	94100	57300	44800	106000	38700	25400	9070	5160	4400	3920
29	23400	38500	92700	54400	---	107000	35900	24800	8780	5080	4340	3870
30	21800	47400	96600	52400	---	106000	33200	24200	8490	4960	4110	3810
31	20400	---	104000	50400	---	104000	---	24000	---	4850	4120	---
TOTAL	875090	601700	1874500	3527500	1641200	1898700	1578100	784900	511120	236880	153190	122720
MEAN	28230	20060	60470	113800	58610	61250	52600	25320	17040	7641	4942	4091
MAX	46500	47400	104000	224000	76600	107000	99800	31300	32300	13200	6930	5270
MIN	8500	14700	28000	50400	40300	26400	33200	20400	8490	4850	4110	3530
CFSM	.99	.70	2.11	3.97	2.05	2.14	1.84	.88	.59	.27	.17	.14
IN.	1.14	.78	2.44	4.58	2.13	2.47	2.05	1.02	.66	.31	.20	.16

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1991, BY WATER YEAR (WY)

	MEAN	14050	25610	38130	41420	51000	50550	40260	26940	18290	11440	8720
MAX	30700	63500	92340	199300	147100	108700	106400	129400	74500	73580	75530	50670
(WY)	1946	1986	1986	1950	1950	1985	1938	1961	1958	1958	1979	1989
MIN	2465	2632	2266	2861	3757	4815	11900	5805	5035	3366	2372	2572
(WY)	1941	1931	1964	1977	1931	1941	1941	1934	1988	1936	1936	1940

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1928 - 1991
ANNUAL TOTAL	15577500	13805600	27880
ANNUAL MEAN	42680	37820	56740
HIGHEST ANNUAL MEAN			1950
LOWEST ANNUAL MEAN			6144
HIGHEST DAILY MEAN	199000	May 23	302000
LOWEST DAILY MEAN	8500	Oct 3	1650
ANNUAL SEVEN-DAY MINIMUM	9190	Sep 27	1700
INSTANTANEOUS PEAK FLOW			305000
INSTANTANEOUS PEAK STAGE			31.75
ANNUAL RUNOFF (CFSM)	1.49		.97
ANNUAL RUNOFF (INCHES)	20.24		13.23
10 PERCENT EXCEEDS	81300	83300	67200
50 PERCENT EXCEEDS	35100	26500	16000
90 PERCENT EXCEEDS	15100	4580	4200

e Estimated

03378500 WABASH RIVER AT NEW HARMONY, IN

LOCATION.--lat 38°07'55", long 87°56'25" in SE¼ sec.35, T.4 S., R.14 W., Posey County, Hydrologic Unit 05120113, at bridge on U.S. Highway 66 at New Harmony, at Indiana-Illinois state line, and at mile 51.5.

DRAINAGE AREA.--29,234 mi².

PERIOD OF RECORD.--August 1988 to current year. Water discharge published October 1938 to September 1947.

GAGE.--Water-stage recorder. Datum of gage is 353.30 ft. above National Geodetic Vertical Datum of 1929. (Furnished by National Weather Service).

REMARKS.--Records good. Water-quality data collected October 1974 to September 1986.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 23.84 ft. May 26, 1943. Beginning August 1988, minimum gage height 0.46 ft. Oct. 12, 1988.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 1913 reached a stage of 27.7 ft. Flood of Jan. 31, 1937, reached a stage of 24.4 ft.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 21.65 ft. June 8; minimum gage height, 0.66 ft., Sept. 18.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.27	4.37	10.73	17.40	10.66	9.16	16.63	7.00	5.75	2.15	1.10	.93
2	2.20	4.20	11.03	17.94	10.14	8.57	16.43	6.63	5.61	2.08	1.06	.85
3	2.30	4.05	11.25	18.66	9.66	8.23	16.07	6.34	5.74	2.12	1.01	.83
4	2.87	3.83	11.17	---	9.24	8.19	15.43	6.08	6.53	2.08	1.00	1.32
5	3.36	3.60	11.08	---	9.08	8.03	14.10	5.85	7.09	1.96	1.00	1.20
6	3.34	3.45	11.27	20.95	10.80	7.89	12.11	5.70	7.16	1.90	.97	1.06
7	3.24	3.61	11.37	21.57	12.53	7.69	10.38	5.72	6.71	1.90	.99	1.03
8	3.31	4.40	11.42	21.52	13.50	7.39	9.41	5.86	6.03	1.94	1.25	.99
9	3.64	5.34	11.32	21.08	14.03	7.03	9.15	5.94	5.42	1.94	1.66	1.07
10	4.91	5.77	10.68	20.55	14.33	6.69	8.75	5.88	4.97	1.99	1.45	1.23
11	6.34	5.63	9.58	19.83	14.42	6.34	8.50	5.59	4.55	1.98	1.36	1.16
12	7.89	5.17	8.53	18.98	14.54	6.07	8.21	5.50	4.15	1.91	1.37	1.01
13	8.85	4.74	7.74	18.11	14.81	6.70	8.14	5.40	3.77	2.38	1.34	.92
14	9.44	4.46	7.08	17.37	15.03	8.84	8.53	5.08	3.45	3.09	1.28	.82
15	9.71	4.21	---	16.83	14.85	10.50	9.46	4.88	3.27	3.17	1.26	.75
16	9.72	4.02	6.27	16.32	14.85	11.67	10.38	4.80	3.13	2.82	1.23	.70
17	9.48	3.86	6.47	15.96	13.65	12.50	10.96	4.94	3.04	2.48	1.25	.67
18	9.18	3.73	8.62	15.70	12.65	13.59	11.63	5.18	2.94	2.21	1.15	.71
19	9.02	3.63	11.25	15.48	12.14	14.31	12.28	5.28	2.89	2.02	1.06	.73
20	8.86	3.57	12.71	15.30	12.16	14.74	12.79	6.13	2.93	1.88	.99	.75
21	8.52	3.53	13.75	---	12.34	15.03	12.95	6.85	2.97	1.75	.94	.77
22	8.22	3.55	14.51	---	12.35	15.50	12.73	6.99	2.98	1.65	.92	.81
23	8.04	3.63	14.93	---	12.31	15.65	12.10	6.65	2.77	1.54	1.01	.79
24	7.62	3.73	---	---	12.39	15.84	11.48	6.07	2.73	1.48	1.19	.79
25	6.99	3.76	---	---	12.35	16.10	11.00	5.48	2.69	1.40	1.20	.77
26	6.40	3.80	---	---	12.07	16.29	10.33	5.32	2.61	1.34	1.11	.75
27	5.96	4.01	---	---	11.32	16.55	9.47	5.66	2.45	1.28	1.03	.77
28	5.58	5.63	---	---	10.17	16.71	8.69	5.76	2.35	1.23	.97	.79
29	5.21	8.31	16.32	---	---	16.86	8.09	5.64	2.28	1.18	1.05	.79
30	4.88	9.98	---	---	---	16.84	7.49	5.50	2.20	1.16	.91	.75
31	4.60	---	---	---	---	16.80	---	5.43	---	1.13	.87	---
MEAN	6.19	4.52	---	---	12.44	11.69	11.12	5.78	4.04	1.91	1.13	.88
MAX	9.72	9.98	---	---	15.03	16.86	16.63	7.00	7.16	3.17	1.66	1.32
MIN	2.20	3.45	---	---	9.08	6.07	7.49	4.80	2.20	1.13	.87	.67

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 mi².
 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.--Records fair except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e.12	1.6	25	225	63	57	36	19	4.8	.05	e.01	e.06
2	e.11	1.6	21	124	59	222	32	17	4.4	.19	.00	e.06
3	e.11	1.6	123	89	62	83	30	15	4.2	.26	.00	e.05
4	577	1.4	82	70	75	64	33	16	3.6	.48	.00	16
5	29	3.7	31	132	88	55	41	18	2.9	.27	.00	24
6	4.1	11	26	1240	1240	56	33	19	2.4	.28	.00	5.5
7	3.9	5.6	21	1710	733	40	32	15	2.0	.40	.00	2.5
8	7.1	3.4	19	543	237	35	48	13	1.9	.40	.00	.50
9	515	e2.7	17	376	152	33	43	14	1.9	.23	.00	.23
10	532	e2.2	16	374	116	29	30	14	1.7	.13	.00	.11
11	59	e1.9	16	1100	85	30	25	36	1.6	1.8	.00	.23
12	14	e1.7	16	588	72	38	24	68	1.4	1.5	.00	.25
13	8.2	e1.5	15	208	224	85	34	26	1.5	1.6	.00	1.1
14	5.5	e1.4	13	145	1410	354	38	17	1.3	1.1	.00	.84
15	4.0	e1.3	30	128	273	255	44	15	1.0	e.80	12	.37
16	3.1	e1.5	34	197	e100	122	37	14	.91	e.54	4.7	.25
17	2.5	e1.3	40	145	91	274	27	18	1.2	e.37	1.1	.12
18	2.6	e1.2	1430	106	447	969	24	15	1.2	e.25	.82	.18
19	2.6	e1.1	1100	94	454	252	66	12	.99	e.19	e.70	.29
20	2.0	e1.3	238	91	204	148	36	13	.88	e.14	e.50	.17
21	1.8	e1.5	443	69	138	120	27	13	2.9	e.10	e.40	e.11
22	3.2	48	1270	e52	107	4050	24	11	46	e.08	e.30	e.07
23	7.6	56	306	e43	83	2570	23	8.5	5.8	e.06	e.24	e.10
24	5.9	19	131	e35	74	386	27	8.6	3.2	e.05	e.20	e.07
25	4.1	14	84	e30	61	152	22	9.6	1.5	e.04	e.17	e.06
26	3.2	13	60	e27	54	108	21	13	.85	e.03	e.14	e.05
27	2.7	12	49	e35	51	90	21	10	.59	e.02	e.12	e.04
28	2.5	343	51	79	47	72	23	7.8	.45	e.02	e.10	e.03
29	2.1	89	1610	53	---	59	30	6.6	.29	e.02	e.09	e.02
30	1.9	33	4190	269	---	44	25	5.9	.15	e.01	e.08	e.02
31	1.8	---	1440	90	---	38	---	5.4	---	e.01	e.07	---
TOTAL	1808.74	677.5	12947	8467	6800	10890	956	493.4	103.51	11.42	21.74	53.38
MEAN	58.3	22.6	418	273	243	351	31.9	15.9	3.45	.37	.70	1.78
MAX	577	343	4190	1710	1410	4050	66	68	46	1.8	12	24
MIN	.11	1.1	13	27	47	29	21	5.4	.15	.01	.00	.02
CFSM	.56	.22	4.02	2.63	2.34	3.38	.31	.15	.03	.00	.01	.02
IN.	.65	.24	4.63	3.03	2.43	3.90	.34	.18	.04	.00	.01	.02

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1991, BY WATER YEAR (WY)

	MEAN	22.7	82.8	147	147	215	234	192	152	81.1	68.1	46.7	31.1
MAX	131	513	710	559	727	581	577	742	285	257	341	233	
(WY)	1978	1986	1983	1982	1990	1975	1983	1990	1973	1969	1977	1982	
MIN	.019	.96	.30	.13	26.3	14.3	8.73	2.98	.62	.36	.18	.000	
(WY)	1969	1966	1966	1977	1978	1981	1981	1988	1988	1991	1988	1983	

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1966 - 1991

ANNUAL TOTAL	75812.55	43229.69	118
ANNUAL MEAN	208	118	205
HIGHEST ANNUAL MEAN			1983
LOWEST ANNUAL MEAN			38.7
HIGHEST DAILY MEAN	6170	4190	6440
LOWEST DAILY MEAN	.04	.00	.00
ANNUAL SEVEN-DAY MINIMUM	.17	.00	.00
INSTANTANEOUS PEAK FLOW		5100	7880
INSTANTANEOUS PEAK STAGE		18.59	19.72
ANNUAL RUNOFF (CFSM)	2.00	1.14	1.13
ANNUAL RUNOFF (INCHES)	27.12	15.46	15.39
10 PERCENT EXCEEDS	522	230	220
50 PERCENT EXCEEDS	30	14	17
90 PERCENT EXCEEDS	1.2	.08	.21

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.

PERIOD OF RECORD.--April 1947 to current year.

REVISED RECORDS.--WSP 1337: 1953. WSP 1507: 1956. WDR 1N-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.--Records good except for estimated daily discharges, which are poor. Flow subject to regulation by operation of Lake George dam.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	62	1250	886	85	103	160	122	162	20	16	27
2	29	59	924	629	84	516	102	128	130	18	21	25
3	37	57	728	415	83	1000	102	110	98	18	26	39
4	120	58	578	248	152	769	110	64	80	18	29	71
5	132	359	420	182	425	489	131	107	69	19	24	58
6	77	1010	305	163	540	349	137	274	61	19	22	38
7	62	858	243	140	445	275	120	239	58	20	22	28
8	152	535	202	129	345	219	108	177	47	40	45	24
9	410	332	180	126	281	182	109	140	12	32	69	23
10	1090	231	162	116	250	155	112	115	30	23	47	21
11	1340	178	136	118	197	137	104	100	41	21	31	21
12	898	145	122	133	151	93	91	88	52	24	25	28
13	541	103	124	123	146	118	89	79	47	30	23	47
14	341	102	114	114	165	130	116	89	41	e25	23	48
15	256	102	131	112	141	156	623	79	36	e19	22	35
16	177	94	141	196	103	208	1170	71	37	e14	21	27
17	158	87	134	378	110	274	1340	68	39	e14	21	21
18	186	82	137	365	129	578	979	114	33	e15	21	19
19	203	78	133	268	241	722	649	186	30	e13	27	16
20	169	75	121	250	276	540	426	148	29	e12	53	15
21	136	81	131	274	228	375	300	112	28	e18	49	16
22	113	94	230	234	199	269	159	129	33	e15	33	20
23	101	95	230	199	171	244	158	205	35	e40	26	20
24	92	81	169	130	147	231	180	214	31	e33	23	19
25	88	76	135	110	127	205	175	206	27	.08	21	19
26	88	73	116	111	111	217	150	244	26	.00	20	16
27	83	616	99	102	101	453	124	292	24	.00	20	14
28	74	3900	95	95	96	543	113	251	22	.00	19	14
29	70	3170	688	88	---	373	113	170	21	.97	20	14
30	66	1900	1980	83	---	251	124	140	19	4.9	25	16
31	63	---	1440	77	---	192	---	136	---	12	28	---
TOTAL	7384	14693	11598	6594	5529	10366	8374	4597	1398	537.95	872	7999
MEAN	238	490	374	213	197	334	279	148	46.6	17.4	28.1	26.6
MAX	1340	3900	1980	886	540	1000	1340	292	162	40	69	71
MIN	29	57	95	77	83	93	89	64	12	.00	16	14
CF SM	1.92	3.95	3.02	1.72	1.59	2.70	2.25	1.20	.38	.14	.23	.21
IN.	2.22	4.41	3.48	1.98	1.66	3.11	2.51	1.38	.42	.16	.26	.24

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 1991, BY WATER YEAR (WY)

MEAN	54.2	88.8	111	106	146	221	216	154	99.6	56.8	46.9	44.1
MAX	433	499	393	365	415	688	477	454	511	302	427	246
(WY)	1955	1986	1983	1950	1959	1979	1950	1970	1989	1983	1990	1965
MIN	6.42	10.7	12.5	10.8	14.7	38.3	23.1	21.8	16.4	10.7	8.81	6.91
(WY)	1957	1957	1963	1977	1964	1957	1963	1958	1988	1988	1964	1948

WATER YEARS 1948 - 1991

ANNUAL TOTAL	86111		72741.95			
ANNUAL MEAN	236		199		112	
HIGHEST ANNUAL MEAN					199	1991
LOWEST ANNUAL MEAN					35.3	1963
HIGHEST DAILY MEAN	3900	Nov 28	3900	Nov 28	3900	Nov 28 1990
LOWEST DAILY MEAN	20	Jan 3	.00	Jul 26	.00	Nov 5 1978
ANNUAL SEVEN-DAY MINIMUM	32	Sep 26	2.6	Jul 25	.20	Nov 3 1978
INSTANTANEOUS PEAK FLOW			4230	Nov 28	4230	Nov 28 1990
INSTANTANEOUS PEAK STAGE			17.58	Nov 28	19.48	Oct 11 1954
ANNUAL RUNOFF (CFSM)	1.90		1.61		.90	
ANNUAL RUNOFF (INCHES)	25.83		21.82		12.26	
10 PERCENT EXCEEDS	583		434		266	
50 PERCENT EXCEEDS	105		109		45	
90 PERCENT EXCEEDS	40		20		13	

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 mi², approximately.

PERIOD OF RECORD.--June 1958 to September 1967, October 1968 to September 30, 1971 (discharge), December 13, 1984 to current year (gage heights only).

GAGE.--Water-stage recorder. Wooden control since Dec. 13, 1984. Datum of gage is 580.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Stage affected by backwater from Deep River during times of flood. Minimum gage height for the period of record may have been lower prior to December 13, 1984.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 13.31 ft, Nov. 30, 1990; minimum gage height, 5.27 ft, Aug. 7, 8, 1991. Minimum gage height was not published prior to December 13, 1984.

EXTREMES OUTSIDE PERIOD OF RECORD.-- Flood in October 1954 reached a stage of 13.09 ft, from flood mark.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 13.31 ft, Nov. 30; minimum gage height, 5.27 ft, Aug. 7, 8.

GAGE HEIGHT, FEET, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY OBSERVATION AT 24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.35	7.11	12.80	10.04	7.36	8.13	9.08	7.95	---	6.10	5.49	5.81
2	6.29	7.08	12.08	9.93	7.46	8.99	8.86	7.90	---	6.06	5.41	5.72
3	7.75	6.98	11.34	---	7.76	9.40	8.65	7.78	---	6.05	5.40	6.73
4	7.88	7.60	10.78	---	8.36	9.84	8.45	7.63	---	6.05	5.38	6.65
5	7.85	8.69	10.44	---	8.66	9.90	8.35	8.37	7.68	6.08	5.34	6.55
6	7.58	9.21	10.11	---	8.85	9.80	8.25	8.62	7.48	6.04	5.30	6.38
7	7.43	9.38	9.86	---	8.96	9.64	8.10	8.76	7.25	7.10	5.27	6.13
8	8.06	9.45	9.64	8.30	8.95	9.50	7.99	8.76	7.11	6.80	7.35	5.97
9	8.79	9.42	9.48	8.18	8.87	9.33	7.95	8.63	6.94	6.60	7.33	5.83
10	9.31	9.28	9.30	8.07	8.74	9.18	7.90	8.34	6.79	6.51	7.19	6.00
11	9.64	9.06	9.12	7.98	8.65	8.97	7.84	8.02	7.45	6.45	7.04	6.05
12	9.72	8.80	8.93	8.01	8.38	8.83	7.70	7.75	7.14	6.36	6.84	6.39
13	9.62	8.51	8.76	8.00	8.53	8.68	7.64	---	6.96	6.26	6.58	6.85
14	9.53	8.25	8.57	7.98	8.51	8.58	7.96	---	6.86	6.17	6.23	6.78
15	9.37	8.12	8.46	7.98	8.32	8.54	9.00	---	6.73	6.05	6.04	6.41
16	9.17	7.86	8.37	8.46	8.11	8.54	9.59	---	6.62	6.01	5.92	6.14
17	8.96	7.70	8.30	8.59	7.99	8.73	10.03	---	6.54	5.91	6.09	6.01
18	8.86	7.55	8.26	8.64	8.39	9.00	10.11	---	6.48	5.85	5.81	5.92
19	8.75	7.50	8.19	8.64	8.62	9.27	10.03	---	6.41	5.79	7.02	5.83
20	8.55	7.40	8.12	8.62	8.75	9.41	9.90	---	6.35	5.71	7.46	5.77
21	8.35	7.64	8.22	8.57	8.81	9.43	9.64	---	6.27	5.69	7.35	5.72
22	8.13	7.83	8.31	8.45	8.74	9.34	9.47	---	6.38	5.65	7.13	5.88
23	7.92	7.90	8.38	8.31	8.61	9.22	9.32	---	6.53	5.76	6.54	5.89
24	7.80	7.83	8.27	8.14	8.49	9.11	9.11	---	6.46	5.70	6.33	5.83
25	7.70	7.72	8.11	7.98	8.46	8.92	8.84	---	6.41	5.66	6.16	5.81
26	7.61	7.61	7.97	7.88	8.32	8.86	8.60	---	6.45	5.64	6.13	5.81
27	7.51	8.95	7.86	7.73	8.09	9.12	8.34	---	6.33	5.60	6.04	5.71
28	7.38	11.62	7.83	7.65	7.92	9.29	8.14	---	6.27	5.56	5.97	5.69
29	7.25	13.21	8.89	7.60	---	9.41	8.03	---	6.21	5.55	5.92	5.67
30	7.20	13.31	9.70	7.64	---	9.37	7.95	---	6.15	5.52	6.50	5.65
31	7.12	---	10.09	7.54	---	9.26	---	---	---	5.49	5.97	---
MEAN	8.18	8.62	9.18	---	8.42	9.15	8.69	---	---	5.99	6.28	6.05
MAX	9.72	13.31	12.80	---	8.96	9.90	10.11	---	---	7.10	7.46	6.85
MIN	6.29	6.98	7.83	---	7.36	8.13	7.64	---	---	5.49	5.27	5.65

04093500 BURNS DITCH AT GARY, IN

LOCATION.--Lat 41°34'30", long 87°17'20", in SE1/4NW1/4 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 mi². 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 of 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 good, except for estimated daily discharges, which are poor. Burns ditch is an artificial channel which reverses the direction of flow of part of Little Calumet River and flows into Lake Michigan at Ogden Dunes. During high levels on Lake Michigan, only periods free from backwater are shown.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	91	2030	1400	137	165	356	207	303	50	14	33
2	41	88	1640	1060	148	581	275	210	270	45	19	25
3	56	82	1330	774	145	1140	220	188	211	33	35	44
4	170	88	1120	556	230	1120	224	153	173	33	38	86
5	209	434	882	416	522	866	237	181	137	29	34	81
6	150	980	696	367	689	669	241	394	113	26	27	54
7	119	1110	560	303	666	557	214	413	96	44	29	37
8	194	858	475	252	561	465	188	343	85	82	90	29
9	546	608	418	225	478	398	190	288	46	51	116	25
10	1070	466	377	206	427	348	198	237	41	42	85	27
11	1450	378	334	212	374	299	173	190	61	36	55	23
12	1330	316	273	235	278	247	154	154	82	36	44	35
13	973	250	267	209	272	237	149	133	79	52	39	55
14	682	207	238	191	308	255	188	129	65	44	31	64
15	540	197	245	189	e310	276	658	126	61	30	25	51
16	424	177	263	294	e225	334	1220	109	56	22	22	35
17	347	154	245	505	192	414	1490	116	59	22	23	26
18	372	136	246	543	212	653	1420	171	57	24	29	22
19	387	125	239	451	351	886	1120	266	49	20	83	21
20	338	120	216	419	435	810	815	253	45	19	97	19
21	283	130	227	454	402	644	612	203	58	27	83	19
22	238	158	340	e413	359	513	440	223	86	23	59	23
23	202	164	385	e365	313	465	354	312	62	48	46	26
24	178	147	e326	e300	270	443	384	316	54	65	38	25
25	164	132	e290	e250	234	397	350	323	47	29	28	25
26	155	121	e245	e230	204	393	316	347	40	23	23	25
27	139	558	215	e200	178	659	254	406	33	21	21	22
28	125	2280	186	180	160	796	224	402	30	18	21	20
29	111	2780	632	159	---	675	211	311	32	30	21	20
30	102	2490	1540	151	---	515	205	252	54	27	31	21
31	97	---	1750	e135	---	415	---	246	---	9.3	55	---
TOTAL	11236	15825	18230	11644	9080	16635	13080	7602	2585	1060.3	1361	1018
MEAN	362	527	588	376	324	537	436	245	86.2	34.2	43.9	33.9
MAX	1450	2780	2030	1400	689	1140	1490	413	303	82	116	86
MIN	41	82	186	135	137	165	149	109	30	9.3	14	19
CFSM	2.27	3.30	3.68	2.35	2.03	3.35	2.72	1.53	.54	.21	.27	.21
IN.	2.61	3.68	4.24	2.71	2.11	3.87	3.04	1.77	.60	.25	.32	.24

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 1991, BY WATER YEAR (WY)

	MEAN	69.0	109	150	138	179	307	320	238	143	71.9	66.6	70.8
MAX	362	527	588	447	519	898	782	588	698	294	546	355	
(WY)	1991	1991	1991	1950	1959	1982	1947	1970	1989	1957	1990	1981	
MIN	11.8	15.6	17.1	16.5	23.4	82.2	26.0	32.0	20.8	12.5	10.2	10.1	
(WY)	1948	1957	1964	1977	1963	1957	1963	1958	1988	1944	1964	1948	

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1944 - 1991	
ANNUAL TOTAL	119874		109356.3			
ANNUAL MEAN	328		300		148	
HIGHEST ANNUAL MEAN					300	
LOWEST ANNUAL MEAN					47.3	
HIGHEST DAILY MEAN	2780		2780		3200	
LOWEST DAILY MEAN	32		9.3		2.6	
ANNUAL SEVEN-DAY MINIMUM	45		20		5.6	
INSTANTANEOUS PEAK FLOW			2820		3430	
INSTANTANEOUS PEAK STAGE			16.29		16.44	
ANNUAL RUNOFF (CFSM)	2.05		1.87		.93	
ANNUAL RUNOFF (INCHES)	27.87		25.43		12.57	
10 PERCENT EXCEEDS	857		667		440	
50 PERCENT EXCEEDS	178		200		71	
90 PERCENT EXCEEDS	62		26		17	

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 mi².

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.--Records good except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	62	324	e318	e59	85	100	103	458	39	32	33
2	48	62	250	e214	e62	280	86	104	363	38	32	32
3	54	62	216	e152	81	465	80	82	178	38	32	37
4	185	65	204	e118	163	281	80	75	120	39	33	58
5	142	265	170	e107	294	191	112	194	90	38	33	39
6	83	823	157	e98	278	155	95	396	74	38	32	35
7	81	435	135	e91	e185	127	82	218	65	44	32	33
8	112	262	114	e87	e148	100	77	137	59	79	61	32
9	253	200	100	e83	e124	92	81	105	54	52	60	31
10	626	158	94	e79	e106	84	147	87	51	45	40	32
11	621	123	87	e95	e88	80	133	77	55	42	36	32
12	295	100	83	112	e72	77	93	70	59	41	35	36
13	195	85	80	108	85	81	82	65	53	40	34	45
14	139	78	75	105	116	86	118	61	49	41	34	39
15	154	76	96	107	e79	111	328	58	47	39	33	37
16	123	73	104	185	e66	140	440	56	56	38	33	34
17	94	68	91	301	e75	144	349	66	49	37	33	33
18	199	65	104	e200	103	274	302	113	46	36	34	32
19	214	64	102	e110	207	225	185	95	44	36	44	32
20	134	63	87	193	208	147	141	72	42	35	70	31
21	98	64	97	e174	165	117	114	64	42	34	43	31
22	81	73	157	e146	142	100	97	95	54	36	37	33
23	74	70	123	e117	106	100	91	155	49	36	35	34
24	70	64	e97	e90	89	101	103	296	44	34	34	33
25	68	72	e81	e59	81	89	88	222	42	33	33	32
26	71	59	e68	e61	73	121	81	409	41	34	32	32
27	68	380	e60	e59	70	289	80	414	40	33	32	31
28	66	3040	e70	e59	71	363	88	279	40	33	32	32
29	65	1070	383	e58	---	212	95	145	39	33	32	31
30	64	459	819	e58	---	140	109	105	39	33	32	31
31	63	---	e717	e58	---	113	---	152	---	32	35	---
TOTAL	4590	8540	5345	3802	3396	4970	4057	4570	2442	1206	1150	1033
MEAN	148	285	172	123	121	160	135	147	81.4	38.9	37.1	34.4
MAX	626	3040	819	318	294	465	440	414	458	79	70	58
MIN	48	59	60	58	59	77	77	56	39	32	32	31
CFSM	2.24	4.30	2.60	1.85	1.83	2.42	2.04	2.23	1.23	.59	.56	.52
IN.	2.58	4.80	3.00	2.14	1.91	2.79	2.28	2.57	1.37	.68	.65	.58

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 1991, BY WATER YEAR (WY)

	MEAN	58.0	72.4	79.4	76.4	94.5	124	119	86.8	67.9	46.0	42.7	42.8
MAX	414	285	186	156	175	319	292	194	234	190	277	143	
(WY)	1955	1991	1966	1950	1976	1982	1947	1948	1950	1981	1990	1972	
MIN	22.3	27.4	24.5	27.0	30.9	52.9	44.6	33.5	25.6	22.2	23.1	21.4	
(WY)	1964	1954	1964	1977	1964	1964	1963	1958	1965	1988	1964	1953	

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1946 - 1991

ANNUAL TOTAL	51030	45101	75.6
ANNUAL MEAN	140	124	124
HIGHEST ANNUAL MEAN			1991
LOWEST ANNUAL MEAN			1964
HIGHEST DAILY MEAN	3040	3040	Nov 28 1990
LOWEST DAILY MEAN	31	31	Aug 24 1965
ANNUAL SEVEN-DAY MINIMUM	35	32	Aug 20 1965
INSTANTANEOUS PEAK FLOW		3880	Nov 28 1990
INSTANTANEOUS PEAK STAGE		10.93	Oct 10 1954
ANNUAL RUNOFF (CFSM)	2.11	1.87	11.66
ANNUAL RUNOFF (INCHES)	28.68	25.34	1.14
10 PERCENT EXCEEDS	252	257	15.52
50 PERCENT EXCEEDS	79	80	139
90 PERCENT EXCEEDS	44	33	47
			27

04094500 SALT CREEK NEAR MCCOOL, IN

LOCATION.--Lat 41°35'48", long 87°08'40", in SE1/4 sec.6, T.36 N., R.6 W., Porter County, Hydrologic Unit 04040001, on left bank on downstream side of highway bridge, 50 ft downstream from Conrail Railroad bridge, 1.2 mi north of McCool, and 1.6 mi upstream from Little Calumet River.

DRAINAGE AREA.--74.6 mi².

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.--Records fair except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46	57	271	e210	e66	80	87	100	160	e52	31	38
2	46	57	115	125	69	223	87	98	182	51	31	36
3	54	54	102	98	77	373	84	89	121	51	34	46
4	135	62	105	84	96	132	85	86	107	51	38	66
5	105	276	97	93	132	91	99	152	98	54	36	45
6	74	603	94	84	123	91	94	300	88	52	35	39
7	85	464	90	82	104	90	87	134	81	53	36	34
8	146	201	87	83	97	86	84	102	80	85	69	32
9	273	106	86	85	94	83	86	97	79	68	83	32
10	609	91	89	85	94	79	88	90	74	58	55	36
11	695	82	89	84	92	75	82	87	76	51	42	35
12	415	76	88	91	87	74	76	85	80	52	40	40
13	159	73	86	87	90	77	75	82	75	51	38	49
14	112	70	81	82	95	81	93	80	69	51	36	43
15	117	70	95	85	85	87	269	79	67	48	34	38
16	105	71	96	108	76	90	384	79	71	43	33	36
17	92	67	91	149	81	102	442	86	67	38	34	35
18	143	66	95	111	84	235	e340	116	62	37	37	34
19	130	65	92	99	99	179	e150	107	60	37	53	34
20	102	63	87	101	92	100	95	90	e58	39	100	33
21	86	67	94	98	89	94	92	83	e61	42	61	35
22	78	75	112	92	87	93	91	112	e68	44	44	35
23	74	74	97	95	85	95	89	113	e65	38	38	38
24	72	72	86	e80	83	94	93	185	e61	35	32	36
25	68	68	e79	e63	77	91	90	227	e57	34	30	35
26	66	66	e70	e70	71	95	87	291	e54	33	30	35
27	64	443	e64	e67	71	139	85	314	e53	32	31	35
28	60	2030	e74	e66	71	121	89	150	e52	32	31	35
29	59	1040	416	e66	---	98	93	106	e52	31	31	35
30	60	562	979	e65	---	93	100	101	e52	32	33	34
31	58	---	e436	e65	---	91	---	105	---	30	32	---
TOTAL	4388	7171	4543	2853	2467	3532	3796	3926	2330	1405	1288	1134
MEAN	142	239	147	92.0	88.1	114	127	127	77.7	45.3	41.5	37.8
MAX	695	2030	979	210	132	373	442	314	182	85	100	66
MIN	46	54	64	63	66	74	75	79	52	30	30	32
CFSM	1.90	3.20	1.96	1.23	1.18	1.53	1.70	1.70	1.04	.61	.56	.51
IN.	2.19	3.58	2.27	1.42	1.23	1.76	1.89	1.96	1.16	.70	.64	.57

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 1991, BY WATER YEAR (WY)

	MEAN	57.6	72.0	76.5	76.3	97.3	122	121	88.6	70.3	49.9	44.4	44.5
MAX	335	248	170	170	238	304	247	197	219	187	211	137	
(WY)	1955	1986	1973	1950	1959	1982	1947	1983	1981	1983	1990	1972	
MIN	22.9	27.7	26.1	25.8	32.7	50.2	42.6	29.9	22.9	18.6	16.5	20.4	
(WY)	1965	1957	1964	1977	1964	1987	1963	1958	1964	1964	1964	1988	

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1946 - 1991	
ANNUAL TOTAL	45973		38833		76.6	
ANNUAL MEAN	126		106		121	
HIGHEST ANNUAL MEAN					36.2	
LOWEST ANNUAL MEAN					1973	
HIGHEST DAILY MEAN	2030	Nov 28	2030	Nov 28	2740	Oct 11 1954
LOWEST DAILY MEAN	33	Jul 17	30	Jul 31	10	Aug 26 1988
ANNUAL SEVEN-DAY MINIMUM	38	Jul 4	31	Aug 24	15	Sep 2 1964
INSTANTANEOUS PEAK FLOW			2320	Nov 28	3180	Oct 11 1954
INSTANTANEOUS PEAK STAGE			11.39	Nov 28	14.12	Oct 11 1954
ANNUAL RUNOFF (CFSM)	1.69		1.43		1.03	
ANNUAL RUNOFF (INCHES)	22.92		19.36		13.95	
10 PERCENT EXCEEDS	267		149		139	
50 PERCENT EXCEEDS	74		82		48	
90 PERCENT EXCEEDS	44		35		28	

04095300 TRAIL CREEK AT MICHIGAN CITY, IN

LOCATION.--Lat 41°43'00", long 86°51'35", in NE¼SE¼ sec.27, T.38 N., R.4 W., LaPorte County, Hydrologic Unit 04040001, on right upstream side of bridge on Springland Avenue in Michigan City, 1.0 mi upstream from Otter Creek, and 4.2 mi upstream from mouth.

DRAINAGE AREA.--54.1 mi².

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.--Records good except for estimated daily discharges, which are fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	60	202	186	62	91	87	113	549	43	31	33
2	48	59	147	135	66	361	79	94	222	41	31	32
3	78	59	146	109	86	314	75	79	124	41	31	46
4	293	69	139	85	174	173	82	74	95	44	33	48
5	125	475	114	92	240	123	101	304	82	41	32	37
6	74	574	112	87	165	113	83	229	73	39	32	35
7	74	251	105	84	124	98	74	124	68	51	31	34
8	90	160	99	80	104	89	72	95	64	50	115	33
9	389	116	94	81	98	89	83	85	61	41	55	32
10	728	100	91	79	90	84	145	76	59	40	40	35
11	407	88	88	90	76	81	91	71	70	38	37	34
12	209	82	87	108	67	78	76	68	66	38	36	46
13	133	77	85	101	e85	84	74	66	58	38	35	49
14	107	75	81	100	e80	94	136	64	55	39	35	39
15	134	73	106	102	e77	123	349	62	53	36	34	37
16	98	72	97	236	e71	123	277	68	54	36	33	35
17	94	69	92	267	e79	126	226	90	51	36	36	34
18	259	68	108	154	106	237	133	98	49	34	38	34
19	141	68	98	119	279	137	104	76	48	33	85	34
20	98	66	87	185	194	103	92	67	47	33	77	33
21	84	70	103	162	144	91	84	64	47	33	44	33
22	78	79	125	114	116	84	79	72	52	35	40	37
23	73	73	99	e94	88	87	83	95	50	35	38	37
24	71	68	87	e76	82	87	130	116	47	35	37	34
25	75	66	e80	64	75	77	97	200	45	33	35	35
26	73	65	e73	73	70	138	84	320	44	32	35	34
27	69	649	67	e62	69	403	87	282	43	32	34	33
28	64	2550	78	e62	74	299	93	126	42	32	34	33
29	62	510	740	e61	---	167	108	87	41	32	34	33
30	62	285	669	e61	---	111	100	80	44	33	34	32
31	61	---	290	e61	---	93	---	201	---	32	34	---
TOTAL	4401	7076	4589	3370	3041	4358	3384	3646	2403	1156	1276	1081
MEAN	142	236	148	109	109	141	113	118	80.1	37.3	41.2	36.0
MAX	728	2550	740	267	279	403	349	320	549	51	115	49
MIN	48	59	67	61	62	77	72	62	41	32	31	32
CFSM	2.62	4.36	2.74	2.01	2.01	2.60	2.09	2.17	1.48	.69	.76	.67
IN.	3.03	4.87	3.16	2.32	2.09	3.00	2.33	2.51	1.65	.79	.88	.74

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 1991, BY WATER YEAR (WY)

	54.5	80.4	81.5	72.0	90.1	116	106	89.6	68.7	49.5	47.8	46.2
MEAN	54.5	80.4	81.5	72.0	90.1	116	106	89.6	68.7	49.5	47.8	46.2
MAX	142	236	147	118	189	249	172	159	137	121	190	88.6
(WY)	1991	1991	1991	1973	1985	1982	1983	1990	1981	1986	1990	1981
MIN	35.3	37.6	40.4	38.7	51.8	56.8	47.1	46.5	33.7	28.9	28.8	29.2
(WY)	1980	1972	1990	1977	1978	1981	1971	1977	1971	1971	1970	1988

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1970 - 1991

ANNUAL TOTAL	44790		39781		75.0	
ANNUAL MEAN	123		109		109	1991
HIGHEST ANNUAL MEAN					50.5	1977
HIGHEST DAILY MEAN	2550	Nov 28	2550	Nov 28	2550	Nov 28 1990
LOWEST DAILY MEAN	40	Jan 1	31	Aug 1	20	Aug 1 1977
ANNUAL SEVEN-DAY MINIMUM	43	Jul 4	32	Aug 1	22	Jul 27 1977
INSTANTANEOUS PEAK FLOW			3880	Nov 28	3880	Nov 28 1990
INSTANTANEOUS PEAK STAGE			12.79	Nov 28	12.79	Nov 28 1990
ANNUAL RUNOFF (CFSM)	2.27		2.01		1.39	
ANNUAL RUNOFF (INCHES)	30.80		27.35		18.85	
10 PERCENT EXCEEDS	226		200		123	
50 PERCENT EXCEEDS	72		77		55	
90 PERCENT EXCEEDS	51		34		33	

STREAMS TRIBUTARY TO LAKE MICHIGAN

04095300 TRAIL CREEK AT MICHIGAN CITY, IN

WATER-QUALITY RECORDS

PERIOD OF RECORD.--June 1990 to current year.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT DISCHARGE: June 1990 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 358 mg/L, Nov. 27, 1990; minimum daily mean, 4 mg/L, April 3, 1991.
SEDIMENT LOADS: Maximum daily, 927 tons, Nov. 28, 1990; minimum daily, 0.4 ton, Sept. 28, 1991.

EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 358 mg/L, Nov. 27; minimum daily mean, 4 mg/L, April 3.
SEDIMENT LOADS: Maximum daily, 927 tons, Nov. 28; minimum daily, 0.4 ton, Sept. 28.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	GAGE HEIGHT (FEET) (00065)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
JUN						
14...	1455	2.47	53	58	8.3	86
JUL						
03...	0845	2.35	46	E118	E15	E87
AUG						
03...	1030	2.28	42	43	4.9	66
20...	2015	9.41	769	159	330	51
21...	0755	6.58	442	107	128	54
21...	0840	6.41	423	109	124	56
21...	1020	6.10	389	120	126	54
21...	1225	5.80	357	126	121	64
SEP						
13...	1053	2.45	52	20	2.8	80
14...	1150	3.16	102	101	28	91

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	GAGE HEIGHT (FEET) (00065)	DIS- CHARGE, INST. CUBIC FEET PER SECOND (00061)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDED (T/DAY) (80155)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM (70331)
OCT						
09...	1820	6.19	399	143	154	52
09...	2305	6.78	463	155	194	49
10...	1005	9.00	719	165	320	56
10...	1205	9.35	761	150	308	59
10...	1530	9.68	802	154	333	47
10...	1700	9.75	811	142	311	45
10...	1810	9.75	811	134	293	45
17...	2047	2.89	81	24	5.2	53
17...	2216	3.88	171	190	88	45
17...	2324	3.70	152	63	26	75
18...	0119	4.26	205	150	83	71
18...	0631	5.05	280	204	154	76
18...	0817	5.11	286	185	143	76
NOV						
05...	1640	8.31	636	205	352	39
30...	1606	4.58	267	71	51	--
DEC						
01...	1101	4.04	208	46	26	--
07...	0858	3.13	107	25	7.2	--
JAN						
11...	1135	3.01	85	21	4.8	--
FEB						
19...	1400	4.96	283	129	99	57
28...	1620	2.84	75	14	2.8	64
APR						
17...	1350	4.30	238	77	49	68
JUN						
01...	0016	8.18	621	211	354	77
01...	0214	8.33	640	294	508	78
01...	0410	8.61	666	278	500	72
01...	0612	8.82	691	273	509	74
01...	0809	8.91	706	221	421	68
01...	1008	8.70	675	228	416	73
01...	1207	8.13	605	191	312	69
06...	0814	2.76	75	23	4.7	70
JUL						
09...	0820	2.35	--	22	--	55
AUG						
22...	1300	2.34	41	29	3.2	--

04095300 TRAIL CREEK AT MICHIGAN CITY, IN

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL			MAY			JUNE			
1	76	---	---	57	---	---	57	---	---
2	90	---	---	55	---	---	61	---	---
3	96	---	---	55	---	---	58	---	---
4	79	---	---	188	---	---	53	---	---
5	78	---	---	161	---	---	53	---	---
6	69	---	---	90	---	---	52	---	---
7	64	---	---	74	---	---	50	---	---
8	60	---	---	66	---	---	71	---	---
9	60	---	---	74	---	---	60	---	---
10	120	---	---	487	---	---	52	---	---
11	134	---	---	255	---	---	49	---	---
12	93	---	---	205	---	---	47	---	---
13	75	---	---	520	---	---	45	---	---
14	138	---	---	310	---	---	51	---	---
15	106	---	---	159	---	---	47	38	4.8
16	80	---	---	145	---	---	44	62	7.4
17	92	---	---	527	---	---	43	59	6.9
18	75	---	---	247	---	---	42	54	6.1
19	67	---	---	129	---	---	40	54	5.9
20	84	---	---	110	---	---	46	55	6.9
21	315	---	---	88	---	---	49	83	11
22	156	---	---	76	---	---	57	63	9.9
23	94	---	---	70	---	---	73	78	16
24	79	---	---	66	---	---	59	61	9.7
25	71	---	---	99	---	---	50	58	7.7
26	67	---	---	224	---	---	61	83	15
27	64	---	---	113	---	---	57	70	11
28	62	---	---	81	---	---	66	79	15
29	59	---	---	70	---	---	124	146	53
30	58	---	---	64	---	---	81	126	28
31	---	---	---	60	---	---	---	---	---
TOTAL	2761	---	---	4925	---	---	1698	---	---

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JULY			AUGUST			SEPTEMBER			
1	63	103	18	50	46	6.1	55	30	4.5
2	56	88	13	48	45	5.7	53	31	4.4
3	50	73	9.8	46	46	5.7	52	25	3.5
4	46	62	7.8	228	256	198	51	21	2.9
5	46	70	8.7	105	65	19	50	20	2.7
6	43	56	6.6	67	41	7.3	54	33	4.8
7	42	51	5.8	61	32	5.2	72	39	8.0
8	41	46	5.0	55	30	4.4	56	27	4.1
9	41	59	6.5	52	31	4.3	52	25	3.4
10	45	59	7.2	51	35	5.1	51	24	3.3
11	77	92	20	64	91	17	50	16	2.1
12	59	69	11	84	103	35	49	22	2.9
13	52	52	7.3	116	98	36	47	18	2.3
14	54	46	6.6	66	38	6.8	71	48	12
15	54	43	6.3	58	39	6.1	62	35	6.1
16	53	42	6.0	52	40	5.7	60	32	5.4
17	54	47	6.9	118	63	38	54	26	3.7
18	53	62	9.7	1610	174	808	49	27	3.6
19	74	79	18	456	129	154	52	36	5.2
20	333	273	269	596	237	381	51	39	5.4
21	157	81	38	610	166	306	107	58	21
22	294	203	207	513	123	193	104	46	13
23	190	84	47	175	73	35	103	55	16
24	90	47	11	124	60	20	106	53	15
25	71	47	9.1	94	54	14	68	49	9.0
26	64	58	10	79	47	10	59	44	7.1
27	59	57	9.1	71	43	8.3	54	36	5.3
28	55	56	8.2	66	41	7.2	52	33	4.8
29	55	63	9.3	69	48	9.0	55	48	7.1
30	57	53	8.1	61	34	5.6	52	42	5.9
31	52	47	6.6	58	29	4.5	---	---	---
TOTAL	2480	---	812.6	5903	---	2361.0	1851	---	194.5

04095300 TRAIL CREEK AT MICHIGAN CITY, IN

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
OCTOBER			NOVEMBER			DECEMBER			
1	50	27	3.6	60	---	3.3	202	50	27
2	48	14	1.8	59	---	3.2	147	29	12
3	78	37	18	59	---	3.2	146	53	22
4	293	251	220	69	---	4.8	139	28	11
5	125	57	19	475	---	420	114	14	4.2
6	74	39	7.8	574	---	630	112	16	4.8
7	74	40	8.1	251	---	95	105	15	4.1
8	90	36	11	160	---	34	99	15	3.9
9	389	181	197	116	---	16	94	13	3.4
10	728	162	327	100	48	13	91	10	2.6
11	407	111	128	88	40	9.5	88	9	2.1
12	209	59	33	82	33	7.4	87	10	2.4
13	133	38	14	77	27	5.5	85	11	2.4
14	107	25	7.6	75	20	4.1	81	11	2.4
15	134	34	12	73	13	2.6	106	17	4.9
16	98	20	5.3	72	10	2.0	97	13	3.4
17	94	25	8.7	69	9	1.7	92	9	2.4
18	259	125	95	68	8	1.5	108	13	3.7
19	141	34	13	68	8	1.5	98	11	2.8
20	98	28	7.3	66	8	1.4	87	10	2.3
21	84	21	4.8	70	8	1.5	103	21	6.9
22	78	21	4.3	79	11	2.4	125	28	9.9
23	73	17	3.4	73	10	2.0	99	9	2.4
24	71	13	2.5	68	9	1.7	87	11	2.6
25	75	---	5.6	66	9	1.6	80	18	4.1
26	73	---	5.3	65	8	1.4	73	18	3.8
27	69	---	4.8	649	358	888	67	15	2.7
28	64	---	3.9	2550	117	927	78	12	2.6
29	62	---	3.6	510	70	91	740	270	478
30	62	---	3.6	285	80	62	669	66	124
31	61	---	3.5	---	---	---	290	35	27
TOTAL	4401	---	1182.5	7076	---	3238.3	4589	---	787.8

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JANUARY			FEBRUARY			MARCH			
1	186	29	15	62	16	2.6	91	10	2.5
2	135	19	6.8	66	11	2.0	361	251	289
3	109	17	5.1	86	17	4.5	314	88	78
4	85	20	4.8	174	51	25	173	51	24
5	92	20	5.0	240	53	36	123	26	8.6
6	87	16	3.8	165	22	10	113	14	4.3
7	84	13	2.8	124	16	5.3	98	10	2.6
8	80	11	2.3	104	12	3.3	89	8	2.0
9	81	9	1.9	98	11	2.9	89	12	2.9
10	79	6	1.3	90	9	2.1	84	11	2.4
11	90	15	3.8	76	6	1.3	81	12	2.7
12	108	16	4.6	67	8	1.4	78	12	2.5
13	101	10	2.6	85	26	8.6	84	9	2.0
14	100	10	2.8	80	19	6.4	94	10	2.8
15	102	10	2.9	77	11	2.2	123	19	6.6
16	236	84	60	71	14	3.4	123	22	7.3
17	267	31	23	79	10	2.3	126	33	16
18	154	19	7.7	106	13	4.6	237	127	87
19	119	23	7.7	279	87	68	137	34	13
20	185	55	28	194	31	16	103	20	5.6
21	162	20	9.0	144	25	9.9	91	11	2.6
22	114	14	4.2	116	14	4.3	84	14	3.1
23	94	16	4.7	88	9	2.1	87	15	3.5
24	76	16	3.7	82	7	1.7	87	12	2.8
25	64	22	4.2	75	6	1.2	77	9	1.9
26	73	21	4.2	70	7	1.4	138	56	25
27	62	23	4.0	69	9	1.8	403	341	434
28	62	14	2.4	74	10	2.1	299	89	76
29	61	11	1.9	---	---	---	167	44	20
30	61	6	1.1	---	---	---	111	22	6.7
31	61	10	1.6	---	---	---	93	19	4.7
TOTAL	3370	---	232.9	3041	---	232.4	4358	---	1142.1

04095300 TRAIL CREEK AT MICHIGAN CITY, IN

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
APRIL			MAY			JUNE			
1	87	17	4.0	113	25	8.5	549	216	343
2	79	9	1.9	94	14	3.6	222	81	50
3	75	4	.82	79	9	2.0	124	48	16
4	82	9	2.2	74	7	1.4	95	27	6.8
5	101	15	4.1	304	307	326	82	20	4.3
6	83	7	1.5	229	126	83	73	20	3.9
7	74	5	1.1	124	38	13	68	20	3.6
8	72	8	1.5	95	19	5.0	64	17	3.0
9	83	17	3.9	85	11	2.5	61	18	3.0
10	145	60	26	76	12	2.4	59	16	2.5
11	91	13	3.2	71	15	2.9	70	23	4.7
12	76	10	2.1	68	13	2.4	66	15	2.8
13	74	12	2.5	66	14	2.5	58	18	2.9
14	136	53	24	64	18	3.1	55	15	2.2
15	349	130	145	62	16	2.6	53	13	1.8
16	277	79	60	68	34	7.1	54	16	2.3
17	226	87	55	90	35	9.0	51	21	2.9
18	133	33	12	98	31	8.3	49	18	2.4
19	104	18	5.2	76	20	4.2	48	17	2.2
20	92	11	2.7	67	17	3.2	47	16	2.0
21	84	9	2.1	64	16	2.8	47	16	2.1
22	79	8	1.7	72	24	4.9	52	18	2.5
23	83	9	2.2	95	61	21	50	16	2.2
24	130	21	7.6	116	96	31	47	12	1.5
25	97	5	1.4	200	264	222	45	9	1.1
26	84	5	1.2	320	82	74	44	7	.81
27	87	9	2.3	282	131	104	43	10	1.2
28	93	9	2.4	126	60	21	42	12	1.3
29	108	16	5.4	87	38	8.9	41	11	1.3
30	100	14	4.0	80	32	7.0	44	11	1.4
31	---	---	---	201	264	292	---	---	---
TOTAL	3384	---	389.02	3646	---	1281.3	2403	---	477.71

DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
JULY			AUGUST			SEPTEMBER			
1	43	14	1.6	31	10	.87	33	13	1.2
2	41	13	1.5	31	12	1.0	32	9	.80
3	41	13	1.4	31	10	.82	46	37	6.1
4	44	12	1.4	33	7	.65	48	24	3.3
5	41	9	.98	32	10	.89	37	15	1.5
6	39	11	1.2	32	11	.90	35	17	1.6
7	51	18	2.8	31	11	.92	34	18	1.7
8	50	21	2.9	115	188	78	33	13	1.2
9	41	7	.78	55	55	8.9	32	14	1.2
10	40	16	1.8	40	10	1.1	35	17	1.6
11	38	15	1.5	37	9	.94	34	16	1.5
12	38	14	1.4	36	10	.97	46	23	3.2
13	38	16	1.7	35	13	1.3	49	22	3.0
14	39	21	2.2	35	14	1.3	39	11	1.1
15	36	20	1.9	34	13	1.2	37	14	1.4
16	36	12	1.1	33	12	1.1	35	18	1.7
17	36	15	1.4	36	19	2.0	34	17	1.5
18	34	14	1.3	38	20	2.0	34	16	1.5
19	33	10	.95	85	97	36	34	14	1.3
20	33	7	.65	77	72	18	33	13	1.2
21	33	11	.98	44	21	2.5	33	7	.64
22	35	19	1.8	40	13	1.3	37	17	1.7
23	35	15	1.4	38	15	1.5	37	11	1.1
24	35	11	1.0	37	18	1.8	34	7	.68
25	33	8	.76	35	18	1.7	35	9	.82
26	32	7	.60	35	24	2.3	34	7	.64
27	32	8	.67	34	24	2.2	33	5	.43
28	32	8	.73	34	22	2.0	33	5	.40
29	32	8	.66	34	18	1.6	33	9	.83
30	33	7	.63	34	16	1.5	32	10	.89
31	32	8	.72	34	15	1.4	---	---	---
TOTAL	1156	---	40.41	1276	---	178.66	1081	---	45.73

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 mi², of which 2.30 mi² 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.--Records good except for estimated daily discharges, which are poor. Maximum instantaneous and mean daily discharges for period of record are estimated, maximum gage height is unknown.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	23	47	e50	e20	e35	e27	32	148	13	10	11
2	17	23	42	e40	e21	e70	e25	28	49	13	10	12
3	21	23	43	e35	e25	e60	e23	25	35	12	9.8	16
4	80	26	41	e28	e40	e42	e27	24	29	15	10	18
5	41	127	36	e31	e66	e38	e35	40	27	14	10	14
6	27	150	e33	e30	e42	e34	e29	39	25	13	10	13
7	28	56	e32	e28	40	e31	e26	29	22	14	9.9	12
8	31	43	e31	e27	37	e29	e33	24	21	17	24	11
9	117	37	e30	e26	35	e27	e32	23	20	15	23	11
10	224	33	e30	e27	33	e26	e40	22	21	14	15	11
11	107	30	e29	e30	29	e26	e30	21	23	13	14	13
12	48	28	e28	e36	27	e25	e25	20	25	14	13	16
13	36	26	e28	e34	e30	e28	e23	19	21	14	13	17
14	32	25	e27	e33	e28	e32	e40	18	19	14	13	15
15	40	25	e35	e34	e27	e40	e64	18	18	13	12	15
16	32	24	e32	e66	e29	e41	e100	24	18	12	12	13
17	30	23	e30	e56	e40	e50	e56	39	17	12	12	12
18	60	23	e36	e45	e56	e70	e36	37	17	11	13	13
19	42	23	e32	e39	e72	e47	30	29	16	13	17	12
20	33	22	e30	e56	e53	e36	29	23	15	11	19	11
21	31	23	e34	e45	e39	e30	27	22	15	11	15	11
22	29	27	e37	e36	e32	e27	27	21	16	12	14	12
23	28	25	e30	e30	e30	e28	28	25	16	13	13	13
24	27	23	e27	e25	e28	e29	50	33	15	12	14	12
25	28	22	e26	e21	e26	e26	34	62	15	11	12	12
26	27	22	e24	e22	e25	e50	29	128	15	11	11	12
27	26	e150	e22	e21	e26	e74	27	63	14	11	11	11
28	26	e650	e25	e20	e28	e58	28	40	13	10	10	11
29	25	131	e220	e20	---	e40	33	33	13	13	10	11
30	24	68	e120	e19	---	e34	30	29	13	12	13	11
31	23	---	e80	e19	---	e30	---	51	---	11	12	---
TOTAL	1357	1931	1317	1029	984	1213	1043	1041	731	394	404.7	382
MEAN	43.8	64.4	42.5	33.2	35.1	39.1	34.8	33.6	24.4	12.7	13.1	12.7
MAX	224	650	220	66	72	74	100	128	148	17	24	18
MIN	17	22	22	19	20	25	23	18	13	10	9.8	11
CFSM	2.55	3.74	2.47	1.93	2.04	2.27	2.02	1.95	1.42	.74	.76	.74
IN.	2.93	4.18	2.85	2.23	2.13	2.62	2.26	2.25	1.58	.85	.88	.83

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 1991, BY WATER YEAR (WY)

	MEAN	22.4	29.1	30.9	25.9	31.0	38.9	35.0	27.6	21.9	15.7	14.8	16.5
MAX	43.8	64.4	51.8	40.4	51.6	70.1	56.0	45.2	38.1	26.2	26.3	29.1	
(WY)	1991	1991	1973	1974	1985	1982	1970	1981	1973	1978	1990	1972	
MIN	14.8	16.8	15.6	15.0	19.2	19.4	18.2	16.0	12.3	10.3	9.71	10.4	
(WY)	1990	1981	1990	1976	1980	1981	1971	1980	1971	1988	1970	1988	

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1970 - 1991

ANNUAL TOTAL	12425		11826.7		25.8	
ANNUAL MEAN	34.0		32.4		32.6	1973
HIGHEST ANNUAL MEAN					21.0	1977
LOWEST ANNUAL MEAN					e650	Nov 28 1990
HIGHEST DAILY MEAN	e650	Nov 28	e650	Nov 28	6.7	Sep 13 1973
LOWEST DAILY MEAN	11	Jun 18	9.8	Aug 3	7.6	Aug 27 1970
ANNUAL SEVEN-DAY MINIMUM	13	Jun 12	10	Aug 1	e900	Nov 28 1990
INSTANTANEOUS PEAK FLOW			e900	Nov 28	unknown	Nov 28 1990
INSTANTANEOUS PEAK STAGE			unknown	Nov 28	1.50	
ANNUAL RUNOFF (CFSM)	1.98		1.88		20.35	
ANNUAL RUNOFF (INCHES)	26.87		25.58		42	
10 PERCENT EXCEEDS	56		50		21	
50 PERCENT EXCEEDS	25		26		12	
90 PERCENT EXCEEDS	15		12			

e Estimated

04099510 PIGEON CREEK NEAR ANGOLA, IN

LOCATION.--Lat 41°38'04", long 85°06'35", in NW1/4 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 mi², of which 22.5 mi² 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.--Records good.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	67	97	553	95	111	136	199	109	33	21	27
2	31	64	96	579	90	116	128	181	130	47	20	28
3	31	62	100	569	89	140	120	166	143	56	22	29
4	37	60	111	537	92	165	113	152	149	61	21	29
5	41	72	132	491	101	177	110	142	143	60	22	27
6	44	106	145	439	112	176	108	137	130	57	21	26
7	47	151	147	389	120	166	107	131	117	53	20	24
8	48	180	142	340	122	157	107	126	104	49	22	23
9	61	188	134	297	122	146	115	119	92	45	22	23
10	112	181	126	260	119	137	127	111	83	41	22	22
11	192	172	121	234	116	128	139	104	76	38	22	21
12	253	155	116	218	111	121	144	98	73	36	22	23
13	283	139	110	204	107	114	139	92	69	35	22	24
14	288	125	106	191	107	107	135	88	64	34	21	24
15	266	114	103	180	103	100	140	84	61	32	21	23
16	236	105	102	182	101	95	156	81	57	31	20	23
17	207	97	103	202	96	92	174	80	54	29	21	21
18	185	92	106	218	94	91	190	77	52	28	22	20
19	167	89	110	219	101	90	195	73	48	26	25	19
20	153	82	114	212	125	90	237	70	46	26	33	18
21	140	78	117	203	151	89	300	67	44	25	38	18
22	131	76	128	192	163	88	335	64	42	25	45	17
23	123	74	145	178	165	89	342	61	39	24	49	17
24	113	73	153	164	159	91	336	60	38	23	48	17
25	104	71	152	149	149	94	324	63	36	23	43	17
26	96	70	144	137	137	99	303	68	35	22	38	17
27	88	70	134	127	126	106	279	73	34	22	34	16
28	82	74	126	118	117	117	258	74	33	22	30	16
29	77	83	159	110	---	129	238	73	32	22	28	16
30	73	93	318	105	---	139	216	71	31	22	27	15
31	69	---	479	99	---	141	---	82	---	21	28	---
TOTAL	3810	3063	4376	8096	3290	3701	5751	3067	2164	1068	850	640
MEAN	123	102	141	261	117	119	192	98.9	72.1	34.5	27.4	21.3
MAX	288	188	479	579	165	177	342	199	149	61	49	29
MIN	31	60	96	99	89	88	107	60	31	21	20	15
CFSM	1.47	1.22	1.69	3.13	1.41	1.43	2.30	1.18	.86	.41	.33	.26
IN.	1.70	1.36	1.95	3.61	1.47	1.65	2.56	1.37	.96	.48	.38	.29

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 1991, BY WATER YEAR (WY)

	MEAN	34.0	49.9	75.6	88.3	107	161	166	111	74.4	48.4	34.3	31.1
MAX	154	184	195	266	257	437	491	383	263	164	126	119	119
(WY)	1955	1986	1968	1950	1959	1982	1950	1956	1981	1981	1981	1981	1981
MIN	4.12	4.51	7.20	7.95	8.55	20.4	48.1	29.8	21.6	10.8	8.12	5.83	5.83
(WY)	1965	1965	1964	1964	1963	1964	1946	1963	1988	1963	1964	1963	1963

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1946 - 1991

ANNUAL TOTAL	47109	39876	81.7
ANNUAL MEAN	129	109	151
HIGHEST ANNUAL MEAN			19.5
LOWEST ANNUAL MEAN			1950
HIGHEST DAILY MEAN	517	579	794
LOWEST DAILY MEAN	28	15	3.4
ANNUAL SEVEN-DAY MINIMUM	31	16	3.5
INSTANTANEOUS PEAK FLOW		584	795
INSTANTANEOUS PEAK STAGE		11.20	13.90
ANNUAL RUNOFF (CFSM)	1.55	1.31	.98
ANNUAL RUNOFF (INCHES)	20.99	17.77	13.29
10 PERCENT EXCEEDS	250	202	187
50 PERCENT EXCEEDS	110	96	52
90 PERCENT EXCEEDS	39	22	16

04099750 PIGEON RIVER NEAR SCOTT, IN

LOCATION.--Lat 41°44'56", long 85°34'35", in SE1/4 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 mi², of which 53.9 mi² 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.--Records good except for estimated daily discharges, which are fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	196	323	413	e1610	e425	499	487	727	534	266	140	152
2	190	314	399	e1550	e420	535	479	690	603	442	135	146
3	187	306	403	e1430	443	583	465	637	536	506	140	150
4	212	303	479	e1300	465	570	454	591	511	392	144	162
5	215	407	486	e1210	494	576	475	572	500	349	149	177
6	209	598	462	e1130	504	582	468	564	488	324	138	165
7	212	593	460	e1050	519	577	447	563	471	305	114	143
8	237	557	471	e980	514	561	438	533	448	284	146	123
9	384	547	460	e910	511	542	450	510	421	242	215	124
10	655	560	445	e860	506	529	447	503	395	223	201	146
11	823	549	432	e810	493	512	444	475	371	211	175	144
12	801	524	418	e770	475	492	442	426	368	204	148	164
13	739	497	404	e730	468	474	442	427	339	216	134	204
14	744	469	393	e700	502	454	466	432	323	219	136	188
15	763	448	400	e690	491	440	519	413	318	207	136	150
16	751	426	398	748	e460	433	545	400	314	195	135	131
17	706	402	392	811	e435	425	536	400	306	180	139	141
18	683	365	406	794	e430	445	530	384	293	159	153	143
19	664	354	406	759	517	452	569	368	279	154	176	138
20	601	352	376	755	578	437	696	337	252	172	228	136
21	549	334	404	750	577	430	809	334	246	189	215	135
22	496	346	440	706	586	424	774	333	246	188	193	135
23	446	357	442	667	605	429	779	360	249	157	182	137
24	441	346	447	e620	583	440	860	384	239	129	170	134
25	430	335	e450	e580	564	439	916	383	233	155	167	135
26	417	327	e440	e550	543	446	892	405	229	149	169	139
27	397	344	e410	e520	519	474	858	389	220	140	152	134
28	376	448	e390	e495	501	505	852	370	214	139	142	130
29	337	498	632	e480	---	520	824	357	203	141	151	128
30	331	446	1130	e460	---	491	785	349	208	154	148	127
31	328	---	e1530	e440	---	482	---	388	---	147	149	---
TOTAL	14520	12675	15218	25865	14128	15198	18148	14004	10357	6938	4920	4361
MEAN	468	422	491	834	505	490	605	452	345	224	159	145
MAX	823	598	1530	1610	605	583	916	727	603	506	228	204
MIN	187	303	376	440	420	424	438	333	203	129	114	123
CFSM	1.53	1.38	1.60	2.72	1.64	1.60	1.97	1.47	1.12	.73	.52	.47
IN.	1.76	1.54	1.84	3.13	1.71	1.84	2.20	1.70	1.25	.84	.60	.53

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1991, BY WATER YEAR (WY)

	MEAN	227	293	381	379	438	624	619	458	372	262	209	203
MAX	575	677	719	834	836	1389	1089	811	1103	654	516	538	
(WY)	1987	1986	1983	1991	1969	1982	1978	1983	1981	1981	1981	1981	
MIN	96.3	96.7	157	173	143	311	324	233	132	104	92.5	85.8	
(WY)	1972	1972	1972	1977	1972	1970	1971	1971	1988	1988	1988	1971	

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1968 - 1991

ANNUAL TOTAL	168126		156332		370	
ANNUAL MEAN	461		428		529	1982
HIGHEST ANNUAL MEAN					207	1972
LOWEST ANNUAL MEAN					2340	Mar 21 1982
HIGHEST DAILY MEAN	1530	Dec 31	e1610	Jan 1	42	Oct 21 1971
LOWEST DAILY MEAN	167	Aug 11	114	Aug 7	69	Aug 27 1971
ANNUAL SEVEN-DAY MINIMUM	184	Aug 6	132	Sep 24	2370	Mar 21 1982
INSTANTANEOUS PEAK FLOW			e1660	Jan 1	7.85	Mar 21 1982
INSTANTANEOUS PEAK STAGE			unknown	Jan 1	1.20	
ANNUAL RUNOFF (CFSM)	1.50		1.40		16.37	
ANNUAL RUNOFF (INCHES)	20.37		18.94			
10 PERCENT EXCEEDS	805		734		690	
50 PERCENT EXCEEDS	420		429		297	
90 PERCENT EXCEEDS	202		146		145	

e Estimated

LOCATION.--Lat 41°40'31", Long 85°42'01", in NE1/4 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 mi², of which 5.89 mi² does not contribute directly to surface runoff.

PERIOD OF RECORD.--October 1979 to current year.

REVISED RECORDS.--WDR IN-82-1: 1980, 1981.

GAGE.--Water-stage recorder. Datum of gage is 810.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	92	139	443	115	118	101	137	253	51	39	44
2	63	91	128	343	115	168	96	129	170	62	36	43
3	63	89	166	310	126	182	94	120	131	60	40	48
4	83	90	202	249	146	147	95	115	111	57	45	48
5	76	252	159	226	161	135	104	114	99	53	45	43
6	71	376	145	210	151	134	99	130	91	51	40	41
7	71	235	134	197	142	125	95	116	85	53	40	40
8	85	196	127	188	136	117	94	108	81	68	53	38
9	334	177	122	180	134	114	96	104	78	56	58	39
10	722	161	118	170	129	111	94	100	76	53	51	39
11	570	148	114	179	120	109	91	97	78	51	49	37
12	354	138	112	200	114	106	88	95	77	58	47	77
13	262	131	108	178	116	104	87	93	72	70	47	75
14	214	126	103	168	126	101	96	91	69	61	44	60
15	201	122	119	178	114	99	146	89	68	57	43	55
16	174	118	124	311	109	98	137	88	67	50	42	51
17	159	113	119	302	109	101	146	90	65	47	44	48
18	188	110	129	226	113	122	124	85	62	48	50	47
19	170	108	123	202	232	112	134	82	59	48	80	46
20	152	105	115	207	208	105	278	81	57	46	77	44
21	141	103	122	196	185	102	190	79	53	48	63	43
22	132	114	153	175	169	99	159	76	52	48	57	43
23	125	111	134	164	146	102	148	82	51	44	54	42
24	120	105	125	151	136	106	251	102	51	41	52	41
25	114	101	118	141	128	100	202	129	49	40	50	41
26	109	98	112	137	121	110	169	156	48	40	49	40
27	107	108	108	132	116	118	158	115	47	42	48	40
28	103	235	108	128	115	142	179	97	47	41	46	38
29	99	191	666	124	---	116	161	88	48	42	48	38
30	97	155	1500	123	---	105	148	84	49	44	47	37
31	94	---	663	119	---	102	---	209	---	42	47	---
TOTAL	5317	4299	6415	6257	3832	3610	4060	3281	2344	1572	1531	1366
MEAN	172	143	207	202	137	116	135	106	78.1	50.7	49.4	45.5
MAX	722	376	1500	443	232	182	278	209	253	70	80	77
MIN	63	89	103	119	109	98	87	76	47	40	36	37
CFSM	1.87	1.56	2.26	2.20	1.49	1.27	1.48	1.15	.85	.55	.54	.50
IN.	2.16	1.74	2.60	2.54	1.55	1.46	1.65	1.33	.95	.64	.62	.55

MEAN	84.1	100	121	106	132	159	144	108	96.1	71.8	57.3	58.5
MAX	172	202	207	202	280	404	210	191	268	189	117	118
(WY)	1991	1986	1991	1991	1985	1982	1985	1983	1981	1981	1981	1981
MIN	43.7	38.6	42.9	53.8	75.2	84.5	93.3	55.3	36.7	37.9	39.9	40.5
(WY)	1988	1981	1990	1981	1980	1981	1986	1988	1988	1988	1987	1983

ANNUAL TOTAL	49645		43884			
ANNUAL MEAN	136		120		103	
HIGHEST ANNUAL MEAN					131	1985
LOWEST ANNUAL MEAN					75.9	1988
HIGHEST DAILY MEAN	1500	Dec 30	1500	Dec 30	2040	Feb 24 1985
LOWEST DAILY MEAN	42	Aug 11	36	Aug 2	24	Jul 9 1988
ANNUAL SEVEN-DAY MINIMUM	48	Aug 6	39	Sep 24	26	Jul 3 1988
INSTANTANEOUS PEAK FLOW			1910	Dec 30	2470	Feb 24 1985
INSTANTANEOUS PEAK STAGE			9.88	Dec 30	10.52	Feb 24 1985
ANNUAL RUNOFF (CFSM)	1.48		1.31		1.12	
ANNUAL RUNOFF (INCHES)	20.14		17.80		15.26	
10 PERCENT EXCEEDS	219		196		176	
50 PERCENT EXCEEDS	105		105		80	
90 PERCENT EXCEEDS	58		44		44	

04099850 PINE CREEK NEAR ELKHART, IN

LOCATION.--Lat 41°40'53", long 85°52'57", in NE1/4 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 mi², of which 8.75 mi² 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.--Records good.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	19	31	70	25	26	22	31	33	14	8.3	12
2	16	19	27	55	25	45	21	30	25	15	8.6	12
3	16	19	38	47	27	44	20	28	22	14	9.3	23
4	28	19	43	41	29	32	20	27	20	14	9.8	32
5	23	66	32	38	33	29	30	28	19	13	9.2	17
6	19	82	29	37	32	29	28	28	18	13	9.0	15
7	18	41	27	35	30	26	22	27	18	13	8.8	13
8	19	32	26	34	29	24	28	25	17	13	13	13
9	101	28	25	33	30	24	24	25	17	12	12	13
10	216	26	24	32	29	23	21	25	17	12	11	12
11	232	24	23	34	27	23	21	24	18	11	10	12
12	69	23	23	37	26	22	21	24	18	12	9.6	79
13	46	22	23	34	26	22	25	24	17	13	9.4	52
14	40	21	21	33	28	22	31	24	17	12	9.1	27
15	40	21	25	33	25	21	94	23	17	12	8.9	24
16	34	21	26	66	e24	21	62	23	17	11	9.0	21
17	31	20	24	59	26	22	47	26	17	10	9.1	18
18	37	19	27	40	27	29	39	24	16	10	9.8	17
19	33	19	25	36	64	25	44	22	15	10	35	17
20	30	19	23	40	48	23	74	22	15	10	32	16
21	28	19	26	37	41	23	47	21	14	10	17	16
22	26	21	31	32	36	22	38	21	15	9.9	15	16
23	25	21	27	31	30	23	36	21	15	9.5	14	16
24	24	20	25	29	28	25	63	22	15	9.1	13	15
25	23	19	24	28	26	23	49	23	14	9.1	13	15
26	22	18	23	27	25	26	40	23	13	8.9	12	15
27	22	41	22	27	24	28	33	22	13	8.8	12	14
28	21	146	22	26	24	26	39	21	13	8.8	11	14
29	20	61	190	26	---	26	36	21	13	9.1	11	14
30	20	37	532	26	---	22	33	21	13	9.5	17	13
31	20	---	169	25	---	21	---	26	---	8.7	13	---
TOTAL	1315	963	1633	1148	844	797	1108	752	511	345.4	388.9	593
MEAN	42.4	32.1	52.7	37.0	30.1	25.7	36.9	24.3	17.0	11.1	12.5	19.8
MAX	232	146	532	70	64	45	94	31	33	15	35	79
MIN	16	18	21	25	24	21	20	21	13	8.7	8.3	12
CFSM	1.37	1.04	1.70	1.19	.97	.83	1.19	.78	.55	.36	.40	.64
IN.	1.58	1.16	1.96	1.38	1.01	.96	1.33	.90	.61	.41	.47	.71

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 1991, BY WATER YEAR (WY)

	MEAN	14.8	17.2	21.9	18.4	23.7	28.4	27.0	21.6	18.9	16.0	12.7	12.4
MAX	42.4	32.8	52.7	37.0	47.6	82.3	38.4	40.6	39.7	39.2	25.5	23.7	
(WY)	1991	1986	1991	1991	1985	1982	1982	1983	1981	1981	1981	1981	
MIN	7.27	7.39	6.93	8.23	11.7	14.4	16.3	11.9	7.79	6.58	6.75	6.34	
(WY)	1990	1981	1990	1981	1980	1981	1981	1988	1988	1988	1988	1988	

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1980 - 1991	
ANNUAL TOTAL	9902.6		10398.3			
ANNUAL MEAN	27.1		28.5		19.4	
HIGHEST ANNUAL MEAN					28.5	
LOWEST ANNUAL MEAN					13.3	
HIGHEST DAILY MEAN	532	Dec 30	532	Dec 30	532	Dec 30 1990
LOWEST DAILY MEAN	7.1	Jan 2	8.3	Aug 1	3.8	Jul 26 1980
ANNUAL SEVEN-DAY MINIMUM	11	Sep 5	8.8	Jul 27	4.7	Jul 3 1988
INSTANTANEOUS PEAK FLOW			607	Dec 30	607	Dec 30 1990
INSTANTANEOUS PEAK STAGE			7.57	Dec 30	9.74	Jul 26 1981
ANNUAL RUNOFF (CFSM)	.88		.92		.63	
ANNUAL RUNOFF (INCHES)	11.88		12.48		8.50	
10 PERCENT EXCEEDS	39		40		32	
50 PERCENT EXCEEDS	19		23		15	
90 PERCENT EXCEEDS	13		12		7.9	

04100222 NORTH BRANCH ELKHART RIVER AT COSPERVILLE, IN

LOCATION.--Lat 41°28'54", long 85°28'32", in NE1/4 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 mi².

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.--Records good except estimated daily discharges, which are fair. Flow regulated at times by dam at Waldron Lake.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	86	166	166	619	e169	182	175	347	349	92	27	64
2	83	157	166	637	e168	201	173	334	391	152	26	55
3	81	148	179	639	e172	225	168	321	411	161	41	50
4	94	142	193	627	189	226	162	305	417	159	48	52
5	103	189	199	604	202	225	161	292	412	154	46	48
6	105	243	199	577	210	223	159	286	397	149	43	44
7	106	262	194	548	211	217	155	276	375	142	39	40
8	108	273	190	517	208	213	154	264	348	136	46	37
9	155	270	183	489	207	204	158	249	318	126	58	36
10	263	265	179	463	202	197	163	231	289	119	57	37
11	320	259	174	443	196	190	168	208	266	112	53	36
12	354	249	167	432	188	183	167	189	246	107	49	63
13	369	238	162	412	182	178	162	174	227	106	45	73
14	375	228	158	393	180	169	162	164	207	100	41	73
15	379	219	162	381	175	162	177	155	189	94	37	70
16	372	209	166	387	e161	157	191	144	174	88	35	66
17	357	200	171	384	e156	153	225	138	160	81	33	61
18	357	190	175	366	e158	160	242	136	146	76	32	56
19	348	182	179	355	186	163	259	132	133	70	37	50
20	336	175	181	356	205	161	307	123	120	65	47	43
21	324	165	182	350	213	156	324	114	109	62	47	38
22	310	161	198	331	217	152	327	107	99	60	44	34
23	291	156	211	315	217	149	331	124	90	55	42	31
24	276	151	e204	e287	211	153	352	129	81	50	39	29
25	260	143	e192	e265	205	156	361	130	72	26	36	28
26	245	137	e180	e241	196	158	359	136	64	21	34	26
27	229	137	e176	e220	187	166	355	134	57	22	32	27
28	214	158	e175	e205	182	179	356	128	52	23	30	41
29	202	168	297	e190	---	187	359	121	46	24	29	38
30	189	168	487	e180	---	182	351	138	57	28	46	34
31	175	---	579	e173	---	178	---	262	---	28	71	---
TOTAL	7466	5808	6424	12386	5353	5605	7163	5991	6302	2688	1290	1380
MEAN	241	194	207	400	191	181	239	193	210	86.7	41.6	46.0
MAX	379	273	579	639	217	226	361	347	417	161	71	73
MIN	81	137	158	173	156	149	154	107	46	21	26	26
CFSM	1.70	1.36	1.46	2.81	1.35	1.27	1.68	1.36	1.48	.61	.29	.32
IN.	1.96	1.52	1.68	3.24	1.40	1.47	1.88	1.57	1.65	.70	.34	.36

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 1991, BY WATER YEAR (WY)

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
MEAN	88.2	117	150	151	157	274	250	172	140	82.4	58.6	66.1								
MAX	272	314	341	400	272	553	530	324	400	211	130	161								
(WY)	1987	1973	1986	1991	1990	1985	1981	1981	1981	1981	1981	1972								
MIN	17.8	17.8	46.5	42.2	43.2	118	133	67.2	18.1	16.4	18.3	22.1								
(WY)	1975	1972	1972	1977	1972	1989	1987	1988	1988	1988	1978	1974								

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1972 - 1991

ANNUAL TOTAL	73591	67856	142
ANNUAL MEAN	202	186	207
HIGHEST ANNUAL MEAN			1973
LOWEST ANNUAL MEAN			1972
HIGHEST DAILY MEAN	579	639	916
LOWEST DAILY MEAN	59	21	2.2
ANNUAL SEVEN-DAY MINIMUM	79	25	2.8
INSTANTANEOUS PEAK FLOW		643	919
INSTANTANEOUS PEAK STAGE		7.01	8.12
ANNUAL RUNOFF (CFSM)	1.42	1.31	1.00
ANNUAL RUNOFF (INCHES)	19.28	17.78	13.59
10 PERCENT EXCEEDS	360	356	303
50 PERCENT EXCEEDS	182	169	110
90 PERCENT EXCEEDS	93	41	31

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 mi².

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.--Records good. Occasional regulation at Miller Lake Outlet.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	20	30	210	13	16	19	35	216	5.1	1.0	.91
2	17	19	29	140	13	24	17	31	188	5.4	.99	.69
3	17	18	33	97	13	36	16	27	142	5.2	1.3	.67
4	29	18	42	73	15	38	14	23	102	5.0	1.6	.67
5	35	27	48	59	21	34	17	22	73	4.8	1.8	.69
6	39	49	42	50	27	30	18	22	54	4.5	1.5	.73
7	38	63	38	44	29	25	19	20	41	4.1	1.1	.75
8	36	56	34	39	27	22	20	19	34	3.7	1.3	.76
9	58	44	31	34	25	19	24	17	27	3.5	1.6	.75
10	156	38	29	31	23	17	27	15	23	3.4	1.6	.72
11	197	34	28	31	21	16	27	14	22	3.1	2.1	.73
12	161	31	26	34	18	15	25	12	21	2.8	2.1	1.4
13	114	28	25	35	17	15	22	11	18	2.7	1.9	1.8
14	84	26	23	33	17	13	21	10	15	2.6	1.6	1.8
15	64	24	24	33	16	13	23	9.6	12	2.4	1.4	1.7
16	51	23	28	42	15	14	29	8.9	14	2.2	1.4	1.7
17	42	22	30	53	14	16	45	9.1	22	2.1	1.4	1.7
18	41	20	30	50	14	23	61	9.0	16	2.0	1.5	1.6
19	41	19	31	44	19	28	63	8.1	12	1.9	1.7	1.5
20	39	18	30	40	32	28	81	7.5	9.5	1.7	1.8	1.4
21	36	18	30	37	37	26	84	7.0	8.2	1.6	1.7	1.4
22	33	18	37	33	35	23	68	6.7	7.4	2.1	1.7	1.3
23	31	17	41	29	31	21	54	7.5	6.5	1.8	1.7	1.3
24	29	17	38	24	26	22	59	8.6	5.8	1.6	1.5	1.3
25	27	17	34	21	22	22	63	11	5.1	1.5	1.1	1.3
26	26	16	30	18	19	23	54	20	4.7	1.4	1.1	1.3
27	24	16	27	16	17	25	45	29	4.4	1.3	1.0	1.2
28	23	22	25	15	16	27	42	29	4.0	1.2	1.0	1.0
29	22	28	74	15	---	27	42	24	3.7	1.1	1.0	1.0
30	21	31	279	14	---	24	38	25	4.0	1.1	1.1	.94
31	20	---	295	14	---	21	---	121	---	1.0	1.1	---
TOTAL	1570	797	1541	1408	592	703	1137	619.0	1115.3	83.9	44.69	34.71
MEAN	50.6	26.6	49.7	45.4	21.1	22.7	37.9	20.0	37.2	2.71	1.44	1.16
MAX	197	63	295	210	37	38	84	121	216	5.4	2.1	1.8
MIN	17	16	23	14	13	13	14	6.7	3.7	1.0	.99	.67
CFSM	2.64	1.38	2.59	2.37	1.10	1.18	1.97	1.04	1.94	.14	.08	.06
IN.	3.04	1.54	2.99	2.73	1.15	1.36	2.20	1.20	2.16	.16	.09	.07

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 1991, BY WATER YEAR (WY)

	MEAN	8.90	14.1	20.9	16.4	26.6	39.1	35.3	19.2	21.1	9.58	5.51	6.04
	MAX	50.6	48.8	52.5	49.5	62.5	111	60.5	41.1	90.7	49.5	36.4	33.4
	(WY)	1991	1989	1978	1974	1985	1982	1978	1983	1981	1986	1990	1990
	MIN	.36	.28	2.59	1.22	2.96	13.6	9.61	4.70	1.98	.41	.25	.23
	(WY)	1972	1972	1977	1977	1979	1989	1971	1988	1988	1971	1971	1978

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1970 - 1991

ANNUAL TOTAL	12071.16	9645.60	
ANNUAL MEAN	33.1	26.4	18.5
HIGHEST ANNUAL MEAN			29.0
LOWEST ANNUAL MEAN			9.49
HIGHEST DAILY MEAN	295	295	431
LOWEST DAILY MEAN	.96	.67	.13
ANNUAL SEVEN-DAY MINIMUM	3.7	.71	.17
INSTANTANEOUS PEAK FLOW		323	480
INSTANTANEOUS PEAK STAGE		7.03	7.03
ANNUAL RUNOFF (CFSM)	1.72	1.38	.96
ANNUAL RUNOFF (INCHES)	23.39	18.69	13.08
10 PERCENT EXCEEDS	60	50	48
50 PERCENT EXCEEDS	26	20	8.9
90 PERCENT EXCEEDS	7.1	1.3	.79

04100295 RIMMELL BRANCH NEAR ALBION, IN

LOCATION.--Lat 41°23'07", long 85°22'14", in NE1/4 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 mi².

PERIOD OF RECORD.--November 1979 to current year.

GAGE.--Water-stage recorder. Datum of gage is 934.49 ft (revised 1991WY) above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for estimated daily discharges, which are fair.

EXTREMES OUTSIDE PERIOD OF RECORD.--Minimum daily discharge, 0.14 ft /s, many days during 1980.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	5.7	11	80	7.0	9.8	8.8	14	166	5.2	.66	.50
2	2.6	5.8	9.0	63	5.6	38	8.1	12	65	8.8	.64	.50
3	4.4	5.7	47	48	11	28	7.6	11	39	3.2	1.9	.52
4	50	5.9	40	34	16	15	7.6	9.6	26	2.0	.95	.54
5	18	72	21	e25	21	13	12	10	17	2.9	.78	.52
6	9.5	60	16	e19	16	12	9.7	13	11	1.8	.71	.51
7	7.2	31	14	e15	13	10	8.4	9.9	8.9	1.4	.67	.51
8	7.3	20	12	e11	12	8.6	12	8.8	7.9	1.2	1.1	.50
9	104	15	11	e10	12	8.5	15	8.1	6.7	1.1	1.2	.51
10	200	12	10	e9.7	11	8.2	15	7.3	5.7	1.1	.82	.54
11	105	11	9.2	16	8.6	7.8	12	6.6	6.4	1.0	.72	.51
12	54	9.1	8.7	22	e7.6	7.2	9.6	6.4	6.9	1.0	.66	5.4
13	36	8.1	8.1	14	e6.8	7.2	8.9	6.1	5.3	1.1	.63	2.4
14	28	7.6	7.3	15	e6.4	7.7	14	5.8	4.2	.97	.59	1.0
15	22	7.2	18	25	e6.0	9.6	23	5.4	3.7	.94	.59	.83
16	16	7.0	18	53	e5.8	10	17	5.3	3.5	.87	.55	.77
17	13	6.4	15	30	e5.6	11	63	7.4	3.1	.82	.55	.73
18	28	6.1	21	18	8.1	22	26	5.9	2.7	.78	.67	.73
19	18	5.9	18	16	40	15	49	5.3	2.4	.77	1.2	.70
20	14	5.6	14	18	22	12	71	4.8	2.1	.73	1.0	.71
21	13	5.5	34	e15	17	11	37	4.3	2.0	.73	.79	.69
22	12	6.1	41	e12	15	9.2	24	4.0	1.9	.73	.70	.71
23	10	6.0	23	e10	11	11	22	4.2	1.8	.69	.65	.74
24	8.8	5.7	e17	e9.1	9.6	15	50	4.6	1.6	.64	.61	.70
25	7.9	5.4	e14	e8.2	8.3	12	27	8.8	1.5	.64	.58	.70
26	7.3	5.1	e12	e6.8	e7.2	16	19	18	1.4	.63	.55	.69
27	7.1	6.9	e10	e6.4	e6.2	16	20	10	1.3	.59	.55	.68
28	6.7	38	e9.6	e6.0	e6.6	13	27	7.6	1.2	.59	.55	.64
29	6.2	19	229	e6.0	---	11	20	5.9	1.1	1.1	.53	.64
30	6.2	13	329	5.4	---	8.8	16	8.4	3.7	1.2	.51	.66
31	5.9	---	153	8.3	---	8.4	---	124	---	.74	.53	---
TOTAL	830.9	417.8	1199.9	634.9	322.4	392.0	659.7	362.5	411.0	45.96	23.14	25.78
MEAN	26.8	13.9	38.7	20.5	11.5	12.6	22.0	11.7	13.7	1.48	.75	.86
MAX	200	72	329	80	40	38	71	124	166	8.8	1.9	5.4
MIN	2.6	5.1	7.3	5.4	5.6	7.2	7.6	4.0	1.1	.59	.51	.50
CFSM	2.50	1.30	3.62	1.91	1.08	1.18	2.06	1.09	1.28	.14	.07	.08
1N.	2.89	1.45	4.17	2.21	1.12	1.36	2.29	1.26	1.43	.16	.08	.09

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1981 - 1991, BY WATER YEAR (WY)

	7.62	12.0	14.8	9.49	20.1	22.9	18.7	10.8	10.6	6.24	3.10	1.78
MEAN	7.62	12.0	14.8	9.49	20.1	22.9	18.7	10.8	10.6	6.24	3.10	1.78
MAX	26.8	31.2	38.7	20.5	44.8	69.9	31.8	24.9	39.1	33.0	16.1	5.68
(WY)	1991	1989	1991	1991	1985	1982	1981	1990	1981	1986	1990	1981
MIN	.62	1.38	1.00	2.27	5.48	6.68	5.94	2.05	.72	.51	.31	.37
(WY)	1984	1981	1990	1981	1989	1981	1986	1985	1988	1988	1988	1987

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1981 - 1991	
ANNUAL TOTAL	7012.1		5325.98		11.5	
ANNUAL MEAN	19.2		14.6		14.6	
HIGHEST ANNUAL MEAN					6.95	
LOWEST ANNUAL MEAN					1988	
HIGHEST DAILY MEAN	329	Dec 30	329	Dec 30	349	Jul 16 1986
LOWEST DAILY MEAN	1.2	Jan 1	.50	Sep 1	.15	Aug 8 1988
ANNUAL SEVEN-DAY MINIMUM	3.1	Sep 26	.51	Sep 1	.17	Aug 3 1988
INSTANTANEOUS PEAK FLOW			385	Dec 30	418	Jul 16 1986
INSTANTANEOUS PEAK STAGE			11.22	Dec 30	12.82	Apr 14 1981
ANNUAL RUNOFF (CFSM)	1.80		1.36		1.07	
ANNUAL RUNOFF (INCHES)	24.38		18.52		14.55	
10 PERCENT EXCEEDS	38		28		26	
50 PERCENT EXCEEDS	9.6		7.9		4.7	
90 PERCENT EXCEEDS	4.2		.67		.53	

04100377 SOLOMON CREEK NEAR SYRACUSE, IN

LOCATION.--Lat 41°27'30", long 85°43'12", in NW¼ sec.28, T.35 N., R.7 E., Elkhart County, Hydrologic Unit 04050001, on right bank 40 ft upstream from County Road 52 East bridge over Solomon Creek, and 2.5 mi northeast of Syracuse.
 DRAINAGE AREA.--36.1 mi².
 PERIOD OF RECORD.--October 1987 to current year.
 GAGE.--Water-stage recorder. Datum of gage is 840.00 ft above National Geodetic Vertical Datum of 1929.
 REMARKS.--Records good, except those for estimated daily discharges, which are fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	46	50	117	50	43	47	62	149	37	19	17
2	40	46	47	102	50	54	45	60	113	38	18	16
3	38	45	55	93	50	59	43	59	95	35	22	17
4	39	45	61	86	51	55	43	58	85	31	21	18
5	38	71	56	82	52	52	45	58	79	31	20	17
6	36	90	54	78	53	52	44	59	74	29	20	17
7	33	77	52	74	52	49	43	57	70	30	19	16
8	31	70	50	71	51	47	43	55	68	29	23	16
9	72	66	49	69	51	45	45	55	66	27	24	16
10	129	63	48	67	50	43	45	54	64	26	22	16
11	122	59	47	68	48	42	44	54	64	25	21	15
12	103	56	46	70	46	41	42	53	63	25	20	40
13	89	54	45	67	46	42	42	53	61	24	20	39
14	81	52	44	65	46	41	44	53	59	23	20	29
15	76	51	47	66	43	41	54	52	57	22	19	25
16	72	50	49	81	e41	43	57	51	56	22	19	23
17	69	49	49	82	e42	45	70	51	55	20	18	22
18	72	48	51	74	42	58	66	52	52	20	17	21
19	69	47	51	70	55	56	66	51	49	19	19	20
20	66	46	49	69	58	52	84	49	46	19	19	20
21	63	46	50	67	56	51	73	49	45	18	18	19
22	60	46	58	64	55	48	68	48	45	24	18	19
23	58	46	56	63	52	49	65	50	45	24	18	19
24	56	45	53	60	50	49	73	52	42	22	18	18
25	54	44	51	58	47	47	70	54	39	21	17	18
26	52	44	49	57	45	48	66	56	38	19	17	18
27	51	44	47	56	43	52	65	54	37	17	17	17
28	50	59	47	55	43	57	66	52	35	17	17	17
29	49	56	120	54	---	53	65	51	34	17	17	17
30	48	52	190	53	---	50	63	61	35	18	17	17
31	47	---	149	51	---	48	---	130	---	18	18	---
TOTAL	1905	1613	1870	2189	1368	1512	1686	1753	1820	747	592	599
MEAN	61.5	53.8	60.3	70.6	48.9	48.8	56.2	56.5	60.7	24.1	19.1	20.0
MAX	129	90	190	117	58	59	84	130	149	38	24	40
MIN	31	44	44	51	41	41	42	48	34	17	17	15
CFSM	1.70	1.49	1.67	1.96	1.35	1.35	1.56	1.57	1.68	.67	.53	.55
IN.	1.96	1.66	1.93	2.26	1.41	1.56	1.74	1.81	1.88	.77	.61	.62

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1991, BY WATER YEAR (WY)

	MEAN	28.4	34.6	37.4	44.8	42.0	42.8	49.2	41.3	47.8	24.8	20.6	22.7
MAX	61.5	53.8	60.3	70.6	49.1	58.1	56.2	59.4	60.7	38.7	33.2	36.5	
(WY)	1991	1991	1991	1991	1990	1990	1991	1990	1991	1990	1990	1990	
MIN	12.9	14.0	14.8	27.4	32.8	30.8	37.9	24.4	16.5	12.1	10.5	13.7	
(WY)	1988	1988	1990	1988	1989	1989	1989	1989	1988	1988	1988	1988	

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1988 - 1991

ANNUAL TOTAL	17836												
ANNUAL MEAN	48.9												
HIGHEST ANNUAL MEAN										36.3			
LOWEST ANNUAL MEAN										48.4			1991
HIGHEST DAILY MEAN	190	Dec 30								24.2			1988
LOWEST DAILY MEAN	16	Jan 1								7.9	Dec 30	1990	
ANNUAL SEVEN-DAY MINIMUM	23	Aug 6								9.0	Aug 9	1988	
INSTANTANEOUS PEAK FLOW										201	Dec 30	1990	
INSTANTANEOUS PEAK STAGE										6.33	Dec 30	1990	
ANNUAL RUNOFF (CFSM)	1.35									1.34			
ANNUAL RUNOFF (INCHES)	18.38									18.19			
10 PERCENT EXCEEDS	72									62			
50 PERCENT EXCEEDS	46									32			
90 PERCENT EXCEEDS	28									14			

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 mi².

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.--Records good except for estimated daily discharges, which are fair. Occasional low-flow regulation at Goshen Dam, 3.4 mi upstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	507	794	829	e3500	e760	828	802	1210	2760	460	194	223
2	493	767	789	e2900	e770	936	778	1170	2450	454	184	211
3	486	741	811	e2600	e800	1160	755	1110	2050	468	221	229
4	536	732	1010	e2450	852	1100	747	1060	1810	452	263	232
5	570	947	984	e2200	904	978	760	1030	1650	421	249	212
6	535	1590	911	e2050	942	948	744	1070	1540	402	238	198
7	524	1620	898	e1900	933	941	725	1030	1470	395	231	187
8	572	1280	888	e1760	918	902	710	965	1390	391	263	175
9	1100	1110	873	e1650	917	880	719	913	1300	368	309	175
10	2500	1060	860	e1590	914	860	740	876	1190	355	286	173
11	3220	1030	841	e1490	890	835	731	843	1110	342	270	169
12	2430	996	821	e1400	856	802	719	816	1050	337	257	329
13	2010	967	802	e1340	840	775	717	791	976	327	245	443
14	1820	937	755	e1300	847	758	770	766	907	320	226	347
15	1710	909	799	1340	819	763	1060	736	847	311	219	299
16	1660	881	879	1520	715	775	1400	723	794	296	200	275
17	1570	851	860	1890	755	789	1450	709	748	277	200	257
18	1540	818	863	1710	816	913	1560	676	684	263	195	243
19	1550	792	882	1470	969	1000	1270	650	603	254	269	231
20	1460	769	854	1380	1170	896	1510	603	546	239	317	220
21	1350	749	851	1380	1070	839	1620	567	496	238	274	211
22	1270	752	986	e1240	1020	814	1370	545	464	261	251	203
23	1200	740	1040	e1140	970	807	1290	547	445	249	237	198
24	1130	718	921	e1050	923	825	1410	637	422	228	224	193
25	1060	694	838	e1000	895	819	1500	850	396	217	212	188
26	1010	675	e800	e950	864	840	1350	960	370	201	205	185
27	961	693	e760	e890	842	921	1290	827	351	183	209	179
28	918	883	e820	e860	825	971	1370	705	329	179	185	173
29	881	1110	1670	e830	---	932	1370	651	311	196	163	179
30	846	932	4940	e800	---	851	1280	681	340	204	186	182
31	822	---	e4200	e770	---	814	---	1730	---	197	197	---
TOTAL	38241	27537	35035	48350	24796	27272	32517	26447	29799	9485	7179	6719
MEAN	1234	918	1130	1560	886	880	1084	853	993	306	232	224
MAX	3220	1620	4940	3500	1170	1160	1620	1730	2760	468	317	443
MIN	486	675	755	770	715	758	710	545	311	179	163	169
CFSM	2.08	1.55	1.90	2.63	1.49	1.48	1.82	1.44	1.67	.52	.39	.38
IN.	2.39	1.72	2.19	3.03	1.55	1.71	2.04	1.66	1.87	.59	.45	.42

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 1991, BY WATER YEAR (WY)

	MEAN	313	377	492	572	696	949	947	707	484	349	267	246
MAX	1652	1132	1276	1866	1657	2497	2424	2354	1516	1079	712	784	
(WY)	1955	1973	1983	1950	1959	1982	1950	1943	1981	1951	1958	1958	
MIN	75.9	95.9	122	122	108	301	363	222	101	94.0	73.0	58.5	
(WY)	1965	1965	1964	1963	1963	1964	1946	1958	1934	1934	1941	1941	

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1932 - 1991

ANNUAL TOTAL	336041		313377		532	
ANNUAL MEAN	921		859		1005	1950
HIGHEST ANNUAL MEAN					197	1964
LOWEST ANNUAL MEAN					6010	Feb 24 1985
HIGHEST DAILY MEAN	4940	Dec 30	4940	Dec 30	7.0	Aug 11 1964
LOWEST DAILY MEAN	255	Jan 1	163	Aug 29		Sep 21 1941
ANNUAL SEVEN-DAY MINIMUM	338	Aug 6	183	Sep 24	50	Feb 24 1985
INSTANTANEOUS PEAK FLOW			5530	Dec 30	6360	Mar 14 1982
INSTANTANEOUS PEAK STAGE			11.03	Dec 30	11.94	
ANNUAL RUNOFF (CFSM)	1.55		1.45		.90	
ANNUAL RUNOFF (INCHES)	21.04		19.63		12.17	
10 PERCENT EXCEEDS	1490		1530		1100	
50 PERCENT EXCEEDS	806		818		380	
90 PERCENT EXCEEDS	484		215		153	

04101000 ST. JOSEPH RIVER AT ELKHART, IN

LOCATION.--Lat 41°41'30", long 85°58'30", in SW¼ 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 mi².

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.--Records good. The flow is regulated by Elkhart Hydroelectric Plant.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2020	3440	7100	11000	4440	4600	4810	6460	6170	2050	1400	1550
2	2340	3300	6700	11600	4740	5020	4570	6090	6400	2720	1410	1530
3	2380	3330	6660	11400	4630	5450	4420	5910	6100	3070	1460	1630
4	2580	3250	6680	10400	4710	5630	4380	5610	5640	3030	1540	1780
5	2620	4220	6320	10000	4780	5490	4410	5310	5070	2920	1520	1760
6	2680	5550	5850	10000	5030	5550	4170	5180	5050	2900	1550	1720
7	2450	5660	6000	9350	5170	5330	4240	5170	4720	2750	1550	1630
8	2530	5730	5760	8560	5260	5440	4250	5120	4510	2640	1840	1550
9	4030	5480	5530	8280	5180	4990	4170	4930	4300	2630	1950	1530
10	6080	5250	5390	8040	5290	5020	4270	4840	3960	2490	2140	1610
11	7810	5360	5540	7630	5040	4840	4230	4750	3780	2290	1990	1580
12	7600	5200	4960	7350	4750	4530	4030	4560	3750	2150	1890	2310
13	7160	4650	4790	7050	4660	4410	3980	4140	3620	2090	1810	2440
14	6910	4890	4560	6890	4830	4170	4160	3950	3430	1980	1750	2130
15	6600	4380	5130	6640	4760	4140	5240	3740	3240	1780	1690	2010
16	6430	4340	4850	7110	4210	4130	5820	3670	2950	1790	1600	1910
17	6340	4220	4910	7590	4280	4150	5990	3810	3120	1730	1660	1820
18	6180	4070	4690	7320	4500	4430	6030	3910	2990	1660	1620	1800
19	6160	4000	4960	7120	4880	4750	5910	3730	2780	1540	2130	1770
20	5650	3820	4530	7120	5290	4430	6260	3530	2640	1500	2310	1730
21	5410	3720	4770	6950	5460	4360	6380	3440	2430	1520	2370	1730
22	5060	3780	4920	6460	5440	4240	6320	3250	2260	1570	2110	1640
23	4830	3650	5240	6280	5340	4190	6670	3150	2100	1820	1950	1680
24	4800	3510	4910	5980	5450	4330	7040	3190	2170	1850	1970	1650
25	4480	3630	4060	5690	5270	4350	7150	3470	2240	1780	1850	1520
26	4260	3540	4350	5270	4990	4500	6850	3790	2040	1750	1800	1740
27	3970	3940	3910	4870	5050	4680	6800	3930	1940	1650	1800	1600
28	3900	5990	4470	5260	4730	4800	6880	3830	1840	1510	1780	1570
29	3740	6630	6790	5330	---	5280	6750	3560	1820	1600	1630	1550
30	3550	6880	11800	5240	---	5000	6530	3560	1770	1440	1610	1530
31	3590	---	13500	4590	---	4490	---	4390	---	1540	1580	---
TOTAL	144140	135410	179630	232370	138160	146720	162710	133970	104830	63740	55260	52000
MEAN	4650	4514	5795	7496	4934	4733	5424	4322	3494	2056	1783	1733
MAX	7810	6880	13500	11600	5460	5630	7150	6460	6400	3070	2370	2440
MIN	2020	3250	3910	4590	4210	4130	3980	3150	1770	1440	1400	1520
CFSM	1.38	1.34	1.72	2.22	1.46	1.40	1.61	1.28	1.04	.61	.53	.51
IN.	1.59	1.49	1.98	2.57	1.53	1.62	1.80	1.48	1.16	.70	.61	.57

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 1991, BY WATER YEAR (WY)

	MEAN	2151	2513	3166	3483	3851	5164	5281	4133	3201	2366	1921	1832
MAX	5752	4878	5795	7496	7039	10760	12690	7725	7535	4409	4180	3855	
(WY)	1987	1989	1991	1991	1968	1982	1950	1956	1989	1968	1981	1981	
MIN	791	856	958	1127	1120	1679	2633	1911	1280	898	737	721	
(WY)	1964	1965	1964	1964	1963	1964	1958	1958	1988	1988	1964	1964	

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1948 - 1991	
ANNUAL TOTAL	1599850		1548940		3251	
ANNUAL MEAN	4383		4244		5264	
HIGHEST ANNUAL MEAN					1283	
LOWEST ANNUAL MEAN					18500	
HIGHEST DAILY MEAN	13500		13500		Mar 21 1982	
LOWEST DAILY MEAN	1630		1400		Aug 5 1964	
ANNUAL SEVEN-DAY MINIMUM	1870		1470		Aug 2 1964	
INSTANTANEOUS PEAK FLOW			14400		Feb 27 1985	
INSTANTANEOUS PEAK STAGE			25.60		Mar 21 1982	
ANNUAL RUNOFF (CFSM)	1.30		1.26		27.91	
ANNUAL RUNOFF (INCHES)	17.66		17.10		.96	
10 PERCENT EXCEEDS	6890		6690		5830	
50 PERCENT EXCEEDS	4030		4330		2740	
90 PERCENT EXCEEDS	2380		1660		1340	

04177720 FISH CREEK AT HAMILTON, IN

LOCATION.--Lat 41°31'55", long 84°54'12", in SE1/4 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 mi².
 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.--Records good.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.3	14	34	310	20	35	30	47	118	15	2.7	3.2
2	5.4	14	29	206	21	92	26	41	100	59	2.6	2.5
3	6.0	14	69	151	27	118	23	33	93	35	5.4	3.2
4	50	16	111	112	37	82	25	29	63	25	4.1	4.3
5	37	100	77	90	49	65	45	34	45	18	3.1	3.3
6	25	180	62	75	49	60	40	45	34	13	2.8	2.9
7	21	117	51	64	43	53	35	37	28	11	2.6	2.9
8	23	80	44	54	41	43	35	31	23	8.9	4.7	2.9
9	131	63	39	49	40	39	43	31	20	6.1	5.1	5.2
10	348	53	36	45	37	36	46	28	17	5.3	3.8	4.8
11	325	41	32	52	33	32	37	26	22	4.8	3.1	3.6
12	197	34	31	63	29	29	30	24	27	5.5	2.8	6.5
13	130	28	30	53	30	26	29	23	19	11	3.1	5.7
14	92	27	24	48	38	24	46	22	15	7.6	3.4	4.3
15	72	25	36	53	33	23	107	19	13	5.2	3.0	4.1
16	56	25	43	99	28	22	104	18	12	4.6	2.9	3.6
17	46	21	40	100	26	23	111	21	10	4.1	3.3	2.9
18	59	19	51	74	32	35	85	18	8.5	3.7	5.4	2.7
19	50	18	54	63	95	33	109	15	7.5	3.8	13	2.4
20	40	18	46	63	96	29	313	13	6.6	3.5	20	2.2
21	34	17	60	62	79	29	214	12	6.0	3.4	9.0	2.2
22	30	22	91	50	72	28	142	12	5.5	3.6	6.3	2.5
23	27	22	77	43	60	34	106	11	5.1	3.2	4.7	2.9
24	25	19	62	36	50	40	120	13	4.7	2.4	4.1	2.6
25	22	18	50	31	43	34	93	17	4.8	2.4	3.7	2.9
26	18	16	42	28	35	40	75	35	4.9	2.4	3.5	3.5
27	18	24	36	26	31	50	65	28	4.7	2.4	3.5	2.4
28	16	62	35	25	32	47	66	23	4.4	2.4	3.4	2.5
29	14	56	246	23	---	37	61	19	4.2	2.7	3.6	2.7
30	14	42	656	23	---	30	54	21	9.2	3.3	3.8	2.9
31	14	---	535	22	---	27	---	74	---	2.9	4.2	---
TOTAL	1951.7	1205	2829	2193	1206	1295	2315	820	735.1	281.2	146.7	100.3
MEAN	63.0	40.2	91.3	70.7	43.1	41.8	77.2	26.5	24.5	9.07	4.73	3.34
MAX	348	180	656	310	96	118	313	74	118	59	20	6.5
MIN	5.4	14	24	22	20	22	23	11	4.2	2.4	2.6	2.2
CFSM	1.68	1.07	2.43	1.89	1.15	1.11	2.06	.71	.65	.24	.13	.09
IN.	1.94	1.20	2.81	2.18	1.20	1.28	2.30	.81	.73	.28	.15	.10

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 1991, BY WATER YEAR (WY)

	MEAN	13.9	27.1	39.1	32.7	50.7	75.3	61.6	36.8	29.2	14.4	11.2	10.4
MAX	69.5	87.3	91.3	99.2	129	219	112	88.4	118	63.0	35.0	47.1	
(WY)	1987	1986	1991	1974	1976	1982	1978	1990	1981	1973	1979	1981	
MIN	2.70	2.46	7.25	5.96	7.84	28.1	18.7	8.24	2.05	2.02	1.89	1.88	
(WY)	1977	1972	1977	1977	1979	1981	1971	1985	1988	1988	1970	1988	

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1970 - 1991

ANNUAL TOTAL	20037.7	15078.0	33.4
ANNUAL MEAN	54.9	41.3	46.0
HIGHEST ANNUAL MEAN			17.8
LOWEST ANNUAL MEAN			1982
HIGHEST DAILY MEAN	656	Dec 30	656
LOWEST DAILY MEAN	3.7	Aug 3	.52
ANNUAL SEVEN-DAY MINIMUM	6.2	Jul 28	.82
INSTANTANEOUS PEAK FLOW			683
INSTANTANEOUS PEAK STAGE			11.95
ANNUAL RUNOFF (CFSM)	1.46		.89
ANNUAL RUNOFF (INCHES)	19.88		12.11
10 PERCENT EXCEEDS	104		81
50 PERCENT EXCEEDS	35		16
90 PERCENT EXCEEDS	9.1		2.9

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 mi².

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.--Records good, except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	85	216	580	e6800	e350	504	585	839	1290	88	44	62
2	82	210	492	e5820	e330	843	523	745	1280	256	44	57
3	81	251	708	e4730	e360	1210	479	656	1030	277	61	55
4	128	359	1360	e3710	500	1380	441	582	718	221	65	60
5	203	564	1420	e2870	653	1300	663	531	492	162	50	57
6	203	1360	1310	e2220	774	1170	738	551	369	148	49	55
7	183	1570	1120	1730	768	1050	697	552	299	115	48	54
8	167	1610	927	1330	702	915	637	543	255	99	49	49
9	349	1460	760	1050	e650	793	680	497	227	89	54	47
10	1490	1320	666	899	e560	690	732	448	205	82	53	47
11	2170	1120	630	791	e470	613	754	412	192	75	55	51
12	2420	859	575	810	e430	552	655	381	201	72	58	58
13	2400	672	517	803	e400	502	539	357	215	84	56	64
14	2140	551	468	751	e380	460	589	380	213	87	53	62
15	1920	476	515	776	e360	423	1250	392	197	79	50	57
16	1650	424	684	1160	e340	395	1820	331	180	70	48	53
17	1080	383	686	1470	e330	375	2140	293	165	65	49	49
18	824	350	732	1440	e410	392	2140	304	152	61	66	46
19	809	323	910	e1270	1010	440	2040	354	140	58	244	43
20	685	302	842	e1100	1450	458	2640	284	130	55	738	41
21	566	291	854	e950	1520	442	2830	250	121	54	560	38
22	478	283	1310	e800	1500	380	2850	232	114	55	373	37
23	418	282	1330	e700	1440	338	2820	218	107	51	229	37
24	371	286	e1000	e600	1270	339	2720	211	102	48	155	37
25	337	286	e860	e540	1040	369	2340	223	98	47	115	37
26	309	277	e730	e500	815	389	2030	438	94	46	95	37
27	282	268	e690	e460	650	512	1710	487	90	45	83	36
28	261	461	e680	e430	550	860	1390	416	87	44	76	35
29	247	747	1470	e400	---	844	1130	354	83	44	69	34
30	235	710	4170	e380	---	771	956	303	78	47	66	34
31	223	---	6300	e360	---	683	---	820	---	44	77	---
TOTAL	22796	18271	35296	47650	20012	20392	41518	13384	8924	2768	3832	1429
MEAN	735	609	1139	1537	715	658	1384	432	297	89.3	124	47.6
MAX	2420	1610	6300	6800	1520	1380	2850	839	1290	277	738	64
MIN	81	210	468	360	330	338	441	211	78	44	44	34
CFSM	1.21	1.00	1.87	2.52	1.17	1.08	2.27	.71	.49	.15	.20	.08
IN.	1.39	1.11	2.15	2.91	1.22	1.24	2.53	.82	.54	.17	.23	.09

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 1991, BY WATER YEAR (WY)

MEAN	176	354	606	633	860	1240	1089	624	379	230	134	124
MAX	1066	1368	2085	2545	2302	3512	3102	2499	1864	1045	563	582
(WY)	1987	1986	1968	1950	1976	1982	1950	1956	1989	1951	1979	1958
MIN	21.0	30.5	31.1	38.3	41.4	312	321	148	51.4	32.2	29.1	20.3
(WY)	1964	1965	1964	1963	1963	1964	1971	1988	1988	1988	1967	1963

SUMMARY STATISTICS FOR 1990 CALENDAR YEAR FOR 1991 WATER YEAR WATER YEARS 1947 - 1991

ANNUAL TOTAL	302470	236272	534
ANNUAL MEAN	829	647	1008
HIGHEST ANNUAL MEAN			132
LOWEST ANNUAL MEAN			9450
HIGHEST DAILY MEAN	6300	Dec 31	14
LOWEST DAILY MEAN	81	Oct 3	15
ANNUAL SEVEN-DAY MINIMUM	94	Jul 31	15
INSTANTANEOUS PEAK FLOW			9710
INSTANTANEOUS PEAK STAGE			17.96
ANNUAL RUNOFF (CFSM)	1.36		.88
ANNUAL RUNOFF (INCHES)	18.45		11.89
10 PERCENT EXCEEDS	1640	1440	1500
50 PERCENT EXCEEDS	617	410	228
90 PERCENT EXCEEDS	126	52	46

e Estimated

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 mi².

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.--Records good except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	68	130	304	3300	204	231	215	325	2770	69	37	44
2	68	126	247	1980	164	614	200	290	1820	158	35	35
3	66	120	701	1410	205	853	188	259	1040	166	78	33
4	615	118	1540	1030	367	536	183	231	668	132	58	38
5	574	539	814	809	487	389	367	229	451	101	44	33
6	283	1990	507	646	484	339	333	297	341	86	40	30
7	190	1250	392	534	410	307	268	255	271	73	38	29
8	180	740	322	458	345	256	266	216	222	67	50	27
9	1120	500	279	406	327	238	522	198	189	61	86	25
10	2550	385	258	453	306	223	433	188	166	58	49	34
11	3120	314	238	351	269	207	353	174	163	57	41	33
12	2000	267	223	555	228	196	276	168	204	54	39	75
13	1220	233	208	427	218	190	244	166	e163	77	36	107
14	813	211	188	364	234	190	338	161	141	56	35	63
15	576	196	388	462	204	218	786	154	130	51	38	48
16	438	186	610	1030	177	238	844	145	129	49	36	43
17	354	175	418	1100	192	232	1410	155	117	48	35	41
18	600	164	515	628	201	507	1270	153	109	46	40	40
19	522	157	628	460	823	412	840	140	101	44	59	38
20	363	151	421	453	1030	310	2340	131	97	43	75	38
21	298	149	535	e410	655	267	1760	126	91	41	51	38
22	255	164	1330	e340	537	241	997	120	85	49	41	37
23	227	158	805	e290	413	242	688	117	83	45	38	38
24	205	153	561	e260	333	267	1300	120	77	41	36	39
25	182	144	e500	e240	287	261	893	145	76	40	33	39
26	167	138	e470	e220	247	286	578	463	73	38	31	39
27	157	152	e430	e205	222	391	449	286	70	37	32	38
28	148	693	e420	e190	208	469	552	195	66	35	31	37
29	139	738	1450	e180	---	328	466	156	63	34	34	36
30	137	404	4840	e170	---	260	387	204	60	62	34	34
31	134	---	5220	e165	---	222	---	1960	---	41	62	---
TOTAL	17769	10845	25762	19426	9777	9920	19746	7927	10036	1959	1372	1229
MEAN	573	361	831	627	349	320	658	256	335	63.2	44.3	41.0
MAX	3120	1990	5220	3300	1030	853	2340	1960	2770	166	86	107
MIN	66	118	188	165	164	190	183	117	60	34	31	25
CFSM	2.12	1.34	3.08	2.32	1.29	1.19	2.44	.95	1.24	.23	.16	.15
IN.	2.45	1.49	3.55	2.68	1.35	1.37	2.72	1.09	1.38	.27	.19	.17

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 1991, BY WATER YEAR (WY)

	MEAN	115	172	290	300	402	522	466	278	206	123	80.1	79.5
MAX	805	750	908	1393	1290	1724	1130	947	1046	515	327	477	
(WY)	1955	1973	1967	1950	1959	1982	1950	1956	1981	1986	1990	1972	
MIN	19.8	24.0	24.7	25.9	28.5	146	139	68.6	44.0	35.1	22.0	20.9	
(WY)	1965	1965	1964	1963	1963	1957	1971	1958	1988	1953	1964	1964	

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1947 - 1991

ANNUAL TOTAL	172910	135768	252
ANNUAL MEAN	474	372	485
HIGHEST ANNUAL MEAN			85.3
LOWEST ANNUAL MEAN			1950
HIGHEST DAILY MEAN	5220	5220	5220
LOWEST DAILY MEAN	65	25	13
ANNUAL SEVEN-DAY MINIMUM	73	30	18
INSTANTANEOUS PEAK FLOW		5580	5580
INSTANTANEOUS PEAK STAGE		13.38	13.38
ANNUAL RUNOFF (CFSM)	1.75	1.38	.93
ANNUAL RUNOFF (INCHES)	23.82	18.71	12.70
10 PERCENT EXCEEDS	1010	811	601
50 PERCENT EXCEEDS	274	205	112
90 PERCENT EXCEEDS	113	38	31

04180500 ST. JOSEPH RIVER NEAR FORT WAYNE, IN

LOCATION.--Lat 41°10'41", long 85°03'19", in NW¼ 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 mi².

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.--Records good except for estimated daily discharges, which are poor. Flow regulated by Cedarville Reservoir and some flow diverted into storage of Hurshtown Reservoir. Instantaneous peak flow for period of record of 13,200 ft³/s also occurred Feb. 26, 1985.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	600	397	1230	12100	e810	950	993	1460	4930	191	105	150
2	102	381	863	9950	647	1630	847	1280	3540	399	102	134
3	162	350	1690	8160	668	2360	783	1130	2350	474	141	113
4	559	409	3620	6490	1040	1960	781	1040	1590	491	168	119
5	869	1010	2500	5100	1470	1920	1330	929	1260	392	176	127
6	615	3440	2150	3940	1600	1710	1530	1080	925	255	150	126
7	415	2940	1850	2910	1560	1560	1120	946	807	221	118	128
8	640	2380	1520	2270	1410	1370	1040	946	648	215	128	127
9	1130	2180	1480	1870	1290	1230	1510	871	531	e199	195	121
10	5210	1970	1150	1550	1220	1140	1340	822	434	179	158	121
11	6200	1700	977	1470	1110	938	1320	648	508	160	131	122
12	4960	1340	1060	1670	e900	878	1160	662	463	164	121	201
13	3850	1040	932	1580	e820	868	1010	654	397	190	121	279
14	3420	774	824	1380	e740	753	1040	584	418	186	125	153
15	2770	883	1110	1580	e670	747	2610	565	390	181	122	104
16	2440	777	1670	2610	e620	858	3120	631	418	168	127	101
17	2210	697	1460	3220	e590	738	e4100	525	360	164	130	108
18	1870	578	1550	2410	696	1170	4340	472	298	156	135	114
19	1820	561	1940	2160	2050	1180	3620	422	297	134	172	113
20	1390	495	1630	2000	e3130	904	6490	561	274	125	451	108
21	1290	450	1720	2030	2430	927	5980	440	259	139	1050	103
22	945	535	3470	e1500	2390	826	4540	319	255	170	543	100
23	777	535	2380	e1270	2140	731	4240	327	241	155	379	102
24	857	425	1970	e1080	1970	739	5120	419	217	135	291	95
25	701	416	1740	e970	1680	718	4610	354	212	129	236	101
26	483	547	e1620	e880	1380	801	3300	1130	210	129	189	88
27	672	467	e1580	e840	1160	1070	2690	1100	211	114	135	99
28	568	1060	e1490	e780	999	1350	2240	798	206	100	e150	98
29	343	1760	4260	e740	---	e1480	1900	640	197	103	177	94
30	427	1460	11000	e720	---	1250	1610	679	185	125	188	91
31	408	---	12600	e700	---	1050	---	5100	---	102	175	---
TOTAL	48703	31957	75036	85930	37190	35806	76314	27534	23031	6045	6589	3640
MEAN	1571	1065	2421	2772	1328	1155	2544	888	768	195	213	121
MAX	6200	3440	12600	12100	3130	2360	6490	5100	4930	491	1050	279
MIN	102	350	824	700	590	718	781	319	185	100	102	88
CFSM	1.48	1.00	2.28	2.62	1.25	1.09	2.40	.84	.72	.18	.20	.11
IN.	1.71	1.12	2.63	3.02	1.31	1.26	2.68	.97	.81	.21	.23	.13

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1991, BY WATER YEAR (WY)

	MEAN	719	1120	1529	1302	1825	2024	1774	926	942	452	297	320
MAX	1984	2404	2421	2773	3315	3612	2843	2270	2915	1413	748	701	
(WY)	1987	1986	1991	1991	1990	1985	1985	1990	1989	1986	1990	1989	
MIN	144	447	167	305	605	980	607	272	153	122	125	121	
(WY)	1988	1988	1990	1984	1989	1989	1986	1988	1988	1988	1988	1991	

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1984 - 1991	
ANNUAL TOTAL	582511		457775			
ANNUAL MEAN	1596		1254		1098	
HIGHEST ANNUAL MEAN					1339	1986
LOWEST ANNUAL MEAN					716	1987
HIGHEST DAILY MEAN	12600	Dec 31	12600	Dec 31	13100	Feb 26 1985
LOWEST DAILY MEAN	102	Oct 2	88	Sep 26	45	Aug 4 1988
ANNUAL SEVEN-DAY MINIMUM	221	Sep 26	95	Sep 24	60	Jul 10 1988
INSTANTANEOUS PEAK FLOW			12800	Dec 31	13200	Jun 5 1989
INSTANTANEOUS PEAK STAGE			17.51	Dec 31	17.86	Jun 5 1989
ANNUAL RUNOFF (CFSM)	1.51		1.18		1.04	
ANNUAL RUNOFF (INCHES)	20.44		16.07		14.07	
10 PERCENT EXCEEDS	3270		2720		2720	
50 PERCENT EXCEEDS	1150		798		535	
90 PERCENT EXCEEDS	292		127		149	

LOCATION.--Lat 40°50'55", long 84°56'16", in SW1/4SW1/4 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.

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.--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.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	68	147	662	9440	e250	277	560	267	2100	35	23	27
2	61	132	600	8430	e230	299	389	237	1620	44	22	27
3	57	123	1570	e7600	e300	293	287	195	2900	182	26	38
4	430	114	3160	e5800	e690	252	245	164	1750	202	24	58
5	937	191	2350	e3900	e1500	236	274	155	808	254	23	120
6	494	642	1510	e1700	e1800	218	259	155	583	231	22	108
7	391	391	1510	e860	e1900	202	230	142	406	229	22	105
8	453	292	1420	e540	e2000	165	245	131	260	165	40	70
9	673	267	1040	e410	e1700	147	432	142	168	85	48	47
10	2520	250	665	e330	e1500	143	350	137	125	62	51	35
11	3020	221	462	e300	e1200	134	262	121	104	51	38	28
12	2150	181	361	e520	e900	124	212	110	102	44	33	42
13	1540	162	298	e680	e580	123	208	106	105	41	31	38
14	1480	159	247	e630	e430	121	1240	118	91	38	30	36
15	1290	153	650	e1020	e330	179	1630	125	97	33	27	33
16	942	142	1150	e2200	e260	287	800	109	114	31	24	33
17	601	132	761	e3300	e240	365	446	108	99	30	27	34
18	748	119	1380	e2100	e390	749	359	126	79	28	49	33
19	840	110	2550	e1700	e1500	758	984	127	66	27	82	30
20	531	105	2260	e1300	e2900	599	3110	99	57	26	83	26
21	529	100	2400	e920	e2500	588	2610	86	51	26	51	23
22	611	118	3690	e820	2280	763	2080	83	46	70	42	22
23	701	234	3810	e700	1990	1190	1870	83	44	67	36	22
24	593	211	3350	e650	1340	982	1700	80	42	44	30	21
25	504	220	e2700	e590	854	726	1120	105	40	44	27	22
26	460	245	e2100	e520	548	1090	721	109	37	50	26	23
27	399	257	e1700	e460	398	1810	547	95	40	43	24	21
28	326	962	e1370	e400	319	1540	450	110	42	34	22	23
29	261	1350	2320	e350	---	1430	366	139	39	29	21	24
30	205	754	7060	e290	---	1080	306	171	36	25	22	24
31	167	---	9340	e270	---	810	---	2550	---	24	23	---
TOTAL	23982	8484	64446	58730	30829	17680	24292	6485	12051	2294	1049	1193
MEAN	774	283	2079	1895	1101	570	810	209	402	74.0	33.8	39.8
MAX	3020	1350	9340	9440	2900	1810	3110	2550	2900	254	83	120
MIN	57	100	247	270	230	121	208	80	36	24	21	21
CFSM	1.25	.46	3.35	3.05	1.77	.92	1.30	.34	.65	.12	.05	.06
IN.	1.44	.51	3.86	3.52	1.85	1.06	1.46	.39	.72	.14	.06	.06

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 1991, BY WATER YEAR (WY)

MEAN	127	273	594	721	925	1127	964	485	402	222	121	88.7
MAX	866	1985	2079	3634	2546	3263	3409	1491	2075	1248	848	381
(WY)	1955	1973	1991	1950	1950	1978	1957	1947	1981	1990	1958	1989
MIN	7.52	13.7	12.8	21.0	30.5	125	79.3	55.6	28.1	20.6	15.5	12.6
(WY)	1964	1965	1964	1961	1964	1981	1966	1988	1988	1965	1963	1963

ANNUAL TOTAL	356513		251515			
ANNUAL MEAN	977		689		497	
HIGHEST ANNUAL MEAN					832	1950
LOWEST ANNUAL MEAN					140	1966
HIGHEST DAILY MEAN	9340	Dec 31	9440	Jan 1	10600	Feb 15 1950
LOWEST DAILY MEAN	43	Jul 9	21	Aug 29	5.4	Oct 18 1960
ANNUAL SEVEN-DAY MINIMUM	58	Jul 5	22	Sep 21	6.2	Oct 12 1963
INSTANTANEOUS PEAK FLOW			9580	Dec 31	11300	Feb 10 1959
INSTANTANEOUS PEAK STAGE			23.81	Dec 31	24.40	Mar 14 1982
ANNUAL RUNOFF (CFSM)	1.57		1.11		.80	
ANNUAL RUNOFF (INCHES)	21.36		15.07		10.87	
10 PERCENT EXCEEDS	2530		1880		1490	
50 PERCENT EXCEEDS	554		240		123	
90 PERCENT EXCEEDS	118		28		22	

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 mi².

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.--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. Period of record computations do not include 1934 water year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	77	167	672	10600	e280	325	671	303	5070	40	28	28
2	71	150	620	10400	e270	356	474	266	2180	44	27	33
3	65	141	1980	9550	320	394	342	221	3950	59	28	35
4	99	134	3900	7480	613	314	268	188	2710	194	30	47
5	876	186	3220	4650	1700	269	354	174	1140	219	30	76
6	647	572	1710	1800	1970	254	349	189	712	226	29	121
7	420	553	1430	908	2060	237	280	169	527	212	28	115
8	393	350	1390	626	2290	204	267	147	361	201	40	93
9	645	294	1090	469	2220	178	603	145	236	141	55	65
10	2570	268	765	386	1840	167	459	151	170	98	54	49
11	3840	243	536	342	1400	161	320	140	134	66	55	38
12	3110	210	419	656	1000	149	237	128	118	52	43	50
13	1770	183	345	782	719	145	207	120	116	45	38	51
14	1490	170	281	701	e470	142	833	116	114	42	36	43
15	1330	168	465	1080	e350	174	2430	132	105	40	35	38
16	1020	161	1180	2640	e290	277	1500	125	115	35	32	36
17	700	148	862	3800	e270	384	795	127	117	33	29	36
18	611	137	1140	3240	367	779	591	120	102	32	33	35
19	925	128	2570	2080	2070	945	1180	140	80	31	98	35
20	616	123	2560	e1550	3390	703	3950	126	65	30	153	33
21	508	117	2680	e1200	2590	636	3660	104	58	30	106	28
22	546	117	4230	e950	2290	722	2470	93	52	46	56	26
23	647	161	4520	e820	2150	1240	2090	85	51	85	44	27
24	624	228	e3600	e740	1530	1240	2080	87	49	74	39	26
25	518	207	e2800	e680	1030	851	1440	95	44	47	33	24
26	463	227	e2200	e590	694	1000	911	164	42	43	31	24
27	419	261	e1800	e510	492	1840	651	138	39	49	29	25
28	356	787	e1600	e460	387	1600	528	111	40	45	28	24
29	290	1570	2950	e400	---	1480	438	130	43	39	27	24
30	232	923	8360	e340	---	1160	358	382	43	34	26	26
31	192	---	10300	e300	---	912	---	6740	---	30	26	---
TOTAL	26070	9084	72175	70730	35052	19238	30736	11356	18583	2362	1346	1311
MEAN	841	303	2328	2282	1252	621	1025	366	619	76.2	43.4	43.7
MAX	3840	1570	10300	10600	3390	1840	3950	6740	5070	226	153	121
MIN	65	117	281	300	270	142	207	85	39	30	26	24
CFSM	1.10	.40	3.06	2.99	1.64	.81	1.34	.48	.81	.10	.06	.06
IN.	1.27	.44	3.52	3.45	1.71	.94	1.50	.55	.91	.12	.07	.06

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 1991, BY WATER YEAR (WY)

	149	292	644	850	1062	1338	1141	642	468	261	142	97.3
MEAN	149	292	644	850	1062	1338	1141	642	468	261	142	97.3
MAX	1299	2612	2349	4897	3404	4070	4119	3866	2545	1428	1074	470
(WY)	1955	1973	1978	1950	1959	1978	1957	1943	1981	1986	1958	1972
MIN	8.28	16.9	16.7	21.3	45.4	87.0	90.7	59.9	34.3	11.9	13.9	11.6
(WY)	1964	1965	1964	1977	1964	1941	1946	1931	1988	1936	1932	1944

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1931 - 1991
ANNUAL TOTAL	412211	298043	600
ANNUAL MEAN	1129	817	1093
HIGHEST ANNUAL MEAN			174
LOWEST ANNUAL MEAN			1950
HIGHEST DAILY MEAN	10300	10600	13000
LOWEST DAILY MEAN	58	24	3.4
ANNUAL SEVEN-DAY MINIMUM	79	25	4.9
INSTANTANEOUS PEAK FLOW		10700	13600
INSTANTANEOUS PEAK STAGE		17.92	19.66
ANNUAL RUNOFF (CFSM)	1.48	1.07	.79
ANNUAL RUNOFF (INCHES)	20.12	14.55	10.70
10 PERCENT EXCEEDS	2970	2210	1700
50 PERCENT EXCEEDS	616	267	138
90 PERCENT EXCEEDS	134	34	23

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 mi².

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.--Records good except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.70	3.8	12	86	3.8	9.3	8.7	11	345	4.3	.16	.16
2	.68	3.9	9.1	40	5.4	17	6.7	6.3	192	29	.13	.10
3	1.8	4.2	293	21	11	14	6.1	5.0	97	8.1	2.0	3.7
4	16	3.6	128	14	30	10	12	4.4	32	3.9	.54	4.3
5	3.0	45	42	11	51	8.7	32	7.5	15	1.2	.26	.58
6	2.5	35	25	8.8	50	8.9	17	8.7	9.5	.69	.20	.27
7	6.0	14	17	e6.4	46	7.3	12	5.0	6.6	.56	.20	.13
8	7.9	9.3	13	e5.6	28	5.8	16	3.9	5.0	3.2	21	.19
9	50	7.8	11	e5.2	21	5.6	34	3.8	3.8	.69	6.4	.17
10	312	6.7	11	e4.7	17	5.3	16	3.4	3.1	.60	1.8	.13
11	112	5.4	9.6	16	12	4.9	9.9	3.2	4.0	.40	.66	.13
12	41	4.6	9.2	19	9.2	4.8	8.1	3.2	3.6	.54	.41	11
13	20	4.0	8.0	10	e9.2	5.0	9.1	3.3	2.2	.51	.69	2.6
14	12	3.8	6.3	13	e9.8	5.9	71	3.6	1.8	.42	1.0	1.1
15	9.0	3.7	51	43	e5.0	11	207	2.9	2.1	.39	.41	.76
16	6.2	4.0	30	174	e4.0	12	63	7.3	2.7	.29	.19	.52
17	5.5	3.9	22	96	5.6	16	36	15	1.7	.27	.27	.45
18	44	3.4	55	32	24	48	19	e6.4	1.2	.16	1.6	.42
19	18	3.4	58	21	169	22	165	e4.3	.94	.30	8.5	.37
20	11	3.4	29	28	76	15	158	e3.5	1.1	.34	3.3	.31
21	7.8	3.3	193	32	39	12	46	e2.5	.88	.10	1.5	.29
22	6.4	6.6	156	e15	25	15	23	e2.0	.87	7.9	.67	.24
23	5.4	4.2	53	e13	16	31	21	e3.3	.94	1.1	.33	.26
24	4.6	3.5	26	e9.3	13	27	44	e15	1.0	.46	.32	.29
25	4.2	3.4	e16	e7.2	11	16	22	e70	.87	.28	.25	.25
26	4.1	3.6	e11	e6.4	8.9	45	15	e25	.81	.13	.22	.24
27	3.7	17	e10	e5.8	7.6	37	12	e12	.79	.10	.16	.14
28	3.5	106	11	e5.1	8.0	22	9.8	e5.0	.79	.09	.20	.09
29	3.4	34	402	e4.6	---	14	8.9	e3.2	.81	2.4	.20	.08
30	3.4	17	777	e4.3	---	10	7.1	152	11	.87	.20	.06
31	3.8	---	294	e3.9	---	8.6	---	941	---	.23	.20	---
TOTAL	729.58	371.5	2788.2	761.3	715.5	474.1	1115.4	1342.7	749.10	69.52	53.97	29.33
MEAN	23.5	12.4	89.9	24.6	25.6	15.3	37.2	43.3	25.0	2.24	1.74	.98
MAX	312	106	777	174	169	48	207	941	345	29	21	11
MIN	.68	3.3	6.3	3.9	3.8	4.8	6.1	2.0	.79	.09	.13	.06
CFSM	1.07	.57	4.11	1.12	1.17	.70	1.70	1.98	1.14	.10	.08	.04
IN.	1.24	.63	4.74	1.29	1.22	.81	1.89	2.28	1.27	.12	.09	.05

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 1991, BY WATER YEAR (WY)

	MEAN	5.45	13.9	29.7	21.1	33.3	40.2	29.7	20.8	15.8	6.02	4.02	3.86
MAX	35.0	64.5	89.9	93.5	94.5	130	73.7	56.5	56.0	68.5	14.2	16.4	
(WY)	1987	1973	1991	1974	1976	1982	1972	1974	1981	1986	1977	1977	
MIN	.27	.32	.28	.12	1.27	4.27	4.22	2.22	.33	.34	.36	.32	
(WY)	1965	1965	1977	1977	1978	1981	1971	1988	1988	1974	1969	1973	

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1965 - 1991
ANNUAL TOTAL	10799.65	9200.20	
ANNUAL MEAN	29.6	25.2	18.6
HIGHEST ANNUAL MEAN			28.3
LOWEST ANNUAL MEAN			8.90
HIGHEST DAILY MEAN	777	941	941
LOWEST DAILY MEAN	.48	.06	.04
ANNUAL SEVEN-DAY MINIMUM	.79	.16	.05
INSTANTANEOUS PEAK FLOW		1100	1100
INSTANTANEOUS PEAK STAGE		14.16	14.16
ANNUAL RUNOFF (CFSM)	1.35	1.15	.85
ANNUAL RUNOFF (INCHES)	18.34	15.63	11.52
10 PERCENT EXCEEDS	58	45	43
50 PERCENT EXCEEDS	8.1	6.3	3.8
90 PERCENT EXCEEDS	1.4	.27	.41

04182810 SPY RUN CREEK AT FORT WAYNE, IN

LOCATION.--Lat 41°06'18", long 85°09'12", in SW1SW1 sec.26, T.31 N., R.12 E., Allen County, Hydrologic Unit 04100004, on right bank 50 ft upstream from Sherman Boulevard bridge in Fort Wayne, and at mile 2.2.

DRAINAGE AREA.--14.0 mi².

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.--Records good except for estimated daily discharges, which are poor.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 14, 1982 reached a stage of 10.75 ft, present site and datum.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.7	3.1	7.7	22	e2.6	11	8.2	16	58	8.0	2.2	1.2
2	3.0	3.2	6.0	16	4.4	34	5.6	7.8	94	24	2.4	1.0
3	4.0	3.0	253	12	11	16	4.9	5.1	32	10	7.4	25
4	62	3.0	41	7.7	18	8.4	21	4.7	15	5.8	3.6	18
5	8.3	156	17	6.3	27	7.2	79	15	11	3.5	2.9	4.7
6	4.3	38	12	e5.1	22	7.2	18	11	7.4	2.7	2.9	3.1
7	4.8	15	9.3	e4.7	20	6.0	10	5.4	5.5	2.0	2.8	2.2
8	12	9.3	7.2	e4.3	13	4.4	38	4.4	4.6	2.1	32	1.8
9	143	7.4	6.2	e3.9	10	4.0	39	3.9	4.1	2.2	12	1.9
10	307	6.6	5.6	e3.6	8.1	3.5	13	3.7	3.8	2.3	4.7	2.1
11	31	5.3	5.0	28	5.9	3.4	8.3	3.4	3.9	2.2	3.0	1.9
12	16	4.8	4.8	23	4.4	3.7	6.3	3.4	4.8	4.4	2.7	136
13	9.4	4.7	4.5	9.3	e4.7	4.6	7.1	4.3	3.8	3.4	2.7	18
14	6.4	5.1	4.0	16	e6.4	9.7	61	5.4	3.1	2.6	4.1	7.0
15	6.1	5.0	57	29	e4.6	14	131	3.7	3.7	2.3	3.0	3.9
16	5.0	5.1	19	95	e3.1	13	27	7.5	5.5	2.6	2.7	2.8
17	4.3	4.5	19	33	e4.0	20	75	8.5	3.6	3.0	15	2.3
18	84	3.8	60	14	57	73	19	4.2	3.2	2.9	14	2.0
19	14	3.8	34	9.2	92	18	178	3.0	3.2	2.5	34	2.1
20	7.4	3.9	17	15	26	10	76	2.6	2.9	2.2	22	2.4
21	5.5	3.8	185	17	15	8.0	22	2.5	2.9	2.2	5.5	1.7
22	4.9	13	57	9.5	11	7.7	15	2.4	2.7	3.5	3.7	1.5
23	4.4	6.0	21	7.1	7.2	11	22	2.6	2.4	2.8	3.7	1.8
24	3.8	4.1	e14	5.5	6.0	22	65	4.1	2.6	2.5	2.3	1.9
25	3.3	3.1	e9.0	3.8	5.3	9.9	17	36	2.8	2.5	1.9	1.9
26	3.1	3.3	e7.0	e3.3	4.4	32	11	34	3.0	2.6	2.0	1.9
27	3.0	28	e6.2	e3.0	3.9	22	8.6	7.9	2.8	2.3	2.3	1.7
28	3.4	113	7.0	e2.8	7.0	17	7.5	4.7	2.8	2.0	2.1	1.5
29	3.3	20	627	e2.6	---	8.3	7.8	3.9	2.5	2.6	2.1	1.5
30	3.4	12	483	e2.5	---	5.7	6.0	34	3.6	3.1	2.0	1.5
31	3.3	---	48	e2.4	---	5.2	---	392	---	2.4	1.6	---
TOTAL	776.1	496.9	2053.5	416.6	404.0	419.9	1007.3	647.1	301.2	119.2	205.3	256.3
MEAN	25.0	16.6	66.2	13.4	14.4	13.5	33.6	20.9	10.0	3.85	6.62	8.54
MAX	307	156	627	95	92	73	178	392	94	24	34	136
MIN	2.7	3.0	4.0	2.4	2.6	3.4	4.9	2.4	2.4	2.0	1.6	1.0
CFSM	1.79	1.18	4.73	.96	1.03	.97	2.40	1.49	.72	.27	.47	.61
IN.	2.06	1.32	5.46	1.11	1.07	1.12	2.68	1.72	.80	.32	.55	.68

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 1991, BY WATER YEAR (WY)

	1984	1985	1986	1987	1988	1989	1990	1991
MEAN	12.7	18.1	25.4	13.8	29.6	25.6	22.9	16.8
MAX	25.0	35.8	66.2	23.9	64.6	46.6	36.6	34.2
(WY)	1991	1986	1991	1990	1990	1984	1988	1989
MIN	2.79	10.2	3.03	3.76	5.32	11.4	8.56	4.15
(WY)	1988	1985	1990	1984	1989	1987	1986	1988

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1984 - 1991
ANNUAL TOTAL	9553.63	7103.4	
ANNUAL MEAN	26.2	19.5	
HIGHEST ANNUAL MEAN			17.3
LOWEST ANNUAL MEAN			22.3
HIGHEST DAILY MEAN	748	627	11.5
LOWEST DAILY MEAN	.93	1.0	748
ANNUAL SEVEN-DAY MINIMUM	1.5	1.7	.93
INSTANTANEOUS PEAK FLOW		976	1.5
INSTANTANEOUS PEAK STAGE		9.26	1370
ANNUAL RUNOFF (CFSM)	1.87	1.39	10.68
ANNUAL RUNOFF (INCHES)	25.39	18.87	1.24
10 PERCENT EXCEEDS	48	34	16.80
50 PERCENT EXCEEDS	7.2	5.3	34
90 PERCENT EXCEEDS	2.7	2.3	5.1
			2.4

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 mi².

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.--Records good except for estimated daily discharges, which are poor. Flow regulated by hydro-powerplant on the St. Joseph River 10.3 mi. upstream from station. Flow slightly regulated by upstream reservoirs.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	723	651	2110	e22700	e820	1390	1820	1980	13900	325	162	e190
2	186	626	1680	e21900	e780	1720	1500	1730	9070	756	126	e160
3	228	576	4530	e18000	1030	3100	1190	1480	7500	699	133	e125
4	872	578	8290	e14100	1410	2430	1150	1380	5660	696	135	e130
5	1560	1800	7020	e10700	2600	2310	1900	1400	3110	658	133	e135
6	1530	3970	4660	e7400	3840	2080	2040	1440	1790	548	169	e135
7	809	4390	3720	e5100	3770	1860	1610	1300	1430	459	174	e135
8	1330	3220	3190	3510	3760	1680	1410	1220	1110	456	282	e135
9	1950	2820	2890	2610	3660	1430	2240	1170	838	372	374	e130
10	7590	2550	2280	2220	3250	1360	1920	1110	789	298	318	e130
11	10400	2250	1680	1950	2710	1200	1700	1040	843	249	253	e130
12	9830	1710	1570	2370	2180	1090	1500	951	647	221	204	e210
13	7070	1240	1390	2530	1720	1090	1320	1020	560	245	164	e330
14	5650	1080	1200	2260	e1300	1040	1820	960	587	241	159	e210
15	4840	1090	1670	2650	e1060	997	5560	893	552	220	166	e140
16	4020	909	3000	5410	e950	1160	5850	968	606	199	142	e120
17	3390	813	2720	7740	e900	1240	4980	974	553	178	151	e125
18	3190	813	2900	6370	e1060	2030	5540	786	446	165	194	e130
19	3010	775	4750	4820	3640	2430	5450	744	407	169	402	e125
20	2380	724	4650	3950	6980	1790	10500	831	362	169	567	e120
21	1900	657	5150	e3000	5700	1640	11000	792	325	159	986	e115
22	1920	759	8380	e2300	4920	1580	8630	584	318	171	720	e112
23	1350	756	e7000	e1900	4610	2070	7370	500	311	176	509	e115
24	1530	772	e5600	e1600	3860	2320	7980	676	450	251	594	e108
25	1370	716	e4500	e1400	2960	1820	7390	772	390	269	282	e110
26	712	792	e3700	e1250	2270	1910	5200	1420	240	210	161	e108
27	946	957	e3300	e1150	1770	2950	3890	1450	178	176	e150	e106
28	1050	2090	e2900	e1080	1510	3110	3190	1140	80	155	e180	e104
29	821	3570	6980	e980	---	3120	2670	905	96	147	e200	e102
30	717	2880	e18000	e930	---	2560	2160	1680	190	144	e225	e100
31	722	---	e21300	e860	---	2120	---	12000	---	211	e210	---
TOTAL	83596	46534	152710	164740	75020	58627	120480	45296	53338	9392	8625	4125
MEAN	2697	1551	4926	5314	2679	1891	4016	1461	1778	303	278	137
MAX	10400	4390	21300	22700	6980	3120	11000	12000	13900	756	986	330
MIN	186	576	1200	860	780	997	1150	500	80	144	126	100
CFSM	1.37	.79	2.50	2.70	1.36	.96	2.04	.74	.90	.15	.14	.07
IN.	1.58	.88	2.89	3.12	1.42	1.11	2.28	.86	1.01	.18	.16	.08

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 1991, BY WATER YEAR (WY)

	MEAN	538	1128	2197	1780	2749	3805	3423	1827	1465	851	508	451
MAX	3087	5308	6292	6008	7649	11460	7955	4138	6480	3510	2119	2093	
(WY)	1987	1973	1968	1974	1976	1982	1957	1983	1981	1986	1958	1972	
MIN	62.3	102	96.4	119	161	1181	789	382	122	197	99.1	91.2	
(WY)	1964	1965	1964	1963	1964	1981	1971	1988	1988	1964	1962	1963	

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1957 - 1991
ANNUAL TOTAL	1091574	822483	
ANNUAL MEAN	2991	2253	~ 1720
HIGHEST ANNUAL MEAN			2637
LOWEST ANNUAL MEAN			669
HIGHEST DAILY MEAN	21300	e22700	26300
LOWEST DAILY MEAN	186	80	48
ANNUAL SEVEN-DAY MINIMUM	342	105	55
INSTANTANEOUS PEAK FLOW		e23000	26600
INSTANTANEOUS PEAK STAGE		unknown	25.49
ANNUAL RUNOFF (CFSM)	1.52	1.15	.87
ANNUAL RUNOFF (INCHES)	20.64	15.55	11.88
10 PERCENT EXCEEDS	6250	5550	4700
50 PERCENT EXCEEDS	2180	1200	720
90 PERCENT EXCEEDS	619	153	148

e Estimated

@ 1550 AP/3
Val = 1.61 AP/500

Area
9.85
W. 1/4 - 228

LOCATION.--Lat 41°33'50", long 86°29'50", in NW1/4 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 mi², of which 58.2 mi² 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.--Records good below 300 ft/s and poor above.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	143	236	e490	e540	243	276	247	292	352	155	68	95
2	139	232	e470	e530	242	328	239	285	310	135	73	93
3	141	227	e450	e510	248	352	231	266	255	123	82	99
4	337	225	e430	e500	277	325	230	257	232	119	83	114
5	323	371	e400	e470	333	304	244	256	220	126	67	107
6	264	e430	e370	e450	344	297	237	261	212	120	66	102
7	235	e460	e360	e410	336	281	230	249	206	124	68	99
8	220	e420	e350	e380	323	267	227	239	200	133	133	96
9	348	e370	e330	e360	317	261	225	231	197	124	149	93
10	e400	358	e320	351	305	256	225	226	195	113	120	94
11	e500	326	e310	345	289	254	218	220	195	106	112	94
12	e520	304	e300	347	271	246	213	217	196	110	107	105
13	e520	286	e295	334	269	247	213	214	189	109	107	120
14	e510	276	291	326	281	243	221	211	180	105	119	116
15	e490	267	307	316	236	247	e340	207	180	100	109	115
16	e470	259	312	356	252	243	e470	204	182	93	102	109
17	e440	250	300	439	253	244	e490	214	171	92	104	107
18	e420	244	306	419	258	297	e480	212	165	86	103	106
19	e380	239	297	386	360	293	e430	208	165	83	108	104
20	e360	233	285	e370	e370	271	e390	203	162	83	123	104
21	e340	232	284	e350	e370	259	377	200	159	84	114	104
22	320	233	311	e340	e360	248	342	197	158	98	108	107
23	306	232	307	e330	e340	257	317	198	155	90	103	111
24	295	228	290	320	330	264	381	249	153	75	100	112
25	283	222	277	299	307	247	367	244	146	75	96	112
26	269	215	264	287	291	253	329	346	140	71	93	109
27	263	311	257	279	280	287	309	325	131	72	89	107
28	255	e400	255	268	271	307	314	270	130	82	87	105
29	248	e500	e370	259	---	283	306	245	128	74	89	104
30	245	e510	e450	255	---	264	300	233	134	64	96	104
31	238	---	e540	250	---	253	---	280	---	65	101	---
TOTAL	10222	9096	10578	11376	8356	8454	9142	7459	5598	3089	3079	3147
MEAN	330	303	341	367	298	273	305	241	187	99.6	99.3	105
MAX	520	510	540	540	370	352	490	346	352	155	149	120
MIN	139	215	255	250	236	243	213	197	128	64	66	93
CFSM	1.90	1.74	1.96	2.11	1.72	1.57	1.75	1.38	1.07	.57	.57	.60
IN.	2.19	1.94	2.26	2.43	1.79	1.81	1.95	1.59	1.20	.66	.66	.67

MEAN	132	149	168	163	176	224	216	179	149	118	101	101
MAX	330	303	341	367	298	471	310	327	298	207	218	185
(WY)	1991	1991	1991	1991	1991	1982	1985	1983	1981	1981	1990	1972
MIN	70.1	67.3	77.5	78.0	76.3	112	112	98.4	84.0	64.2	63.1	64.4
(WY)	1954	1965	1961	1961	1963	1957	1987	1958	1971	1971	1964	1953

ANNUAL TOTAL	88191		89596			
ANNUAL MEAN	242		245		156	
HIGHEST ANNUAL MEAN					245	1991
LOWEST ANNUAL MEAN					95.4	1964
HIGHEST DAILY MEAN	600	May 17	e540	Dec 31	903	Mar 17 1982
LOWEST DAILY MEAN	112	Jan 2	64	Jul 30	44	Aug 4 1988
ANNUAL SEVEN-DAY MINIMUM	143	Sep 10	71	Jul 26	51	Sep 7 1964
INSTANTANEOUS PEAK FLOW			e560	Dec 30	908	Mar 17 1982
INSTANTANEOUS PEAK STAGE			8.36	Dec 30	9.04	Jun 27 1968
ANNUAL RUNOFF (CFSM)	1.39		1.41		.90	
ANNUAL RUNOFF (INCHES)	18.85		19.16		12.18	
10 PERCENT EXCEEDS	391		388		258	
50 PERCENT EXCEEDS	209		248		134	
90 PERCENT EXCEEDS	148		99		80	

e Estimated

LOCATION.--Lat 41°24'00", long 86°42'04", in SE 1/4 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 mi², of which 137 mi² 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.--Records good.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	524	798	1520	1570	862	938	850	990	1200	403	261	371
2	515	776	1490	1570	839	1020	818	973	1220	405	259	334
3	519	751	1450	1560	851	1090	785	927	1090	375	272	332
4	814	744	1410	1540	916	1060	764	881	971	366	281	386
5	959	971	1370	1520	1020	1020	793	864	871	369	273	362
6	882	1370	1330	1490	1060	994	792	888	795	363	263	337
7	791	1390	1280	1460	1070	966	767	858	736	359	258	323
8	744	1350	1240	1420	1050	928	755	813	695	557	318	312
9	965	1280	1200	1380	1050	904	749	770	659	539	427	305
10	1440	1210	1160	1340	1030	881	743	745	636	469	381	303
11	1570	1140	1130	1300	1000	857	724	717	633	423	346	299
12	1580	1080	1090	1280	970	838	699	700	640	402	330	309
13	1560	1020	1060	1250	954	837	684	684	616	392	321	346
14	1530	970	1020	1220	958	828	719	672	591	375	319	342
15	1500	934	1020	1190	918	839	998	659	573	362	317	340
16	1470	903	1040	1210	861	856	1350	657	585	347	302	330
17	1420	854	1020	1270	867	874	1460	721	558	331	300	320
18	1410	818	1020	1270	885	1010	1480	744	523	324	304	314
19	1380	792	1010	1260	1030	1050	1440	751	502	317	318	313
20	1320	771	983	1250	1150	994	1380	703	492	312	392	311
21	1260	749	970	1240	1150	946	1300	667	484	304	363	309
22	1200	754	1020	1220	1150	915	1240	644	481	312	336	313
23	1140	751	1020	1180	1110	909	1170	641	474	322	319	330
24	1090	733	980	1150	1070	988	1160	709	463	295	308	328
25	1050	713	943	1090	1030	953	1150	778	448	291	296	326
26	1010	691	912	1050	986	932	1100	1110	431	284	290	326
27	969	789	881	1020	956	983	1050	1170	423	279	287	319
28	935	1460	862	981	933	1010	1030	1070	411	281	279	316
29	893	1540	1210	948	---	989	1020	949	405	281	275	311
30	849	1530	1600	926	---	930	1010	868	401	275	308	312
31	817	---	1600	894	---	884	---	971	---	264	415	---
TOTAL	34106	29632	35841	39049	27726	29223	29980	25294	19007	10978	9718	9779
MEAN	1100	988	1156	1260	990	943	999	816	634	354	313	326
MAX	1580	1540	1600	1570	1150	1090	1480	1170	1220	557	427	386
MIN	515	691	862	894	839	828	684	641	401	264	258	299
CFSM	2.05	1.84	2.15	2.35	1.84	1.76	1.86	1.52	1.18	.66	.58	.61
IN	2.36	2.05	2.									

MEAN	402	461	514	537	577	716	745	632	514	408	350	341
MAX	1162	988	1190	1260	990	1376	1218	1067	1057	839	791	718
(WY)	1955	1991	1928	1991	1991	1985	1982	1983	1950	1950	1990	1972
MIN	198	230	236	235	236	325	420	296	248	205	174	179
(WY)	1964	1965	1964	1963	1964	1934	1987	1934	1934	1934	1941	1941

ANNUAL TOTAL	292571	.	300333				
ANNUAL MEAN	802		823			516	
HIGHEST ANNUAL MEAN						823	1991
LOWEST ANNUAL MEAN						293	1964
HIGHEST DAILY MEAN	1600	Dec 30	1600	Dec 30		1920	Mar 20 1982
LOWEST DAILY MEAN	330	Jan 2	258	Aug 7		154	Aug 30 1941
ANNUAL SEVEN-DAY MINIMUM	437	Jan 1	267	Aug 1		156	Aug 28 1941
INSTANTANEOUS PEAK FLOW			1610	Dec 30		1920	Mar 20 1982
INSTANTANEOUS PEAK STAGE			13.48	Dec 30		13.52	Mar 5 1985
ANNUAL RUNOFF (CFSM)	1.49		1.53			.96	
ANNUAL RUNOFF (INCHES)	20.27		20.81			13.05	
10 PERCENT EXCEEDS	1260		1350			884	
50 PERCENT EXCEEDS	730		862			444	
90 PERCENT EXCEEDS	503		312			272	

05517000 YELLOW RIVER AT KNOX, IN

LOCATION.--Lat 41°18'10", long 86°37'14", in SW1/4 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 mi², of which 51 mi² 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.--Records good except those for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	255	402	1420	3130	e410	529	593	768	1080	210	120	134
2	245	386	1330	3660	e420	643	556	701	1630	345	116	131
3	233	373	1020	3730	e440	944	511	646	2000	332	120	127
4	270	364	889	3000	532	1180	489	597	2090	243	130	130
5	485	463	965	2680	715	1160	515	572	1870	210	123	127
6	653	931	993	2160	883	862	535	642	1280	194	119	129
7	491	1170	869	e1400	914	719	526	735	700	182	119	122
8	385	1500	777	e1000	854	638	498	666	535	370	138	119
9	523	1660	716	e870	789	570	484	577	466	431	182	119
10	1140	1460	653	e790	764	533	477	532	420	300	165	115
11	1680	1070	620	e730	712	502	461	500	395	250	143	110
12	2070	787	585	e710	630	480	436	475	399	225	128	114
13	2400	649	559	e680	565	477	420	455	373	210	123	129
14	2530	578	523	e660	e500	468	444	444	348	196	124	138
15	2400	537	511	851	e440	497	830	431	332	180	121	134
16	2100	510	602	1010	e370	557	1560	423	401	168	114	127
17	1740	482	718	1390	e450	645	1850	446	418	164	117	122
18	1450	461	694	1670	502	828	2120	506	350	159	118	130
19	1220	440	679	1840	644	1060	2210	516	319	155	132	127
20	1130	422	672	1670	979	1170	2190	485	298	151	173	143
21	1060	406	623	1350	1260	988	1980	438	279	148	197	134
22	886	406	e615	1220	1390	760	1750	407	265	147	187	129
23	748	417	e600	1080	1250	704	1460	395	258	143	157	126
24	655	412	e598	e820	1010	732	1160	441	250	139	141	123
25	592	396	e585	e680	761	791	1050	459	241	137	132	123
26	544	374	e580	e600	641	764	1080	530	232	131	132	122
27	504	384	e570	e550	573	812	984	532	221	129	127	121
28	471	609	e560	e520	536	944	843	488	215	128	123	118
29	448	992	902	e480	---	951	808	424	210	124	121	118
30	428	1200	1970	e450	---	841	808	393	205	122	147	117
31	416	---	2760	e430	---	665	---	584	---	124	147	---
TOTAL	30152	20241	26158	41811	19934	23414	29628	16208	18080	6147	4236	3758
MEAN	973	675	844	1349	712	755	988	523	603	198	137	125
MAX	2530	1660	2760	3730	1390	1180	2210	768	2090	431	197	143
MIN	233	364	511	430	370	468	420	393	205	122	114	110
CFSM	2.24	1.55	1.94	3.10	1.64	1.74	2.27	1.20	1.39	.46	.31	.29
IN.	2.58	1.73	2.24	3.58	1.70	2.00	2.53	1.39	1.55	.53	.36	.32

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 1991, BY WATER YEAR (WY)

	MEAN	254	283	389	428	519	731	727	496	386	260	202	171
MAX	1939	883	1070	1349	1193	2127	1714	1113	1113	737	652	692	
(WY)	1955	1973	1967	1991	1959	1982	1950	1981	1975	1951	1958	1972	
MIN	77.5	83.3	91.6	71.3	107	194	243	169	146	115	93.6	75.9	
(WY)	1965	1965	1964	1963	1963	1957	1958	1958	1988	1971	1964	1964	

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1944 - 1991
ANNUAL TOTAL	224675	239767	
ANNUAL MEAN	616	657	403
HIGHEST ANNUAL MEAN			661
LOWEST ANNUAL MEAN			180
HIGHEST DAILY MEAN	2760	3730	5600
LOWEST DAILY MEAN	121	110	50
ANNUAL SEVEN-DAY MINIMUM	212	118	50
INSTANTANEOUS PEAK FLOW		3960	5660
INSTANTANEOUS PEAK STAGE		12.08	13.75
ANNUAL RUNOFF (CFSM)	1.42	1.51	.93
ANNUAL RUNOFF (INCHES)	19.21	20.50	12.59
10 PERCENT EXCEEDS	1370	1390	880
50 PERCENT EXCEEDS	440	506	258
90 PERCENT EXCEEDS	251	127	110

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 mi², of which 192 mi² 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.--Records good except for estimated daily discharges, which are fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1210	2110	3280	4630	2440	2380	2390	2760	2840	947	530	752
2	1180	2010	3380	4840	2370	2440	2300	2670	3080	971	509	677
3	1170	1910	3450	4920	2340	2550	2210	2560	3190	1080	517	638
4	1360	1830	3410	4920	2390	2640	2160	2440	3290	994	550	677
5	1660	2020	3300	4910	2530	2710	2140	2350	3350	929	551	688
6	1870	2580	3220	4880	2660	2720	2130	2300	3330	899	535	560
7	1900	2870	3160	4820	2760	2640	2100	2280	3140	857	525	509
8	1780	3040	3070	4730	2790	2530	2070	2260	2750	1020	553	494
9	1930	3180	2970	4520	2780	2450	2030	2170	2340	1450	815	491
10	2720	3280	2870	4340	2770	2350	1980	2060	2080	1340	864	501
11	3280	3300	2760	4180	2730	2270	1920	1980	1900	1160	777	491
12	3540	3190	2660	3960	2650	2220	1870	1910	1820	1060	702	502
13	3680	3010	2570	3790	2570	2160	1830	1850	1750	1010	658	563
14	3840	2820	2450	3670	2510	2100	1850	1810	1670	969	642	611
15	4050	2630	2400	3570	2400	2090	2090	1820	1600	922	634	635
16	4210	2470	2400	3520	2200	2150	2610	1750	1610	873	607	622
17	4230	2340	2430	3550	2160	2250	3040	1840	1650	832	588	600
18	4290	2240	2460	3590	2230	2460	3330	2020	1560	800	601	585
19	4250	2130	2450	3620	2330	2690	3570	2130	1450	774	640	583
20	4090	2010	2430	3650	2470	2830	3750	2100	1350	746	781	578
21	3890	1940	2400	3660	2640	2870	3850	2010	1280	724	841	583
22	3720	1920	2410	e3670	2760	2820	3850	1920	1250	716	806	584
23	3540	1910	2460	e3550	2840	2710	3760	1830	1210	711	735	611
24	3330	1870	2510	e3460	2850	2600	3640	1840	1160	661	673	616
25	3140	1810	e2350	e3300	2770	2570	3450	2090	1120	623	624	615
26	2950	1760	e2270	e3190	2640	2570	3250	2900	1080	601	599	611
27	2730	1790	e2200	2990	2520	2590	3120	3080	1040	580	577	595
28	2550	2510	2330	2850	2420	2620	3030	3040	1000	573	563	589
29	2410	3060	2740	2730	---	2650	2930	2900	973	575	546	588
30	2310	3190	3750	2650	---	2620	2840	2680	949	565	545	569
31	2210	---	4280	2540	---	2530	---	2520	---	547	693	---
TOTAL	89020	72730	86820	119200	71520	77780	81090	69870	56812	26509	19781	17718
MEAN	2872	2424	2801	3845	2554	2509	2703	2254	1894	855	638	591
MAX	4290	3300	4280	4920	2850	2870	3850	3080	3350	1450	864	752
MIN	1170	1760	2200	2540	2160	2090	1830	1750	949	547	509	491
CFSM	2.12	1.79	2.07	2.84	1.89	1.86	2.00	1.67	1.40	.63	.47	.44
IN.	2.45	2.00	2.39	3.28	1.97	2.14	2.23	1.92	1.56	.73	.54	.49

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 1991, BY WATER YEAR (WY)

	MEAN	917	1082	1352	1439	1568	2077	2235	1757	1374	1022	807	705
MAX	3378	2562	2816	3845	2874	4229	4376	3231	3167	1938	2316	1810	
(WY)	1955	1973	1983	1991	1968	1985	1950	1983	1981	1950	1990	1972	
MIN	350	398	447	449	391	719	1082	767	657	419	371	360	
(WY)	1964	1965	1964	1963	1963	1957	1958	1958	1988	1988	1964	1964	

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1949 - 1991
ANNUAL TOTAL	781717	788850	
ANNUAL MEAN	2142	2161	1360
HIGHEST ANNUAL MEAN			2161
LOWEST ANNUAL MEAN			618
HIGHEST DAILY MEAN	4290	Oct 18	5850
LOWEST DAILY MEAN	868	Jan 3	280
ANNUAL SEVEN-DAY MINIMUM	1070	Jan 2	507
INSTANTANEOUS PEAK FLOW			507
INSTANTANEOUS PEAK STAGE			4900
ANNUAL RUNOFF (CFSM)	1.58		12.64
ANNUAL RUNOFF (INCHES)	21.51		1.60
10 PERCENT EXCEEDS	3400		21.71
50 PERCENT EXCEEDS	1910		3580
90 PERCENT EXCEEDS	1270		2300
			600
			2620
			1110
			520

05517530 KANKAKEE RIVER NEAR KOUTS, IN

LOCATION.--Lat 41°15'14", long 87°02'02", in SW 1/4 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 mi², of which 194 mi² 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.--Records poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e1050	e2070	e3320	4350	e2550	e2420	e2450	2820	3220	1000	e475	696
2	e1000	e2000	3520	4420	e2500	e2490	e2350	2710	3340	1010	e470	624
3	e1020	e1900	3570	4470	e2400	e2560	e2280	2620	3320	1100	e490	574
4	e1080	e1800	3510	4480	e2450	e2650	e2220	2530	3370	1090	e470	646
5	e1200	e2000	3410	4480	e2550	e2700	e2200	2450	3400	1040	e480	710
6	e1300	e2500	3350	4480	e2700	e2760	e2180	2430	3390	947	e490	568
7	e1400	e2850	3230	4480	e2800	e2700	e2120	2400	3250	861	e510	497
8	e1600	e3000	3120	4430	e2850	e2600	e2100	2380	2860	959	e540	464
9	e1980	e3100	3050	4350	e2850	e2500	e2080	2240	2430	e1100	e600	437
10	2890	e3200	2960	4270	e2800	e2450	e2020	2100	2190	e1300	799	453
11	3470	e3200	2860	4160	e2780	e2350	e2000	2030	1990	e1190	721	447
12	e3500	e3150	2740	4030	e2700	e2280	e1920	1940	1860	e1080	646	471
13	e3630	e3000	2690	3880	e2650	e2200	e1900	1870	1810	e980	592	531
14	e3800	e2750	e2550	3770	e2550	e2150	e1900	1850	1740	e920	594	619
15	e3950	e2600	e2500	3660	e2450	e2120	e2100	1850	1640	e880	599	599
16	e4100	e2450	e2520	e3600	e2350	e2200	e2700	1770	1690	e820	585	588
17	e4150	e2300	e2540	e3600	e2250	e2300	e2900	1820	1740	e780	542	603
18	e4200	e2200	e2550	e3650	e2290	e2450	e3100	2030	1630	e740	565	574
19	e4150	e2100	e2530	e3700	e2400	e2700	e3250	2160	1540	e700	630	550
20	e4050	e2000	e2500	e3700	e2500	e2850	e3300	2160	1390	e660	766	557
21	e3850	e1950	e2510	e3700	e2650	e2900	e3400	2110	1280	e620	811	535
22	e3650	e1900	e2530	e3650	e2790	e2880	e3380	2020	1280	e600	788	527
23	e3450	e1890	e2590	e3600	e2880	e2780	e3350	1920	1240	e580	722	541
24	e3250	e1820	2500	e3550	e2900	e2700	e3320	1960	1170	e560	633	549
25	e3100	e1800	e2400	e3400	e2800	e2700	e3300	2200	1130	e540	566	562
26	e2900	e1790	e2320	e3200	e2700	e2720	e3280	3140	1120	e520	543	557
27	e2750	e1800	e2200	e3100	e2600	e2750	e3200	3250	1090	e510	533	557
28	e2550	e2500	2330	e3000	e2500	e2720	3090	3160	1060	e500	520	571
29	e2400	e3000	2940	e2850	---	e2700	2990	2990	1040	e490	522	621
30	e2280	e3150	4040	e2750	---	e2600	2900	2770	1010	e480	535	567
31	e2160	---	4180	e2650	---	e2550	---	2650	---	e480	621	---
TOTAL	85860	71770	89560	117410	73190	79430	79280	72330	59220	25037	18358	16795
MEAN	2770	2392	2889	3787	2614	2562	2643	2333	1974	808	592	560
MAX	4200	3200	4180	4480	2900	2900	3400	3250	3400	1300	811	710
MIN	1000	1790	2200	2650	2250	2120	1900	1770	1010	480	470	437
CFSM	2.01	1.74	2.10	2.75	1.90	1.86	1.92	1.70	1.43	.59	.43	.41
IN.	2.32	1.94	2.42	3.17	1.98	2.15	2.14	1.96	1.60	.68	.50	.45

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 1991, BY WATER YEAR (WY)

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
MEAN	979	1180	1631	1458	1618	2474	2603	1933	1616	1063	902	790					
MAX	2770	2392	2887	3787	2614	4613	4229	3255	3172	1828	2432	1496					
(WY)	1991	1991	1991	1991	1991	1985	1985	1983	1981	1981	1990	1990					
MIN	477	542	704	634	718	1423	1144	1130	619	411	398	479					
(WY)	1979	1979	1979	1977	1978	1987	1987	1989	1988	1988	1988	1978					

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1975 - 1991
ANNUAL TOTAL	796613	788240	
ANNUAL MEAN	2183	2160	1520
HIGHEST ANNUAL MEAN			2159
LOWEST ANNUAL MEAN			1131
HIGHEST DAILY MEAN	4340	4480	6410
LOWEST DAILY MEAN	953	437	292
ANNUAL SEVEN-DAY MINIMUM	1110	471	309
INSTANTANEOUS PEAK FLOW		4520	6420
INSTANTANEOUS PEAK STAGE		13.73	14.52
ANNUAL RUNOFF (CFSM)	1.59	1.57	1.10
ANNUAL RUNOFF (INCHES)	21.54	21.31	15.00
10 PERCENT EXCEEDS	3460	3560	2930
50 PERCENT EXCEEDS	1960	2350	1260
90 PERCENT EXCEEDS	1270	559	588

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 mi².

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.--Records fair except estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	33	123	e128	e32.0	33	39	40	340	23	16	17
2	25	32	96	89	33	109	38	38	95	23	15	16
3	27	32	85	71	36	93	37	36	71	23	17	18
4	58	32	73	61	67	65	39	35	59	22	16	19
5	34	215	61	57	126	56	50	121	52	22	16	17
6	30	195	57	52	91	54	44	88	45	21	16	17
7	96	93	53	49	78	49	40	48	41	21	16	17
8	79	70	50	48	64	45	40	38	38	21	22	16
9	168	58	47	46	62	43	40	34	36	21	18	16
10	382	51	46	45	59	41	39	31	35	21	17	16
11	155	46	44	46	48	40	37	30	35	20	16	16
12	96	43	43	46	42	41	36	29	34	20	16	17
13	77	42	41	45	40	39	36	28	33	20	15	19
14	62	40	39	45	40	44	55	27	32	20	13	17
15	61	39	47	43	36	45	233	27	33	19	15	17
16	52	37	46	66	34	62	116	28	32	19	15	16
17	48	36	43	85	33	93	148	30	31	18	15	16
18	93	35	46	63	40	191	85	44	29	18	15	17
19	66	35	43	54	72	97	65	36	28	18	39	16
20	52	34	40	58	52	73	55	31	28	18	29	16
21	46	34	45	58	50	63	49	29	27	18	21	16
22	43	34	61	50	47	56	46	30	27	18	19	17
23	41	34	46	47	39	56	44	66	27	17	18	17
24	39	33	42	43	36	55	44	80	27	17	18	17
25	38	33	39	40	34	50	40	86	26	17	17	17
26	37	32	36	39	32	56	39	120	26	17	17	17
27	36	307	35	38	31	68	38	69	25	17	17	17
28	35	955	35	36	30	60	38	51	25	17	17	17
29	34	361	536	35	---	47	41	44	24	17	17	17
30	34	171	e572	34	---	43	43	90	24	16	17	16
31	33	---	e187	34	---	41	---	170	---	16	17	---
TOTAL	2102	3192	2757	1651	1384.0	1908	1694	1654	1385	595	552	504
MEAN	67.8	106	88.9	53.3	49.4	61.5	56.5	53.4	46.2	19.2	17.8	16.8
MAX	382	955	572	128	126	191	233	170	340	23	39	19
MIN	25	32	35	34	30	33	36	27	24	16	13	16
CFSM	2.14	3.36	2.81	1.68	1.56	1.94	1.78	1.68	1.46	.61	.56	.53
IN.	2.47	3.75	3.24	1.94	1.62	2.24	1.99	1.94	1.63	.70	.65	.59

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 1991, BY WATER YEAR (WY)

	MEAN	20.6	30.3	33.4	31.4	40.2	55.9	52.6	43.8	35.2	24.9	21.6	17.6
MAX	67.8	112	88.7	63.6	79.3	142	103	89.4	95.4	71.5	99.0	39.3	
(WY)	1991	1986	1991	1973	1976	1982	1975	1974	1981	1983	1990	1981	
MIN	11.5	11.0	14.4	11.0	10.6	18.0	20.8	14.9	14.6	12.0	10.8	12.0	
(WY)	1981	1981	1990	1977	1978	1981	1986	1980	1988	1988	1988	1988	

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1969 - 1991	
ANNUAL TOTAL	20325		19378.0			
ANNUAL MEAN	55.7		53.1		33.9	
HIGHEST ANNUAL MEAN					52.8	
LOWEST ANNUAL MEAN					19.3	
HIGHEST DAILY MEAN	955	Nov 28	955	Nov 28	955	Nov 28 1990
LOWEST DAILY MEAN	12	Jan 1	13	Aug 14	8.9	Sep 11 1977
ANNUAL SEVEN-DAY MINIMUM	18	Jan 9	15	Aug 12	9.5	Feb 24 1978
INSTANTANEOUS PEAK FLOW			1160	Nov 28	1160	Nov 28 1990
INSTANTANEOUS PEAK STAGE			17.41	Nov 28	17.95	Mar 29 1985
ANNUAL RUNOFF (CFSM)	1.76		1.67		1.07	
ANNUAL RUNOFF (INCHES)	23.85		22.74		14.54	
10 PERCENT EXCEEDS	92		88		59	
50 PERCENT EXCEEDS	31		38		21	
90 PERCENT EXCEEDS	22		17		13	

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 mi², of which 201 mi² 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.--Records good except for estimated daily discharges, which are fair.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1390	2810	4660	5570	3280	3070	3180	3600	4000	1130	498	765
2	1350	2640	4530	5650	3140	3130	3100	3480	4390	1110	487	754
3	1350	2470	4480	5660	3080	3300	3010	3340	4380	1120	519	697
4	1550	2340	4440	5660	3120	3340	2900	3220	4280	1140	500	709
5	1720	2540	4370	5660	3350	3350	2870	3130	4200	1060	502	779
6	1890	3420	4270	5590	3520	3370	2840	3200	4140	980	519	723
7	2090	3900	4170	5520	3610	3350	2780	3140	4090	926	531	649
8	2250	3970	4060	5520	3650	3270	2710	3020	3920	925	576	604
9	2390	3980	3950	5470	3670	3170	2680	2890	3560	1240	742	575
10	3260	4000	3850	5410	3660	3080	2620	2720	3160	1410	864	573
11	4270	4010	3730	5370	3640	2960	2530	2570	2820	1280	828	571
12	4560	3980	3600	5290	3570	2900	2450	2480	2560	1180	741	629
13	4590	3890	3480	5160	3470	2880	2410	2370	2370	1050	684	653
14	4580	3740	3360	5010	3380	2770	2420	2310	2250	980	634	706
15	4610	3560	3260	4880	3250	2730	2700	2300	2110	916	636	695
16	4660	3380	3230	4820	3030	2730	3260	2260	2060	892	673	680
17	4720	3170	3210	4800	2880	2860	3640	2290	2070	838	629	680
18	4810	2990	3190	4780	2880	3260	4010	2460	2030	817	624	670
19	4930	2850	3150	4730	2970	3680	4170	2680	1910	769	685	639
20	4800	2680	3120	4700	3070	3860	4240	2740	1760	698	888	655
21	4840	2520	3090	4680	3170	3910	4310	2680	1570	674	922	651
22	4760	2470	3100	4630	3280	3900	4370	2610	1470	659	897	660
23	4620	2430	3110	4560	3340	3840	4410	2650	1440	630	857	650
24	4430	2350	e3050	4460	3370	3730	4430	2690	1370	608	785	660
25	4250	2260	e3000	4350	3360	3590	4380	2770	1290	583	704	681
26	4040	2190	e2950	4230	3300	3490	4260	3540	1240	573	659	676
27	3790	2290	e2900	4080	3220	3480	4110	4190	1230	545	630	672
28	3520	3410	3450	3910	3140	3470	3960	4320	1180	537	632	667
29	3300	4500	3950	3730	---	3430	3830	4190	1120	535	601	699
30	3130	4760	5110	3570	---	3350	3710	3980	1100	527	620	673
31	2960	---	5440	3430	---	3270	---	3850	---	505	675	---
TOTAL	109410	95500	115260	150880	92400	102520	102290	93670	75070	26837	20742	20095
MEAN	3529	3183	3718	4867	3300	3307	3410	3022	2502	866	669	670
MAX	4930	4760	5440	5660	3670	3910	4430	4320	4390	1410	922	779
MIN	1350	2190	2900	3430	2880	2730	2410					

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 1991, BY WATER YEAR (WY)

MEAN	1045	1278	1595	1778	1939	2533	2780	2302	1740	1206	928	837
MAX	3529	3413	4502	4867	3658	5570	5365	4409	4347	2478	3058	2191
(WY)	1991	1973	1928	1991	1950	1985	1982	1943	1981	1981	1990	1972
MIN	455	519	540	460	462	848	1226	789	569	441	402	356
(WY)	1954	1954	1964	1940	1963	1934	1925	1934	1934	1988	1988	1941

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR			FOR 1991 WATER YEAR			WATER YEARS 1924 - 1991	
ANNUAL TOTAL	1016090			1004674				
ANNUAL MEAN	2784			2753			1661	
HIGHEST ANNUAL MEAN							2754	1991
LOWEST ANNUAL MEAN							775	1964
HIGHEST DAILY MEAN	5440	Dec 31		5660	Jan 3		7650	Mar 26 1982
LOWEST DAILY MEAN	1190	Jul 10		487	Aug 2		260	Jan 13 1954
ANNUAL SEVEN-DAY MINIMUM	1360	Jul 5		504	Jul 31		298	Aug 2 1988
INSTANTANEOUS PEAK FLOW				5660	Jan 2		7650	Mar 26 1982
INSTANTANEOUS PEAK STAGE				11.91	Jan 2		12.98	Mar 24 1982
ANNUAL RUNOFF (CFSM)	1.56			1.55			.93	
ANNUAL RUNOFF (INCHES)	21.25			21.01			12.69	
10 PERCENT EXCEEDS	4270			4580			3320	
50 PERCENT EXCEEDS	2540			3050			1320	
90 PERCENT EXCEEDS	1600			657			623	

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 mi².

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.--Records good except those for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	87	96	1310	e560	108	133	211	149	325	29	9.4	18
2	94	93	1010	e400	107	378	196	144	209	29	9.3	16
3	95	89	853	e300	120	450	175	132	163	29	9.7	23
4	129	89	725	e270	237	289	171	124	138	28	11	38
5	114	417	585	e250	432	239	193	153	122	27	10	31
6	94	725	513	e230	365	220	191	212	111	25	11	28
7	103	427	448	e220	338	201	178	169	102	26	9.8	26
8	167	316	398	e215	294	174	173	145	98	25	22	25
9	283	267	360	e210	273	164	173	133	93	23	29	24
10	836	233	330	e205	271	151	173	124	89	21	19	25
11	724	207	303	e240	235	143	161	118	88	18	17	25
12	505	186	285	e280	200	144	152	124	86	19	14	27
13	385	158	264	e240	190	132	148	113	80	21	13	31
14	315	138	245	e220	182	138	162	141	76	21	14	30
15	273	130	277	e310	160	145	786	151	73	19	12	30
16	237	123	281	e440	211	186	852	124	72	17	11	29
17	211	114	e250	e620	163	384	757	120	68	14	13	28
18	286	109	e270	e480	153	1180	596	205	61	14	16	28
19	259	104	e290	e350	245	991	423	196	58	13	17	27
20	211	99	e270	e280	228	684	332	158	52	11	28	31
21	192	96	e340	e310	216	524	280	138	48	10	23	29
22	174	101	e440	e260	218	417	218	139	48	9.2	21	30
23	166	100	e370	e220	195	402	190	176	48	9.4	19	31
24	158	95	e320	e190	174	376	191	225	47	10	17	30
25	144	91	e280	e160	157	322	174	225	43	9.8	17	30
26	153	86	e250	e170	145	335	164	496	37	9.7	17	30
27	142	611	e230	e150	138	390	155	387	34	10	15	29
28	120	2210	e240	e135	132	369	151	275	28	14	15	29
29	110	2010	e520	e125	---	287	152	213	28	14	15	28
30	106	1710	e1100	117	---	249	162	194	26	12	15	29
31	101	---	e800	112	---	229	---	252	---	9.7	16	---
TOTAL	6974	11230	14157	8269	5887	10426	8040	5655	2551	546.8	485.2	835
MEAN	225	374	457	267	210	336	268	182	85.0	17.6	15.7	27.8
MAX	836	2210	1310	620	432	1180	852	496	325	29	29	38
MIN	87	86	230	112	107	132	148	113	26	9.2	9.3	16
CFSM	1.83	3.04	3.71	2.17	1.71	2.73	2.18	1.48	.69	.14	.13	.23
IN.	2.11	3.40	4.28	2.50	1.78	3.15	2.43	1.71	.77	.17	.15	.25

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 1991, BY WATER YEAR (WY)

	56.8	81.4	113	117	150	211	215	147	110	62.8	43.7	40.2
MEAN	56.8	81.4	113	117	150	211	215	147	110	62.8	43.7	40.2
MAX	237	471	457	371	486	634	477	421	463	275	237	195
(WY)	1955	1986	1991	1950	1959	1982	1950	1974	1989	1981	1990	1972
MIN	7.54	11.8	8.13	17.5	15.6	34.3	48.6	30.6	26.3	10.6	7.09	7.78
(WY)	1964	1957	1964	1977	1964	1957	1963	1958	1988	1988	1964	1964

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1949 - 1991

ANNUAL TOTAL	81706		75056.0									
ANNUAL MEAN	224		206									
HIGHEST ANNUAL MEAN												
LOWEST ANNUAL MEAN												
HIGHEST DAILY MEAN	2210	Nov 28	2210	Nov 28					2990	Mar 5 1976		
LOWEST DAILY MEAN	47	Jul 8	9.2	Jul 22					3.6	Sep 7 1964		
ANNUAL SEVEN-DAY MINIMUM	53	Jul 4	9.7	Jul 21					3.8	Sep 4 1964		
INSTANTANEOUS PEAK FLOW			2460	Nov 28					3550	Mar 5 1976		
INSTANTANEOUS PEAK STAGE			12.54	Nov 28					12.54	Nov 28 1990		
ANNUAL RUNOFF (CFSM)	1.82		1.67						.91			
ANNUAL RUNOFF (INCHES)	24.71		22.70						12.39			
10 PERCENT EXCEEDS	508		419						253			
50 PERCENT EXCEEDS	132		151						58			
90 PERCENT EXCEEDS	64		17						17			

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 mi².

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.--Records fair, except for estimated daily discharges, which are poor.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	e27	e120	233	e26	39	47	47	41	20	3.4	3.6
2	12	e26	e90	158	e27	63	43	44	37	14	3.3	3.6
3	15	e26	e75	113	48	56	41	39	32	12	3.4	4.0
4	33	e26	e90	85	70	47	43	36	28	11	3.5	4.5
5	21	e60	e72	72	79	45	47	48	26	10	3.5	3.9
6	17	e230	e61	63	66	44	44	55	24	9.8	3.7	3.8
7	34	e150	e52	58	59	37	40	42	23	9.4	3.8	3.7
8	45	e110	e46	53	53	37	38	38	23	9.1	6.0	3.6
9	196	e82	e43	48	52	37	39	36	22	8.6	5.2	3.8
10	334	e66	e42	45	52	34	35	34	21	8.6	4.0	3.9
11	e240	e52	41	49	45	34	33	33	20	8.2	3.7	4.2
12	e190	e46	40	51	40	34	32	32	20	7.9	3.6	4.3
13	e140	e42	37	45	40	34	33	31	19	7.6	3.6	4.2
14	e110	e39	35	43	39	53	44	37	18	7.3	3.5	4.2
15	e92	e36	58	43	e34	38	189	41	18	6.9	3.6	4.2
16	e82	e34	53	126	e33	39	146	36	18	6.5	3.4	4.1
17	e74	e32	49	112	e33	65	135	34	16	6.2	3.3	4.0
18	e100	e30	56	73	46	201	97	107	16	6.0	3.4	4.1
19	e85	e30	51	64	70	271	76	81	15	5.5	4.1	4.0
20	e72	e29	46	e70	55	303	64	58	12	5.4	4.4	4.0
21	e60	e29	61	e57	51	230	55	47	12	5.2	4.5	4.1
22	e52	e32	82	e48	49	167	50	43	13	5.0	3.8	4.4
23	e46	e32	59	e41	44	145	48	44	13	4.7	3.6	4.5
24	e41	e30	e51	e38	43	133	46	45	12	4.7	3.5	4.4
25	e38	e27	e44	e35	39	110	42	44	12	4.6	3.6	4.2
26	e35	e26	e40	e33	37	116	40	50	11	4.4	3.5	4.2
27	e32	e35	e37	e31	36	117	41	42	11	4.2	3.4	4.2
28	e30	e110	e35	e30	35	89	41	36	11	4.1	3.5	4.4
29	e29	e230	411	e29	---	70	46	33	10	4.0	3.2	4.3
30	e28	e160	621	29	---	57	45	31	11	3.9	3.9	4.2
31	e27	---	403	e27	---	51	---	30	---	3.5	3.8	---
TOTAL	2322	1884	3001	2002	1301	2796	1720	1354	565	228.3	116.7	122.6
MEAN	74.9	62.8	96.8	64.6	46.5	90.2	57.3	43.7	18.8	7.36	3.76	4.09
MAX	334	230	621	233	79	303	189	107	41	20	6.0	4.5
MIN	12	26	35	27	26	34	32	30	10	3.5	3.2	3.6
CFSM	2.10	1.76	2.72	1.81	1.31	2.53	1.61	1.23	.53	.21	.11	.11
IN.	2.43	1.97	3.14	2.09	1.36	2.92	1.80	1.41	.59	.24	.12	.11

e Estimated

MEAN	13.9	17.8	28.5	29.2	38.0	50.6	52.2	39.1	29.9	15.8	9.28	10.4
MAX	74.9	67.7	96.8	113	91.1	149	141	111	111	51.9	52.1	53.1
(WY)	1991	1973	1991	1950	1959	1982	1950	1974	1981	1981	1972	1989
MIN	1.19	1.80	2.43	3.52	3.13	7.69	17.2	10.2	5.47	3.08	1.97	1.53
(WY)	1965	1965	1964	1963	1964	1957	1986	1958	1988	1988	1964	1964

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1949 - 1991	
ANNUAL TOTAL	18753		17412.6			
ANNUAL MEAN	51.4		47.7		27.8	
HIGHEST ANNUAL MEAN					48.2	
LOWEST ANNUAL MEAN					6.38	
HIGHEST DAILY MEAN	621	Dec 30	621	Dec 30	621	Dec 30 1990
LOWEST DAILY MEAN	11	Jul 8	3.2	Aug 29	.50	Oct 11 1964
ANNUAL SEVEN-DAY MINIMUM	12	Sep 25	3.5	Jul 31	.77	Oct 11 1964
INSTANTANEOUS PEAK FLOW			656	Dec 30	656	Dec 30 1990
INSTANTANEOUS PEAK STAGE			7.93	Dec 30	8.86	Feb 10 1959
ANNUAL RUNOFF (CFSM)	1.44		1.34		.78	
ANNUAL RUNOFF (INCHES)	19.60		18.20		10.62	
10 PERCENT EXCEEDS	90		98		62	
50 PERCENT EXCEEDS	34		36		16	
90 PERCENT EXCEEDS	15		4.0		4.1	

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 mi².

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.--Records good. 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	122	615	e1680	e112	154	247	196	206	31	8.1	5.4
2	40	121	466	e1620	e125	228	219	194	229	30	7.6	4.7
3	44	120	401	e1400	e150	296	208	179	177	26	7.2	5.2
4	109	118	447	e1200	e250	262	200	153	146	24	7.1	6.1
5	96	348	398	e1000	358	230	217	155	125	23	6.4	5.6
6	76	804	331	733	376	215	210	185	110	23	7.9	5.8
7	102	842	284	494	345	192	191	164	100	20	8.1	5.4
8	171	677	238	353	307	169	181	142	95	21	14	4.7
9	473	501	212	288	283	158	180	133	90	21	13	4.1
10	e900	376	201	257	280	143	167	124	84	21	9.2	4.9
11	e1200	290	193	246	257	137	149	117	84	20	8.3	5.2
12	e1200	236	184	290	221	149	141	113	81	19	7.9	5.9
13	e1100	206	172	272	201	90	141	109	70	18	8.0	7.1
14	e950	190	156	247	196	164	177	120	59	17	7.5	7.5
15	e770	176	215	248	140	211	396	248	64	15	6.8	6.5
16	625	165	275	460	e160	186	707	210	63	17	6.3	5.9
17	468	152	248	737	e160	239	709	176	60	31	6.6	5.6
18	478	146	257	e692	183	576	670	396	42	23	6.2	6.3
19	522	140	269	e565	307	e900	533	546	43	18	7.7	6.0
20	441	133	235	e455	322	e1100	396	430	40	15	9.2	12
21	350	134	254	e360	281	e1120	306	291	39	14	7.9	18
22	282	147	406	e290	258	e1050	251	211	39	12	7.9	9.1
23	239	150	e390	e250	231	e920	221	196	38	11	7.6	9.8
24	211	140	e340	e220	205	e800	212	193	35	10	7.2	9.3
25	190	126	e260	e190	182	732	190	200	31	9.5	6.0	9.3
26	174	119	e210	e170	164	596	173	371	31	8.9	5.6	8.7
27	163	155	e190	e160	152	589	167	489	27	8.9	5.9	12
28	151	569	e180	e148	148	525	174	429	25	8.1	5.7	10
29	138	871	824	e140	---	412	187	293	24	7.1	5.4	7.8
30	135	783	e1500	e135	---	325	209	210	23	7.8	5.5	5.3
31	129	---	e1700	e120	---	275	---	178	---	8.1	6.2	---
TOTAL	11968	9057	12051	15420	6354	13143	8129	7151	2280	538.4	234.0	219.2
MEAN	386	302	389	497	227	424	271	231	76.0	17.4	7.55	7.31
MAX	1200	871	1700	1680	376	1120	709	546	229	31	14	18
MIN	40	118	156	120	112	90	141	109	23	7.1	5.4	4.1
CFSM	2.68	2.10	2.70	3.45	1.58	2.94	1.88	1.60	.53	.12	.05	.05
IN.	3.09	2.34	3.11	3.98	1.64	3.40	2.10	1.85	.59	.14	.06	.06

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 1991, BY WATER YEAR (WY)

MEAN	62.2	87.1	142	145	191	258	267	188	145	69.6	39.3	44.7
MAX	386	320	389	497	480	788	604	566	632	266	169	276
(WY)	1991	1973	1991	1991	1976	1982	1950	1974	1958	1957	1990	1989
MIN	5.69	5.95	5.97	13.2	12.7	36.7	73.2	41.6	15.1	9.22	3.57	5.38
(WY)	1957	1965	1964	1963	1964	1957	1956	1958	1988	1988	1964	1964

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1950 - 1991

ANNUAL TOTAL	90316	86544.6	
ANNUAL MEAN	247	237	136
HIGHEST ANNUAL MEAN			245
LOWEST ANNUAL MEAN			24.5
HIGHEST DAILY MEAN			1970
LOWEST DAILY MEAN	e1700	e1700	1970
ANNUAL SEVEN-DAY MINIMUM	35	4.1	1.6
INSTANTANEOUS PEAK FLOW	42	5.1	2.1
INSTANTANEOUS PEAK STAGE		e1730	2040
ANNUAL RUNOFF (CFSM)	1.72	14.60	15.09
ANNUAL RUNOFF (INCHES)	23.33	1.65	.95
10 PERCENT EXCEEDS	581	22.36	12.85
50 PERCENT EXCEEDS	157	581	340
90 PERCENT EXCEEDS	58	167	73
		7.5	13

e Estimated

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 mi².

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.--Records good except for Aug. 2 to Sept. 2, which are fair. Streamflow affected by irrigation.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53	166	833	2340	e140	198	315	254	269	48	8.7	e9.0
2	51	165	663	2160	e150	303	279	250	300	45	e9.0	e7.6
3	59	163	602	1900	e190	392	262	231	239	39	e8.6	7.1
4	137	159	657	1600	372	342	254	199	195	33	e8.5	7.9
5	127	529	585	1260	485	301	274	199	167	32	e8.0	7.6
6	100	1050	491	922	505	282	269	234	148	30	e9.5	8.5
7	134	1040	425	653	459	248	246	210	135	27	e11	7.7
8	241	843	349	470	407	216	235	183	127	25	e15	7.9
9	721	646	307	382	376	203	232	172	121	26	e22	6.1
10	1460	492	286	343	371	182	213	161	113	27	e16	6.6
11	1680	379	277	333	337	174	188	155	112	26	13	7.0
12	1660	311	259	406	291	189	175	154	108	25	e12	7.4
13	1500	271	240	371	265	125	178	149	95	24	e10	8.8
14	1250	253	212	338	256	190	229	158	80	22	e9.0	12
15	992	236	304	352	183	267	574	335	85	18	e8.2	11
16	778	221	418	701	e220	245	912	289	84	19	e7.6	8.4
17	607	201	371	984	e230	340	913	255	80	36	e7.3	7.3
18	673	193	386	884	234	867	856	640	62	29	7.0	7.4
19	695	185	411	696	413	1340	689	763	60	23	10	7.6
20	585	175	352	601	429	1610	517	601	55	20	16	13
21	464	175	401	e480	377	1630	396	413	53	18	14	35
22	377	193	643	e380	344	1490	327	302	50	16	e12	13
23	321	197	585	e310	305	1320	288	275	47	13	e10	13
24	285	187	429	e270	271	1160	271	268	44	12	e9.2	11
25	257	166	e340	e240	239	951	246	273	39	12	e8.2	12
26	236	156	e290	e210	216	805	226	522	39	11	e7.3	11
27	220	202	e260	e200	199	780	218	650	38	14	e7.1	16
28	205	827	e240	e190	192	689	227	558	34	10	e7.0	15
29	186	1150	1120	e180	---	541	241	386	35	7.5	e6.9	13
30	182	1030	2200	171	---	417	271	286	34	7.4	e7.2	7.3
31	177	---	2380	e145	---	350	---	245	---	9.0	e8.0	---
TOTAL	16413	11961	17316	20472	8456	18147	10521	9770	3048	703.9	313.3	312.2
MEAN	529	399	559	660	302	585	351	315	102	22.7	10.1	10.4
MAX	1680	1150	2380	2340	505	1630	913	763	300	48	22	35
MIN	51	156	212	145	140	125	175	149	34	7.4	6.9	6.1
CFSM	2.61	1.96	2.75	3.25	1.49	2.88	1.73	1.55	.50	.11	.05	.05
IN.	3.01	2.19	3.17	3.75	1.55	3.33	1.93	1.79	.56	.13	.06	.06

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 1991, BY WATER YEAR (WY)

	MEAN	75.1	107	179	194	251	332	340	238	185	87.6	48.0	55.7
MAX	529	415	559	774	613	935	886	766	863	378	238	357	
(WY)	1991	1986	1991	1950	1976	1982	1950	1974	1958	1957	1990	1989	
MIN	5.77	7.75	7.04	14.5	13.9	40.8	87.8	47.6	22.9	12.5	4.61	5.26	
(WY)	1965	1965	1964	1963	1964	1957	1986	1958	1988	1964	1964	1964	

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1949 - 1991

ANNUAL TOTAL	123068		117433.4		174	
ANNUAL MEAN	337		322		322	1991
HIGHEST ANNUAL MEAN					29.7	1964
LOWEST ANNUAL MEAN					2500	Jun 11 1958
HIGHEST DAILY MEAN	2380	Dec 31	2380	Dec 31	2.2	Sep 9 1964
LOWEST DAILY MEAN	44	Jul 9	6.1	Sep 9	2.8	Sep 9 1964
ANNUAL SEVEN-DAY MINIMUM	54	Sep 26	7.3	Sep 6	2550	Jun 10 1958
INSTANTANEOUS PEAK FLOW			2390	Dec 31	16.54	Jun 10 1958
INSTANTANEOUS PEAK STAGE			15.79	Dec 31	.86	
ANNUAL RUNOFF (CFSM)	1.66		1.58		11.64	
ANNUAL RUNOFF (INCHES)	22.55		21.52			
10 PERCENT EXCEEDS	775		790		436	
50 PERCENT EXCEEDS	202		220		88	
90 PERCENT EXCEEDS	75		9.0		16	

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 mi².

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.--Records fair except estimated daily discharges, for Dec. 31 to Jan. 30, which are poor. Low flows in summer may be affected by irrigation.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	8.6	32	e100	e5.4	16	21	12	8.2	.78	.20	.14
2	3.6	8.4	24	e66	e5.6	43	18	11	7.4	.22	.21	.14
3	4.0	7.7	47	e52	e11	41	17	9.6	6.6	.19	.23	.14
4	6.2	8.1	49	e41	28	29	18	9.2	5.8	.29	.25	.17
5	5.3	95	30	e35	38	25	23	9.6	5.1	.17	.17	.16
6	4.7	125	26	e29	37	24	20	9.6	4.8	.43	.28	.15
7	9.1	75	22	e26	34	17	18	7.8	4.6	.51	.19	.15
8	15	51	19	e24	31	15	17	7.4	4.4	.61	.76	.14
9	143	40	18	e22	31	14	17	7.4	4.2	.61	1.4	.15
10	395	31	18	e21	33	12	13	7.0	4.1	1.0	.60	.16
11	204	25	17	e22	26	12	11	6.8	4.1	.52	.28	.18
12	106	21	16	e23	21	16	10	7.0	4.4	.17	.23	.20
13	71	19	13	e21	22	56	13	6.9	3.9	.29	.19	.20
14	55	18	11	e20	21	55	42	7.2	3.3	.85	.15	.32
15	46	17	27	e20	e12	59	134	6.8	3.5	.40	.15	.32
16	37	17	27	e30	e12	91	94	8.0	4.3	.25	.27	.24
17	31	14	24	e26	e13	169	63	15	3.5	.38	.65	.22
18	70	13	27	e22	23	354	42	174	3.1	.18	.28	.19
19	45	13	24	e18	55	196	32	89	2.7	.42	1.9	.21
20	33	11	22	e15	42	107	26	47	1.9	.69	1.6	.22
21	26	11	44	e12	36	76	21	30	2.4	.20	.76	.22
22	21	12	83	e11	32	59	19	21	1.8	.26	.33	.29
23	18	13	e40	e9.5	25	126	17	17	1.6	.23	.25	.35
24	16	11	e26	e8.6	23	98	15	14	.99	.20	.20	.37
25	14	9.8	e20	e7.9	19	68	13	19	1.5	.15	.18	.33
26	13	8.8	e18	e7.3	16	88	12	38	.87	.14	.17	.29
27	12	12	e17	e7.0	14	84	12	27	.32	.16	.19	.31
28	11	87	e17	e6.6	13	60	12	17	.88	.29	.18	.32
29	9.5	63	344	e6.3	---	39	15	13	.60	.20	.19	.34
30	9.6	43	590	e5.8	---	28	14	12	.17	.17	.20	.36
31	9.0	---	e230	e5.5	---	25	---	9.4	---	.15	.17	---
TOTAL	1446.4	888.4	1922	720.5	679.0	2102	799	675.7	101.03	11.11	12.81	6.98
MEAN	46.7	29.6	62.0	23.2	24.2	67.8	26.6	21.8	3.37	.36	.41	.23
MAX	395	125	590	100	55	354	134	174	8.2	1.0	1.9	.37
MIN	3.4	7.7	11	5.5	5.4	12	10	6.8	.17	.14	.15	.14
CFSM	2.14	1.36	2.84	1.07	1.11	3.11	1.22	1.00	.15	.02	.02	.01
IN.	2.47	1.52	3.28	1.23	1.16	3.59	1.36	1.15	.17	.02	.02	.01

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 1991, BY WATER YEAR (WY)

	MEAN	6.36	10.2	20.4	17.1	26.3	35.9	33.2	22.8	22.6	10.2	4.05	5.93
MAX	46.7	64.3	81.0	92.8	82.7	94.3	85.9	74.2	159	56.8	33.4	57.1	
(WY)	1991	1986	1968	1950	1982	1979	1950	1981	1958	1951	1977	1989	
MIN	.084	.097	.15	.25	.59	1.89	5.50	2.93	.86	.36	.11	.063	
(WY)	1965	1965	1964	1977	1964	1957	1986	1988	1988	1991	1964	1964	

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1950 - 1991

ANNUAL TOTAL	11073.7	9364.93	
ANNUAL MEAN	30.3	25.7	
HIGHEST ANNUAL MEAN			17.9
LOWEST ANNUAL MEAN			36.1
HIGHEST DAILY MEAN	590	Dec 30	3.50
LOWEST DAILY MEAN	1.9	Sep 13	912
ANNUAL SEVEN-DAY MINIMUM	2.2	Sep 8	.00
INSTANTANEOUS PEAK FLOW			.00
INSTANTANEOUS PEAK STAGE			1080
ANNUAL RUNOFF (CFSM)	1.39		14.02
ANNUAL RUNOFF (INCHES)	18.90		.82
10 PERCENT EXCEEDS	55		11.13
50 PERCENT EXCEEDS	15		44
90 PERCENT EXCEEDS	3.4		4.8
			.40

LOCATION.--Lat 40°52'14", long 87°16'24", 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.

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.--Records good except for estimated daily discharges, which are fair.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	102	366	1210	5570	e320	451	e870	e540	e620	e140	15	12
2	100	360	1130	e5080	e340	553	e790	e510	e590	e130	15	9.7
3	108	356	1060	e4490	e410	721	e760	e480	e540	e100	14	11
4	168	349	1050	e3940	e600	740	e740	e450	e440	e85	14	12
5	224	617	1000	e3210	788	701	e730	e440	e380	e73	13	10
6	194	1130	914	e2270	846	669	e720	e430	e320	e67	e16	9.0
7	204	1310	810	e1710	849	626	e700	e410	e280	e62	e18	9.2
8	397	1350	718	e1360	816	558	e670	e360	e250	e58	e22	9.1
9	793	1280	637	1120	777	510	e630	e340	e230	e59	e37	8.6
10	1480	1170	580	e880	760	470	e580	e320	e220	e60	e28	8.4
11	2590	1030	541	e732	732	431	e540	e310	e215	e58	e22	8.5
12	3040	877	517	e732	673	435	e490	e300	e210	e56	e19	8.0
13	3040	734	486	e720	619	633	e480	e300	e200	e54	e17	9.6
14	2460	624	441	675	589	813	e560	e300	e160	e46	e15	10
15	2390	552	485	664	e420	925	922	e460	e165	e42	e13	12
16	1970	503	629	902	e370	1010	1300	678	e165	e39	e13	12
17	1660	460	649	1240	e430	1210	1490	697	e160	47	e12	10
18	1480	424	661	1360	498	1810	1560	963	e125	65	e11	9.4
19	1370	406	675	1300	684	2810	1510	1320	e115	57	e16	9.8
20	1250	383	654	1220	798	3360	1410	1470	e110	47	e25	9.8
21	1130	365	659	e1000	796	3490	e1200	1440	e105	40	e23	31
22	982	391	899	e850	768	3350	e1000	e1100	e100	35	e20	35
23	833	415	982	e730	726	3120	e800	e800	e92	31	e18	22
24	707	406	e860	e630	674	2940	e630	e600	e85	29	e15	17
25	604	374	e760	e560	615	2660	e570	e550	e80	28	e14	14
26	528	342	e690	e510	555	2340	e520	e900	e76	25	e12	16
27	481	373	e630	e460	503	2160	e480	e1040	e71	23	10	19
28	450	873	e600	e430	461	1960	e500	1050	e66	21	9.7	22
29	409	1160	1390	390	---	e1600	e540	1020	e63	18	9.5	18
30	388	1230	4420	e360	---	e1250	e550	e840	e72	16	10	14
31	380	---	5500	e330	---	e1000	---	e700	---	16	11	---
TOTAL	31912	20210	32237	45425	17417	45306	24242	21118	6305	1627	507.2	406.1
MEAN	1029	674	1040	1465	622	1461	808	681	210	52.5	16.4	13.5
MAX	3040	1350	5500	5570	849	3490	1560	1470	620	140	37	35
MIN	100	342	441	330	320	431	480	300	63	16	9.5	8.0
CFSM	2.29	1.50	2.32	3.26	1.39	3.25	1.80	1.52	.47	.12	.04	.03
IN.	2.64	1.67	2.67	3.76	1.44	3.75	2.01	1.75	.52	.13	.04	.03

e Estimated

MEAN	155	231	407	414	578	748	771	554	444	223	95.1	120
MAX	1029	1033	1274	1634	1490	2266	1672	1360	2314	964	435	1105
(WY)	1991	1986	1968	1950	1968	1982	1950	1974	1958	1957	1990	1989
MIN	9.70	16.1	15.3	27.0	31.4	81.7	199	108	39.8	17.7	12.2	11.1
(WY)	1957	1965	1964	1963	1964	1957	1986	1958	1988	1988	1988	1964

ANNUAL TOTAL	248814		246712.3			
ANNUAL MEAN	682		676		394	
HIGHEST ANNUAL MEAN					683	1973
LOWEST ANNUAL MEAN					77.6	1964
HIGHEST DAILY MEAN	5500	Dec 31	5570	Jan 1	5930	Jun 14 1958
LOWEST DAILY MEAN	89	Jul 9	8.0	Sep 12	6.3	Sep 10 1964
ANNUAL SEVEN-DAY MINIMUM	101	Sep 26	8.7	Sep 6	8.0	Sep 5 1964
INSTANTANEOUS PEAK FLOW			5670	Dec 31	5930	Jun 14 1958
INSTANTANEOUS PEAK STAGE			22.19	Dec 31	24.42	Jun 14 1958
ANNUAL RUNOFF (CFSM)	1.52		1.51		.88	
ANNUAL RUNOFF (INCHES)	20.61		20.44		11.91	
10 PERCENT EXCEEDS	1350		1400		1060	
50 PERCENT EXCEEDS	450		498		184	
90 PERCENT EXCEEDS	147		15		26	

05536179 HART DITCH AT DYER, IN

LOCATION.--lat 41°30'28", long 87°30'36", in NE 1/4 sec.12, T.35 N., R.10 W., Lake County, Hydrologic Unit 07120003, on right bank 50 ft upstream from 213th Street in Dyer, 0.8 mi upstream from Dyer ditch.
 DRAINAGE AREA.--37.6 mi².
 PERIOD OF RECORD.--October 1989 to current year.
 GAGE.--Water-stage recorder. Datum of gage is 607.38 ft above National Geodetic Vertical Datum of 1929.
 REMARKS.--Records good except those above 1,000 ft /s, which are fair. Low-flow affected by sewage effluent.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.7	10	240	e130	e8.3	45	46	33	71	4.5	4.4	4.8
2	5.0	9.1	164	e70	e10	842	36	35	48	4.7	4.6	3.4
3	12	9.3	124	e40	e15	628	31	23	35	4.7	6.4	7.5
4	32	12	107	e35	67	213	34	18	26	5.1	5.3	13
5	14	271	72	e30	235	142	66	261	20	4.5	5.5	6.3
6	8.4	342	63	e26	189	105	47	207	17	4.2	4.4	3.6
7	15	167	54	23	138	81	36	102	14	5.0	4.8	2.7
8	32	105	45	20	89	56	32	62	12	4.8	14	2.5
9	183	72	39	19	73	46	33	43	10	5.0	10	2.6
10	414	52	35	18	72	38	31	33	9.5	4.5	5.5	3.3
11	261	38	32	17	e35	31	24	26	11	4.5	3.5	2.7
12	142	30	30	19	e26	35	20	26	10	4.4	3.1	6.1
13	92	26	28	19	e35	39	19	20	8.7	4.7	2.8	16
14	64	23	23	17	e36	41	67	17	7.7	4.5	2.8	6.7
15	55	21	35	18	e20	57	568	16	7.3	4.7	2.7	3.8
16	44	20	44	49	e17	116	419	18	7.3	4.3	2.8	3.0
17	36	18	36	134	e15	269	357	25	7.6	4.5	2.9	2.4
18	66	16	45	e80	33	592	179	263	6.8	4.4	2.7	2.5
19	57	16	43	63	131	336	98	172	6.3	4.5	12	2.0
20	39	14	33	65	88	195	59	88	5.9	4.3	15	2.0
21	32	23	55	e38	69	121	41	56	9.4	4.0	6.4	2.3
22	27	48	144	e28	75	80	32	42	10	4.6	4.1	2.9
23	24	46	e50	e20	54	76	27	48	7.0	4.4	2.9	2.6
24	21	33	e28	e16	36	70	26	54	6.3	4.4	2.2	2.4
25	18	27	e20	e14	30	51	23	69	4.5	4.0	2.5	2.5
26	17	22	e16	e12	24	81	21	238	4.0	4.1	2.4	2.2
27	15	561	e14	e11	22	341	20	138	4.4	3.7	2.4	2.0
28	14	2580	e15	e10	20	278	20	80	4.9	3.7	2.1	2.3
29	14	864	606	e9.7	---	116	23	113	4.7	4.4	2.1	2.5
30	13	363	832	e9.8	---	74	27	310	4.2	4.5	2.9	3.2
31	12	---	e210	e9.0	---	58	---	116	---	4.6	4.1	---
TOTAL	1784.1	5838.4	3282	1069.5	1662.3	5253	2462	2752	400.5	138.2	149.3	121.8
MEAN	57.6	195	106	34.5	59.4	169	82.1	88.8	13.3	4.46	4.82	4.06
MAX	414	2580	832	134	235	842	568	310	71	5.1	15	16
MIN	5.0	9.1	14	9.0	8.3	31	19	16	4.0	3.7	2.1	2.0
CFSM	1.53	5.18	2.82	.92	1.58	4.51	2.18	2.36	.36	.12	.13	.11
IN.	1.77	5.78	3.25	1.06	1.64	5.20	2.44	2.72	.40	.14	.15	.12

e Estimated

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1991, BY WATER YEAR (WY)

	MEAN	32.6	107	55.4	38.1	65.0	124	54.7	94.7	13.1	5.75	20.3	5.14
MAX	57.6	195	106	41.7	70.7	169	82.1	101	13.3	7.05	35.7	6.22	
(WY)	1991	1991	1991	1990	1990	1991	1991	1990	1991	1990	1990	1990	
MIN	7.72	19.6	4.92	34.5	59.4	79.1	27.4	88.8	12.9	4.46	4.82	4.06	
(WY)	1990	1990	1990	1991	1991	1990	1990	1991	1990	1991	1991	1991	

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR	FOR 1991 WATER YEAR	WATER YEARS 1990 - 1991
ANNUAL TOTAL	22467.8	24913.1	
ANNUAL MEAN	61.6	68.3	51.3
HIGHEST ANNUAL MEAN			68.3
LOWEST ANNUAL MEAN			34.4
HIGHEST DAILY MEAN	2580 Nov 28	2580 Nov 28	2580 Nov 28 1990
LOWEST DAILY MEAN	2.7 Jul 9	2.0 Sep 19	2.0 Sep 19 1991
ANNUAL SEVEN-DAY MINIMUM	3.8 Jul 4	2.4 Sep 23	2.4 Sep 23 1991
INSTANTANEOUS PEAK FLOW		3010 Nov 28	3010 Nov 28 1990
INSTANTANEOUS PEAK STAGE		15.33 Nov 28	15.33 Nov 28 1990
ANNUAL RUNOFF (CFSM)	1.64	1.82	1.36
ANNUAL RUNOFF (INCHES)	22.23	24.65	18.54
10 PERCENT EXCEEDS	130	152	116
50 PERCENT EXCEEDS	21	23	17
90 PERCENT EXCEEDS	5.1	3.5	3.8

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 mi².

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.--Records good below 200 ft/s and fair above. High flow occasionally in backwater from Little Calumet River.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	25	e350	e370	e25	140	95	87	102	14	6.4	13
2	13	22	e300	e250	e27	e1600	79	71	75	11	6.1	11
3	107	22	e250	e120	54	e1100	69	54	60	17	22	54
4	97	49	e200	e82	166	e520	85	47	49	15	11	31
5	39	e560	e160	e68	570	e280	113	648	41	14	11	17
6	24	e700	e130	61	455	e210	88	488	37	11	8.8	12
7	43	e210	e110	54	300	e160	72	170	34	30	8.1	10
8	132	e130	e94	48	174	e130	66	105	28	23	153	9.5
9	735	e100	e80	46	138	106	75	81	25	12	25	10
10	e900	e80	e72	44	129	88	72	65	23	8.9	15	26
11	e500	66	67	47	89	76	58	56	41	8.7	12	10
12	e250	55	64	51	64	87	51	54	26	9.9	11	47
13	160	49	58	49	183	92	49	47	23	12	9.3	54
14	116	45	49	50	108	108	168	44	20	12	9.6	19
15	99	43	81	50	e60	149	e1400	41	20	12	9.7	12
16	75	40	75	188	e48	216	e800	45	21	8.5	8.2	11
17	79	37	72	285	e46	566	e700	46	19	7.5	8.0	8.9
18	121	35	81	176	87	1210	e400	441	18	8.6	8.0	8.1
19	87	34	72	130	271	766	e200	284	16	6.6	111	7.2
20	65	32	59	e135	175	392	e130	114	14	7.4	61	7.5
21	55	70	160	e100	128	212	e110	78	25	10	20	7.5
22	49	83	324	e70	128	143	e100	70	41	8.8	15	21
23	44	68	113	e54	94	170	86	77	22	8.0	12	8.4
24	39	52	e60	e45	70	142	74	96	19	7.6	10	7.5
25	38	45	e45	e39	59	108	63	156	17	7.3	10	7.8
26	36	40	e35	e35	50	227	57	481	19	8.6	11	7.1
27	34	1240	e33	e32	47	e860	55	213	20	7.5	9.1	6.4
28	31	e2600	e35	e31	48	e640	54	111	16	7.6	6.5	6.7
29	30	e1100	1390	e30	---	306	70	142	16	11	8.5	7.0
30	28	e600	e1500	e28	---	155	62	628	16	7.7	17	7.4
31	26	---	e600	e26	---	114	---	168	---	6.8	18	---
TOTAL	4066	8232	6719	2794	3793	11073	5501	5208	903	340.0	651.3	465.0
MEAN	131	274	217	90.1	135	357	183	168	30.1	11.0	21.0	15.5
MAX	900	2600	1500	370	570	1600	1400	648	102	30	153	54
MIN	13	22	33	26	25	76	49	41	14	6.6	6.1	6.4
CFSM	1.86	3.88	3.07	1.27	1.92	5.05	2.59	2.38	.43	.16	.30	.22
IN.	2.14	4.33	3.54	1.47	2.00	5.83	2.89	2.74	.48	.18	.34	.24

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 1991, BY WATER YEAR (WY)

	MEAN	27.5	46.8	62.9	56.1	79.4	136	130	98.5	59.0	29.1	25.9	25.0
MAX	282	287	279	172	236	429	363	367	249	161	155	201	
(WY)	1955	1986	1983	1975	1985	1979	1947	1943	1981	1957	1990	1965	
MIN	3.95	3.54	3.07	3.77	6.32	19.1	19.2	11.9	8.78	6.11	4.73	3.91	
(WY)	1965	1972	1964	1977	1963	1957	1946	1958	1965	1965	1964	1956	

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1943 - 1991

ANNUAL TOTAL	47996.5	49745.3	
ANNUAL MEAN	131	136	64.6
HIGHEST ANNUAL MEAN			136
LOWEST ANNUAL MEAN			19.2
HIGHEST DAILY MEAN	e2600	Nov 28	e2600
LOWEST DAILY MEAN	9.5	Jul 9	1.6
ANNUAL SEVEN-DAY MINIMUM	12	Jul 3	1.7
INSTANTANEOUS PEAK FLOW			e3010
INSTANTANEOUS PEAK STAGE			8.72
ANNUAL RUNOFF (CFSM)	1.86		1.93
ANNUAL RUNOFF (INCHES)	25.25		26.17
10 PERCENT EXCEEDS	294		302
50 PERCENT EXCEEDS	55		54
90 PERCENT EXCEEDS	19		8.9

e Estimated

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 mi². 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.--Records fair 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. Periods of high flow frequently are in backwater from downstream storage.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e20	21	e615	e140	e15	66	122	62	106	14	7.2	12
2	e25	22	e450	e112	e17	555	100	58	80	12	5.9	10
3	64	21	e360	e94	e25	706	84	44	60	15	16	58
4	103	33	e270	e82	74	423	81	35	44	20	11	34
5	47	369	e230	e74	204	e260	96	282	33	12	9.3	19
6	27	470	e200	e66	207	e200	82	300	26	9.9	8.8	13
7	35	295	e170	e59	167	e160	71	148	23	16	7.8	11
8	65	e167	e145	47	135	e130	64	111	20	28	157	10
9	308	e120	e123	37	114	e115	65	88	18	11	43	9.7
10	493	e94	e110	33	106	e103	64	69	17	8.8	17	30
11	409	e78	e95	35	87	92	53	53	36	7.8	12	12
12	e240	e62	e84	38	e56	90	44	44	20	8.4	10	45
13	e160	e52	e75	37	e92	88	40	37	17	8.3	9.0	59
14	e120	e46	68	37	e100	91	102	33	15	9.2	8.0	27
15	e100	39	75	36	e80	115	e510	30	14	8.9	8.4	18
16	e82	35	71	108	e50	150	657	34	15	7.2	8.0	15
17	e70	31	68	150	e40	254	559	35	14	6.1	7.3	13
18	e115	29	70	127	e46	487	435	158	13	7.2	7.9	12
19	e86	28	65	e90	130	417	e250	172	13	5.8	73	11
20	e70	29	54	e86	132	262	e180	100	11	5.7	114	10
21	e56	58	86	e76	111	197	e142	76	12	7.2	27	10
22	e46	72	143	e66	107	163	e118	64	33	7.2	17	25
23	38	62	e92	e60	94	173	e104	63	17	6.6	12	14
24	32	49	e59	e50	73	142	e92	72	14	6.0	9.3	11
25	29	42	e48	e40	56	118	e81	140	13	5.9	9.0	11
26	28	35	e34	e32	44	158	67	508	12	6.6	9.1	11
27	25	487	e33	e27	36	333	55	413	10	6.8	7.8	9.8
28	24	e1100	e32	e24	34	408	47	130	12	6.1	7.4	9.5
29	24	e700	e400	e22	---	252	55	91	12	8.8	6.9	9.7
30	24	e650	e500	e19	---	188	50	250	12	7.4	16	9.4
31	21	---	e250	e16	---	149	---	141	---	6.5	17	---
TOTAL	2986	5296	5075	1920	2432	7045	4470	3841	742	296.4	679.1	549.1
MEAN	96.3	177	164	61.9	86.9	227	149	124	24.7	9.56	21.9	18.3
MAX	493	1100	615	150	207	706	657	508	106	28	157	59
MIN	20	21	32	16	15	66	40	30	10	5.7	5.9	9.4
CFSM	1.07	1.96	1.82	.69	.97	2.53	1.66	1.38	.27	.11	.24	.20
IN.	1.23	2.19	2.10	.79	1.01	2.91	1.85	1.59	.31	.12	.28	.23

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 1991, BY WATER YEAR (WY)

	MEAN	33.7	58.7	81.0	61.6	88.5	142	142	102	67.9	37.4	37.1	41.0
MAX	96.3	212	301	186	252	386	268	266	218	172	141	217	
(WY)	1991	1973	1983	1973	1959	1979	1973	1959	1981	1983	1990	1965	
MIN	6.47	5.29	7.12	7.32	8.49	32.4	21.3	21.8	11.2	9.56	7.28	5.54	
(WY)	1969	1972	1961	1961	1963	1964	1963	1968	1965	1965	1964	1966	

SUMMARY STATISTICS

FOR 1990 CALENDAR YEAR

FOR 1991 WATER YEAR

WATER YEARS 1959 - 1991

ANNUAL TOTAL	38874		35331.6									
ANNUAL MEAN	107		96.8									
HIGHEST ANNUAL MEAN										74.3		
LOWEST ANNUAL MEAN										121		1973
HIGHEST DAILY MEAN	e1100	Nov 28								23.5		1964
LOWEST DAILY MEAN	14	Jan 1								1160	Apr 28	1959
ANNUAL SEVEN-DAY MINIMUM	16	Jul 3								1.9	Aug 16	1964
INSTANTANEOUS PEAK FLOW										2.2	Sep 2	1964
INSTANTANEOUS PEAK STAGE										1510	Apr 28	1959
ANNUAL RUNOFF (CFSM)										17.03	Nov 28	1990
ANNUAL RUNOFF (INCHES)	1.18									.83		
10 PERCENT EXCEEDS	279									11.21		
50 PERCENT EXCEEDS	59									192		
90 PERCENT EXCEEDS	21									32		
										8.3		

e Estimated

Figure 6.- Number of lakes by county having 1991 water-level records.

STREAMS TRIBUTARY TO LAKE MICHIGAN

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 mi².

PERIOD OF RECORD.--1946 to current year.

DATUM OF GAGE.--949.90 ft above National Geodetic Vertical Datum of 1929, as corrected on the basis of levels of the Indiana Department of Natural Resources, 1976.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage is attached to the southwest wall of the dam on the outlet channel about 500 ft downstream from the lake.

ESTABLISHED LEGAL LEVEL.--3.59 ft gage datum or 953.59 ft above National Geodetic Vertical Datum of 1929 as decreed on December 17, 1949, by the Lagrange County Circuit Court. Minor errors were subsequently discovered in the establishment of the datum of the gage (see "DATUM OF GAGE") and the correct elevation of the legal level should be 3.59 ft gage datum or 953.49 ft above National Geodetic Vertical Datum of 1929.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete dam with a fixed crest "V" notch weir.

INLET AND OUTLET.--One inlet enters on the east side from Blackman Lake 2.3 mi upstream. The other inlet enters on the northeastern shore from Eve Lake. The outlet flows from the lake on the southern shore and into Little Elkhart Creek 1.7 mi downstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 5.32 ft June 15, 1981; minimum stage, 2.12 ft Jan. 8, 1954.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	3.94	4.35	4.23	4.85	4.23	4.21	4.17	4.41	4.27	4.31	3.69	3.79
10	4.42	4.35	4.18	4.84	4.12	4.17	4.21	4.34	4.14	4.17	3.69	3.74
15	4.53	4.25	4.17	4.42	4.12	4.10	4.22	4.25	4.04	4.05	3.64	3.80
20	4.45	4.19	4.16	4.41	4.18	4.08	4.41	4.16	3.93	3.92	3.67	3.68
25	4.35	4.16	4.22	4.41	4.18	4.11	4.49	4.20	3.82	3.82	3.63	3.63
EOM	4.21	4.21	4.81	4.41	4.17	4.19	4.47	4.40	3.98	3.69	3.83	3.57

WTR YR 1991 MEAN 4.14 MAX 4.85 MIN 3.57

STREAMS TRIBUTARY TO LAKE ERIE

04177680 BALL LAKE NEAR HAMILTON, IN

LOCATION.--Lat 41°32'12", long 84°56'18", in SE¼SW¼NE¼ sec.32, T.36 N., R.14 E., Steuben County, Hydrologic Unit 04100003 (HAMILTON, IN quadrangle). The gage is on the northeastern shore of the lake, south of the bridge over the outlet, and 1.3 mi west of Hamilton.

SURFACE AREA.--87 acres.

DRAINAGE AREA.--11.6 mi².

PERIOD OF RECORD.--1961 to current year.

DATUM OF GAGE.--889.81 ft above National Geodetic Vertical Datum of 1929, as corrected on the basis of levels of the Indiana Department of Natural Resources in February 1972.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage is driven into the lake bed near the recording gage and a high-water staff gage is attached to the control dam.

ESTABLISHED LEGAL LEVEL.--4.95 ft gage datum or 894.76 ft above National Geodetic Vertical Datum of 1929 as decreed on September 20, 1974, by the Steuben County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete sill with movable boards.

INLET AND OUTLET.--Fish Creek flows through the lake, entering at the western end and leaving at the northeastern end. Fish Creek empties into the St. Joseph River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 10.02 ft Dec. 26, 1965; minimum stage, 3.96 ft Oct. 19-31, Nov. 1-12, 1978.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.88	5.45	4.98	5.00	4.99	5.02	4.93	4.95	4.86	4.81	4.77	4.76
10	5.68	4.94	4.89	5.00	4.99	4.96	4.96	4.89	4.82	4.78	4.77	4.77
15	4.96	4.88	4.93	5.02	4.99	4.92	5.22	4.84	4.81	4.78	4.76	4.77
20	4.91	4.85	4.93	4.99	4.99	4.90	5.48	4.83	4.80	4.77	4.83	4.75
25	4.86	4.85	4.97	4.99	4.99	4.93	5.03	4.92	4.78	4.75	4.76	4.75
EOM	4.83	4.91	6.53	4.99	4.99	4.88	4.95	5.16	4.85	4.76	4.76	4.76

WTR YR 1991 MEAN 4.92 MAX 6.56 MIN 4.74

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 mi².

PERIOD OF RECORD.--1943 to current year.

DATUM OF GAGE.--699.83 ft above National Geodetic Vertical Datum of 1929, as corrected from the unadjusted elevations.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage in two sections is at the site.

ESTABLISHED LEGAL LEVEL.--13.65 ft gage datum or 713.65 ft above National Geodetic Vertical Datum of 1929 as decreed on August 10, 1948, by the Starke County Circuit Court. Minor errors were subsequently discovered in the establishment of the datum of the gage (see "DATUM OF GAGE") and the correct elevation of the legal level should be 13.65 ft gage datum or 713.48 ft above National Geodetic Vertical Datum of 1929.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a steel sheet piling dam.

INLET AND OUTLET.--Several small unnamed ditches enter the lake at various locations. The outlet flows from the western shore, into Cedar Lake ditch, and eventually into the Kankakee River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 15.03 ft June 18, 1981; minimum stage, 10.52 ft Nov. 12, 13, 1964.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	13.93	14.26	14.26	14.51	14.35	14.30	14.28	14.30	14.32	13.83	13.33	13.17
10	14.21	14.22	14.26	14.44	14.33	14.25	14.27	14.26	14.19	13.85	13.38	13.08
15	14.22	14.19	14.28	14.42	14.32	14.29	14.42	14.24	14.21	13.75	13.30	13.09
20	14.21	14.16	14.28	14.43	14.32	14.29	14.39	14.31	14.12	13.64	13.38	13.00
25	14.17	14.17	14.32	14.39	14.26	14.36	14.34	14.38	14.02	13.53	13.31	12.96
EOB	14.12	14.28	14.60	14.39	14.26	14.33	14.35	14.49	13.93	13.42	13.25	12.90

WTR YR 1991 MEAN 14.05 MAX 14.64 MIN 12.90

STREAMS TRIBUTARY TO LAKE MICHIGAN

04100260 BEAR LAKE NEAR WOLFLAKE, IN

LOCATION.--Lat 41°19'07", long 85°30'49", in SW¼NW¼ sec.17, T.33 N., R.9 E., Noble County, Hydrologic Unit 04050001 (ORMAS, IN quadrangle). The gage is on the southern shore of the lake on a dredged channel, at the end of the gravel lane to the Merry Lea Nature Center, 1.1 mi southwest of the town of Wolflake.

SURFACE AREA.--136 acres.

DRAINAGE AREA.--6.98 mi².

PERIOD OF RECORD.--1943 to current year.

DATUM OF GAGE.--889.90 ft above National Geodetic Vertical Datum of 1929, as corrected on the basis of levels of the Indiana Department of Natural Resources, 1974-75.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well on the west side of the dredged channel.

ESTABLISHED LEGAL LEVEL.--4.60 ft gage datum or 894.60 ft above National Geodetic Vertical Datum of 1929 as decreed on September 23, 1959, by the Noble County Circuit Court. Minor errors were subsequently discovered in the establishment of the datum of the gage (see "DATUM OF GAGE") and the correct elevation of the legal level should be 4.60 ft gage datum or 894.50 ft above National Geodetic Vertical Datum of 1929.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a steel sheet piling dam.

INLET AND OUTLET.--There are two inlets to the lake, one enters on the southwest shore from High Lake, 0.6 mi upstream, and the other enters from the northeast. The outlet, Carrol Creek, leaves the lake on the southeast tip, flows into Muncie Lake, 3.1 mi downstream, and eventually into the Elkhart River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 8.25 ft Dec. 30, 1942 (before dredging of the outlet channel). Maximum stage, 6.61 ft Apr. 12, 1944 (after dredging); minimum stage, 2.90 ft Oct. 31, Nov. 1-3, 7-17, 1952, October 22-24, 29-31, Nov. 1-3, 6, 7, 1966.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.68	4.76	4.63	4.81	4.49	4.58	4.49	4.55	4.77	4.40	4.28	4.08
10	5.38	4.68	4.55	4.63	4.50	4.49	4.50	4.48	4.53	4.32	4.30	4.03
15	5.26	4.56	4.55	4.61	4.45	4.47	4.57	4.46	4.46	4.26	4.24	4.25
20	4.85	4.49	4.55	4.64	4.53	4.54	4.78	4.38	4.37	4.19	4.24	4.18
25	4.65	4.45	4.59	4.51	4.49	4.52	4.72	4.61	4.31	4.38	4.20	4.13
EOB	4.50	4.55	5.32	4.45	4.48	4.49	4.61	4.92	4.42	4.29	4.16	4.09

WTR YR 1991 MEAN 4.50 MAX 5.47 MIN 4.02

WABASH RIVER BASIN

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 mi².

PERIOD OF RECORD.--1945-68, 1971, 1976 to current year.

DATUM OF GAGE.--820.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder and an electric tape gage (ETG) are installed in an aluminum shelter over a 15-inch diameter stilling well.

ESTABLISHED LEGAL LEVEL.--7.75 ft gage datum or 827.75 ft above National Geodetic Vertical Datum of 1929 as established on October 18, 1949, by the Kosciusko County Circuit Court. Little Chapman Lake has the same control structure and established level and hence the same lake levels for the period of record.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete dam with a fixed crest at the outlet channel downstream from Little Chapman Lake.

INLET AND OUTLET.--Several small ditches enter the lake at various points. The outlet flows into Little Chapman Lake to the south, then into Deeds Creek, and eventually into the Tippecanoe River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 9.37 ft Oct. 11, 1954; minimum stage, 6.75 ft Oct. 20, 1953.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.59	7.86	7.90	7.96	7.62	7.73	7.65	7.64	7.61	7.38	7.10	7.11
10	8.19	7.80	7.84	7.78	7.65	7.69	7.61	7.55	7.50	7.33	7.17	7.07
15	7.96	7.75	7.85	7.79	7.65	7.68	7.67	7.52	7.53	7.28	7.13	7.13
20	7.74	7.71	7.85	7.82	7.67	7.71	7.81	7.46	7.44	7.23	7.25	7.05
25	7.61	7.71	7.89	7.68	7.66	7.69	7.77	7.61	7.37	7.18	7.21	7.04
EOM	7.55	7.82	8.32	7.59	7.65	7.67	7.65	7.80	7.43	7.11	7.17	6.98

WTR YR 1991 MEAN 7.57 MAX 8.45 MIN 6.98

WABASH RIVER BASIN

03330040 BIG LAKE NEAR WOLFLAKE, IN

LOCATION.--Lat 41°16'33", long 85°30'43", in NW¼SE¼NW¼ sec.32, T.33 N., R.9 E., Noble County, Hydrologic Unit 05120106 (ORMAS, IN quadrangle). The gage is at the head of the outlet channel, approximately 20 feet north of the control structure and 4 mi southwest of the town of Wolf Lake.

SURFACE AREA.--228 acres.

DRAINAGE AREA.--8.89 mi².

PERIOD OF RECORD.--1943-74, 1978 to current year.

DATUM OF GAGE.--890.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well.

ESTABLISHED LEGAL LEVEL.--8.40 ft gage datum or 898.40 ft above National Geodetic Vertical Datum of 1929 as decreed on July 18, 1956, by the Noble County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a steel sheet piling dam with a fixed crest.

INLET AND OUTLET.--The main inlet enters from Crooked Lake to the east. Three other inlets flow from Crane Lake to the east, Green Lake to the north, and Sell Brook to the south. The outlet leaves the lake at the extreme west end and forms the headwaters of the Tippecanoe River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 12.76 ft Apr. 4, 1950; minimum stage, 7.12 ft Aug. 24, 1987.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.43	8.61	8.48	---	8.43	8.37	8.32	8.33	9.32	8.24	8.08	7.90
10	9.91	8.49	8.31	---	8.31	8.27	8.47	8.27	8.43	8.16	8.09	7.83
15	9.67	8.27	8.35	---	8.29	8.26	8.45	8.24	8.23	8.11	8.04	7.92
20	8.93	8.24	8.36	8.44	8.46	8.41	8.93	8.18	8.16	8.04	8.09	7.82
25	8.34	8.22	---	8.37	8.32	8.32	8.73	8.37	8.12	8.12	8.02	7.78
EOM	8.22	8.36	---	8.37	8.29	8.35	8.49	9.50	8.34	8.06	7.97	7.71

WTR YR 1991 MEAN 8.34 MAX 10.18 MIN 7.71

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 mi².

PERIOD OF RECORD.--1954 to current year.

DATUM OF GAGE.--950.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well.

ESTABLISHED LEGAL LEVEL.--6.21 ft gage datum or 956.21 ft above National Geodetic Vertical Datum of 1929 as decreed on July 22, 1965, by the Lagrange County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete dam with a fixed sill and removable boards.

INLET AND OUTLET.--The one inlet is a small ditch that enters at the extreme western tip. The outlet flows from the extreme northern tip, northeastward to Mud and Little Turkey Lakes, thence to Turkey Creek.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 7.49 ft Mar. 31, 1978; minimum stage, 4.58 ft Nov. 27, 1964.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.22	6.50	6.30	6.41	6.25	6.37	6.30	6.41	6.27	6.27	5.88	5.73
10	6.57	6.29	6.21	6.30	6.24	6.28	6.34	6.27	6.17	6.15	5.69	5.73
15	6.40	6.21	6.28	6.30	6.26	6.22	6.39	6.21	6.14	6.12	5.65	5.78
20	6.29	6.19	6.26	6.32	6.34	6.28	6.52	6.16	6.08	6.04	5.77	5.69
25	6.19	6.19	6.30	6.25	6.27	6.28	6.49	6.28	5.99	5.96	5.72	5.67
EOM	6.14	6.28	6.64	6.23	6.28	6.34	6.41	6.47	6.24	5.88	5.75	5.60

WTR YR 1991 MEAN 6.18 MAX 6.72 MIN 5.60

STREAMS TRIBUTARY TO LAKE MICHIGAN

04100140 BIXLER LAKE AT KENDALLVILLE, IN

LOCATION.--Lat 41°26'13", long 85°15'10", in NE¼NE¼NE¼ sec.4, T.34 N., R.11 E., Noble County, Hydrologic Unit 04050001 (KENDALLVILLE, IN quadrangle). The gage is on the south bank of the outlet channel on the southwest shore of the lake and 0.7 mi southeast of City Hall in Kendallville.

SURFACE AREA.--120 acres.

DRAINAGE AREA.--5.28 mi².

PERIOD OF RECORD.--1946 to current year.

DATUM OF GAGE.--960.10 ft above National Geodetic Vertical Datum of 1929, as corrected on the basis of levels of the Indiana Department of Natural Resources, 1974-75.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage is bolted to a concrete pier 20 ft upstream from the control dam.

ESTABLISHED LEGAL LEVEL.--3.65 ft gage datum or 963.65 ft above National Geodetic Vertical Datum of 1929 as decreed on April 25, 1952, by the Noble County Circuit Court. Minor errors were subsequently discovered in the establishment of the datum of the gage (see "DATUM OF GAGE") and the correct elevation of the legal level should be 3.65 ft gage datum or 963.75 ft above National Geodetic Vertical Datum of 1929.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a fixed deep-notch concrete dam with two flood gates.

INLET AND OUTLET.--Riddle ditch enters the lake from the north, Sherman ditch from the east, Shaffer ditch from the southeast, and an unnamed ditch from the southwest. The outlet leaves at the southwest corner and flows into Henderson Lake 1.9 mi downstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 6.26 ft Feb. 24, 1985; minimum stage, 1.24 ft Jan. 13-15, 18, 1954.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.40	4.32	4.37	---	3.68	3.90	3.59	3.62	---	---	3.23	2.92
10	5.48	4.05	4.38	---	3.74	3.65	3.81	3.49	---	---	3.28	---
15	4.52	3.52	4.12	3.56	3.62	3.49	4.09	3.74	---	---	3.20	---
20	4.03	3.35	4.02	4.07	3.94	3.67	4.84	4.08	---	3.42	3.18	---
25	3.59	3.53	4.13	3.92	3.92	3.96	4.52	4.28	---	3.29	3.10	---
EOM	3.57	3.73	---	3.61	3.80	3.55	4.15	---	---	3.19	3.02	---

WTR YR 1991 MEAN 3.78 MAX 5.48 MIN 2.64

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 mi².

PERIOD OF RECORD.--1946-68, 1976 to current year.

DATUM OF GAGE.--840.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder installed in an aluminum shelter over a 15-inch diameter stilling well.

ESTABLISHED LEGAL LEVEL.--10.28 ft gage datum or 850.28 ft above National Geodetic Vertical Datum of 1929 as decreed on July 23, 1948, by the Whitley County Circuit Court.

LAKE-LEVEL CONTROL.--A concrete dam with a fixed crest is located in the outlet channel about 300 ft downstream from the lake.

INLET AND OUTLET.--Maloney ditch enters at the eastern tip of the lake. The outlet flows from the lake at the northwest end and joins Carter Creek (Blue River) 0.2 mi downstream. Carter Creek eventually flows into Eel River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 15.80 ft Dec. 10, 1966; minimum stage, 7.64 ft Nov. 19, 20, 1952.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.15	10.48	10.56	11.64	10.10	10.24	10.21	10.13	10.94	9.77	9.34	9.13
10	11.24	10.45	10.45	10.73	10.12	10.19	10.29	10.02	10.43	9.71	9.36	9.05
15	10.82	10.29	10.42	10.47	10.13	10.17	10.32	10.05	10.15	9.61	9.27	9.31
20	10.50	10.26	10.42	10.41	10.23	10.24	10.62	10.09	9.98	9.50	9.36	9.20
25	10.30	10.25	10.50	10.22	10.22	10.25	10.56	10.28	9.83	9.47	9.26	9.16
EOM	10.22	10.37	12.69	10.12	10.19	10.26	10.34	11.18	9.78	9.32	9.17	9.05

WTR YR 1991 MEAN 10.12 MAX 12.69 MIN 9.03

STREAMS TRIBUTARY TO LAKE MICHIGAN

04099250 BOWER LAKE NEAR PLEASANT LAKE, IN

LOCATION.--Lat 41°36'03", long 85°03'24", in SW¼SW¼SE¼ sec.5, T.36 N., R.13 E., Steuben County, Hydrologic Unit 04050001 (ASHLEY, IN quadrangle). The gage is located at the public fishing site on the northwestern edge of the lake, 3.9 mi southwest of Angola.

SURFACE AREA.--25 acres.

DRAINAGE AREA.--84.6 mi².

PERIOD OF RECORD.--1946-1970, 1977 to current year.

DATUM OF GAGE.--940.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary wire-weight gage is attached to the bridge over the outlet.

ESTABLISHED LEGAL LEVEL.--8.50 ft gage datum or 948.50 ft above National Geodetic Vertical Datum of 1929, as decreed on October 28, 1959, by Steuben County Circuit Court. Golden Lake near Pleasant Lake has the same established level and hence the same lake levels for the period of record.

LAKE-LEVEL CONTROL.--The lake level is controlled by the outlet channel or the outlet of Golden Lake.

INLET AND OUTLET.--Pigeon Creek flows through the lake, entering at the southern shore and leaving at the western end to flow into Golden Lake and eventually into the St. Joseph River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 17.13 ft Mar. 22, 1982; minimum stage, 7.88 ft Sept. 14, 15, 1964.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.83	9.79	10.26	---	---	---	---	10.01	10.09	9.00	8.27	8.38
10	11.10	10.52	9.89	---	---	---	---	9.62	9.27	8.61	8.32	8.27
15	11.39	9.72	9.63	---	---	---	---	9.34	8.96	8.46	8.27	8.31
20	10.22	9.30	9.82	---	---	---	11.73	9.10	8.72	8.37	8.64	8.16
25	9.62	9.18	10.18	---	---	---	11.83	9.10	8.54	8.32	8.58	8.16
EOM	9.16	9.64	13.65	---	---	---	10.74	9.79	8.50	8.28	8.44	8.10

WTR YR 1991 MEAN 9.34 MAX 13.71 MIN 8.10

04099810 CASS LAKE NEAR SHIPSEWANA, 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 mi².

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 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	3.13	3.20	2.51	2.54	2.66	3.03	2.88	2.95	2.71	2.77	2.63	2.81
10	3.49	3.18	2.44	2.48	2.97	2.69	2.97	2.94	2.71	2.75	2.73	2.78
15	3.42	3.15	2.43	2.48	2.97	2.46	3.07	2.94	2.73	2.74	2.71	2.91
20	3.36	3.13	2.42	2.51	2.99	2.45	3.12	2.92	2.70	2.66	2.81	2.83
25	3.05	3.14	2.43	2.59	2.99	2.57	2.83	2.58	2.66	2.63	2.77	2.81
EOM	2.99	2.65	2.87	2.59	2.99	2.77	2.95	2.72	2.66	2.63	2.81	2.78

WTR YR 1991 MEAN 2.81 MAX 3.49 MIN 2.41

ILLINOIS RIVER BASIN

05518700 CEDAR LAKE AT CEDAR LAKE, IN

LOCATION.--Lat 41°21'58", long 87°25'36", in NE¼SW¼SW¼ sec.26, T.34 N., R.9 W., Lake County, Hydrologic Unit 07120001 (LOWELL, IN quadrangle). The gage is on the south bank of the outlet channel on the east shore of the lake, upstream from the first bridge over the outlet, and 0.5 mi east of the town of Cedar Lake.

SURFACE AREA.--781 acres.

DRAINAGE AREA.--8.14 mi².

PERIOD OF RECORD.--1943 to current year.

DATUM OF GAGE.--690.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 24-inch diameter stilling well. An auxiliary staff gage is driven into the channel bed.

ESTABLISHED LEGAL LEVEL.--Not established.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a fixed-crest concrete dam.

INLET AND OUTLET.--Several small ditches enter the lake at various points. The outlet, Cedar Creek, flows from the lake on the eastern shore of the center lobe, into Dalecarlia Lake, 1.5 mi downstream, and eventually into the Kankakee River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 4.30 ft May 15, 1970; minimum stage not determined, below 1.22 ft during July, August, September, October 1988, and September 1991.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	2.82	3.21	3.62	3.53	2.94	3.14	3.04	3.12	2.84	2.32	1.82	1.49
10	3.26	3.17	3.35	3.13	2.98	3.05	2.96	3.03	2.72	2.24	1.91	1.42
15	3.22	3.11	3.18	3.06	2.93	3.09	3.24	3.01	2.67	2.15	1.85	1.35
20	3.13	3.03	3.08	3.07	3.02	3.37	3.25	2.95	2.56	2.07	1.85	1.23
25	3.06	3.00	3.06	2.99	2.99	3.29	3.11	3.08	2.45	2.00	1.79	---
EOM	2.98	3.99	3.58	2.88	2.97	3.12	3.05	3.03	2.37	1.86	1.58	---

WTR YR 1991 MEAN 2.79 MAX 4.13 MIN 1.23

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 mi².

PERIOD OF RECORD.--1943-1968, 1971 to current year.

DATUM OF GAGE.--800.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage is attached to the control dam at the outlet.

ESTABLISHED LEGAL LEVEL.--3.86 ft gage datum or 803.86 ft above National Geodetic Vertical Datum of 1929 as decreed on December 3, 1963, by the Kosciusko County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete dam at the western end of the lake.

INLET AND OUTLET.--The one inlet flows through a 24-inch diameter tile from Pike Lake and enters the lake on the southeastern side. The outlet flows from the western shore and joins Walnut Creek 0.65 mi downstream, which in turn flows into the Tippecanoe River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 7.24 ft Oct. 15, 1954; minimum stage, 0.17 ft Oct. 4, 1955.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.31	5.11	4.75	5.19	4.46	4.76	4.58	4.59	5.29	4.30	3.97	4.27
10	4.78	5.12	4.75	5.35	4.27	4.58	4.51	4.41	4.85	4.24	4.13	4.22
15	5.72	4.90	4.64	5.11	4.23	4.50	4.58	4.33	4.70	4.15	4.15	4.22
20	5.81	4.74	4.55	5.27	4.75	4.52	4.73	4.28	4.49	4.06	4.24	4.08
25	5.48	4.65	4.60	5.27	4.74	4.55	4.87	4.43	4.25	3.98	4.24	4.05
EOM	5.02	4.63	5.16	5.27	4.73	4.60	4.70	4.83	4.40	3.92	4.28	4.03

WTR YR 1991 MEAN 4.61 MAX 5.84 MIN 3.92

STREAMS TRIBUTARY TO LAKE ERIE

04177200 CLEAR LAKE AT CLEAR LAKE, IN

LOCATION.--Lat 41°44'52", long 84°50'25", in SW¼SW¼ sec.17, T.38 N., R.15 E., Steuben County, Hydrologic Unit 04100003 (CLEAR LAKE, IN-OH-MI quadrangle). The gage is on the northern shore of the lake, at the channel between Clear and Round Lakes, and 4.75 mi northeast of Fremont.

SURFACE AREA.--800 acres.

DRAINAGE AREA.--6.86 mi².

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 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.79	7.99	7.99	8.37	8.03	---	---	8.03	7.89	7.71	---	---
10	8.10	7.96	7.95	8.33	8.01	---	---	7.97	7.81	7.68	---	---
15	8.04	7.91	7.95	8.13	8.07	---	---	7.97	7.77	---	---	---
20	7.97	7.87	7.97	8.12	7.92	---	8.22	7.87	7.72	---	---	---
25	7.89	7.86	8.01	8.14	---	---	8.21	7.97	7.68	---	---	---
EOM	7.83	7.92	8.40	8.14	---	---	8.09	7.97	7.67	---	---	---

WTR YR 1991 MEAN 7.96 MAX 8.40 MIN 7.57

05515240 CLEAR LAKE AT LAPORTE, IN

LOCATION.--Lat 41°37'25", long 86°43'11", in NE¼SE¼ 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 mi².

PERIOD OF RECORD.--1942-49, 1952-75, 1979 to current year.

DATUM OF GAGE.--790.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage is attached to the north wingwall of the inlet culvert on the west side of the lake.

ESTABLISHED LEGAL LEVEL.--8.20 ft gage datum or 798.20 ft above National Geodetic Vertical Datum of 1929 as decreed on August 31, 1949, by the LaPorte County Circuit Court.

LAKE-LEVEL CONTROL.--During periods of high water, water may be released through the main sewer system of the city of LaPorte and diverted into the Kankakee River.

INLET AND OUTLET.--A small ditch enters on the west shore. There is no outlet during periods of low and medium water levels. When water levels are high, water may flow from the lake into the city sewer system.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 11.20 ft Apr. 23, 1973; minimum stage, 3.98 ft Nov. 27, 1964.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	8.85	9.34	9.77	9.91	10.16	10.22	10.44	10.55	9.97	9.26	9.37
10	8.61	8.76	9.32	9.77	9.90	10.14	10.28	10.39	10.43	9.91	9.31	9.29
15	8.59	8.74	9.34	9.84	10.00	10.15	10.42	10.32	10.39	9.80	9.23	9.38
20	8.63	8.69	9.34	9.91	10.03	10.21	10.42	10.39	10.30	9.68	9.28	9.26
25	8.58	8.68	9.41	9.92	10.02	10.20	10.42	10.51	10.21	9.54	9.18	9.21
EOM	8.52	9.33	9.75	9.91	10.03	10.22	10.43	10.65	10.09	9.37	9.28	9.12

WTR YR 1991 MEAN 9.69 MAX 10.66 MIN 8.26

STREAMS TRIBUTARY TO LAKE MICHIGAN

04097850 CROOKED LAKE AT CROOKED LAKE, IN

LOCATION.--Lat 41°40'14", long 85°02'04", in NE¼NW¼ 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.--980.26 ft above National Geodetic Vertical Datum of 1929, as corrected on the basis of levels of Indiana Department of Natural Resources, 1977-78.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage is driven into the channel bed between the Second and Third Basins under County Road 400 West.

ESTABLISHED LEGAL LEVEL.--8.17 ft gage datum or 988.17 ft above National Geodetic Vertical Datum of 1929 as decreed on June 17, 1948, by the Steuben County Circuit Court. Minor errors were subsequently discovered in the establishment of the datum of the gage (see "DATUM OF GAGE") and the correct elevation of the legal level should be 8.17 ft gage datum or 988.43 ft above National Geodetic Vertical Datum of 1929.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a fixed-crest dam with an adjustable gate at the western end of the Third Basin.

INLET AND OUTLET.--The principal inlets enter the lake from the south, from Loon and Buck Lakes, and the southeast, from Center Lake. Another ditch enters from the east. The outlet flows from the western end of the Third Basin into Lake Gage 1.4 mi downstream and eventually into the St. Joseph River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 10.07 ft Apr. 6, 1985; minimum stage, 7.05 ft Nov. 13-15, 1964.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.04	9.27	9.22	9.63	9.24	9.22	9.13	9.29	9.19	8.99	8.65	8.70
10	9.34	9.24	9.18	9.52	9.21	9.20	9.13	9.19	9.17	8.92	8.67	8.73
15	9.33	9.19	9.19	9.47	9.22	9.13	9.17	9.16	9.14	8.89	8.59	8.72
20	9.30	9.12	9.18	9.46	9.22	9.10	9.31	9.09	9.04	8.80	8.91	8.65
25	9.23	9.10	9.24	9.36	9.19	9.10	9.37	9.14	8.96	8.78	8.74	8.64
EOM	9.12	9.14	9.65	9.28	9.18	9.15	9.35	9.25	8.93	8.69	8.80	8.55

WTR YR 1991 MEAN 9.10 MAX 9.66 MIN 8.55

STREAMS TRIBUTARY TO LAKE MICHIGAN

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 mi².

PERIOD OF RECORD.--1945 to current year.

DATUM OF GAGE.--859.87 ft above National Geodetic Vertical Datum of 1929, as corrected on the basis of levels of Indiana Department of Natural Resources, 1973-74.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 24-inch diameter stilling well.

ESTABLISHED LEGAL LEVEL.--7.70 ft gage datum or 867.70 ft above National Geodetic Vertical Datum of 1929 as decreed on October 18, 1949, by the Kosciusko County Circuit Court. Minor errors were subsequently discovered in the establishment of the datum of the gage (see "DATUM OF GAGE") and the correct elevation of the legal level should be 7.70 ft gage datum or 867.57 ft above National Geodetic Vertical Datum of 1929.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a steel sheet piling dam.

INLET AND OUTLET.--Cable Run enters the lake on the southeastern tip, and an unnamed ditch enters on the eastern shore. The outlet, Hammond ditch, flows from the lake on the northwestern shore and into Wabash 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 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.63	8.96	8.89	9.32	9.08	8.96	8.94	9.01	9.14	8.60	8.28	8.28
10	9.08	8.90	8.85	9.19	8.92	8.90	8.96	8.92	8.97	8.53	8.32	8.21
15	9.03	8.83	8.87	9.13	8.92	8.91	9.00	8.86	8.89	8.46	8.26	8.25
20	8.96	8.78	8.87	9.14	8.92	8.96	9.14	8.80	8.78	8.39	8.27	8.13
25	8.85	8.76	8.95	9.13	8.89	8.97	9.16	8.91	8.66	8.36	8.20	8.08
EOM	8.76	8.84	9.50	9.13	8.88	8.97	9.08	9.33	8.69	8.30	8.26	8.00

WTR YR 1991 MEAN 8.79 MAX 9.53 MIN 8.00

WABASH RIVER BASIN

03331320 DIAMOND LAKE NEAR SILVER LAKE, IN

LOCATION.--Lat 41°06'23", long 85°56'05", in SW¼NW¼SE¼ sec.26, T.31 N., R.5 E., Kosciusko County, Hydrologic Unit 05120106 (SILVER LAKE, IN quadrangle). The gage is on the inlet channel on the northern shore of the lake, 2.2 mi northwest of the town of Silver Lake.

SURFACE AREA.--79 acres.

DRAINAGE AREA.--3.92 mi².

PERIOD OF RECORD.--1954-72, 1975 to current year.

DATUM OF GAGE.--849.90 ft above National Geodetic Vertical Datum of 1929, as corrected on the basis of levels of Indiana Department of Natural Resources, 1976.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well.

ESTABLISHED LEGAL LEVEL.--Not established.

LAKE-LEVEL CONTROL.--The lake level is controlled by Yellow Creek Lake, 0.3 mi downstream.

INLET AND OUTLET.--There are two inlets. One enters from the north and east from Hill Lake, one enters from the southeast. The one outlet flows from the western shore and into Yellow Creek Lake, 0.3 mi downstream. Yellow Creek Lake flows into Yellow Creek, which eventually discharges into the Tippecanoe River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 13.47 July 9, 1964; minimum stage, 9.78 ft Sept. 18-19, 23, 27-30, Oct. 10-12, 1988.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.70	11.12	10.86	11.50	10.73	10.72	10.66	10.85	10.65	10.39	10.17	10.14
10	11.78	10.86	10.70	10.79	10.68	10.63	10.66	10.67	10.50	10.48	10.21	10.07
15	11.26	10.69	10.75	10.87	10.64	10.62	10.93	10.68	10.56	10.40	10.15	10.08
20	10.87	10.61	10.70	10.95	10.78	10.81	10.98	10.59	10.46	10.36	10.23	10.03
25	10.67	10.65	10.77	10.79	10.66	10.71	10.84	10.63	10.39	10.30	10.16	10.03
EOM	10.64	10.78	12.17	10.80	10.64	10.72	10.73	11.27	10.42	10.22	10.16	9.96

WTR YR 1991 MEAN 10.63 MAX 12.20 MIN 9.96

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 mi².

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 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.86	5.29	5.20	6.41	5.00	5.11	4.99	5.23	6.47	4.74	4.63	4.62
10	5.66	5.40	5.13	6.34	5.03	5.03	4.97	5.06	5.91	4.67	4.66	4.58
15	6.23	5.25	5.08	5.61	4.97	4.96	5.03	4.93	5.47	4.61	4.60	4.81
20	5.90	5.07	5.11	5.54	5.03	5.06	5.41	4.82	5.08	4.57	4.64	4.70
25	---	4.98	5.14	5.54	5.04	5.04	5.51	4.92	4.83	4.56	4.58	4.64
EOM	---	5.11	6.06	5.54	5.00	5.07	5.35	5.85	4.77	4.54	4.66	4.60

WTR YR 1991 MEAN 5.12 MAX 6.57 MIN 4.51

STREAMS TRIBUTARY TO LAKE MICHIGAN

04100370 ENGLE LAKE NEAR LIGONIER, IN

LOCATION.--Lat 41°26'08", long 85°34'30", in SE¼NW¼NW¼, sec.2, T.34 N., R.8 E., Noble County, Hydrologic Unit 04050001 (LIGONIER, IN quadrangle). The gage is located at a public access site on the eastern side of the lake, 2.2 mi south of the town of Ligonier.

SURFACE AREA.--48 acres.

DRAINAGE AREA.--4.19 mi².

PERIOD OF RECORD.--1956-67, 1977 to current year.

DATUM OF GAGE.--870.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well.

ESTABLISHED LEGAL LEVEL.--8.90 ft gage datum or 878.90 ft above National Geodetic Vertical Datum of 1929 as decreed on October 23, 1984, by the Noble County Circuit Court.

LAKE-LEVEL CONTROL.--The lake level is controlled by the outlet channel at low water and the first culvert downstream at higher stages.

INLET AND OUTLET.--Sparta Lake ditch feeds the lake from the south, flowing from Sparta Lake. The outlet flows from the northern shore through Indian Lake and into the Elkhart River 1.7 mi downstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage 10.53 ft Mar. 29, 1985; minimum stage, 7.48 ft Nov. 17, 1964.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.28	9.62	9.42	10.05	9.59	9.45	9.39	9.44	9.52	9.07	9.02	8.98
10	9.74	9.44	9.36	9.72	9.56	9.36	9.39	9.35	9.36	9.01	9.07	8.92
15	9.51	9.36	9.39	9.60	9.56	9.37	9.46	9.28	9.32	8.97	8.96	9.16
20	9.48	9.32	9.40	9.60	9.63	9.42	9.57	9.23	9.21	8.91	9.00	9.01
25	9.39	9.31	9.45	9.60	9.52	9.40	9.51	9.36	9.14	8.98	8.93	8.96
EOM	9.34	9.39	10.05	9.60	9.51	9.39	9.45	10.07	9.08	8.94	8.99	8.91

WTR YR 1991 MEAN 9.34 MAX 10.07 MIN 8.89

STREAMS TRIBUTARY TO LAKE MICHIGAN

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 mi².

PERIOD OF RECORD.--1945 to current year.

DATUM OF GAGE.--930.75 ft above National Geodetic Vertical Datum of 1929, as corrected on the basis of levels of the U.S. Geological Survey, 1966.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage is mounted on a tree stump on the northern bank of the outlet channel at the same site.

ESTABLISHED LEGAL LEVEL.--6.50 ft gage datum or 936.50 ft above National Geodetic Vertical Datum of 1929 as decreed on May 7, 1959, by the Lagrange County Circuit Court. Minor errors were subsequently discovered in the establishment of the datum of the gage (see "DATUM OF GAGE") and the correct elevation of the legal level should be 6.50 ft gage datum or 937.25 ft above National Geodetic Vertical Datum of 1929.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by the outlet channel.

INLET AND OUTLET.--One inlet enters at the extreme southern tip from Royer Lake 700 ft upstream. The other enters on the north shore of the east lobe from Grass Lake, approximately 1.4 mi upstream. The outlet, East Fly Creek, flows from the lake on the northwest shore and joins Fly Creek, which empties into Pigeon River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 9.23 ft June 14, 15, 1981; minimum stage, 5.32 ft Nov. 17-20, 1953.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.67	7.37	7.19	7.71	7.04	7.26	7.12	7.27	7.22	7.37	6.84	6.94
10	7.63	7.26	7.07	7.30	7.11	7.13	7.10	7.20	6.92	7.11	6.91	6.91
15	7.48	7.07	7.03	7.27	7.09	7.02	7.12	7.06	6.80	7.03	6.86	6.98
20	7.25	6.96	7.04	7.36	7.30	7.04	7.44	6.91	6.70	6.92	6.93	6.90
25	7.04	6.91	7.09	7.22	7.23	7.04	7.52	6.95	6.61	6.85	6.88	6.88
EOM	6.91	7.12	8.60	7.22	7.11	7.18	7.36	7.19	6.80	6.80	6.98	6.85

WTR YR 1991 MEAN 7.10 MAX 8.60 MIN 6.59

STREAMS TRIBUTARY TO LAKE MICHIGAN

04099760 FISH LAKE NEAR SCOTT, IN

LOCATION.--Lat 41°45'25", long 85°38'54", in NW¼NW¼SE¼ sec.7, T.38 N., R.8 E., Lagrange County, Hydrologic Unit 04050001 (MIDDLEBURY, IN quadrangle). The gage is on the northwest shore of the lake, on the north side of the outlet channel, 4.8 mi northwest of Scott.

SURFACE AREA.--139 acres.

DRAINAGE AREA.--6.21 mi².

PERIOD OF RECORD.--1954-69, 1978 to current year.

DATUM OF GAGE.--809.84 ft above National Geodetic Vertical Datum of 1929, as corrected on the basis of levels of Indiana Department of Natural Resources, 1975.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage is attached to the dam at the same site.

ESTABLISHED LEGAL LEVEL.--4.42 ft gage datum or 814.42 ft above National Geodetic Vertical Datum of 1929 as decreed on September 11, 1959, by the Lagrange County Circuit Court. Minor errors were subsequently discovered in the establishment of the datum of the gage (see "DATUM OF GAGE") and the correct elevation of the legal level should be 4.42 ft gage datum or 814.26 ft above National Geodetic Vertical Datum of 1929.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a fixed concrete sill with removable boards.

INLET AND OUTLET.--The inlet, Fetch ditch, enters on the southeastern shore. The outlet flows from the lake at the lower west shore and empties into Pigeon River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 5.61 ft Feb. 26, 1985; minimum stage, 1.54 ft Nov. 26, 1964.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.23	4.55	4.84	5.16	4.67	4.63	4.54	4.73	---	---	4.00	3.90
10	4.63	4.58	4.76	4.87	4.66	4.57	4.51	4.60	---	4.47	4.06	3.84
15	4.79	4.51	4.71	4.80	4.68	4.49	4.63	4.52	---	4.40	3.96	3.94
20	4.64	4.46	4.68	4.86	4.73	4.50	4.75	4.64	---	4.29	4.11	3.83
25	4.50	4.44	4.67	4.85	4.64	4.53	4.81	---	---	4.21	4.04	3.79
EOM	4.38	4.82	5.22	4.85	4.59	4.54	4.80	---	---	4.09	3.97	3.72

WTR YR 1991 MEAN 4.49 MAX 5.22 MIN 3.72

05517700 FLINT LAKE NEAR VALPARAISO, IN

LOCATION.--Lat 41°30'41", long 87°02'23", in NE¼SW¼ sec.6, T.35 N., R.5 W., Porter County, Hydrologic Unit 07120001 (CHESTERTON, IN quadrangle). The gage is on the southeast shore of the lake, at the outlet and the Valparaiso Water Works, 3.2 mi northeast of Valparaiso.

SURFACE AREA.--86 acres.

DRAINAGE AREA.--3.80 mi², revised.

PERIOD OF RECORD.--1946 to current year. From Jan. 1, 1911, to Aug. 14, 1946, readings of the lake level were taken approximately once per week by Water Works personnel. These data are available upon request.

DATUM OF GAGE.--780.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed inside the Valparaiso Water Works. An auxiliary staff gage is located lakeward of the concrete block pumping station.

ESTABLISHED LEGAL LEVEL.--17.66 ft gage datum or 797.66 ft above National Geodetic Vertical Datum of 1929 as decreed on August 19, 1963, by the Porter County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by the outlet channel and two 30-inch corrugated metal pipes under the road, 600 ft downstream.

INLET AND OUTLET.--There are three inlets. One drains Long Lake to the northwest and another drains Loomis Lake to the west and Listenberger drain enters from the south. The outlet flows from the lake at the southeast corner and into the West Branch of Crooked Creek approximately 5.0 mi downstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 21.18 ft July 2, 1983 as recorded by the Valparaiso Water Company; minimum stage, 12.59 ft Dec. 29, 1948.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	19.28	19.84	20.23	20.03	19.62	19.75	19.53	19.86	20.00	18.94	18.03	17.25
10	19.94	19.67	20.05	19.84	19.60	19.64	19.52	19.68	19.72	19.16	18.08	17.03
15	19.79	19.57	19.92	19.77	19.57	19.63	19.77	19.54	19.58	19.00	17.82	16.90
20	19.68	19.50	19.78	19.81	19.57	19.70	19.93	19.61	19.45	18.79	17.75	16.62
25	19.56	19.44	19.75	19.71	19.55	19.59	19.78	20.14	19.29	18.57	17.51	16.40
EOM	19.41	20.56	20.27	19.26	19.51	19.55	19.72	20.18	19.13	18.23	17.25	16.13

WTR YR 1991 MEAN 19.23 MAX 20.82 MIN 16.13

WABASH RIVER BASIN

03330160 GILBERT LAKE NEAR WASHINGTON CENTER, IN

LOCATION.--Lat 41°19'50", long 85°35'48", in NE¼NE¼SE¼ sec.9, T.33 N., R.8 E., Noble County, Hydrologic Unit 05120106 (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 mi².

PERIOD OF RECORD.--1954-59, 1961 to current year.

DATUM OF GAGE.--884.85 ft above National Geodetic Vertical Datum of 1929, as corrected on the basis of levels of the Indiana Department of Natural Resources, 1974-75.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage in one section is driven into the lake bed approximately 100 ft south of the primary gage.

ESTABLISHED LEGAL LEVEL.--Not established.

LAKE-LEVEL CONTROL.--The level is controlled by the outlet through the swamp, east of the lake.

INLET AND OUTLET.--The lake has no inlet. The outlet leaves from the southeastern side and flows into Stump Lake.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 6.81 ft Dec. 4-5, 1987; minimum stage, 3.53 ft Nov. 1, 1963.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.31	5.41	5.20	5.54	5.53	5.69	4.90	5.47	4.54	5.07	4.48	5.12
10	5.42	5.20	5.20	5.53	5.71	5.60	5.13	5.45	4.47	5.14	4.62	5.16
15	4.86	5.15	5.24	5.32	5.72	5.69	5.30	5.53	4.58	5.21	4.72	5.36
20	4.90	5.20	5.25	5.47	5.86	5.76	5.54	5.56	4.65	5.26	4.89	5.39
25	4.87	5.23	5.30	5.47	5.70	4.61	5.49	5.73	4.74	5.49	4.95	5.45
EOM	4.95	5.23	5.54	5.47	5.71	4.58	5.44	5.72	4.96	5.41	5.08	5.50

WTR YR 1991 MEAN 5.24 MAX 5.86 MIN 4.44

STREAMS TRIBUTARY TO LAKE MICHIGAN

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 mi².

PERIOD OF RECORD.--1945 to current year.

DATUM OF GAGE.--890.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in a wooden shelter over a 24-inch diameter stilling well. An auxiliary staff gage is bolted to the downstream side of the bridge at the same site.

ESTABLISHED LEGAL LEVEL.--7.36 ft gage datum or 897.36 ft above National Geodetic Vertical Datum of 1929 as decreed on February 2, 1954, by the Lagrange County Circuit Court. Witmer, Westler, Dallas, and Messick Lakes, all near Wolcottville, have the same established level and hence the same lake levels for the period of record.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete sill with removable stop logs located at the outlet of Messick Lake.

INLET AND OUTLET.--One inlet enters on the north shore from Oliver Lake 1.6 mi upstream. The other inlet enters on the east shore from Dallas Lake 0.5 mi upstream, which is part of a chain of lakes including Westler and Witmer Lakes. The outlet flows from the lake on the southwest shore and into Messick Lake about 0.5 mi downstream. Messick Lake empties into the North Branch of the Elkhart River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 11.17 ft Apr. 7, 1978; minimum stage, 6.34 ft Oct. 10, 1953.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.76	8.41	8.24	9.53	8.12	8.30	8.05	8.71	8.57	8.38	7.64	7.62
10	8.47	8.51	8.21	9.11	8.15	8.21	8.00	8.52	8.43	8.35	7.67	7.59
15	8.95	8.43	8.15	8.86	8.09	8.02	8.03	8.26	8.14	8.19	7.59	7.67
20	8.98	8.27	8.15	8.80	8.16	7.97	8.50	7.99	7.88	7.97	7.65	7.57
25	8.72	8.12	8.21	8.58	8.23	7.95	8.86	8.03	7.67	7.80	7.58	7.54
EOM	8.39	8.19	9.29	8.24	8.18	8.10	8.85	8.34	7.82	7.62	7.67	7.50

WTR YR 1991 MEAN 8.19 MAX 9.55 MIN 7.50

STREAMS TRIBUTARY TO LAKE ERIE

04177700 HAMILTON LAKE AT HAMILTON, IN

LOCATION.--Lat 41°32'10", long 84°54'45", in SW¼SW¼NW¼ sec.34, T.36 N., R.14 E., Steuben County, Hydrologic Unit 04100003 (HAMILTON, IN quadrangle). The gage is on the eastern shore of the southern lobe at the outlet, in the town of Hamilton.

SURFACE AREA.--802 acres.

DRAINAGE AREA.--16.5 mi².

PERIOD OF RECORD.--1943 to current year.

DATUM OF GAGE.--890.12 ft above National Geodetic Vertical Datum of 1929, as corrected on the basis of levels of Indiana Department of Natural Resources, 1978.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well.

ESTABLISHED LEGAL LEVEL.--8.83 ft gage datum or 898.83 ft above National Geodetic Vertical Datum of 1929 as decreed on July 3, 1947, by the Steuben County Circuit Court. Minor errors were subsequently discovered in the establishment of the datum of the gage (see "DATUM OF GAGE") and the correct elevation of the legal level should be 8.83 ft gage datum or 898.95 ft above National Geodetic Vertical Datum of 1929.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by two dams. The northernmost dam is concrete and steel sheet piling with a fixed crest. The southern dam has a fixed concrete sill.

INLET AND OUTLET.--Black Creek enters the lake on the northeast shore. Two small ditches enter from the east and the north. There are two outlets, both on the southern lobe, that flow into Fish Creek thence into the St. Joseph River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 10.14 ft Dec. 30, 1965; minimum stage, 7.27 ft Jan. 4-9, 1953.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.70	8.96	8.85	---	---	8.63	8.62	8.59	8.63	8.51	8.25	8.38
10	9.30	8.79	8.73	---	---	8.53	8.63	8.53	8.49	8.44	8.27	8.40
15	8.83	8.70	8.72	---	---	8.48	8.82	8.49	8.45	8.47	8.26	8.44
20	8.73	8.66	8.76	---	8.62	8.53	9.11	8.46	8.43	8.41	8.47	8.36
25	8.67	8.65	---	---	8.52	8.55	8.80	8.54	8.38	8.34	8.44	8.33
EOM	8.63	8.74	---	---	8.50	8.59	8.66	8.68	8.45	8.26	8.41	8.28

WTR YR 1991 MEAN 8.57 MAX 9.30 MIN 8.23

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 mi².

PERIOD OF RECORD.--1946-53, 1970-75, 1977 to current year.

DATUM OF GAGE.--760.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well.

ESTABLISHED LEGAL LEVEL.--7.30 ft gage datum or 767.30 ft above National Geodetic Vertical Datum of 1929 as decreed on September 25, 1950, by the Elkhart County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a fixed-crest concrete dam.

INLET AND OUTLET.--The one inlet enters the lake at the extreme northern point of the lake. The outlet, Puterbaugh Creek, flows from the west end of the lake and enters the St. Joseph River approximately 4.0 mi downstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 9.73 ft Feb. 26, 1985; minimum stage, 4.55 ft Nov. 12-18, 1971.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.39	8.32	8.44	8.77	8.38	8.37	8.24	8.31	8.13	7.57	6.41	6.87
10	8.23	8.29	8.35	8.76	8.33	8.29	8.22	8.26	8.02	7.50	6.47	6.77
15	8.28	8.18	8.30	8.38	8.33	8.24	8.42	8.20	8.02	7.37	6.30	7.01
20	8.21	8.13	8.29	8.40	8.42	8.27	8.38	8.13	7.96	7.10	6.99	6.93
25	8.12	8.12	8.31	8.40	8.37	8.26	8.41	8.22	7.77	6.89	7.06	6.88
EOM	8.07	8.60	8.80	8.40	8.33	8.26	8.39	8.19	7.58	6.60	6.98	6.80

WTR YR 1991 MEAN 7.92 MAX 8.80 MIN 6.26

STREAMS TRIBUTARY TO LAKE MICHIGAN

04100258 HIGH LAKE NEAR WOLFLAKE, IN

LOCATION.--Lat 41°18'51", long 85°31'49", in SW¼NE¼SW¼ sec.18, T.33 N., R.9 E., Noble County, Hydrologic Unit 04050001 (ORMAS, IN quadrangle). The gage is on a dredged channel on the west shore of the east lobe, 2.1 mi southwest of Wolflake.

SURFACE AREA.--123 acres.

DRAINAGE AREA.--4.43 mi².

PERIOD OF RECORD.--1961-68, 1970 to current year.

DATUM OF GAGE.--890.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage is driven into the lake bed at the same site.

ESTABLISHED LEGAL LEVEL.--6.35 ft gage datum or 896.35 ft above National Geodetic Vertical Datum of 1929 as decreed on February 25, 1963, by the Noble County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete, fixed-crest dam with a rectangular notch.

INLET AND OUTLET.--The one inlet, Beal Branch, enters the lake on the southeast shore. The outlet flows from the east side of the north lobe, through Bear Lake, 0.6 mi downstream, into Carrol Creek, and eventually into the Elkhart River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 7.70 ft June 28, 1968; minimum stage, 5.30 ft Nov. 15, 25-28, 1964, Oct. 13, 26-31, Nov. 1-3, 1966.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	7.04	6.93	6.93	6.93	6.96	6.74	6.86	7.21	6.68	6.53	6.43
10	---	6.98	6.81	6.57	6.83	6.84	6.77	6.78	6.93	6.58	6.57	6.41
15	---	6.80	6.79	6.64	6.79	6.80	6.94	6.74	6.83	6.52	6.51	6.54
20	---	6.71	6.82	7.00	7.04	6.92	7.22	6.66	6.69	6.46	6.55	6.46
25	---	6.68	6.90	6.91	6.99	6.83	7.16	6.91	6.59	6.66	6.50	6.45
EOM	---	6.82	7.26	6.90	6.97	6.76	6.99	7.27	6.74	6.54	6.46	6.44

WTR YR 1991 MEAN 6.78 MAX 7.44 MIN 6.40

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 mi².

PERIOD OF RECORD.--1952 to current year.

DATUM OF GAGE.--860.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage is located on the southernmost tip of the lake. The staff is mounted on a board driven into the lake bed.

ESTABLISHED LEGAL LEVEL.--11.50 ft gage datum or 871.50 ft above National Geodetic Vertical Datum of 1929 as decreed on September 10, 1959, by the Kosciusko County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete fixed sill with removable boards.

INLET AND OUTLET.--There are no surface inlets. The one outlet flows from the western edge of the lake and empties into Diamond Lake 1.5 mi downstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 12.54 ft July 21, 1963; minimum stage, 9.86 ft Jan. 18, 19, 1954.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	11.41	11.69	11.51	12.27	11.47	11.46	11.44	11.52	11.42	11.22	10.90	10.85
10	11.97	11.53	11.44	12.33	11.45	11.40	11.47	11.48	11.35	11.24	10.92	10.80
15	11.62	11.45	11.45	11.55	11.45	11.40	11.58	11.47	11.40	11.19	10.88	10.80
20	11.52	11.40	11.44	11.58	11.49	11.50	11.63	11.40	11.36	11.13	10.92	10.72
25	11.48	11.38	11.49	11.58	11.47	11.50	11.56	11.43	11.29	11.05	10.87	10.68
EOM	11.44	11.47	12.09	11.58	11.47	11.45	11.48	11.57	11.26	10.96	10.85	10.64

WTR YR 1991 MEAN 11.37 MAX 12.33 MIN 10.64

STREAMS TRIBUTARY TO LAKE MICHIGAN

04099500 HOGBACK LAKE NEAR ANGOLA, IN

LOCATION.--Lat 41°37'39", long 85°04'59", in SE¼SE¼SE¼ sec.25, T.37 N., R.12 E., Steuben County, Hydrologic Unit 04050001 (ANGOLA WEST, IN quadrangle). The gage is on the northeast shore, 0.5 mi south of the Tri-State Airport, on County Road 500 West, and 4.4 mi southwest of Angola.

SURFACE AREA.--146 acres.

DRAINAGE AREA.--103 mi².

PERIOD OF RECORD.--1946-73, 1977 to current year.

DATUM OF GAGE.--940.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage in one section is attached to a tree at the same site.

ESTABLISHED LEGAL LEVEL.--8.50 ft gage datum or 948.50 ft above National Geodetic Vertical Datum of 1929 as decreed on October 28, 1959, by the Steuben County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by the outlet channel (Pigeon Creek).

INLET AND OUTLET.--There are three inlets to the lake. One unnamed ditch enters from the north. A small tributary enters on the eastern tip from Silver Lake, 0.7 mi upstream. Pigeon Creek flows through the lake, entering at the southeastern shore from Golden Lake, 1.2 mi upstream and leaving at the north end of the western lobe. Pigeon Creek joins Turkey Creek to become Pigeon River and eventually empties into the St. Joseph River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 17.07 ft Mar. 22, 1982; minimum stage, 7.24 ft Sept. 9, 10, 1953.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.39	8.93	9.64	---	---	---	---	9.88	9.93	8.91	8.26	8.41
10	9.88	10.08	9.47	---	---	---	---	9.53	9.17	8.59	8.28	8.29
15	10.95	9.31	9.16	---	---	---	---	9.24	8.89	8.47	8.25	8.33
20	9.82	8.91	9.30	---	---	---	11.13	9.03	8.66	8.35	8.50	8.20
25	9.24	8.79	9.64	---	---	---	11.63	8.98	8.53	8.28	8.60	8.18
EOM	8.78	9.12	---	---	---	---	10.59	9.44	8.45	8.26	8.42	8.15

WTR YR 1991 MEAN 9.07 MAX 11.87 MIN 8.15

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 mi².

PERIOD OF RECORD.--1946-76, 1978 to current year.

DATUM OF GAGE.--750.00 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1965, the datum of the gage was 760.00 ft above National Geodetic Vertical Datum of 1929. All levels listed below are at the present datum.

GAGE.--A water-stage recorder is installed in a wooden shelter over a 24-inch diameter stilling well. An auxiliary staff gage is driven into the lake bed.

ESTABLISHED LEGAL LEVEL.--13.09 ft gage datum or 763.09 ft above National Geodetic Vertical Datum of 1929 as decreed on August 31, 1949, by the St. Joseph County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a 24-inch reinforced concrete pipe with a gate chamber and slide gate.

INLET AND OUTLET.--The one inlet flows into the lake at the extreme northeast tip from Saugany Lake, approximately 1.7 mi upstream. The outlet flows from the lake on the east shore to Geyer ditch and eventually into the Kankakee River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 16.90 ft May 3, 1983; minimum stage, 7.60 ft Nov. 15, 1964.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	13.62	14.09	---	14.35	14.34	14.36	14.38	14.43	14.21	13.39	13.29	13.59
10	13.97	13.98	14.36	14.35	14.36	14.53	14.33	14.36	14.06	13.39	13.42	13.57
15	13.99	13.93	14.34	14.35	14.37	14.45	14.43	14.30	13.96	13.38	13.41	13.63
20	13.99	13.86	14.32	14.35	14.36	14.42	14.40	14.29	13.81	13.36	13.48	13.54
25	13.92	13.80	14.35	14.34	14.36	14.37	14.42	14.36	13.65	13.38	13.45	13.55
EOM	13.87	14.39	14.36	14.34	14.36	14.39	14.41	14.39	13.52	13.32	13.54	13.52

WTR YR 1991 MEAN 14.03 MAX 14.53 MIN 13.28

STREAMS TRIBUTARY TO LAKE MICHIGAN

04097680 JIMMERSON LAKE AT NEVADA MILLS, IN

LOCATION.--Lat 41°43'31", long 85°04'55", in SW¼NW¼ sec.30, T.38 N., R.13 E., Steuben County, Hydrologic Unit 04050001 (ANGOLA WEST, IN quadrangle). The gage is at the extreme west end of the lake on the abutment of the concrete spillway structure and dam in the town of Nevada Mills, 4.6 mi east of Orland.

SURFACE AREA.--434 acres.

DRAINAGE AREA.--51.6 mi².

PERIOD OF RECORD.--1937-44, 1946 to current year. (Lake level readings were made once a week by employees of Northern Indiana Public Service Company from 1937 to 1944.)

DATUM OF GAGE.--960.27 ft above National Geodetic Vertical Datum of 1929, as corrected on the basis of levels of Indiana Department of Natural Resources in June 1972.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 24-inch diameter stilling well attached to the control structure. An auxiliary staff gage is bolted to the same wall.

ESTABLISHED LEGAL LEVEL.--4.66 ft gage datum or 964.66 ft above National Geodetic Vertical Datum of 1929 as decreed on July 3, 1947, by the Steuben County Circuit Court. Minor errors were subsequently discovered in the establishment of the datum of the gage (see "DATUM OF GAGE") and the correct elevation of the legal level should be 4.66 ft gage datum or 964.93 ft above National Geodetic Vertical Datum of 1929.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete fixed-crest dam.

INLET AND OUTLET.--Crooked Creek flows through the lake, entering from Lake James at the extreme southeast end, and leaving from the northwest. Crooked Creek flows through Tamarack Lake and becomes Fawn River, which eventually empties into the St. Joseph River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 6.22 ft May 27, 1943; minimum stage, 3.71 ft Feb. 16, 17, 1948.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.00	5.18	5.26	5.71	5.23	5.36	5.27	5.36	5.12	4.95	4.75	4.88
10	5.35	5.26	5.22	5.55	5.22	5.28	5.26	5.27	5.01	4.87	4.78	4.90
15	5.43	5.20	5.15	5.46	5.19	5.21	5.25	5.17	4.94	4.83	4.75	4.90
20	5.33	5.16	5.23	5.48	5.28	5.23	5.42	5.09	4.88	4.76	4.99	4.80
25	5.20	5.12	5.27	5.38	5.26	5.24	5.52	5.12	4.79	4.81	4.98	4.76
EOM	5.09	5.19	5.70	5.27	5.25	5.30	5.42	5.15	4.80	4.75	4.95	4.72

WTR YR 1991 MEAN 5.14 MAX 5.77 MIN 4.72

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 mi².

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 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.56	5.91	---	---	---	---	5.50	6.19	6.56	6.14	5.46	5.35
10	6.52	5.51	---	---	---	---	5.56	6.15	6.48	6.15	5.57	5.24
15	5.47	5.87	---	---	---	---	6.31	6.23	6.46	6.04	5.48	5.20
20	5.73	5.94	---	---	---	---	6.02	6.44	6.35	5.90	5.64	5.09
25	5.50	5.63	---	---	---	---	5.90	6.49	6.22	5.74	5.53	5.06
EOM	5.53	5.86	---	---	---	---	6.13	6.55	6.25	5.56	5.45	4.99

WTR YR 1991 MEAN 5.84 MAX 6.85 MIN 4.99

STREAMS TRIBUTARY TO LAKE MICHIGAN

04100390 KNAPP LAKE NEAR WASHINGTON CENTER, IN

LOCATION.--Lat. 41°20'36", long 85°36'17", in SW¼NE¼SW¼ sec.4, T.33 N., R.8 E., Noble County, Hydrologic Unit 04050001 (ORMAS, IN quadrangle). The gage is at a public fishing site on the east side of the lake, and 5.8 mi west of the town of Wolf Lake.

SURFACE AREA.--88 acres.

DRAINAGE AREA.--6.02 mi².

PERIOD OF RECORD.--1946-74, 1976 to current year.

DATUM OF GAGE.--870.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well.

ESTABLISHED LEGAL LEVEL.--8.25 ft gage datum or 878.25 ft above National Geodetic Vertical Datum of 1929 as decreed on October 7, 1954, by the Noble County Circuit Court. Harper Lake, Moss Lake, and Hindman Lake, all near Washington Center, have the same established level as Knapp Lake and hence the same lake levels for the period of record.

LAKE-LEVEL CONTROL.--The lake level is controlled by the outlet channel.

INLET AND OUTLET.--There are three inlets. The outlet of Little Knapp Lake enters at the southeastern corner, the outlet of Harper Lake enters at the southernmost tip, and Galloway ditch enters on the eastern shore. The outlet flows from the lake on the western shore, through a series of lakes, into Turkey Creek and eventually into the Elkhart River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 11.10 ft June 27, 1968; minimum stage, 6.87 ft Sept. 14, 15, 1983.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.69	8.17	7.88	9.95	7.69	7.77	7.54	7.72	8.13	7.18	7.10	7.14
10	9.42	8.11	7.70	---	7.66	7.59	7.58	7.59	7.66	7.13	7.25	7.09
15	8.86	7.77	7.68	---	7.56	7.53	7.72	7.52	7.47	7.09	7.14	7.30
20	8.32	7.58	7.76	8.19	7.82	7.76	8.42	7.41	7.31	7.03	7.13	7.15
25	7.90	7.52	7.87	7.93	7.69	7.66	8.24	7.53	7.21	7.23	7.07	7.08
EOM	7.60	7.76	10.00	7.93	7.59	7.61	7.92	8.39	7.25	7.11	7.24	7.02

WTR YR 1991 MEAN 7.67 MAX 10.02 MIN 7.02

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 mi².

PERIOD OF RECORD.--1943 to current year.

DATUM OF GAGE.--710.12 ft above National Geodetic Vertical Datum of 1929, as corrected on the basis of levels of Indiana Department of Natural Resources, 1978.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well.

ESTABLISHED LEGAL LEVEL.--4.56 ft gage datum or 714.56 ft above National Geodetic Vertical Datum of 1929 as decreed on September 15, 1948, by the Strke County Circuit Court. Minor errors were subsequently discovered in the establishment of the datum of the gage (see "DATUM OF GAGE") and the correct elevation of the legal level should be 4.56 ft gage datum or 714.68 ft above National Geodetic Vertical Datum of 1929.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a steel sheet piling dam with a fixed crest.

INLET AND OUTLET.--Lawrence Pontius ditch and an unnamed ditch enter the lake on the south shore of the east lobe. The outlet flows from the lake at the western tip and into Robbins ditch 1400 ft downstream. Robbins ditch empties into the Kankakee River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 6.10 ft Oct. 11, 1954; minimum stage, 3.10 ft Oct. 12, 1970.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.57	4.79	4.67	5.25	4.73	4.61	4.62	4.61	4.62	4.44	4.36	4.45
10	5.08	4.65	4.61	5.25	4.72	4.59	4.59	4.58	4.54	4.56	4.45	4.40
15	4.76	4.59	4.64	5.17	4.71	4.61	4.97	4.57	4.59	4.49	4.42	4.45
20	4.63	4.56	4.61	4.72	4.70	4.64	4.75	4.59	4.53	4.45	4.47	4.38
25	4.58	4.56	4.64	4.72	4.62	4.71	4.66	4.87	4.49	4.40	4.44	4.38
EOM	4.55	4.75	5.25	4.72	4.60	4.60	4.64	4.86	4.47	4.35	4.48	4.36

WTR YR 1991 MEAN 4.62 MAX 5.29 MIN 4.33

ILLINOIS RIVER BASIN

05517800 LAKE ELIZA NEAR BEATRICE, IN

LOCATION.--Lat 41°25'55", long 87°10'33", in SW¼NE¼NW¼ sec.1, T.34 N., R.7 W., Porter County, Hydrologic Unit 07120001 (PALMER, IN quadrangle). The gage is on the east bank of a boat channel off the northernmost end of the lake, south of the bridge over the channel, and at the town of Lake Eliza.

SURFACE AREA.--45 acres.

DRAINAGE AREA.--1.70 mi².

PERIOD OF RECORD.--1954-74, 1976 to current year.

DATUM OF GAGE.--735.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage is attached to the bridge piling.

ESTABLISHED LEGAL LEVEL.--3.70 ft gage datum or 738.70 ft above National Geodetic Vertical Datum of 1929 as decreed on February 7, 1982, by the Porter County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a reinforced concrete dam with fixed crest.

INLET AND OUTLET.--Two small inlets enter the lake from the northwest and the northeast. The outlet flows from the lake on the south side through a dredged channel, forms the head waters of Wolf Creek, and eventually joins the Kankakee River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 7.24 ft June 14, 1981; minimum stage, 2.45 ft Oct. 13-15, 1988.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.01	4.52	4.08	4.02	4.14	4.05	4.05	4.29	3.97	3.72	3.17	3.38
10	4.89	4.04	4.02	3.98	4.04	4.02	4.03	4.02	3.90	3.64	3.27	3.31
15	4.07	4.02	4.03	3.99	4.01	4.05	4.56	3.97	3.98	3.54	3.20	3.35
20	4.05	4.01	4.00	4.07	4.05	4.08	4.07	4.05	3.93	3.45	3.31	3.24
25	4.04	4.00	4.01	3.99	4.00	4.04	4.02	4.30	3.86	3.33	3.24	3.21
EOM	4.03	4.70	4.44	3.97	4.01	4.01	4.02	4.19	3.79	3.20	3.26	3.15

WTR YR 1991 MEAN 3.89 MAX 6.56 MIN 3.14

STREAMS TRIBUTARY TO LAKE MICHIGAN

04097950 LAKE GAGE AT PANAMA, IN

LOCATION.--Lat 41°42'32", long 85°06'53", in SE¼SE¼NW¼ sec.35, T.38 N., R.12 E., Steuben County, Hydrologic Unit 04050001 (ANGOLA WEST, IN quadrangle). The gage is at the bridge over the outlet on the northern tip of the lake, 0.4 mi northwest of Panama, and 3.3 mi southeast of Orland.

SURFACE AREA.--332 acres.

DRAINAGE AREA.--17.3 mi².

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 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.72	4.32	4.31	4.74	4.44	4.40	4.36	4.56	4.76	4.57	4.41	4.53
10	4.85	4.31	4.29	4.72	4.38	4.34	4.36	4.45	4.70	4.49	4.45	4.53
15	4.61	4.28	4.29	4.70	4.37	4.30	4.40	4.57	4.65	4.48	4.41	4.53
20	4.49	4.21	4.28	4.68	4.37	4.31	4.51	4.58	4.59	4.45	4.60	4.42
25	4.34	4.20	4.31	4.58	4.34	4.33	4.55	4.68	4.50	4.47	4.53	4.39
EOM	4.24	4.26	4.63	4.50	4.36	4.38	4.58	4.78	4.47	4.42	4.55	4.35

WTR YR 1991 MEAN 4.47 MAX 4.85 MIN 4.20

STREAMS TRIBUTARY TO LAKE MICHIGAN

04092990 LAKE GEORGE AT HOBART, IN

LOCATION.--Lat 41°32'07", long 87°15'30", in NW¼NW¼NW¼ sec.32, T.36 N., R.7 W., Lake County, Hydrologic Unit 04040001 (GARY, IN quadrangle). The gage is on the northeast end of the lake, 70 ft northwest of the dam and 400 ft upstream of the Ridge Road bridge, in Hobart.

SURFACE AREA.--282 acres.

DRAINAGE AREA.--124 mi².

PERIOD OF RECORD.--1947 to current year.

DATUM OF GAGE.--600.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in a steel shelter over an 18-inch diameter clay stilling well.

ESTABLISHED LEGAL LEVEL.--2.23 ft gage datum or 602.23 ft above National Geodetic Vertical Datum of 1929 as decreed on September 18, 1959, by the Lake County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete dam with removable boards.

INLET AND OUTLET.--The two principal inlets are Turkey Creek, entering from the extreme southwestern tip, and Deep River, entering on the northeastern shore of the southern lobe. Three unnamed tributaries enter from the northwest, south, and southeast. The outlet, Deep River, flows from the lake at the northeast end and eventually joins the Calumet River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 7.14 ft Oct. 11, 1954; minimum stage, 0.27 ft Nov. 6, 1978 (while the lake was being drained).

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	2.35	3.53	---	---	3.17	2.83	2.42	2.74	1.95	1.99	1.98	2.13
10	4.30	2.41	---	2.34	2.44	2.08	2.31	2.39	2.07	2.02	2.08	2.00
15	2.44	2.35	---	2.27	2.37	2.60	4.00	2.03	2.08	1.99	1.97	2.05
20	2.40	2.24	---	2.49	2.68	2.85	2.32	2.28	2.05	1.96	2.20	1.97
25	2.30	2.24	---	2.36	2.29	2.15	2.28	2.51	2.04	1.50	1.98	1.99
EOM	2.18	---	---	2.23	2.20	2.10	1.98	2.34	2.00	1.91	2.00	1.96

WTR YR 1991 MEAN 2.30 MAX 5.14 MIN 1.40

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 mi².

PERIOD OF RECORD.--1946 to current year.

DATUM OF GAGE.--980.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well.

ESTABLISHED LEGAL LEVEL.--5.28 ft gage datum or 985.28 ft above National Geodetic Vertical Datum of 1929 as decreed on October 12, 1945, by the Steuben County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete dam with removable boards.

INLET AND OUTLET.--The inlet flows from Silver Lake, 0.8 mi upstream, and enters on the north shore. The outlet flows from the southwest end of the lake and forms Crooked Creek. Crooked Creek flows into Mud Lake 0.8 mi downstream, then enters Snow Lake.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 6.20 ft Apr. 4, 25, 1950; minimum stage, 4.20 ft Dec. 6, 7, 1946; Oct. 23-31, 1948.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.35	5.51	5.43	---	---	---	5.75	5.81	5.67	5.62	5.53	5.58
10	5.60	5.43	5.41	---	---	5.83	5.76	5.76	5.63	5.54	5.55	5.59
15	5.48	5.39	5.40	5.52	---	5.72	5.78	5.77	5.61	5.55	5.50	5.57
20	5.44	5.36	5.40	---	---	5.72	5.85	5.70	5.58	5.51	5.65	5.49
25	5.39	5.35	5.41	---	---	5.74	5.84	5.72	5.52	5.56	5.60	5.43
EOM	5.33	5.40	---	---	---	5.75	5.82	5.76	5.63	5.52	5.59	5.41

WTR YR 1991 MEAN 5.57 MAX 5.86 MIN 5.25

WABASH RIVER BASIN

03331380 LAKE MANITOU AT ROCHESTER, IN

LOCATION.--Lat 41°03'00", long 86°10'06", NW¼SW¼NW¼ sec.14, T.30 N., R.3 E., Fulton County, Hydrologic Unit 05120106 (ROCHESTER, IN quadrangle). The gage is located at the Public Fishing Site on the eastern side of the lake, and 2.6 mi southeast of the courthouse in Rochester.

SURFACE AREA.--1,158 acres.

DRAINAGE AREA.--44.2 mi².

PERIOD OF RECORD.--1943 to current year.

DATUM OF GAGE.--770.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in a aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage is located at the northwest end of the lake at the fish hatchery.

ESTABLISHED LEGAL LEVEL.--8.41 ft gage datum or 778.41 ft above National Geodetic Vertical Datum of 1929 as decreed on September 27, 1948, by the Fulton County Circuit Court.

LAKE-LEVEL CONTROL.--The lake level is controlled by a concrete dam and the gate of a feeder canal at the lake outlet.

INLET AND OUTLET.--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, 10.87 ft Aug. 19, 1990; minimum stage, 6.48 ft Nov. 14, 25-27, 1964.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.71	8.87	8.86	9.09	8.78	8.74	8.73	8.73	8.61	8.47	8.32	8.40
10	9.37	8.80	8.71	8.88	8.77	8.66	8.75	8.66	8.56	8.62	8.42	8.33
15	9.01	8.68	8.73	8.87	8.71	8.67	8.96	8.67	8.56	8.45	8.35	8.36
20	8.82	8.65	8.72	8.96	8.80	8.91	8.89	8.66	8.55	8.39	8.44	8.28
25	8.71	8.62	8.80	8.76	8.72	8.79	8.80	8.67	8.48	8.34	8.35	8.29
EOM	8.65	8.82	9.90	8.69	8.68	8.76	8.72	8.72	8.45	8.31	8.36	8.26

WTR YR 1991 MEAN 8.67 MAX 10.04 MIN 8.26

WABASH RIVER BASIN

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 mi².

PERIOD OF RECORD.--1943 to current year.

DATUM OF GAGE.--730.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage is attached to the upstream side of the north abutment of the outlet dam.

ESTABLISHED LEGAL LEVEL.--3.12 ft gage datum or 733.12 ft above National Geodetic Vertical Datum of 1929 as decreed on August 9, 1948, by the Marshall County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete dam with a fixed crest at the outlet channel.

INLET AND OUTLET.--Wilson ditch enters the lake at the northeast corner, Curtiss ditch enters at the east center, and Morris 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 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	3.46	---	---	4.46	4.05	3.94	3.94	3.97	3.92	3.36	3.07	3.04
10	3.82	---	---	4.32	4.00	3.87	3.91	---	3.77	3.49	3.13	2.98
15	---	---	3.78	4.35	3.96	3.88	4.12	---	3.76	3.41	3.08	2.98
20	---	---	3.77	4.36	3.98	3.95	4.20	---	3.67	3.42	3.19	2.86
25	---	---	3.83	4.24	3.93	3.99	4.10	---	3.55	3.29	3.13	2.80
EOM	---	---	4.53	4.22	3.91	3.95	4.01	4.01	3.46	3.15	3.10	2.75

WTR YR 1991 MEAN 3.70 MAX 4.53 MIN 2.75

ILLINOIS RIVER BASIN

05516200 LAKE OF THE WOODS NEAR BREMEN, IN

LOCATION.--Lat 41°25'04", long 86°13'44", in SW¼NW¼NW¼ sec.7, T.34 N., R.3 E., Marshall County, Hydrologic Unit 07120001 (BREMAN, 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 mi².

PERIOD OF RECORD.--1945 to current year.

DATUM OF GAGE.--800.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage is driven into the outlet channel.

ESTABLISHED LEGAL LEVEL.--3.85 ft gage datum or 803.85 ft above National Geodetic Vertical Datum of 1929 as decreed on August 9, 1948, by the Marshall County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete dam with a 13 ft by 1 ft notch. The dam is equipped with a lift gate.

INLET AND OUTLET.--Three ditches, Kimble, Martin, and Seltenright, enter the lake on the northwest shore. Scofield ditch enters at the west lobe. The outlet, Clark ditch, flows from the lake at the southern end and eventually into Yellow River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 7.68 ft Oct. 12, 1954; minimum stage, 2.75 ft Nov. 18-20, 1953.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	3.54	3.96	3.97	4.19	3.83	3.96	3.77	3.88	3.97	3.77	3.54	3.60
10	4.43	3.91	3.84	3.92	3.81	3.82	3.64	3.66	3.84	3.87	3.63	3.56
15	4.14	3.70	3.90	3.99	3.74	3.71	4.21	3.46	3.94	3.75	3.59	3.62
20	3.92	3.55	3.79	4.10	3.99	3.88	4.25	3.66	3.90	3.68	3.71	3.28
25	3.68	3.53	3.85	3.87	3.89	3.86	4.04	3.82	3.83	3.62	3.64	3.12
EOM	3.49	4.00	4.80	3.64	3.79	3.76	3.87	4.35	3.82	3.49	3.63	3.00

WTR YR 1991 MEAN 3.79 MAX 4.88 MIN 3.00

04099580 LAKE OF THE WOODS NEAR HELMER, IN

LOCATION.--Lat 41°32'30", long 85°11'42", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$ 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 mi².

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 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	11.47	11.70	11.64	12.31	11.75	---	---	---	---	---	11.06	11.18
10	12.11	11.61	11.52	11.88	---	---	---	---	---	---	11.11	11.17
15	11.77	11.48	11.50	11.75	---	---	---	---	---	---	11.07	11.22
20	11.63	11.40	11.51	11.82	---	---	---	---	---	11.19	11.24	11.13
25	11.51	11.41	11.65	11.81	---	---	---	---	---	11.11	11.20	11.09
EOM	11.42	11.51	12.48	11.81	---	---	---	---	---	11.04	11.19	11.04

WTR YR 1991 MEAN 11.48 MAX 12.48 MIN 11.02

STREAMS TRIBUTARY TO LAKE MICHIGAN

04097520 LAKE PLEASANT NEAR NEVADA MILLS, IN

LOCATION.--Lat 41°45'18", long 85°06'10", in NW $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$ 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 mi².

PERIOD OF RECORD.--1954-69, 1971, 1976 to current year.

DATUM OF GAGE.--960.40 ft above National Geodetic Vertical Datum of 1929 as corrected on the basis of levels of Indiana Department of Natural Resources, 1977-78.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage is attached to the southwest bridge abutment at the site.

ESTABLISHED LEGAL LEVEL.--1.10 ft gage datum or 961.50 ft above National Geodetic Vertical Datum of 1929 as decreed on April 11, 1986, by the Steuben County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a metal plate welded across the bottom of a corrugated metal pipe.

INLET AND OUTLET.--The one inlet enters the lake on the west side. The outlet flows from the northern shore, enters Michigan, and eventually empties into Prairie River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 2.04 ft Mar. 17, 1980; minimum stage, -0.14 ft Nov. 6-14, 1964.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	1.47	1.68	1.63	1.93	---	---	---	1.69	1.48	1.45	1.26	1.40
10	1.80	1.62	1.60	1.87	---	---	---	1.64	1.41	1.38	1.30	1.39
15	1.74	1.57	1.59	1.74	---	---	---	1.60	1.37	1.33	1.24	1.39
20	1.68	1.54	1.59	1.70	---	---	1.70	1.52	1.31	1.24	1.45	1.31
25	1.61	1.53	1.62	1.70	---	---	1.72	1.52	1.22	1.34	1.39	1.28
EOM	1.54	1.60	1.93	---	---	---	1.69	1.57	1.30	1.27	1.41	1.24

WTR YR 1991 MEAN 1.52 MAX 1.93 MIN 1.16

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 mi².

PERIOD OF RECORD.--1954 to current year.

DATUM OF GAGE.--950.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage in one section is attached to the west wingwall on the south side of the bridge.

ESTABLISHED LEGAL LEVEL.--4.50 ft gage datum or 954.50 ft above National Geodetic Vertical Datum of 1929 as decreed on March 26, 1970. Round Lake at Kendallville has the same established level and hence the same lake levels for the period of record.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a fixed-crest concrete dam.

INLET AND OUTLET.--The one inlet enters on the east side from Round Lake. The outlet, Waterhouse ditch, flows from the lake at the southwest end and into Henderson Lake ditch, thence into Sylvan Lake 4.8 mi downstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 6.75 ft Jan. 31, 1969; minimum stage, 3.33 ft Nov. 17, 18, 1964.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.78	5.07	4.89	---	4.88	4.88	4.80	4.84	4.98	4.74	4.41	4.22
10	5.49	4.85	4.78	---	4.84	4.77	4.88	4.76	4.75	4.65	4.45	4.18
15	4.94	4.75	4.80	---	---	4.75	4.98	4.72	4.70	4.61	4.40	4.23
20	4.81	4.71	4.82	4.90	4.91	4.81	5.28	4.69	4.64	4.53	4.39	4.14
25	4.74	4.72	4.88	---	4.80	4.79	5.01	4.75	4.58	4.44	4.33	4.10
EOM	4.73	4.80	---	---	4.77	4.79	4.89	5.99	4.65	4.36	4.28	4.03

WTR YR 1991 MEAN 4.71 MAX 6.21 MIN 4.03

WABASH RIVER BASIN

03328100 LONG LAKE AT LAKETON, IN

LOCATION.--Lat 40°59'08", long 85°50'20", in NE¼NW¼NE¼ sec.10, T.29 N., R.6 E., Wabash County, Hydrologic Unit 05120104 (NORTH MANCHESTER SOUTH, IN quadrangle). The gage is located on the north shore of the lake, 0.3 mi west of Crill Road, and 0.8 mi north of Laketon.

SURFACE AREA.--48 acres.

DRAINAGE AREA.--0.55 mi².

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 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	12.18	12.09	---	---	---	---	12.03	12.40	11.84	11.47	11.21
10	---	12.09	12.09	---	---	---	---	11.97	12.32	12.02	11.49	11.11
15	---	12.01	12.12	---	---	---	---	11.93	12.26	11.88	11.40	11.05
20	12.32	11.94	12.20	---	---	---	---	11.85	12.14	11.74	11.37	10.91
25	12.20	11.89	---	---	---	---	---	12.13	11.99	11.64	11.28	10.83
EOM	12.03	11.96	---	---	---	12.07	---	12.45	11.87	11.56	11.24	10.73

WTR YR 1991 MEAN 11.81 MAX 12.47 MIN 10.73

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 mi².

PERIOD OF RECORD.--1946 to current year.

DATUM OF GAGE.--940.10 ft above National Geodetic Vertical Datum of 1929 as corrected on the basis of levels of Indiana Department of Natural Resources, 1977.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage is located near the gage in two sections. One section is mounted on a post which is driven into the lake bed. The other section is mounted to a tree near the gage.

ESTABLISHED LEGAL LEVEL.--Not established.

LAKE-LEVEL CONTROL.--The lake level is controlled by the downstream channel.

INLET AND OUTLET.--Pigeon Creek flows into Long Lake at the eastern end of the lake and exits at the western end.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 17.42 ft Mar. 22, 1982; minimum stage, 8.78 ft Sept. 30, 1991.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.36	10.59	10.85	---	---	---	---	---	---	---	8.89	8.91
10	12.11	10.84	10.26	---	---	---	---	---	---	---	8.95	8.89
15	11.67	9.99	10.00	---	---	---	---	---	---	---	8.89	8.89
20	10.55	9.61	10.24	---	---	---	12.60	---	---	8.90	9.49	8.82
25	9.89	9.55	10.56	---	---	---	---	---	---	8.95	9.01	8.83
EOM	9.54	10.11	14.35	---	---	---	---	---	---	8.90	9.14	8.79

WTR YR 1991 MEAN 9.79 MAX 14.35 MIN 8.79

WABASH RIVER BASIN

03331460 LOST LAKE NEAR CULVER, IN

LOCATION.--Lat 41°12'02", long 86°25'17", in NE¼NW¼NW¼ sec.28, T.32 N., R.1 E., Marshall County, Hydrologic Unit 05120106 (CULVER, IN quadrangle). The gage is on the northern shore of the lake at the east end of West 19th Road (lake access road), 1.1 mi south of the center of Culver.

SURFACE AREA.--40 acres.

DRAINAGE AREA.--14.2 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 February 17, 1960, by the Marshall County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete dam and sill with removable boards in the outlet channel approximately 850 ft downstream from the main body of the lake.

INLET AND OUTLET.--The one inlet flows into the lake from Maxinkuckee Lake and enters on the north shore. The outlet flows from the south end of the lake to the Tippecanoe River 3.7 mi downstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 13.05 ft June 15, 1981; minimum stage, 10.12 ft July 9, 1959.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	11.19	11.40	11.38	11.76	11.49	11.45	11.44	11.61	12.04	11.28	10.60	10.76
10	11.39	11.34	11.34	11.69	11.47	11.38	11.42	11.51	11.97	11.41	10.65	10.74
15	11.37	11.32	11.36	11.68	11.44	11.36	11.59	11.48	12.08	11.32	10.56	10.58
20	11.32	11.27	11.34	11.70	11.47	11.44	11.64	11.47	12.00	11.15	10.66	10.52
25	11.26	11.25	11.37	11.61	11.43	11.46	11.66	11.46	11.85	10.98	10.72	10.51
EOM	11.23	11.36	11.79	11.54	11.42	11.45	11.62	12.11	11.73	10.68	10.75	10.45

WTR YR 1991 MEAN 11.34 MAX 12.11 MIN 10.45

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 mi².

PERIOD OF RECORD.--1948-49, 1959 to current year.

DATUM OF GAGE.--760.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage in one section is driven into the lake bed about 5 ft upstream from the outlet culvert.

ESTABLISHED LEGAL LEVEL.--3.60 ft gage datum or 763.60 ft above the National Geodetic Vertical Datum of 1929 as decreed on March 29, 1978, by the Wabash County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by two 18-inch corrugated metal culverts at the outlet.

INLET AND OUTLET.--The principal inlet is a tile drain from McColley Lake, 0.5 mi to the north. The outlet flows from the southwestern shore, into Bolley Ditch 0.7 mi downstream, thence into Squirrel Creek, and eventually into Eel River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 5.10 ft May 16, 1968; minimum stage, 2.32 ft Oct. 12, 1983.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	3.81	3.97	3.88	4.06	3.90	3.81	3.83	3.80	3.72	3.35	3.23	3.17
10	4.21	3.89	3.84	4.00	3.88	3.73	3.79	3.72	3.64	3.56	3.29	3.11
15	4.02	3.83	3.83	4.03	3.83	3.75	3.91	3.68	3.59	3.53	3.23	3.10
20	3.99	3.77	3.81	4.06	3.89	---	3.93	3.65	3.51	3.48	3.27	2.99
25	3.99	3.70	3.88	3.95	3.83	---	3.89	3.66	3.44	3.39	3.21	2.95
EOM	3.88	3.82	4.27	3.90	3.80	3.84	3.84	3.82	3.38	3.28	3.18	2.88

WTR YR 1991 MEAN 3.68 MAX 4.41 MIN 2.88

STREAMS TRIBUTARY TO LAKE MICHIGAN

04100280 MUNCIE LAKE NEAR BURR OAK, IN

LOCATION.--Lat 41°19'37", long 85°27'28", in NE¼SW¼SW¼ sec.11, T.33 N., R.9 E., Noble County, Hydrologic Unit 04050001 (MERRIAM, IN quadrangle). The gage is on the southwest shore of the lake, just north of the gravel road on the Addis farm, and 1.3 mi northwest of Burr Oak.

SURFACE AREA.--47 acres.

DRAINAGE AREA.--42.8 mi².

PERIOD OF RECORD.--1954 to current year.

DATUM OF GAGE.--880.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well.

ESTABLISHED LEGAL LEVEL.--Not established.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by the outlet channel.

INLET AND OUTLET.--There are three inlets to the lake. Forker Creek flows into the lake from the east, Brown Ditch from the southeast, and Carrol Creek from the west. The outlet flows from the northwest shore into Williams Lake, then into the South Branch of the Elkhart River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 9.47 ft Mar. 24, 25, 1978, Feb. 25, 26, 1985; minimum stage, 1.88 ft Aug. 8, 1988.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	3.69	4.20	4.27	---	3.62	3.61	3.22	3.56	5.96	2.90	2.39	2.22
10	6.81	4.26	3.56	---	3.32	3.19	3.58	3.20	3.92	2.58	2.44	2.10
15	5.95	3.35	3.44	---	3.07	3.79	3.60	3.01	3.13	2.43	2.35	2.64
20	4.70	3.02	3.72	---	3.83	3.53	5.28	2.89	2.90	2.32	2.30	2.35
25	3.68	2.94	---	---	3.24	3.64	4.92	3.52	2.65	2.52	2.32	2.29
EOM	3.06	3.55	---	---	3.95	3.11	4.31	6.19	3.24	2.34	2.23	2.23

WTR YR 1991 MEAN 3.37 MAX 7.22 MIN 2.10

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 mi².

PERIOD OF RECORD.--1953 to current year.

DATUM OF GAGE.--840.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A staff gage is attached to the east concrete retaining wall of the control dam.

ESTABLISHED LEGAL LEVEL.--3.56 ft gage datum or 843.56 ft above National Geodetic Vertical Datum of 1929 as decreed on September 11, 1959, by the Lagrange County Circuit Court. South Twin Lake near Howe has the same established level and hence the same lake levels for the period of record.

LAKE-LEVEL CONTROL.--Prior to October 1, 1982, the low water control was a fixed-crest dam with removable boards at the upstream end of the channel between the two lakes. At high stages the outlet channel of South Twin Lake was the control. After October 1, 1982, a concrete dam with a fixed crest was installed in the outlet of South Twin Lake. This is now the control structure for both North and South Twin Lakes, although the original structure is still in place.

INLET AND OUTLET.--There are two inlets to the lake. One enters at the southeast shore from Still Lake 0.9 mi upstream, and the other, which drains the adjacent marsh land, enters on the northwest shore. The outlet flows from the southwest shore and into South Twin Lake approximately 200 ft downstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 5.20 ft Feb. 26, 1985; minimum stage, 2.97 ft Aug. 20, 1964.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	3.58	3.80	3.74	3.78	3.65	3.66	3.67	3.64	3.86	---	---	3.48
10	3.92	3.70	3.70	3.78	3.64	3.63	---	3.60	3.78	---	3.50	3.50
15	3.78	3.67	3.68	3.74	3.67	3.62	3.64	3.58	3.74	---	3.48	3.50
20	3.71	3.64	3.69	3.72	3.66	3.64	3.70	3.55	---	---	3.58	3.46
25	3.63	3.67	3.70	3.70	3.64	3.67	3.74	3.80	---	---	3.52	3.44
EOM	3.60	3.74	4.00	3.67	3.63	3.70	3.72	3.96	---	---	3.46	3.42

WTR YR 1991 MEAN 3.66 MAX 4.10 MIN 3.36

WABASH RIVER BASIN

03331400 NYOMA 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 mi².

PERIOD OF RECORD.--1946 to current year.

DATUM OF GAGE.--790.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well.

ESTABLISHED LEGAL LEVEL.--3.91 ft gage datum or 793.91 ft above National Geodetic Vertical Datum of 1929 as decreed on September 27, 1948, by the Fulton County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete dam with a fixed crest.

INLET AND OUTLET.--The lake is fed by two small ditches entering from the east and northeast. The outlet flows from the lake at the southwest corner and into Mud Creek, which eventually joins the Tippecanoe River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 6.13 ft Aug. 18, 1990; minimum stage, 2.98 ft Oct. 12-19, 25, 26, 1953.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.20	4.57	---	4.45	4.31	4.22	4.24	4.21	4.09	3.96	3.92	3.96
10	5.07	4.25	---	4.25	4.25	4.14	4.24	4.15	4.05	4.07	3.98	3.91
15	4.42	4.18	4.24	4.35	4.18	4.18	4.66	4.14	3.98	3.97	3.91	3.92
20	4.29	4.14	4.21	4.38	4.33	4.46	4.33	4.19	4.02	3.94	3.96	3.86
25	4.19	4.12	4.27	4.21	4.19	4.28	4.25	4.34	3.98	3.91	3.91	3.90
EOM	4.15	---	5.57	4.15	4.16	4.26	4.20	4.26	3.97	3.90	4.05	3.89

WTR YR 1991 MEAN 4.18 MAX 5.60 MIN 3.86

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 mi².

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 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	2.78	2.82	3.52	4.63	4.68	4.64	4.69	4.58	4.47	3.92	3.13	2.50
10	2.93	2.79	3.58	4.64	4.67	4.64	4.68	4.58	4.31	3.79	3.13	2.34
15	2.94	2.72	3.70	4.66	4.70	4.69	4.73	4.55	4.39	3.90	3.01	2.20
20	2.93	2.71	4.65	4.63	4.70	4.69	4.72	4.46	4.36	3.75	2.94	2.04
25	2.92	2.76	4.63	4.62	4.65	4.69	4.63	4.54	4.22	3.54	2.83	1.90
EOM	2.84	3.20	4.70	4.62	4.62	4.70	4.59	4.57	4.03	3.30	2.68	1.76

WTR YR 1991 MEAN 3.85 MAX 5.13 MIN 1.76

STREAMS TRIBUTARY TO LAKE MICHIGAN

04100100 OLIVER LAKE NEAR VALENTINE, IN

LOCATION.--Lat 41°34'37", long 85°24'44", in SE¼SW¼NE¼ sec.18, T.36 N., R.10 E., Lagrange County, Hydrologic Unit 04050001 (OLIVER LAKE, IN quadrangle). The gage is at the public fishing site on the northwest side of the lake, and 1.6 mi southwest of Valentine.

SURFACE AREA.--362 acres.

DRAINAGE AREA.--11.1 mi².

PERIOD OF RECORD.--1945 to current year.

DATUM OF GAGE.--889.78 ft above National Geodetic Vertical Datum of 1929 as corrected on the basis of levels of Indiana Department of Natural Resources, 1975-76.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage is attached to the dam in the outlet.

ESTABLISHED LEGAL LEVEL.--9.45 ft gage datum or 899.45 ft above National Geodetic Vertical Datum of 1929 as decreed on September 29, 1952, by the Lagrange County Circuit Court. Minor errors were subsequently discovered in the establishment of the datum of the gage (see "DATUM OF GAGE") and the correct elevation of the legal level should be 9.45 ft gage datum or 899.23 ft above National Geodetic Vertical Datum of 1929. Martin and Olin Lakes near Valentine have the same established level as Oliver Lake and hence the same lake levels for the period of record.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a fixed sill and dam with movable boards.

INLET AND OUTLET.--The lake has several inlets. Dove Creek enters on the northwest, the outlet of Holsinger Hole on the north, Hart ditch on the east, and the channel between Oliver and Olin Lakes on the southeast shore. The Oliver Lake outlet flows from the southwest lobe of the lake, through a wetland, into Hackenburg Lake 1.6 mi downstream, and eventually into the North Branch of the Elkhart River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 11.77 ft June 14, 1981; minimum stage, 8.42 ft Jan. 18, 19, and Feb. 3-5, 1961.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.81	10.04	9.81	10.37	9.62	9.70	9.69	9.91	10.17	10.15	9.70	9.83
10	10.58	10.03	9.70	10.00	9.63	9.62	9.80	9.84	9.96	9.92	9.76	9.79
15	10.42	9.87	9.66	9.91	9.63	9.55	9.87	9.75	9.82	9.83	9.73	9.88
20	10.22	9.73	9.66	9.94	9.71	9.59	10.09	9.69	9.74	9.75	9.82	9.76
25	10.00	9.68	9.69	9.85	9.66	9.67	10.08	9.91	9.68	9.70	9.76	9.72
EOM	9.82	9.81	10.77	9.83	9.62	9.71	10.00	10.23	9.84	9.66	9.90	9.70

WTR YR 1991 MEAN 9.85 MAX 10.77 MIN 9.54

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 mi².

PERIOD OF RECORD.--1954 to current year.

DATUM OF GAGE.--815.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage in one section is driven into the lake bed just north of the public access site.

ESTABLISHED LEGAL LEVEL.--1.62 ft gage datum or 816.62 ft above National Geodetic Vertical Datum of 1929 as decreed on August 5, 1965, by the Kosciusko County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by an old mill dam of stone and concrete (fixed crest) at the west lobe of the far northern shore.

INLET AND OUTLET.--There are four inlets to the lake. Magee ditch enters from the north, Williamson ditch from the west and the confluence of Adams and Sloan ditches from the southeast. Trimble Creek flows through the lake, entering on the extreme southeastern end, leaving at the northwestern lobe and flowing into the Tippecanoe River 7.5 mi downstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 4.35 ft June 13, 1981; minimum stage, below -0.90 ft, lake drained, 1988.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	2.01	2.35	2.16	---	2.21	2.05	2.00	2.04	1.96	1.78	1.68	1.71
10	2.84	2.09	2.05	---	2.02	1.96	2.00	2.01	1.90	1.86	1.77	1.68
15	2.23	2.02	2.08	2.13	1.96	1.96	2.28	1.95	1.89	1.82	1.71	1.72
20	2.16	2.00	2.07	2.16	2.11	2.07	2.25	1.92	1.82	1.79	1.78	1.68
25	2.06	1.98	2.17	2.06	1.98	2.02	2.10	1.99	1.81	1.73	1.71	1.71
EOM	2.03	2.10	3.28	2.06	1.96	2.01	2.01	2.05	1.86	1.70	1.71	1.69

WTR YR 1991 MEAN 1.98 MAX 3.34 MIN 1.67

WABASH RIVER BASIN

03331040 PIKE LAKE AT WARSAW, IN

LOCATION.--Lat 41°15'44", long 85°51'00", in NE¼NW¼NE¼ sec.5, T.32 N., R.6 E., Kosciusko County, Hydrologic Unit 05120106 (LEESBURG, IN quadrangle). The gage is on the extreme northwestern point of the lake at the bridge over the outlet, 1.6 mi north of Warsaw.

SURFACE AREA.--203 acres.

DRAINAGE AREA.--41.5 mi².

PERIOD OF RECORD.--1954 to current year.

DATUM OF GAGE.--800.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well attached to the upstream abutment of the control structure.

ESTABLISHED LEGAL LEVEL.--5.64 ft gage datum or 805.64 ft above National Geodetic Vertical Datum of 1929 as decreed on December 12, 1963, by the Kosciusko County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete dam with a fixed crest and removable boards.

INLET AND OUTLET.--The one inlet, Deeds Creek, flows from Little Chapman Lake 3.4 mi upstream, and enters the lake on the lower northern shore. The outlet flows to the west from the extreme northern end of the lake through Lones ditch and enters the Tippecanoe River 0.9 mi downstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 10.79 ft Oct. 15, 1954; minimum stage, 3.71 ft Sept. 21, 22, 1955.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.28	5.78	5.49	7.76	5.40	5.31	5.23	5.51	6.06	5.85	5.70	5.69
10	7.50	5.64	5.25	7.01	5.27	5.15	5.25	5.25	5.95	5.79	5.76	5.66
15	7.17	5.38	5.28	6.47	5.14	5.16	5.57	5.98	5.97	5.76	5.70	5.72
20	6.63	5.14	5.26	6.23	5.37	5.39	6.07	5.94	5.88	5.72	5.79	5.65
25	6.05	5.07	5.48	5.93	5.18	5.27	5.98	6.28	5.82	5.70	5.70	5.69
EOM	5.79	5.32	8.71	5.48	5.14	5.28	5.77	6.39	6.09	5.70	5.73	5.67

WTR YR 1991 MEAN 5.78 MAX 8.71 MIN 5.07

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 mi².

PERIOD OF RECORD.--1946-75, 1980 to current year.

DATUM OF GAGE.--780.00 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1964, the datum of the gage was 790.00 ft. All levels given below are at the present datum.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage is driven into the channel bed at the same site.

ESTABLISHED LEGAL LEVEL.--16.20 ft gage datum or 796.20 ft above National Geodetic Vertical Datum of 1929, as decreed on August 31, 1949, by the LaPorte County Circuit Court. Stone Lake at LaPorte has the same established level and hence the same lake levels during the periods of record when the channel between the two lakes is open and flowing, water years 1946-63 and 1968-85.

LAKE-LEVEL CONTROL.--Pine and Stone Lakes form a closed basin; however, there is a capability of pumping water from the lakes into the Little Kankakee River during times of high water.

INLET AND OUTLET.--Kabelin ditch enters Pine Lake from the northwest through a large drain tile. Pine Lake is connected to Stone Lake by a channel on the southern tip.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 20.81 ft May 7, 22, 1983; minimum stage, 9.00 ft Nov. 14, 1964.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	17.23	17.69	18.23	18.61	18.82	19.13	19.11	19.11	19.05	18.44	---	17.90
10	17.52	17.67	18.22	18.63	18.82	19.13	19.12	19.01	18.93	18.33	---	17.87
15	17.52	17.63	18.24	18.71	18.93	19.15	19.19	18.94	18.88	18.24	---	17.90
20	17.57	17.60	18.24	18.80	18.97	19.22	19.16	18.97	18.74	---	---	17.83
25	17.52	17.59	18.29	18.81	18.97	19.19	19.12	19.12	18.68	---	17.88	17.79
EOM	17.45	18.20	18.60	18.81	18.98	19.15	19.12	19.18	18.55	---	17.86	17.72

WTR YR 1991 MEAN 18.48 MAX 19.24 MIN 17.12

ILLINOIS RIVER BASIN

05516600 PRETTY LAKE NEAR PLYMOUTH

LOCATION.--Lat 41°19'39", long 86°22'15", in NW¼SE¼NE¼ sec. 11, T. 33 N., R. 1 E., Marshall County, Hydrologic Unit 07120001, the gage is on the north shore of the lake, 3.3 mi southwest of Plymouth.

SURFACE AREA.--97 acres.

DRAINAGE AREA.--0.85 mi².

PERIOD OF RECORD.--1954-66. 1989 to current year.

DATUM OF GAGE.--780.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A staff gage in one section is driven into the lake bed near house at 10099 Pretty Lake Trail.

ESTABLISHED LEGAL LEVEL.--7.36 ft gage datum or 787.36 ft above National Geodetic Vertical Datum of 1929 as decreed on July 16, 1965, by the Marshall County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by the banks. At times of very high water levels, water overflows the southeastern shore.

INLET AND OUTLET.--There are no inlets. There is no well-defined outlet.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 10.10 ft June 1, 1991; minimum stage, 4.90 ft Nov. 26, 27, 1964.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.91	9.22	---	---	---	---	---	---	10.07	9.20	8.80	8.68
10	9.18	9.28	---	---	---	---	---	---	10.02	9.38	8.82	8.61
15	9.22	9.23	---	---	---	---	---	---	9.78	9.27	8.76	8.64
20	9.24	---	---	---	---	---	---	---	9.56	9.12	8.87	8.53
25	9.19	---	---	---	---	---	---	---	9.32	8.96	8.79	8.46
EOM	9.14	---	---	---	---	---	---	---	9.24	8.82	8.74	8.41

WTR YR 1991 MEAN 9.09 MAX 10.10 MIN 8.08

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 mi².

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 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.37	7.69	7.43	7.54	7.43	7.38	7.38	7.47	7.36	7.19	7.01	7.27
10	8.47	7.38	7.37	7.42	7.37	7.33	7.35	7.44	7.29	7.20	7.12	7.21
15	7.48	7.32	7.40	7.41	7.35	7.36	8.12	7.36	7.27	7.16	7.08	7.23
20	7.39	7.30	7.34	7.48	7.55	7.38	7.62	7.39	7.23	7.12	7.39	7.16
25	7.30	7.29	7.34	7.35	7.38	7.45	7.56	7.45	7.21	7.07	7.24	7.17
EOM	7.29	7.54	8.35	7.31	7.35	7.39	7.52	7.59	7.23	7.01	7.30	7.17

WTR YR 1991 MEAN 7.37 MAX 9.02 MIN 6.99

WABASH RIVER BASIN

03330300 RIDINGER LAKE NEAR PIERCETON, IN

LOCATION.--Lat 41°15'07", long 85°39'34", in SW¼SW¼SE¼ sec.1, T.32 N., R.7 E., Kosciusko County, Hydrologic Unit 05120106 (NORTH WEBSTER, IN quadrangle). The gage is on the inlet channel, attached to the Adams Road bridge, 0.4 mi upstream from the lake and 4.4 mi northeast of Pierceton.

SURFACE AREA.--136 acres.

DRAINAGE AREA.--34.6 mi².

PERIOD OF RECORD.--1943 to current year.

DATUM OF GAGE.--840.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well attached to the right downstream wingwall of the bridge. An auxiliary staff gage in two sections is at the control dam.

ESTABLISHED LEGAL LEVEL.--3.12 ft gage datum or 843.12 ft above National Geodetic Vertical Datum of 1929, as decreed on April 11, 1949, by the Kosciusko County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete dam with a fixed crest and a sluice-way with a steel gate for controlling high water. The dam is located in the outlet, 300 ft downstream from the lake.

INLET AND OUTLET.--Grassy Creek flows through the lake, entering at the southwestern end. Grassy Creek is formed 1.5 mi upstream by the outlet of Robinson Lake and Cedar Lake Branch. Grassy Creek leaves the lake at the northwestern end and flows into Big Barbee Lake, 3.5 mi downstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 9.01 ft Feb. 24, 1985; minimum stage, 1.35 ft Jan. 17-19, 1944.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	3.51	4.22	3.18	3.42	3.04	2.91	2.90	2.92	2.94	2.54	2.50	2.49
10	6.34	3.07	2.90	2.99	2.89	2.78	2.96	2.77	2.72	2.52	2.51	2.50
15	3.56	2.86	3.09	3.28	2.82	2.87	3.39	2.76	2.66	2.51	2.49	2.52
20	3.22	2.78	2.96	3.16	3.09	3.05	3.69	2.70	2.59	2.49	2.52	2.48
25	2.89	2.77	3.23	2.97	2.84	2.89	3.19	3.03	2.55	2.48	2.48	2.52
EOM	2.80	3.06	6.65	2.82	2.81	2.86	2.97	4.00	2.68	2.48	2.56	2.52

WTR YR 1991 MEAN 2.95 MAX 7.45 MIN 2.48

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 October 18, 1949, by the Kosciusko County Circuit Court. All lakes in the Barbee Chain have the same established level and hence the same lake levels for the period of record. The lakes are as follows: Kuhn, Big Barbee, Little Barbee, Irish, Banning, Sechrist and Sawmill.

LAKE-LEVEL CONTROL.--The level of the lakes is controlled by a concrete dam with a fixed crest, located 600 ft upstream of the County Road 500 North bridge over the outlet of Sawmill Lake.

INLET AND OUTLET.--There are four inlets to the Barbee Chain. Grassy Creek flows into Big Barbee Lake at the south-eastern side. The outlet of Heron Lake flows into Kuhn Lake from the north. Puntney ditch enters Little Barbee Lake from the south. The outlet from Shoe Lake flows into Banning Lake on the northeastern shore. The outlet, Grassy Creek, leaves Sawmill Lake at the northwestern tip and flows into Tippecanoe Lake 1.7 mi downstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 10.53 ft Mar. 20, 1982; minimum stage, 5.45 ft Jan. 29-31, Feb. 1-28, Mar. 1, 2, 1978.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.93	7.92	7.89	9.56	7.73	7.78	7.62	7.87	8.07	7.33	7.13	7.26
10	8.91	8.07	7.69	8.86	7.76	7.57	7.70	7.67	7.72	7.28	7.21	7.21
15	9.34	7.78	7.66	8.46	7.69	7.52	7.78	7.61	7.58	7.24	7.19	7.28
20	8.86	7.56	7.76	8.32	7.79	7.83	8.29	7.51	7.44	7.20	7.26	7.21
25	8.28	7.49	7.92	7.97	7.72	7.76	8.22	7.78	7.36	7.17	7.20	7.19
EOM	7.73	7.77	9.70	7.68	7.66	7.68	8.02	8.00	7.36	7.14	7.31	7.17

WTR YR 1991 MEAN 7.76 MAX 9.95 MIN 7.13

WABASH RIVER BASIN

03331120 SHERBURN LAKE NEAR PIERCETON, IN

LOCATION.--Lat 41°09'40", long 85°44'43", in SE¼SE¼SE¼ sec.4, T.31 N., R.7 E., Kosciusko County, Hydrologic Unit 05120106 (PIERCETON, IN quadrangle). The gage is at the extreme northern end of the lake on the outlet channel just south of County Road 500 South, 3.4 mi southwest of Pierceton.

SURFACE AREA.--15 acres.

DRAINAGE AREA.--5.51 mi².

PERIOD OF RECORD.--1954 to current year. (Formerly published as Johnson Lake near Pierceton.)

DATUM OF GAGE.--870.00 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1980, the datum of the gage was 880.00 ft. All levels listed below are at the present datum.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage is driven into the lake bed just south of the western lobe of the lake, 400 ft south of County Road 500 South on the first drive west of the outlet.

ESTABLISHED LEGAL LEVEL.--11.00 ft gage datum or 881.00 ft above National Geodetic Vertical Datum of 1929 as decreed on December 19, 1974, by the Kosciusko County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by the invert of the culvert under the first east-west road north of the lake.

INLET AND OUTLET.--The one inlet flows from Sellers Lake 0.35 mi upstream. The outlet flows from the northern shore through Wyland ditch and into Winona Lake 6.7 mi downstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 15.34 ft Dec. 30, 1990; minimum stage, 9.20 ft Sept. 14-18, 1983.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	11.55	12.08	12.15	---	11.32	11.50	10.83	10.80	10.42	10.14	9.87	9.72
10	13.95	11.97	11.49	---	11.41	10.96	10.94	10.50	10.00	10.12	9.95	9.66
15	11.88	11.35	11.33	11.81	11.14	10.75	11.16	10.26	9.97	9.95	9.93	9.69
20	11.41	11.03	11.43	12.03	11.64	11.48	11.91	10.15	9.93	9.85	9.89	9.62
25	11.01	10.89	11.75	11.47	11.38	10.93	11.32	10.55	9.82	9.82	9.78	9.61
EOM	10.93	11.74	---	11.05	11.20	10.91	10.86	10.88	9.91	9.85	9.79	9.59

WTR YR 1991 MEAN 10.80 MAX 15.34 MIN 9.59

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 Shipsewana.

SURFACE AREA.--202 acres.

DRAINAGE AREA.--6.74 mi².

PERIOD OF RECORD.--1951 to current year.

DATUM OF GAGE.--850.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage is attached to a wingwall of the control dam at the extreme eastern end of the lake.

ESTABLISHED LEGAL LEVEL.--2.04 ft gage datum or 852.04 ft above National Geodetic Vertical Datum of 1929 as decreed on March 8, 1956, by the Lagrange County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a sheet piling dam with a fixed crest at three elevations.

INLET AND OUTLET.--The principal inlet enters on the southern shore from Cotton Lake 2.0 mi upstream. Another small ditch enters on the western shore. The outlet is on the extreme eastern tip of the lake and flows to the northeast through Page ditch, which empties into Pigeon River, 6.1 mi downstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 3.33 ft Mar. 20, 1982; minimum stage, 1.39 ft Sept. 19-22, 1955.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	2.39	2.63	2.56	2.86	2.63	2.63	2.48	2.51	2.37	2.30	2.11	2.19
10	2.77	2.55	2.50	2.67	2.62	2.58	2.45	2.45	2.31	2.26	2.19	2.17
15	2.70	2.48	2.52	2.58	2.62	2.49	2.52	2.39	2.28	2.26	2.14	2.32
20	2.61	2.44	2.48	2.64	2.62	2.49	2.59	2.36	2.21	2.19	2.27	2.21
25	2.50	2.45	2.50	2.63	2.62	2.45	2.62	2.42	2.15	2.13	2.19	2.19
EOM	2.44	2.54	2.97	2.63	2.62	2.47	2.58	2.46	2.17	2.11	2.17	2.16

WTR YR 1991 MEAN 2.44 MAX 2.97 MIN 2.09

WABASH RIVER BASIN

03330380 SHOE LAKE NEAR OSWEGO, IN

LOCATION.--Lat 41°18'32", long 85°45'10", in SE¼SW¼SE¼ sec.18, T.33 N., R.7 E., Kosciusko County, Hydrologic Unit 05120106 (LEESBURG, IN quadrangle). The gage is on the extreme western end of the lake on County Road 475 East, 2.0 mi southeast of Oswego.

SURFACE AREA.--40 acres.

DRAINAGE AREA.--0.34 mi².

PERIOD OF RECORD.--1946-52, 1972-74, 1977 to current year.

DATUM OF GAGE.--830.00 ft above National Geodetic Vertical Datum of 1929. Prior to 1972, the datum of the gage was 840.00 ft above National Geodetic Vertical Datum of 1929. All levels listed below are at the present datum.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well.

ESTABLISHED LEGAL LEVEL.--11.57 ft gage datum or 841.57 ft above National Geodetic Vertical Datum of 1929 as decreed on October 18, 1948, by the Kosciusko County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by removable boards placed in wooden support posts in the outlet channel, upstream of the culvert under County Road 450 North.

INLET AND OUTLET.--There is no inlet except for small drainage ditches. The outlet leaves the lake at the southeastern end and flows into Banning Lake 0.3 mi downstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 12.95 ft Dec. 13-15, 1972; minimum stage, 10.50 ft Oct. 15, 16, 1988.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	12.09	12.32	12.27	12.49	12.43	12.34	12.21	12.25	12.26	11.92	11.43	11.23
10	12.34	12.27	12.24	12.45	12.40	12.27	12.21	12.20	12.19	11.84	11.45	11.15
15	12.26	12.25	12.26	12.45	12.40	12.27	12.24	12.17	12.21	11.77	11.38	11.16
20	12.24	12.21	12.24	12.43	12.39	12.28	12.29	12.12	12.15	11.68	11.47	11.05
25	12.20	12.20	12.27	12.40	12.34	12.26	12.29	12.23	12.06	11.57	11.39	10.99
EOM	12.17	12.24	12.53	12.42	12.34	12.23	12.25	12.43	12.00	11.47	11.31	10.90

WTR YR 1991 MEAN 12.06 MAX 12.56 MIN 10.90

WABASH RIVER BASIN

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 mi².

PERIOD OF RECORD.--1943-74, 1976-78, 1980 to current year.

DATUM OF GAGE.--900.19 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage in one section is attached to the concrete head wall at the outlet.

ESTABLISHED LEGAL LEVEL.--7.04 ft gage datum or 907.04 ft above National Geodetic Vertical Datum of 1929 as decreed on May 22, 1949, by the Whitley County Circuit Court. Minor errors were subsequently discovered in the establishment of the datum of the gage (see "DATUM OF GAGE") and the correct elevation of the legal level should be 7.04 ft gage datum or 907.23 ft above National Geodetic Vertical Datum of 1929.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete dam in the outlet channel 300 ft downstream of the lake.

INLET AND OUTLET.--A ditch from Catfish Lake, 650 ft upstream, enters at the extreme western end of the lake. Two small ditches enter on the southern shore. The outlet is a dredged channel at the eastern edge of the lake that empties into Round Lake 930 ft downstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 8.26 ft Dec. 31, 1990; minimum stage, 5.44 ft Dec. 9-11, 23-30, 1944.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.01	7.23	7.24	7.53	7.18	7.05	7.05	7.20	7.44	7.03	6.66	6.47
10	7.85	7.17	7.18	7.43	7.10	6.97	7.13	7.11	7.20	6.95	6.67	6.42
15	7.42	7.06	7.23	7.22	7.10	6.96	7.15	7.07	7.11	6.86	6.61	6.51
20	7.23	6.96	7.22	7.19	7.10	7.07	7.38	6.96	7.04	6.77	6.65	6.42
25	7.07	6.93	7.36	7.18	7.15	7.06	7.36	7.14	6.94	6.78	6.59	6.36
EOM	6.95	7.09	8.26	7.18	7.15	7.08	7.29	7.70	7.07	6.66	6.54	6.28

WTR YR 1991 MEAN 7.04 MAX 8.26 MIN 6.28

WABASH RIVER BASIN

03328350 SILVER LAKE AT SILVER LAKE, IN

LOCATION.--Lat 41°04'49", long 85°54'29", in SE¼SE¼NE¼ sec.1, T.30 N., R.5 E., Kosciusko County, Hydrologic Unit 05120104 (SILVER LAKE, IN quadrangle). The gage is located at the outlet channel on the west side of the lake, approximately 30 feet above the control structure and 1.1 mi northwest of the town of Silver Lake.

SURFACE AREA.--102 acres.

DRAINAGE AREA.--6.31 mi².

PERIOD OF RECORD.--1947 to current year.

DATUM OF GAGE.--859.85 ft above National Geodetic Vertical Datum of 1929, as corrected on the basis of levels of Indiana Department of Natural Resources, 1974.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage in one section is attached to the dam.

ESTABLISHED LEGAL LEVEL.--1.73 ft gage datum or 861.73 ft above National Geodetic Vertical Datum of 1929 as decreed on September 20, 1948, by the Kosciusko County Circuit Court. Minor errors were subsequently discovered in the establishment of the datum of the gage (see "DATUM OF GAGE") and the correct elevation of the legal level should be 1.73 ft gage datum or 861.58 ft above National Geodetic Vertical Datum of 1929. North Little Lake at Silver Lake has the same established level and hence the same lake levels for the period of record.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a steel sheet piling dam with a fixed crest.

INLET AND OUTLET.--The outlet from North Little Lake enters from the north and two ditches enter from the east and southeast. The outlet leaves from the western side and flows into South Little Lake, then into Silver Creek, which joins Eel River 12 mi downstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 3.80 ft Dec. 10, 1966; minimum stage, -0.20 ft Sept. 21, 1959.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	1.88	1.71	---	1.75	1.61	1.62	1.66	1.57	1.40	1.19	1.37
10	---	1.64	1.61	---	1.63	1.55	1.59	1.56	1.49	1.50	1.25	1.31
15	---	1.57	1.66	1.71	1.60	1.56	1.74	1.52	1.57	1.44	1.21	1.32
20	---	1.56	1.62	1.74	1.70	1.69	1.78	1.50	1.50	1.38	1.38	1.24
25	---	1.54	---	1.74	1.60	1.62	1.67	1.52	1.46	1.28	1.36	1.20
EOM	1.54	1.68	---	1.74	1.57	1.60	1.59	1.88	1.41	1.22	1.33	1.14

WTR YR 1991 MEAN 1.53 MAX 1.91 MIN 1.14

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 mi².

PERIOD OF RECORD.--1946 to current year.

DATUM OF GAGE.--770.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well.

ESTABLISHED LEGAL LEVEL.--2.19 ft gage datum or 772.19 ft above National Geodetic Vertical Datum of 1929 as decreed on September 25, 1950, by the Elkhart County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by the outlet channel.

INLET AND OUTLET.--Two small drainage ditches enter the lake on the eastern shore. The outlet, Osolo Township ditch, flows from the lake at the southeastern tip and into the St. Joseph River, 4.0 mi downstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 3.42 ft Feb. 24, 1985; minimum stage, 1.36 ft Sept. 7, 1946.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	2.74	2.97	2.93	2.97	2.94	2.92	2.91	2.97	2.85	2.65	---	---
10	2.97	2.87	2.90	2.93	2.92	2.88	2.87	2.94	2.81	---	---	---
15	2.87	2.85	2.90	2.94	2.97	2.87	2.97	2.90	2.81	---	---	---
20	2.85	2.84	2.89	2.95	2.95	2.90	2.94	2.83	2.75	---	---	---
25	---	2.83	2.91	2.93	2.92	2.89	2.96	2.94	2.68	---	---	---
EOM	---	2.96	3.04	2.94	2.92	2.89	2.95	3.03	2.63	---	---	---

WTR YR 1991 MEAN 2.89 MAX 3.16 MIN 2.63

STREAMS TRIBUTARY TO LAKE MICHIGAN

04100300 SKINNER LAKE NEAR ALBION, IN

LOCATION.--Lat 41°24'12", long 85°22'37", in SE¼SE¼NW¼ sec.16, T.34 N., R.10 E., Noble County, Hydrologic Unit 04050001 (ALBION, IN quadrangle). The gage is on the upstream side of the bridge over the outlet channel on the northwest lobe of the lake, and 2.5 mi northeast of Albion.

SURFACE AREA.--125 acres.

DRAINAGE AREA.--14.0 mi².

PERIOD OF RECORD.--1945-72, 1976 to current year.

DATUM OF GAGE.--920.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage is driven into the channel bed at the same site.

ESTABLISHED LEGAL LEVEL.--7.74 ft gage datum or 927.74 ft above National Geodetic Vertical Datum of 1929, as decreed on August 31, 1955, by the Noble County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a steel sheet piling dam with a fixed crest.

INLET AND OUTLET.--Rimmell Branch enters the lake on the southern shore, a small ditch enters on the southeast tip, and the outlet channel of Sweet Lake flows into the lake from the northeast. The outlet, Croft ditch, flows from the lake on the south shore of the northwest lobe, and into the South Branch of the Elkhart River 5.6 mi downstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 12.60 ft Apr. 5, 1950; minimum stage, 6.14 ft Oct. 16, 17, 1946.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.11	8.54	8.14	8.25	8.12	8.02	7.96	7.97	8.13	7.84	7.75	7.67
10	10.28	8.01	7.96	7.98	7.99	7.93	8.02	7.90	7.87	7.76	7.76	7.66
15	8.20	7.92	8.03	8.17	7.91	7.94	8.12	7.85	7.82	7.74	7.73	7.76
20	8.03	7.88	8.02	8.11	8.16	8.01	8.58	7.83	7.79	7.73	7.78	7.70
25	7.93	7.88	8.14	8.00	7.95	8.00	8.18	7.90	7.76	7.71	7.74	7.71
EOM	7.88	8.03	11.44	8.00	7.92	7.93	8.06	9.28	7.89	7.74	7.73	7.67

WTR YR 1991 MEAN 8.03 MAX 11.57 MIN 7.65

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 mi².

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 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	2.60	2.72	2.81	3.97	2.28	2.46	2.16	2.28	3.34	1.89	1.58	1.35
10	4.68	2.88	2.35	2.94	2.28	2.10	2.50	2.11	2.44	1.60	1.49	1.42
15	3.90	2.27	2.32	2.67	2.16	2.08	2.61	1.98	1.96	1.43	1.39	1.56
20	3.18	2.06	2.47	2.81	2.56	2.54	3.42	1.79	1.69	1.35	1.41	1.57
25	2.54	2.00	2.72	2.32	2.28	2.31	3.10	2.21	1.52	1.65	1.36	1.65
EOM	2.08	2.51	5.51	2.11	2.13	2.30	2.77	3.32	1.72	1.44	1.33	1.71

WTR YR 1991 MEAN 2.28 MAX 5.51 MIN 1.33

STREAMS TRIBUTARY TO LAKE MICHIGAN

04099780 STONE LAKE NEAR SCOTT, IN

LOCATION.--Lat 41°44'32", long 85°39'03", in SE¼SE¼SW¼ sec.18, T.38 N., R.8 E., Lagrange County, Hydrologic Unit 04050001 (MIDDLEBURY, IN quadrangle). The gage is on the southeast shore of the lake approximately 200 ft west of the intersection of County Road 1150 West and the lake access road, and 5.4 mi northeast of Middlebury.

SURFACE AREA.--152 acres.

DRAINAGE AREA.--1.51 mi².

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 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.09	8.40	8.63	8.83	8.68	8.92	8.89	8.99	8.94	8.74	8.34	8.40
10	8.34	8.37	8.62	8.78	8.71	8.89	8.88	8.95	8.89	8.70	8.42	8.33
15	8.34	8.35	8.64	8.78	8.83	8.85	8.95	8.92	8.86	8.63	8.30	8.28
20	8.34	8.34	8.67	8.76	8.88	8.86	9.00	8.92	8.81	8.56	8.50	8.32
25	8.30	8.33	8.69	8.71	8.87	8.88	9.01	8.95	8.72	8.50	8.45	8.31
EOM	8.25	8.58	8.90	8.69	8.88	8.89	9.00	9.09	8.70	8.42	8.39	8.28

WTR YR 1991 MEAN 8.65 MAX 9.09 MIN 8.02

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. All levels listed below are at the present datum.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage is attached to the north downstream wall of the footbridge.

ESTABLISHED LEGAL LEVEL.--9.20 ft present gage datum or 916.20 ft above National Geodetic Vertical Datum of 1929 as decreed on June 14, 1951, by the Noble County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete dam with movable gates.

INLET AND OUTLET.--Barr Lake, 0.2 mi upstream, empties into Sylvan Lake on the southeast shore of the northwest lobe. Oviatt ditch and Henderson Lake ditch both enter the lake on the extreme eastern end. The outlet flows from the lake at the western tip, into Jones Lake 2.8 mi downstream and eventually into the North Branch of the Elkhart River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 10.76 ft Feb. 25 1985; minimum stage, 2.72 ft Nov. 8, 1979.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.48	6.66	6.64	7.09	6.55	6.66	6.52	6.66	7.06	6.52	6.29	6.22
10	7.07	6.72	6.55	6.76	6.55	6.54	6.57	6.54	6.61	6.37	6.33	6.22
15	6.94	6.56	6.57	6.76	6.53	6.49	6.63	6.43	6.50	6.30	6.25	6.30
20	6.68	6.46	6.62	6.77	6.63	6.50	7.02	6.41	6.38	6.26	6.29	6.21
25	6.53	6.43	6.74	6.68	6.57	6.53	6.95	6.46	6.29	6.21	6.24	6.21
EOM	6.42	6.57	7.58	6.52	6.54	6.58	6.80	7.24	6.52	6.22	6.25	6.20

WTR YR 1991 MEAN 6.55 MAX 7.61 MIN 6.19

STREAMS TRIBUTARY TO LAKE MICHIGAN

04100460 SYRACUSE LAKE AT SYRACUSE, IN

LOCATION.--Lat 41°25'26", long 85°44'59", in SW¼SW¼ sec.5, T.34 N., R.7 E., Kosciusko County, Hydrologic Unit 04050001 (LAKE WAWASEE, IN quadrangle). The gage is at the southwestern end of the lake, on the south abutment of the dam, and just west of the State Road 13 bridge in the town of Syracuse.

SURFACE AREA.--414 acres.

DRAINAGE AREA.--38.2 mi².

PERIOD OF RECORD.--1943 to current year.

DATUM OF GAGE.--849.85 ft above National Geodetic Vertical Datum of 1929 as corrected on the basis of levels of Indiana Department of Natural Resources, 1973-74.

GAGE.--A water-stage recorder is installed in a concrete shelter over a stilling well in the south abutment of the control structure. Two auxiliary staff gages are at the site. One is attached to the upstream side of the south abutment and the other is bolted to the seawall just west of the bridge over the outlet.

ESTABLISHED LEGAL LEVEL.--8.87 ft gage datum or 858.87 ft above National Geodetic Vertical Datum of 1929 as decreed on September 20, 1948, by the Kosciusko County Circuit Court. Minor errors were subsequently discovered in the establishment of the datum of the gage (see "DATUM OF GAGE") and the correct elevation of the legal level should be 8.87 ft gage datum or 858.72 ft above National Geodetic Vertical Datum of 1929.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete dam with two steel lift gates.

INLET AND OUTLET.--The one inlet is the outlet channel from Lake Wawasee on the southern shore of the lake. The outlet, Turkey Creek, flows from the lake at the southwest end and eventually into the Elkhart River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 10.15 ft Jan. 27, 28, 1950; minimum stage, 7.00 ft Nov. 19-21, 1953.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	8.84	8.68	8.57	8.83	8.40	8.51	8.70	9.03	8.74	8.53	8.57
10	---	8.85	8.62	8.88	8.71	8.25	8.52	8.69	8.94	8.69	8.57	8.52
15	---	8.78	8.57	9.20	8.62	8.37	8.54	8.68	8.87	8.62	8.53	8.65
20	---	8.69	8.57	9.18	8.53	8.46	8.73	8.73	8.89	8.55	8.59	8.56
25	---	8.60	8.58	9.11	8.43	8.49	8.84	8.88	8.82	8.56	8.56	8.53
EOM	---	8.64	8.57	9.11	8.39	8.52	8.79	9.21	8.79	8.52	8.55	8.47

WTR YR 1991 MEAN 8.68 MAX 9.21 MIN 8.25

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 October 18, 1949, by the Kosciusko County Circuit Court. James Lake at Oswego and Oswego Lake at Oswego have the same established level and hence the same lake levels for the period of record.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete dam with multiple slide gates on the outlet channel of the lake.

INLET AND OUTLET.--The lake has two principal inlets. The Tippecanoe River flows from Webster Lake, enters James Lake, and flows into Tippecanoe Lake on the eastern side. The outlet from the Barbee Chain of Lakes enters from the southeast. The outlet, the Tippecanoe River, leaves the lake on the southwestern side.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 9.43 ft May 21, 1943; minimum stage, 4.90 ft Feb. 13-17, 1963.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.73	---	6.81	8.80	6.66	6.72	6.58	7.20	7.37	6.51	6.07	6.52
10	6.77	---	6.84	8.28	6.57	6.66	6.74	6.85	7.12	6.45	6.30	6.51
15	7.93	---	6.73	7.79	6.58	6.56	6.81	6.60	6.67	6.43	6.35	6.55
20	---	---	6.73	7.65	6.58	6.54	7.27	6.56	6.67	6.34	6.47	6.40
25	---	6.64	6.99	7.54	6.64	6.78	7.58	6.66	6.61	6.16	6.47	6.33
EOM	---	6.62	8.18	7.02	6.60	6.84	7.50	7.13	6.58	6.02	6.49	6.24

WTR YR 1991 MEAN 6.82 MAX 8.87 MIN 6.01

STREAMS TRIBUTARY TO LAKE MICHIGAN

04100320 UPPER LONG LAKE NEAR WOLFLAKE, IN

LOCATION.--Lat 41°21'33", long 85°29'09", in NE¼NE¼SE¼ sec.33, T.34 N., R.9 E., Noble County, Hydrologic Unit 04050001 (MERRIAM, IN quadrangle). The gage is on the northeast shore of the lake, at the northernmost boat slip, and 1.8 mi north-northeast of the town of Wolf Lake.

SURFACE AREA.--86 acres.

DRAINAGE AREA.--2.08 mi².

PERIOD OF RECORD.--1956 to current year.

DATUM OF GAGE.--880.00 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage is also located in the boat slip.

ESTABLISHED LEGAL LEVEL.--11.19 ft gage datum or 891.19 ft above National Geodetic Vertical Datum of 1929 as decreed on February 20, 1968, by Noble County Circuit Court.

LAKE-LEVEL CONTROL.--The lake level is controlled by a fixed-sill concrete dam.

INLET AND OUTLET.--There is one inlet that enters the lake from the eastern side. The outlet flows to the north through Dollar Lake, and eventually into the South Branch Elkhart River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 13.40 ft June 27, 1968; minimum stage, 9.95 ft May 11, 1970.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	11.70	11.80	11.61	11.70	11.53	11.65	11.57	11.74	11.71	11.51	11.43	---
10	12.68	11.59	11.51	11.58	11.52	11.54	11.60	11.70	11.54	11.45	11.47	---
15	12.13	11.49	11.53	11.63	11.52	11.53	11.75	11.71	11.50	11.43	---	---
20	11.87	11.46	11.54	11.62	11.63	11.60	12.10	11.64	11.45	11.41	---	---
25	11.58	11.45	11.59	11.53	11.56	11.61	11.83	11.83	11.41	11.44	---	---
EOM	11.47	11.53	12.70	11.51	11.56	11.57	11.75	12.10	11.53	11.42	---	---

WTR YR 1991 MEAN 11.62 MAX 12.70 MIN 11.40

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 mi².

PERIOD OF RECORD.--1958 to current year.

DATUM OF GAGE.--760.74 ft above National Geodetic Vertical Datum of 1929.

GAGE.--A water-stage recorder installed in an aluminum shelter over a 12-inch diameter stilling well.

ESTABLISHED LEGAL LEVEL.--Not established.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete spillway dam with a movable gate.

INLET AND OUTLET.--The inlets are Laughery Creek, Falling Timber Creek, and Cedar Creek. The outlet is Laughery Creek, which flows southeasterly and empties into the Ohio River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 36.43 ft Jan. 21, 1959, as determined by the U.S. Geological Survey from high-water marks during an indirect measurement of discharge; minimum stage, 18.05 ft Apr. 12, 1970.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	29.41	29.25	29.52	29.39	29.74	29.32	29.42	29.33	29.19	28.99	28.73	29.54
10	30.10	29.55	29.32	29.50	29.55	29.30	29.82	29.32	29.16	29.04	29.14	29.16
15	29.28	29.29	30.22	29.51	29.60	29.64	30.30	29.27	29.15	29.13	29.05	29.23
20	29.41	29.26	29.70	29.43	29.75	29.61	29.53	29.26	29.14	29.08	29.35	29.13
25	29.33	29.38	29.60	29.32	29.38	29.58	29.36	29.24	29.07	28.95	29.12	29.12
EOM	29.26	29.41	30.10	29.64	29.34	29.43	29.34	29.22	29.08	28.76	29.08	29.10

WTR YR 1991 MEAN 29.45 MAX 32.90 MIN 28.73

STREAMS TRIBUTARY TO LAKE MICHIGAN

04100220 WALDRON LAKE NEAR COSPERVILLE, IN

LOCATION.--Lat 41°29'34", long 85°26'55", in SE¼NW¼NE¼ sec.14, T.35 N., R.9 E., Noble County, Hydrologic Unit 04050001 (ALBION, IN quadrangle). The gage is on a dredged channel at the public fishing site west of County Road 125 West at Dukes Bridge, and 6.8 mi northwest of Albion.

SURFACE AREA.--216 acres.

DRAINAGE AREA.--134 mi².

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 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.59	7.12	6.95	8.75	6.62	6.83	6.37	7.43	8.50	6.80	5.85	5.88
10	7.77	7.41	6.83	8.32	6.71	6.64	6.38	7.16	7.80	6.48	5.93	5.82
15	8.35	7.14	6.69	8.10	6.54	6.40	6.49	6.90	7.21	6.17	5.80	6.12
20	8.14	6.84	6.80	7.54	6.74	6.39	7.35	6.77	6.67	5.81	5.88	5.85
25	7.66	6.62	6.94	7.09	6.70	6.35	7.70	6.92	6.13	5.67	5.79	5.77
EOM	7.08	6.79	8.74	6.51	6.57	6.47	7.71	7.79	6.00	5.75	6.02	5.51

WTR YR 1991 MEAN 6.80 MAX 8.86 MIN 5.51

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 mi².

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 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.34	9.66	10.32	---	---	10.18	9.95	10.14	10.50	9.56	9.08	9.00
10	9.88	9.70	10.08	---	---	10.06	9.95	10.20	10.40	9.68	9.18	8.98
15	9.86	9.60	9.82	---	---	10.02	10.15	10.04	10.00	9.58	9.10	8.94
20	9.76	9.48	9.78	---	---	10.11	10.35	10.08	9.90	9.46	9.10	8.85
25	9.62	9.42	9.74	---	---	10.04	10.30	10.50	9.84	9.36	9.40	8.80
EOM	9.46	10.60	10.24	---	---	10.00	10.18	10.70	9.72	9.14	8.60	8.90

WTR YR 1991 MEAN 9.73 MAX 10.70 MIN 8.60

WABASH RIVER BASIN

03330240 WEBSTER LAKE AT NORTH WEBSTER, IN

LOCATION.--Lat 41°19'09", long 85°41'20", in NE¼SW¼NW¼ sec.14, T.33 N., R.7 E., Kosciusko County, Hydrologic Unit 05120106 (NORTH WEBSTER, IN quadrangle). The gage is on the southwest side of the lake at the outlet, 0.3 mi northeast of the intersection of State Road 13 and County Road 550 North and approximately 0.6 mi southeast of the center of North Webster.

SURFACE AREA.--774 acres.

DRAINAGE AREA.--49.2 mi².

PERIOD OF RECORD.--1943 to current year.

DATUM OF GAGE.--839.93 ft above National Geodetic Vertical Datum of 1929, as corrected on the basis of levels of Indiana Department of Natural Resources, 1973-74.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An 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.--12.75 ft gage datum or 852.75 ft above National Geodetic Vertical Datum of 1929 as decreed July 2, 1945, by the Kosciusko County Circuit Court. Minor errors were subsequently discovered in the establishment of the datum of the gage (see "DATUM OF GAGE") and the correct elevation of the legal level should be 12.75 ft. gage datum or 852.68 ft above National Geodetic Vertical Datum of 1929.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete notch dam with seven adjustable gates at the head of the outlet channel. North of this dam is another which used to serve as a mill race. This dam has one metal gate.

INLET AND OUTLET.--The Tippecanoe River flows through Webster Lake, entering at the southeast end and leaving at the southwest side. The Tippecanoe River enters James Lake, 2.1 mi downstream.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 15.15 ft Feb. 11, 1984; minimum stage, 9.79 ft (during repair of the dam) Oct. 5, 1962.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	13.31	13.07	12.94	13.94	12.52	12.78	12.93	12.99	13.55	13.25	13.21	12.92
10	13.59	12.95	13.15	13.18	12.81	12.70	12.97	13.01	13.14	13.25	13.14	12.78
15	13.79	12.91	13.12	12.94	12.65	12.54	12.95	13.19	13.17	13.20	13.04	12.78
20	13.36	12.81	13.22	13.32	12.60	12.91	13.41	13.10	13.20	13.10	13.09	12.75
25	13.10	12.50	13.25	13.08	12.70	12.89	13.48	13.35	13.07	13.22	13.02	12.78
EOM	12.99	12.68	14.04	12.57	12.63	12.77	13.11	13.45	13.14	13.20	13.07	12.77

WTR YR 1991 MEAN 13.06 MAX 14.19 MIN 12.40

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, and eventually into the Kankakee River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 8.51 ft Jan. 8, 9, 10, 1989; minimum stage, 4.94 ft Sept. 30, 1991.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.88	7.30	7.07	7.77	7.06	6.99	6.98	---	6.76	5.92	5.12	5.08
10	7.44	7.00	6.99	7.77	6.96	6.91	6.96	---	6.57	5.82	5.30	4.99
15	7.05	6.91	7.00	6.98	6.97	6.91	7.33	---	6.49	5.68	5.19	5.14
20	7.01	6.87	6.95	7.04	7.16	6.94	---	---	6.32	5.50	5.35	5.05
25	6.93	6.89	7.01	7.04	6.97	6.99	---	---	6.19	5.37	5.16	5.05
EOM	6.85	7.13	7.78	7.03	6.95	6.97	---	7.06	6.05	5.22	5.01	4.94

WTR YR 1991 MEAN 6.50 MAX 7.93 MIN 4.94

WABASH RIVER BASIN

03331140 WINONA LAKE AT WARSAW, IN

LOCATION.--Lat 41°13'34", long 85°50'46", in NW¼NE¼SE¼ sec.17, T.32 N., R.6 E., Kosciusko County, Hydrologic Unit 05120106 (WARSAW, IN quadrangle). The gage is on the western side of the lake, 20 ft east of the dam on the northern side of the outlet channel, 1.0 mi south of Warsaw.

SURFACE AREA.--562 acres.

DRAINAGE AREA.--32.1 mi².

PERIOD OF RECORD.--1943-78, 1980 to current year.

DATUM OF GAGE.--800.10 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 17, 1977, the datum of the gage was 810.10 ft above National Geodetic Vertical Datum of 1929 as corrected on the basis of levels of Indiana Department of Natural Resources, 1973-74. All levels listed below are at the present datum.

GAGE.--A water-stage recorder is installed in an aluminum shelter over a 15-inch diameter stilling well. An auxiliary staff gage is attached to the stilling well.

ESTABLISHED LEGAL LEVEL.--11.06 ft gage datum or 811.06 ft above National Geodetic Vertical Datum of 1929 as decreed on June 17, 1949, by the Kosciusko County Circuit Court. Minor errors were subsequently discovered in the establishment of the datum of the gage (see "DATUM OF GAGE") and the correct elevation of the legal level should be 11.06 ft gage datum or 811.16 ft above National Geodetic Vertical Datum of 1929.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete fixed-crest dam with steel lift gates.

INLET AND OUTLET.--There are three inlets to the lake. Wyland ditch enters on the eastern shore from Sherburn Lake 6.7 mi upstream. Keefer-Evans ditch enters on the southeastern shore and Paterson ditch on the southwestern shore. The outlet, Eagle Creek, flows from the western lobe of the lake into Walnut Creek 1.4 mi downstream, thence into the Tippecanoe River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 13.31 ft June 14, 1981; minimum stage, 9.40 ft Feb. 15, 1982.

LAKE LEVEL, IN FEET ABOVE GAGE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
24:00 VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	11.40	10.29	10.20	---	10.07	10.09	10.03	10.44	11.00	10.99	10.81	10.79
10	12.20	10.16	10.04	---	10.06	10.00	10.03	11.01	11.03	10.97	10.90	10.77
15	---	10.01	---	10.19	10.01	9.98	10.16	11.10	11.05	10.94	10.85	10.83
20	---	9.95	---	10.25	10.11	10.19	10.33	11.07	10.97	10.88	10.93	10.76
25	---	9.93	---	10.10	10.03	10.07	10.19	11.34	10.89	10.82	10.86	10.78
EOM	10.29	10.11	---	10.02	10.00	10.04	10.07	11.26	11.26	10.80	10.85	10.79

WTR YR 1991 MEAN 10.53 MAX 12.20 MIN 9.93

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

Station number	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	Baughner Lake near Washington Center	Noble	31.0	32	878.52	390	+	1945-51
03330220	Wilmot Pond at Wilmot	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	+	1946-
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	+	1946-
03330480	Tippicanoe 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	77	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-

RECORDS AVAILABLE ON LAKES--Continued

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Lakes in the Ohio River basin for which records are available--Continued

Station number	Lake	County	Drain-age (square miles)	Surface area (acres)	Established level*	Capacity (acre-feet)	Contour map available	Records available
WABASH RIVER BASIN--Continued								
03331160	Center Lake at Warsaw	Kosciusko	0.73	120	803.86	2,060	+	1945-
03331180	Palestine Lake at Palestine	Kosciusko	32.4	290	-----	1,170	+	1954-
03331200	Crystal Lake near Atwood	Kosciusko	.45	76	789.69	930	+	1945-51
03331220	Hoffman Lake at Atwood	Kosciusko	8.07	180	785.85	3,160	+	1945-53
03331240	Beaver Dam Lake near Silver Lake	Kosciusko	2.83	146	868.95	3,280	+	1947-53
03331260	Loon Lake near Silver Lake	Kosciusko	3.59	40	865.74	670	+	1947-53
03331280	McClures Lake near Silver Lake	Kosciusko	1.29	32	865.85	410	+	1945-52
03331300	Hill Lake near Silver Lake	Kosciusko	.85	67	871.50	1,300	+	1952-
03331320	Diamond Lake near Silver Lake	Kosciusko	3.92	79	-----	1,280	+	1954-
03331340	Yellow Creek Lake near Silver Lake	Kosciusko	11.1	151	860.50	4,730	+	1945-53
03331360	Rock Lake near Akron	Kosciusko	2.74	56	847.29	360	+	1946-66
03331370	Town Lake near Akron	Fulton	2.77	23	-----	220	+	1949-50
03331380	Lake Manitou at Rochester	Fulton	44.2	1,158	778.41	10,165	+	1943-
03331390	Zink Lake near Rochester	Fulton	1.11	19	810.68	-----	-	1952-55
03331400	Nyona Lake near Greenoak	Fulton	7.59	104	793.91	1,340	+	1946-
03331420	South Mud Lake near Fulton	Fulton	4.53	94	793.42	1,020	+	1946-66
03331438	King Lake near Delong	Fulton	1.98	18	-----	180	+	1971-
03331440	Maxinkuckee Lake at Culver	Marshall	13.7	1,864	733.12	45,600	+	1943-
03331460	Lost Lake near Culver	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
03371700	Ogle Lake near Nashville	Brown	1.03	20	-----	250	+	1963-71
								1954-

Lakes in the St. Lawrence River basin for which records are available

STREAMS TRIBUTARY TO LAKE MICHIGAN

04092500	Wolf Lake at Hammond ⁵	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	24	961.50	3,490	+	1954-69, 1971, 1976-
04097550	Lake George at Jamestown	Steuben	^a 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	^a 40.2	310	964.96	7,998	+	1943-49
04097660	Lake James at Lake James	Steuben	^a 47.8	1,034	964.96	33,585	+	1943-49
04097680	Jimmerson Lake at Nevada Mills ⁶	Steuben	^a 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	^a 17.3	332	954.25	10,140	+	1946-
04097960	Lime Lake at Panama	Steuben	^a 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	^a 35.2	61	988.24	930	+	1954-63
04099100	Fox Lake near Angola	Steuben	^a 1.25	142	1,018.83	3,150	+	1946-53
04099190	Pleasant Lake at Pleasant Lake	Steuben	^a 1.12	53	963.52	1,190	+	1946-66
04099200	Long Lake at Moonlight	Steuben	^a 67.9	92	-----	1,540	+	1946-
04099250	Bower Lake near Pleasant Lake	Steuben	^a 84.6	25	948.50	280	+	1946-71, 1976-
04099260	Golden Lake near Pleasant Lake	Steuben	^a 88.8	119	948.50	1,810	+	1946-71, 1976-
04099400	Silver Lake near Angola	Steuben	^a 3.79	238	959.40	2,540	+	1945-53
04099430	Bass Lake near Angola	Steuben	^a .39	61	979.68	450	+	1954-66
04099440	Howard Lake near Angola	Steuben	^a 3.90	27	977.34	130	+	1954-63
04099500	Hogback Lake near Angola	Steuben	^a 103	146	948.50	1,450	+	1946-
04099520	Otter Lake near Flint	Steuben	^a 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	^a 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	^a 6.74	202	852.04	1,350	+	1951-

RECORDS AVAILABLE ON LAKES--Continued

Lakes in the St. Lawrence River basin for which records are available

Station Number	Lake	County	Drain- age (square miles)	Surface area (acres)	Estab- lished level*	Capac- ity (acre- feet)	Contour map avail- able	Records avail- able
STREAMS TRIBUTARY TO LAKE MICHIGAN--Continued								
04099760	Fish Lake near Scott	Lagrange	^a 6.21	139	814.42	2,560	+	1954-73, 1976-
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	^a 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 Lake 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 near 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	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	Sacander 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	^a 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 ⁸	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	Papakeechee 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	^a 8.05	551	867.70	9,000	+	1945-
04100480	Wabee Lake near Milford	Kosciusko	^a 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--Continued

Station Number	Lake	County	Drainage (square miles)	Surface area (acres)	Established level*	Capacity (acre-feet)	Contour map available	Records available
ILLINOIS RIVER BASIN								
05514740	Saugany Lake near Rolling Prairie	LaPorte	^a 2.34	74	781.21	2,190	+	1946-50
05514741	Hudson Lake at Hudson Lake	LaPorte	7.92	432	763.09	5,060	+	1946-
05514750	North Chain Lake at Lydick	St. Joseph	^a 3.89	88	721.17	1,400	+	1946-53
05514760	South Chain Lake at Westfield	St. Joseph	^a 6.32	90	717.04	270	-	1946-53
05514770	Wharton Lake near South Bend	St. Joseph	^a 1.85	-----	-----	-----	-	1960-
05514900	Silver Lake near Rolling Prairie	LaPorte	1.72	54	795.20	-----	-	1946-66
05515200	Upper Fish Lake near Stillwell	LaPorte	^a 9.65	139	688.22	1,040	+	1946-53
05515210	Lower Fish Lake near Stillwell	LaPorte	^a 10.4	134	688.22	870	+	1946-53
05515220	Pine Lake at LaPorte	LaPorte	^a 10.7	564	796.20	-----	-	1946-75
05515230	Stone Lake at LaPorte	LaPorte	^a 10.7	140	796.20	-----	-	1980- 1946-75
05515240	Clear Lake at LaPorte	LaPorte	.65	106	798.20	760	+	1942-49, 1952-75
05515600	Koontz Lake at Koontz Lake	Starke	^a 6.25	346	714.56	3,170	+	1943-
05515800	Riddles Lake near Lakeville	St. Joseph	^a 11.7	77	817.50	640	+	1946-73, 1976-
05516200	Lake of the Woods near Bremen	Marshall	^a 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	^a 5.34	168	767.75	1,020	+	1945-53
05516900	Eagle Lake near Ober	Starke	^a 25.5	24	713.25	160	+	1946-53
05517100	Skitz Lake near Knox	Starke	-----	1,000	-----	-----	-	1949-53 ²
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 Same as Wolf Lake at Chicago, Illinois WRD District.⁶ Formerly published as Jimerson Lake at Nevada Mills.⁷ Formerly published as Sanford Lake near Cosperville.⁸ Formerly published as Duley Lake near Cromwell, and Druley Lake near Cromwell.^a Contains drainage area (5 percent or greater) that does not contribute directly to surface-water runoff.

OTHER LAKE MAPS AVAILABLE

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	Schlam 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	Muteer Lake	Lagrange	18	150
Bartley Lake	Noble	34	430	Miller Lake	Noble	11	160
Barton Lake	Steuben	94	1,340	Millers Lake	Noble	28	410
Bell Lake	Steuben	38	510	Mud Lake	Noble	8	70
Boner Lake	Kosciusko	40	370	Norman Lake	Noble	14	280
Bowen Lake	Noble	30	1,080	Pigeon Lake	Lagrange	61	1,160
Bristol Lake	Noble	27	740	Port Mitchell Lake	Noble	15	180
Buck Lake	Lagrange	18	150	Rainbow Lake	Lagrange	16	250
Center Lake	Steuben	46	390	Schockopee Lake	Noble	21	280
Cline Lake	Lagrange	20	350	Shock Lake	Kosciusko	37	1,210
Deer Lake	Noble	36	420	Smith Hole	Lagrange	2	10
Dock Lake	Noble	16	230	Still Lake	Lagrange	30	620
Eve Lake	Lagrange	31	670	Sweet Lake	Noble	16	210
Fish Lake	Steuben	59	750	Tamarack Lake	Noble	84	1,340
Hog Lake	LaPorte	59	690	Walters Lake	Steuben	53	550
Hog Lake	Steuben	48	570	Weir Lake	Lagrange	6	70
Lime Lake	Steuben	30	330	Wible Lake	Noble	49	650
Little Turkey Lake	Steuben	58	780	Williams Lake	Noble	46	1,070
Marl Lake	Noble	30	510	Wyland Lake	Kosciusko	6	100

STREAMS TRIBUTARY TO LAKE ERIE

Dunton Lake	DeKalb	21	340	Mirror Lake	Steuben	9	120
Handy Lake	Steuben	16	290	Terry Lake	DeKalb	17	160
Lake Anne	Steuben	17	280				

UPPER MISSISSIPPI RIVER BASIN

Cook Lake	Marshall	93	1,650	Gilbert Lake	Marshall	37	490
Dixon Lake	Marshall	33	480	Holem Lake	Marshall	40	390
Flat Lake	Marshall	26	210	Lawrence Lake	Marshall	69	1,580

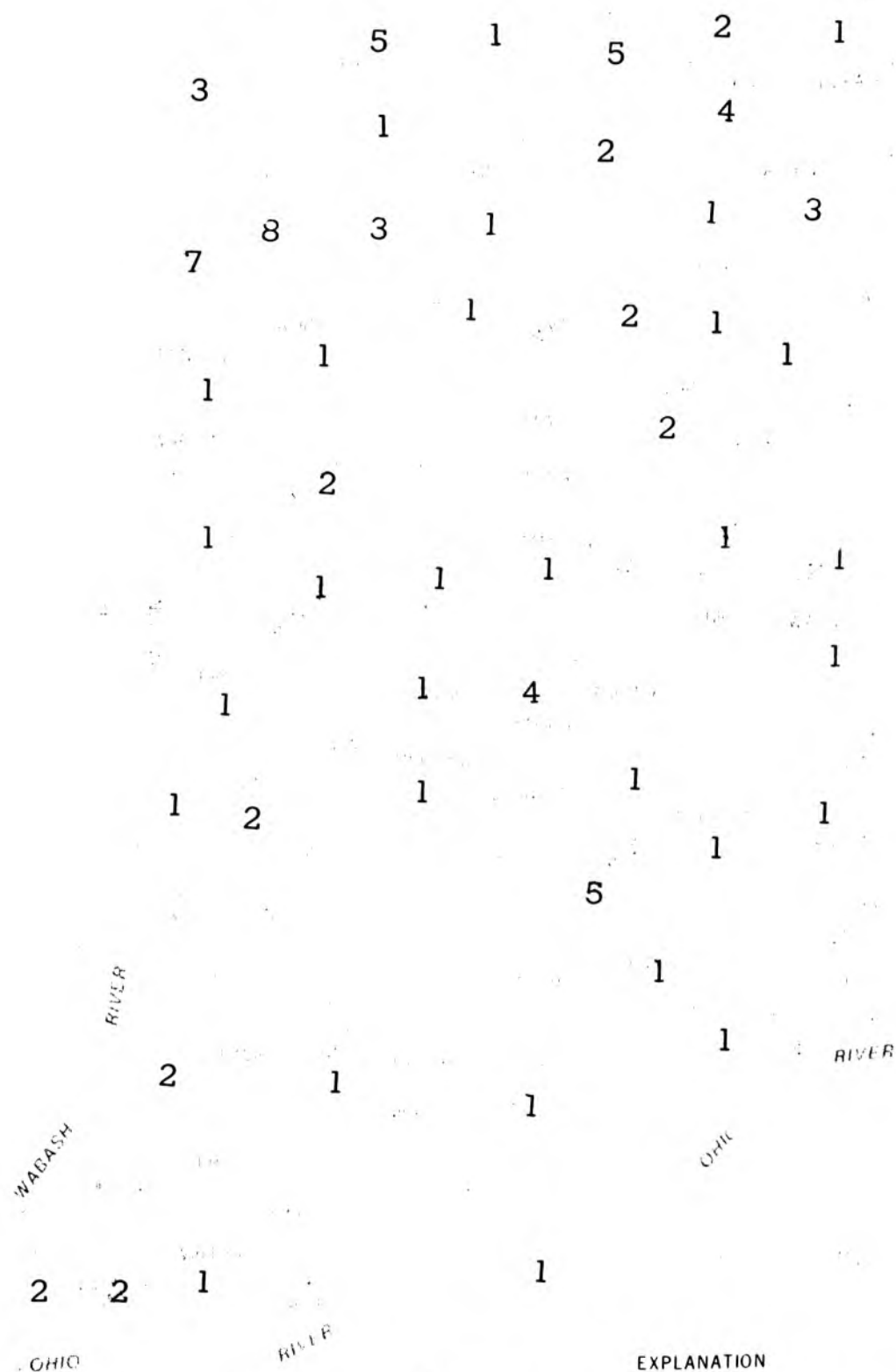


Figure 7.- Number of ground-water wells by county having 1991 water-level records.

ALLEN COUNTY

410426084495201. Local number, AL 5.

LOCATION.--Lat 41°04'26", long 84°49'52", in NW¼NE¼SE¼ sec.9, T.30 N., R.15 E., Allen County, Hydrologic Unit 04100005, 1.3 mi west of Edgerton.
 Owner: Noel Gerig.

AQUIFER.--Limestone of Salina Formation of Silurian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 4 in., depth 97 ft, cased to 40 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 760 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of floor of shelter, 0.10 ft above land-surface datum.

REMARKS.--Nearby quarry operations were shut down in 1980, and since that time water levels have been rising.

PERIOD OF RECORD.--July 1962 to December 1971, January 1973 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 10.04 ft below land-surface datum, July 8, 9, 1962; lowest, 38.41 ft below land-surface datum, May 4, 1967.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	15.11	14.49	14.93	14.96	14.68	13.95	14.51	14.10	14.22	14.02	14.37	14.37
10	15.31	14.86	14.99	15.10	14.51	14.46	14.40	14.37	14.25	14.04	14.11	14.72
15	15.18	15.11	14.64	14.48	14.33	14.78	14.18	14.26	14.13	14.17	14.13	14.58
20	15.16	15.05	14.88	14.36	14.70	14.39	14.45	14.39	14.18	14.50	14.06	14.90
25	15.16	14.64	15.14	14.99	14.79	14.62	14.44	14.14	14.12	14.13	14.48	14.37
EOM	15.07	15.06	15.06	14.75	14.30	14.73	14.10	14.17	14.27	14.19	14.40	14.66

WTR YR 1991 HIGH 13.75 MAR 6

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	15.72	15.17	15.59	15.52	15.09	14.52	14.94	14.74	14.69	14.67	14.75	14.83
10	15.95	15.34	15.36	15.55	14.96	14.85	15.18	14.51	14.76	14.55	14.53	15.21
15	15.87	15.41	15.21	15.02	15.16	15.15	14.65	14.79	14.88	14.95	14.20	15.16
20	15.60	15.16	15.46	14.76	15.00	14.89	14.95	14.89	14.86	14.90	14.28	15.39
25	15.58	15.21	15.54	15.38	15.20	15.03	15.01	14.28	14.80	14.51	15.04	15.10
EOM	15.48	15.63	15.64	15.39	15.07	15.19	14.57	14.77	14.81	14.82	14.87	15.27

WTR YR 1991 LOW 16.23 OCT 1

ALLEN COUNTY

410932084561101. Local number, AL 6.

LOCATION.--Lat 41°09'32", long 84°56'11", in SW¼SW¼NE¼ sec.10, T.31 N., R.14 E., Allen County, Hydrologic Unit 04100005, at the intersection of Ehle and Thimler Roads, 10 mi northeast of New Haven.
 Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 84 ft, cased to 81.5 ft, screened to 83.5 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 760 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of floor of shelter, 2.50 ft above land-surface datum.

REMARKS.--Water level affected by pumpage.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 7.90 ft below land-surface datum, Feb. 24, 1990; lowest, 14.77 ft below land-surface datum, Oct. 29, 1978.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	12.09	10.91	9.94	8.89	10.11	9.92	10.19	10.39	9.86	12.49	13.42	13.62
10	10.92	10.52	10.13	9.60	9.88	10.24	9.86	10.63	10.69	12.60	13.34	13.84
15	10.22	10.93	10.36	9.64	9.99	10.43	9.53	11.00	11.31	12.69	13.52	13.69
20	10.18	11.28	9.80	9.19	9.65	10.26	8.74	11.34	11.94	12.97	13.39	13.79
25	10.49	11.44	9.33	9.65	9.71	10.27	9.29	11.72	12.32	13.08	13.52	13.85
EOM	10.92	11.19	8.07	10.07	9.89	10.03	9.88	10.26	12.64	13.23	13.76	13.85

WTR YR 1991 HIGH 8.07 DEC 31

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	12.25	11.15	10.15	9.09	10.28	10.11	10.38	10.59	10.18	12.71	13.64	13.83
10	11.81	10.71	10.38	9.81	10.09	10.44	10.11	10.80	10.93	12.84	13.56	14.08
15	10.47	11.08	10.51	9.88	10.28	10.66	10.00	11.26	11.53	12.95	13.77	13.91
20	10.41	11.49	9.95	9.35	9.86	10.47	8.96	11.61	12.15	13.22	13.57	13.95
25	10.76	11.67	9.53	9.87	9.94	10.50	9.54	11.88	12.53	13.27	13.72	14.04
EOM	11.13	11.33	8.34	10.24	10.10	10.22	10.14	11.49	12.85	13.41	13.93	14.04

WTR YR 1991 LOW 14.14 SEP 23

ALLEN COUNTY

410335085190701. Local number, AL 8. (Formerly published as AL 7)
 LOCATION.--Lat 41°03'35", long 85°19'07", in SE¼SW¼SW¼ sec. 8, T.30N., R.11E., Allen County, Hydrologic Unit
 05120101, on Covington Road about 5 mi. west of Interstate Highway 69 on the northeast corner of the United
 Telephone Company property.
 Owner: U.S. Geological Survey.

AQUIFER.--Limestone.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 193 ft., cased to 173 ft., open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 850.60 ft (revised) above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of casing, 3.50 ft. above land-surface datum.

PERIOD OF RECORD.--July 1988 to current year. Records for WY1988, WY1989, WY1990 published as AL 7.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 55.70 ft below land-surface datum, April 26, 1989; lowest,
 68.47 ft. below land-surface datum, June 19, 1991.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	59.53	59.45	58.81	---	---	58.32	58.11	59.37	60.40	62.68	---	62.92
10	58.87	58.69	58.72	---	---	58.52	58.16	60.02	63.21	63.02	---	63.51
15	59.75	58.90	---	---	---	58.47	---	61.38	63.75	---	---	63.11
20	58.78	59.13	58.93	---	---	58.45	58.61	59.83	---	---	---	63.21
25	58.98	58.38	---	---	58.91	58.89	59.12	59.91	---	---	63.94	62.67
EOM	59.12	58.93	---	---	58.22	58.49	59.20	59.59	---	---	62.98	64.57

WTR YR 1991 HIGH 57.41 MAR 2

DAY	LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	60.63	60.56	59.87	---	---	59.47	59.10	61.03	62.21	66.04	---	64.60
10	59.46	60.08	60.26	---	---	60.07	59.21	61.36	65.24	66.15	---	65.66
15	61.50	59.75	---	---	---	59.50	---	63.15	67.53	---	---	66.20
20	60.33	60.12	60.02	---	---	59.46	60.51	61.71	---	---	---	65.07
25	60.10	60.22	---	---	60.04	60.02	60.36	62.08	---	---	66.93	64.49
EOM	60.06	59.94	---	---	59.12	59.16	60.79	61.55	---	---	66.04	66.74

WTR YR 1991 LOW 68.47 JUN 19

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, 14.11 ft below land-surface datum, April 8² 9, 1991; lowest,
 21.15 ft below land-surface datum, Feb. 11, 12, 1977.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	17.95	18.20	18.59	16.06	15.63	15.18	14.16	14.40	---	16.17	17.11	17.59
10	18.03	18.28	18.58	15.66	15.60	15.33	14.16	14.54	---	16.32	17.11	17.67
15	18.05	18.36	18.57	15.51	15.39	15.40	14.25	14.56	---	16.12	17.17	17.76
20	18.07	18.42	18.55	15.48	15.22	15.38	14.37	14.67	---	16.18	17.26	17.86
25	18.09	18.49	18.28	15.55	15.15	15.19	14.35	---	---	16.57	17.37	17.94
EOM	18.15	18.57	17.48	15.59	15.12	14.52	14.34	---	15.92	16.92	17.49	18.06

WTR YR 1991 HIGH 14.11 APR 8

DAY	LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	17.96	18.22	18.61	16.21	15.65	15.22	14.27	14.43	---	16.18	17.11	17.61
10	18.04	18.29	18.58	15.72	15.62	15.35	14.22	14.57	---	16.39	17.13	17.69
15	18.06	18.37	18.59	15.54	15.40	15.43	14.32	14.57	---	16.12	17.19	17.78
20	18.07	18.43	18.59	15.51	15.25	15.41	14.38	14.69	---	16.24	17.29	17.88
25	18.10	18.51	18.35	15.57	15.17	15.28	14.39	---	---	16.63	17.39	17.96
EOM	18.16	18.58	17.87	15.63	15.13	14.63	14.38	---	15.98	16.98	17.52	18.07

WTR YR 1991 LOW 18.61 DEC 4

BARTHOLOMEW COUNTY

390950085553501. Local number, BA 8.

LOCATION.--Lat 39°09'50", long 85°55'35", in NE1/4SW1/4 sec.1, T.8 N., R.5 E., Bartholomew County, Hydrologic Unit 05120206, on property of Meadows Metal Products Co., 4 mi south of Columbus.
 Owner: Meadows Metal Products Co., Inc.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 6 in., depth 49 ft, casing length unknown.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 615.48 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of floor of shelter, 3.00 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 8.06 ft below land-surface datum, June 3, 1968; lowest, 24.13 ft below land-surface datum, Dec. 27, 1988.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	18.79	19.19	19.64	14.16	13.80	13.34	11.61	12.06	14.05	15.63	17.31	18.57
10	18.88	19.29	19.52	13.22	13.75	13.61	11.78	12.44	14.30	15.93	17.51	18.78
15	18.98	19.40	19.36	13.05	13.49	13.78	11.74	12.76	14.52	16.21	17.75	18.97
20	19.04	19.49	19.13	13.09	13.39	13.64	11.59	13.15	14.80	16.47	17.97	19.17
25	19.10	19.58	18.52	13.31	13.34	12.96	11.66	13.42	15.06	16.75	18.21	19.34
EOM	19.18	19.68	17.24	13.53	13.31	11.82	11.80	13.75	15.33	17.06	18.42	19.53

WTR YR 1991 HIGH 11.54 APR 22

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	18.82	19.24	19.69	14.61	13.85	13.41	11.63	12.10	14.12	15.69	17.35	18.60
10	18.91	19.32	19.55	13.31	13.76	13.65	11.87	12.51	14.34	15.99	17.57	18.81
15	19.01	19.42	19.41	13.09	13.56	13.83	11.80	12.84	14.56	16.27	17.80	19.00
20	19.06	19.51	19.18	13.15	13.44	13.70	11.61	13.21	14.83	16.52	18.02	19.20
25	19.11	19.61	18.72	13.36	13.36	13.16	11.68	13.47	15.10	16.80	18.25	19.37
EOM	19.18	19.71	17.49	13.63	13.32	11.93	11.84	13.81	15.38	17.11	18.48	19.56

WTR YR 1991 LOW 19.72 DEC 2

BARTHOLOMEW COUNTY

391035085560401. Local number, BA 9.

LOCATION.--Lat 39°10'35", long 85°56'04", in SW1/4NE1/4SW1/4 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.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	30.11	30.86	30.42	21.94	22.89	22.64	20.97	21.24	23.65	28.32	30.78	30.31
10	29.76	30.09	30.40	21.41	23.18	22.88	21.09	21.54	23.60	28.59	30.99	31.13
15	29.89	30.93	31.08	21.60	22.69	22.84	21.06	22.59	24.31	29.47	31.23	35.51
20	29.81	30.22	30.29	22.81	22.68	22.83	21.51	22.39	24.25	29.82	29.31	31.22
25	29.92	30.58	30.30	22.27	22.92	22.32	21.20	22.83	27.83	30.14	30.89	31.10
EOM	30.85	30.32	27.85	22.58	23.52	21.26	21.82	22.64	24.75	30.50	30.81	31.38

WTR YR 1991 HIGH 20.89 APR 3

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	30.55	30.92	31.27	22.52	23.82	23.61	21.82	22.14	23.77	28.85	30.83	34.74
10	30.68	30.89	31.32	22.37	23.78	23.72	21.96	22.87	24.22	29.21	31.07	35.21
15	30.75	31.03	31.20	22.59	23.65	23.76	21.99	23.61	24.47	29.55	33.74	35.58
20	30.67	31.11	31.00	22.97	23.66	23.77	21.91	26.68	24.31	29.87	31.30	35.80
25	30.80	31.20	30.75	23.22	23.68	23.27	21.89	22.90	28.11	30.20	34.52	35.76
EOM	30.87	31.25	29.92	23.51	23.68	22.10	21.92	24.46	25.34	30.55	34.80	36.09

WTR YR 1991 LOW 36.09 SEP 30

BARTHOLOMEW COUNTY

390317085523701. Local number, BA 10.

LOCATION.--Lat 39°03'17", long 85°52'37", in NE¼NE¼NE¼ sec.16, T.7 N., R.6 E., Bartholomew County, Hydrologic Unit 05120206, 0.8 mi east of State Highway 11 and 1.0 mi southeast of Jonesville.
 Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 6 in., depth 85 ft, cased to 80 ft, screened to 85 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 580 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of floor of shelter, 3.50 ft above land-surface datum.

PERIOD OF RECORD.--October 1978 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.67 ft below land-surface datum, Apr. 14, 1979; lowest, 12.65 ft below land-surface datum, Oct. 29, Nov. 2, 1988.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.79	9.39	8.49	4.31	6.85	6.67	5.95	7.04	8.07	9.30	10.31	10.79
10	9.46	9.62	8.56	5.63	3.89	7.13	6.43	7.36	8.24	9.41	10.32	10.91
15	9.27	9.71	8.57	5.35	5.54	3.78	4.93	7.60	8.48	9.55	10.49	11.05
20	9.17	9.86	3.32	5.76	5.41	4.66	5.71	7.72	8.73	9.73	10.50	11.11
25	9.24	9.79	4.12	6.38	5.93	2.92	6.18	7.66	8.94	9.89	10.60	11.16
EOM	9.36	9.19	.91	6.77	6.22	4.98	6.69	7.90	9.14	10.12	10.79	11.28

WTR YR 1991 HIGH .90 JAN 1

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.98	9.71	8.80	4.79	6.99	6.76	6.04	7.13	8.11	9.37	10.41	10.95
10	9.66	9.73	8.67	5.71	4.68	7.24	6.59	7.50	8.41	9.57	10.47	11.05
15	9.41	9.83	8.86	5.51	5.88	5.28	5.14	7.76	8.59	9.64	10.55	11.13
20	9.31	9.95	3.52	5.98	5.61	4.88	5.80	7.78	8.81	9.82	10.59	11.25
25	9.28	9.86	4.81	6.50	6.13	3.20	6.31	7.80	9.07	10.02	10.73	11.30
EOM	9.51	9.48	1.95	6.91	6.44	5.30	6.82	8.02	9.21	10.18	10.84	11.40

WTR YR 1991 LOW 11.40 SEP 28

BARTHOLOMEW COUNTY

390658085572201. Local number, BA 13.

LOCATION.--Lat 39°06'58", long 85°57'22", in SW¼NW¼SE¼ sec.22, T.8 N., R.5 E., Bartholomew County, Hydrologic Unit 05120206, at the end of farm access road, 0.3 mi north of County Road 600 South at its intersection with Interstate Highway 65.
 Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 6 in., depth 55.6 ft, cased to 50.6 ft, screened to 55.6 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 633.91 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of floor of shelter, 3.40 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 19.91 ft below land-surface datum, March 27, 1991; lowest, 24.17 ft below land-surface datum, Feb. 16, 1989.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	21.22	20.75	21.29	21.18	20.93	20.12	20.69	20.27	20.58	20.49	20.87	---
10	20.96	21.20	21.35	21.07	20.72	20.84	20.48	20.70	20.59	20.54	20.77	---
15	21.13	21.53	20.95	20.59	20.34	20.72	20.20	20.43	20.32	20.83	20.84	---
20	21.28	21.46	21.19	20.62	20.85	20.43	20.42	20.64	20.52	20.76	20.77	---
25	21.29	21.01	21.39	21.19	20.84	20.64	20.50	20.40	20.64	20.70	21.10	---
EOM	21.40	21.51	21.40	21.00	20.60	20.67	20.38	20.32	20.46	20.81	20.92	---

WTR YR 1991 HIGH 19.91 MAR 27

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	21.33	21.22	21.60	21.37	21.00	20.49	20.77	20.49	20.69	20.55	20.94	---
10	21.29	21.40	21.43	21.52	20.88	20.97	20.83	20.79	20.72	20.59	20.94	---
15	21.40	21.67	21.26	20.97	20.95	20.93	20.54	20.51	20.47	20.91	20.94	---
20	21.40	21.55	21.35	20.84	21.00	20.67	20.52	20.71	20.63	20.83	20.92	---
25	21.42	21.23	21.50	21.35	20.91	20.75	20.66	20.51	20.71	20.80	21.20	---
EOM	21.49	21.79	21.60	21.35	20.75	20.83	20.52	20.39	20.59	20.90	21.05	---

WTR YR 1991 LOW 21.81 NOV 29

BENTON COUNTY

402851087213501. Local number, BE 4.

LOCATION.--Lat 40°28'51", long 87°21'35", in SE¼NE¼SE¼ sec.31, T.24 N., R.8 W., Benton County, Hydrologic Unit 05120108, on north side of county road, 3.6 mi southeast of Boswell.
Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 310 ft, cased to 300 ft, screened to 305 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 710 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of floor of shelter, 2.19 ft above land-surface datum.

PERIOD OF RECORD.--November 1978 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 10.65 ft below land-surface datum, May 7, 1982; lowest, 16.55 ft below land-surface datum, Dec. 4, 1988.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	14.09	13.51	13.31	12.57	11.80	11.49	11.23	11.07	11.43	12.11	13.70	14.81
10	13.94	13.62	13.28	12.36	11.72	11.78	11.09	11.30	11.56	12.39	13.78	14.95
15	13.99	13.65	13.10	11.97	11.51	11.65	10.97	11.28	11.57	12.64	13.99	15.02
20	13.96	13.57	13.09	11.85	11.69	11.44	11.07	11.41	11.74	12.86	14.09	15.32
25	13.94	13.35	13.03	11.94	11.78	11.37	11.10	11.29	11.88	13.12	14.42	15.21
EOM	13.86	13.45	12.87	11.77	11.65	11.28	11.01	11.26	12.02	13.46	14.58	15.46

WTR YR 1991 HIGH 10.96 APR 23

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	14.12	13.73	13.42	12.69	11.81	11.59	11.25	11.15	11.49	12.16	13.76	14.85
10	14.01	13.67	13.30	12.49	11.76	11.82	11.23	11.34	11.60	12.43	13.87	14.99
15	14.07	13.70	13.21	12.08	11.67	11.71	11.07	11.32	11.60	12.71	14.03	15.06
20	14.02	13.59	13.13	11.88	11.71	11.54	11.11	11.42	11.76	12.92	14.17	15.37
25	13.96	13.40	13.09	11.96	11.80	11.39	11.13	11.36	11.92	13.21	14.45	15.31
EOM	13.90	13.54	12.89	11.86	11.73	11.32	11.08	11.31	12.03	13.49	14.65	15.49

WTR YR 1991 LOW 15.49 SEP 30

BOONE COUNTY

400532086183901. Local number, BO 17.

LOCATION.--Lat 40°05'32", long 86°18'39", in SW¼SE¼NW¼ sec.16, T.19 N., R.2 E., Boone County, Hydrologic Unit 05120201, 0.6 mi north along U.S. Highway 421 from the intersection of U.S. Highway 421 and County Road 300 North at Waugh on the west side of the highway at the residence of John Sheets.
Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 171.8 ft, cased to 166.8 ft, screened to 171.8 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 956.50 ft above National Geodetic Vertical Datum of 1929. Measuring point: Mark on top of casing, 3.50 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 45.87 ft below land-surface datum, July 11-13, 1986; lowest, 51.98 ft below land-surface datum, Oct. 13, 14, 1988.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	48.58	47.84	47.64	47.51	47.52	47.33	47.08	46.62	47.20	48.95	50.76	51.19
10	48.32	48.06	47.66	47.54	47.50	47.54	46.95	46.71	47.39	49.25	50.80	51.31
15	48.27	47.98	47.48	47.39	47.38	47.35	46.75	46.66	47.65	49.40	50.74	51.35
20	48.22	47.95	47.55	47.37	47.52	47.21	46.77	46.91	48.04	---	50.79	51.59
25	48.17	47.74	47.52	47.55	47.57	47.22	46.78	46.99	48.31	---	50.92	51.49
EOM	48.14	47.76	47.51	47.49	47.48	47.15	46.69	47.02	48.63	---	51.05	51.62

WTR YR 1991 HIGH 46.62 MAY 5

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	48.58	48.03	47.75	47.59	47.53	47.43	47.10	46.69	47.23	49.00	50.81	51.19
10	48.39	48.14	47.71	47.64	47.55	47.59	47.07	46.76	47.44	49.28	50.84	51.32
15	48.34	48.03	47.64	47.46	47.53	47.41	46.86	46.72	47.74	49.43	50.74	51.38
20	48.25	47.96	47.61	47.40	47.56	47.30	46.81	46.94	48.08	---	50.84	51.62
25	48.18	47.80	47.58	47.57	47.61	47.25	46.82	47.05	48.38	---	50.93	51.57
EOM	48.15	47.87	47.58	47.57	47.55	47.21	46.75	47.09	48.67	---	51.11	51.62

WTR YR 1991 LOW 51.62 SEP 20

CASS COUNTY

403407086175701. Local number, CS 3.

LOCATION.--Lat 40°34'07", long 86°17'57", in NE¼NE¼SE¼ sec.33, T.25 N., R.2 E., Cass County, Hydrologic Unit 05120105, at intersection of State Highway 18 and County Road 400 East, 2.5 mi east of Young America.
Owner: U.S. Geological Survey.

AQUIFER.--Dolomitic limestone of Devonian-Silurian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 130 ft, cased to 78ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 781.74 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of floor of shelter, 2.65 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.85 ft below land-surface datum, Feb. 2, 1968; lowest, 9.55 ft below land-surface datum, Nov. 11, 1988.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.47	5.54	5.97	5.40	5.57	5.55	5.04	5.27	6.35	7.28	8.19	8.90
10	6.22	5.79	5.83	5.48	5.53	5.89	4.91	5.56	6.61	7.72	7.78	9.21
15	6.20	5.86	5.56	5.36	5.50	5.47	4.98	5.70	6.47	7.69	8.42	9.24
20	6.16	5.93	5.64	5.40	5.70	5.28	5.13	5.94	6.78	7.86	8.44	9.27
25	5.94	5.88	5.75	5.64	5.67	5.22	5.19	5.99	7.13	7.99	8.85	8.93
EOM	5.88	6.03	5.61	5.67	5.65	5.00	5.27	6.34	7.58	7.89	9.03	9.12

WTR YR 1991 HIGH 4.74 MAR 27

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.63	5.89	6.19	5.57	5.70	5.69	5.10	5.40	6.50	7.36	8.33	9.01
10	6.38	5.93	5.91	5.60	5.64	5.97	5.21	5.64	6.76	7.87	7.93	9.36
15	6.33	5.98	5.76	5.48	5.85	5.64	5.17	5.83	6.65	7.78	8.48	9.37
20	6.23	6.01	5.79	5.52	5.75	5.41	5.24	6.01	6.91	8.00	8.51	9.39
25	6.06	6.02	5.87	5.76	5.81	5.29	5.29	6.07	7.29	8.14	9.00	9.18
EOM	6.00	6.19	5.72	5.81	5.81	5.13	5.38	6.41	7.80	8.02	9.11	9.26

WTR YR 1991 LOW 9.45 SEP 16

CLAY COUNTY

392653087120501. Local number, CY 6.

LOCATION.--Lat 39°26'53", long 87°12'05", in SE¼SE¼SE¼ sec.29, T.12 N., R.7 W., Clay County, Hydrologic Unit 05120111, 2.8 mi southwest of Staunton and 4.0 mi west of State Highway 59 just north of State Highway 42.
Owner: U.S. Geological Survey.

AQUIFER.--Sandstone of the Mansfield Formation, Pennsylvanian Period.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 400 ft, cased to 347 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 653.16 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.40 ft above land-surface datum.

PERIOD OF RECORD.--September 1987 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 151.36 ft below land-surface datum, Jan. 19, 1988; lowest, 155.66 ft below land-surface datum, Sept. 20, 1991.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	153.42	153.22	153.72	153.93	154.18	153.86	154.44	154.38	154.88	155.10	155.48	155.20
10	153.35	153.61	153.86	154.00	154.10	154.42	154.36	154.62	154.91	155.18	155.29	155.26
15	153.46	153.77	153.65	153.71	153.99	154.35	154.10	154.51	154.88	155.44	155.35	155.28
20	153.48	153.78	153.80	153.79	154.23	154.14	154.36	154.72	155.02	155.40	155.29	155.46
25	153.62	153.53	153.94	154.23	154.23	154.28	154.40	154.57	155.10	155.35	155.43	155.04
EOM	153.62	153.79	154.07	154.24	154.07	154.37	154.40	154.65	155.05	155.44	155.34	155.35

WTR YR 1991 HIGH 153.22 NOV 5

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	153.65	153.60	154.09	154.10	154.25	154.14	154.52	154.48	154.99	155.23	155.65	155.46
10	153.48	153.77	153.98	154.28	154.31	154.51	154.63	154.81	155.16	155.43	155.51	155.45
15	153.68	153.97	153.99	154.04	154.32	154.54	154.46	154.73	154.99	155.55	155.45	155.38
20	153.69	153.94	154.01	153.97	154.32	154.32	154.50	154.79	155.14	155.53	155.46	155.66
25	153.69	153.70	154.11	154.34	154.43	154.41	154.60	154.79	155.27	155.53	155.61	155.35
EOM	153.81	154.14	154.24	154.42	154.32	154.55	154.60	154.79	155.17	155.54	155.43	155.55

WTR YR 1991 LOW 155.66 SEP 20

CLAY COUNTY

391124087134701. Local number, CY 7.

LOCATION.--Lat 39°11'24", long 87°13'47", in SW¼NW¼SE¼ sec. 30, T.9N., R.7W., Clay County, Hydrologic Unit
 05120111, 300 ft east of State Highway 159 just south of Coalmont and about 3.6 mi northwest of Jasonville.
 Owner: U.S. Geological Survey

AQUIFER.--Sandstone of Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 121 ft, cased to 80 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 616.80 ft (revised) above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of casing, 3.50 ft above land-surface datum.

PERIOD OF RECORD.--September 1988 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 25.59 ft below land-surface datum, Sept. 4, 5, 1988; lowest,
 33.05 ft below land-surface datum, Dec. 26, 1988.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	30.94	30.69	30.47	29.91	29.66	29.34	29.18	29.09	29.36	29.76	30.17	30.43
10	30.78	30.76	30.43	29.86	29.59	29.43	29.12	29.17	29.46	29.83	30.07	30.52
15	30.79	30.81	30.29	29.74	29.49	29.34	29.02	29.13	29.50	29.76	30.18	30.61
20	30.77	30.82	30.20	29.70	29.47	29.25	29.04	29.18	29.57	29.85	30.27	30.72
25	30.77	30.71	30.08	29.74	29.46	29.21	29.06	29.20	29.60	29.94	30.39	30.68
EOM	30.80	30.60	30.00	29.70	29.41	29.18	29.05	29.24	29.69	30.07	30.45	30.82

WTR YR 1991 HIGH 29.01 APR 29

DAY	LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	30.97	30.79	30.53	29.97	29.68	29.38	29.20	29.11	29.39	29.78	30.19	30.46
10	30.81	30.78	30.44	29.92	29.62	29.44	29.17	29.19	29.49	29.87	30.11	30.55
15	30.82	30.84	30.38	29.80	29.53	29.37	29.08	29.17	29.54	29.79	30.20	30.63
20	30.79	30.84	30.24	29.72	29.49	29.28	29.06	29.20	29.59	29.88	30.30	30.74
25	30.78	30.73	30.10	29.75	29.48	29.23	29.08	29.23	29.63	29.98	30.41	30.71
EOM	30.82	30.66	30.02	29.72	29.45	29.20	29.09	29.27	29.71	30.09	30.46	30.84

WTR YR 1991 LOW 31.06 OCT 2

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, 0.12 ft below land-surface datum, Dec. 30, 1991; lowest,
 9.25 ft below land-surface datum, Feb. 9-11, 1977.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.09	5.09	2.97	2.22	.92	4.14	3.88	4.44	5.53	6.81	7.68	7.53
10	1.88	5.36	3.99	2.64	1.24	4.43	4.24	4.70	5.88	6.97	7.63	7.62
15	4.08	5.63	4.31	1.04	2.34	1.77	.99	4.91	5.64	7.02	7.83	7.84
20	3.10	5.99	.76	1.85	1.63	1.70	1.69	4.09	6.07	7.18	7.68	8.01
25	4.06	5.83	1.30	3.64	3.17	1.30	3.63	4.66	6.39	7.34	7.81	8.08
EOM	4.70	4.72	.76	3.93	3.79	2.49	4.15	5.16	6.64	7.53	8.01	8.16

WTR YR 1991 HIGH .12 DEC 30

DAY	LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.13	5.13	3.14	2.50	3.83	4.17	3.97	4.48	5.60	6.85	7.72	7.57
10	2.26	5.37	4.12	2.96	1.61	4.49	4.34	4.75	5.94	6.99	7.68	7.66
15	4.28	5.70	4.48	1.24	2.92	2.04	1.39	4.95	5.73	7.06	7.86	7.88
20	3.48	6.04	.87	2.27	1.74	1.95	2.03	4.25	6.14	7.21	7.70	8.02
25	4.19	5.86	1.55	3.75	3.41	1.56	3.78	4.75	6.46	7.38	7.86	8.10
EOM	4.79	4.85	1.05	4.05	3.88	2.96	4.21	5.24	6.69	7.56	8.04	8.16

WTR YR 1991 LOW 8.16 SEP 29

DELAWARE COUNTY

400541085213701. Local number, DW 4.

LOCATION.--Lat 40°05'41", long 85°21'37", in SE¼NW¼SW¼ sec.9, T.19 N., R.10 E., Delaware County, Hydrologic Unit 05120201, on property owned by Monroe Township Conservation Club, and 8.0 mi south of Muncie.
Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 91 ft, cased to 89 ft, screened to 91 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 1,005 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of floor of shelter, 2.88 ft above land-surface datum.

PERIOD OF RECORD.--October 1966 to October 1971, October 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 42.21 ft below land-surface datum, Dec. 30, 1990; lowest, 49.50 ft below land-surface datum, Oct. 13, 14, 1966.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	47.50	47.77	47.40	46.27	47.13	47.59	47.06	47.61	47.36	48.23	48.64	48.76
10	47.16	47.84	47.59	46.98	46.93	47.74	47.31	47.73	47.65	48.26	48.66	48.80
15	47.28	47.93	47.42	46.90	47.25	46.69	47.05	47.83	47.83	48.34	48.70	48.83
20	47.22	48.00	46.79	46.94	46.93	46.35	46.95	47.03	47.97	48.41	48.58	48.84
25	47.44	48.01	46.44	47.27	47.27	45.95	47.27	47.31	48.05	48.49	48.69	48.81
EOM	47.65	47.64	42.91	47.50	47.43	46.64	47.46	47.14	48.15	48.57	48.74	48.85

WTR YR 1991 HIGH 42.21 DEC 30

DAY	LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	47.54	47.79	47.40	46.46	47.31	47.60	47.11	47.62	47.43	48.25	48.64	48.77
10	47.47	47.86	47.65	47.03	47.04	47.77	47.37	47.75	47.69	48.27	48.68	48.81
15	47.36	47.94	47.78	47.01	47.35	47.07	47.09	47.85	47.86	48.35	48.71	48.83
20	47.26	48.01	46.81	47.00	46.97	46.48	47.01	47.10	47.99	48.43	48.60	48.84
25	47.48	48.03	46.59	47.31	47.32	46.18	47.31	47.38	48.08	48.50	48.71	48.82
EOM	47.69	47.66	44.58	47.56	47.47	46.73	47.50	47.30	48.17	48.58	48.75	48.85

WTR YR 1991 LOW 48.85 SEP 29

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.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	13.53	12.43	12.65	11.28	11.85	12.22	12.53	11.67	11.09	12.27	13.74	14.10
10	13.29	12.49	12.71	11.37	11.94	12.31	12.54	11.71	11.11	12.52	13.76	14.17
15	12.28	12.51	12.70	11.49	12.01	12.38	12.51	11.78	11.29	12.74	13.82	14.17
20	12.19	12.54	12.77	11.43	12.07	12.41	12.21	11.90	11.68	13.06	13.89	14.22
25	12.26	12.56	12.79	11.60	12.14	12.48	11.87	11.93	11.90	13.29	13.95	14.27
EOM	12.39	12.61	11.73	11.73	12.18	12.52	11.72	11.56	12.22	13.49	14.03	14.34

WTR YR 1991 HIGH 11.07 JUN 7

DAY	LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	13.54	12.49	12.68	11.31	11.87	12.24	12.54	11.69	11.12	12.29	13.74	14.11
10	13.48	12.51	12.72	11.39	11.96	12.33	12.57	11.72	11.14	12.61	13.77	14.18
15	12.32	12.52	12.74	11.52	12.06	12.39	12.55	11.81	11.32	12.82	13.84	14.17
20	12.21	12.55	12.78	11.48	12.09	12.43	12.30	11.92	11.70	13.09	13.89	14.23
25	12.29	12.59	12.80	11.62	12.15	12.49	11.93	11.96	11.99	13.38	13.96	14.28
EOM	12.41	12.64	12.11	11.77	12.18	12.53	11.73	11.77	12.23	13.58	14.05	14.35

WTR YR 1991 LOW 14.35 SEP 30

ELKHART COUNTY

414419085544601. Local number, EH 5.

LOCATION.--Lat 41°44'19", long 85°54'46", in NW¼NE¼NE¼ sec.23, T.38 N., R.5 E., Elkhart County, Hydrologic Unit 04050001, on the inlet to Heaton Lake, and 3.5 mi east of Elkhart.
 Owner: State of Indiana.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 1.5 in., depth 13 ft, cased to 11 ft, screened to 13 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 770 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of floor of shelter, 2.10 ft above land-surface datum.

PERIOD OF RECORD.--May 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.37 ft below land-surface datum, June 16, 1981; lowest, 5.65 ft below land-surface datum, Sept. 17-19, 1988.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	3.89	2.81	2.55	2.49	2.89	2.79	3.02	2.85	3.15	3.85	4.95	4.71
10	2.80	2.85	2.75	2.69	2.88	2.91	3.04	2.95	3.31	3.99	4.90	4.71
15	2.85	3.01	2.84	2.71	2.90	3.01	2.71	3.09	3.35	4.09	4.94	4.71
20	2.94	3.11	2.85	2.65	2.75	2.95	2.74	3.18	3.51	4.31	4.71	4.71
25	3.09	3.15	2.85	2.80	2.78	3.00	2.72	3.05	3.65	4.59	4.71	4.48
EOM	3.21	2.30	1.94	2.95	2.89	2.98	2.71	3.05	3.85	4.81	4.71	4.55

WTR YR 1991 HIGH 1.94 DEC 30

DAY	LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	3.91	3.16	2.56	2.51	2.92	2.82	3.02	2.85	3.22	3.88	4.96	4.72
10	3.30	2.90	2.78	2.69	2.88	2.94	3.08	2.99	3.35	4.05	4.91	4.72
15	2.88	3.05	2.85	2.75	2.91	3.05	3.02	3.11	3.38	4.11	5.00	4.72
20	2.96	3.16	2.88	2.65	2.78	2.98	2.74	3.20	3.54	4.44	4.72	4.71
25	3.11	3.21	2.88	2.86	2.84	3.02	2.72	3.12	3.74	4.64	4.72	4.48
EOM	3.22	2.39	1.98	2.96	2.89	2.99	2.76	3.21	3.86	4.84	4.72	4.61

WTR YR 1991 LOW 5.09 AUG 7

ELKHART COUNTY

414351085540401. Local number, EH 6.

LOCATION.--Lat 41°43'51", long 85°54'04", in NW¼NE¼SW¼ sec.24, T.38 N., R.5 E., Elkhart County, Hydrologic Unit 04050001, on the southeast shore of Heaton Lake, and 4.0 mi east of Elkhart.
 Owner: State of Indiana.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 1.5 in., depth 22 ft, cased to 20 ft, screened to 22 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 770 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of floor of shelter, 2.50 ft above land-surface datum.

PERIOD OF RECORD.--May 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 5.10 ft below land-surface datum, June 16-19, 1981; lowest, 10.68 ft below land-surface datum, Oct. 16, 17, 1988.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.04	7.57	6.69	6.05	6.80	6.85	7.17	6.85	7.43	8.62	9.65	9.16
10	8.09	7.39	6.78	6.31	6.84	6.93	7.20	6.94	7.54	8.77	9.78	9.25
15	7.46	7.42	6.85	6.34	6.88	7.02	7.09	7.09	7.69	8.91	9.85	---
20	7.42	7.49	6.92	6.40	6.97	7.08	6.90	7.24	7.93	9.12	9.39	---
25	7.50	7.59	7.05	6.54	6.85	7.12	6.88	7.30	8.18	9.31	9.05	---
EOM	7.64	6.74	6.05	6.64	6.85	7.12	6.82	7.35	8.47	9.53	9.05	---

WTR YR 1991 HIGH 6.02 JAN 1

DAY	LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.08	7.73	6.70	6.05	6.80	6.87	7.18	6.85	7.44	8.64	9.69	9.18
10	8.71	7.40	6.80	6.31	6.86	6.97	7.20	6.99	7.56	8.80	9.79	9.27
15	7.47	7.44	6.85	6.41	6.92	7.06	7.22	7.13	7.71	8.95	9.87	---
20	7.44	7.53	6.95	6.40	6.98	7.10	6.90	7.26	7.96	9.16	9.53	---
25	7.54	7.65	7.06	6.56	6.86	7.15	6.88	7.30	8.23	9.32	9.08	---
EOM	7.69	6.80	6.12	6.72	6.86	7.13	6.82	7.36	8.50	9.57	9.08	---

WTR YR 1991 LOW 9.90 AUG 18

ELKHART COUNTY

414514085505001. Local number, EH 7.

LOCATION.--Lat 41°45'14", long 85°50'50", in SW¼SE¼SW¼ sec.9, T.38 N., R.6 E., Elkhart County, Hydrologic Unit 04050001, on north side of County Road 2, 200 ft east of County Road 21, and 2.7 mi northwest of Bristol.
Owner: U.S. Geological Survey.

AQUIFER.--Fine to medium sand of Pleistocene age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 6 in., depth 61 ft, cased to 56 ft, screened to 61 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 781 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of floor of shelter, 3.70 ft above land-surface datum.

PERIOD OF RECORD.--June 1981 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 5.50 ft below land-surface datum, Feb. 24, 1985; lowest, 12.73 ft below land-surface datum, Aug. 5, 6, 1988.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.77	9.57	8.56	7.55	8.45	8.56	9.02	8.55	9.10	10.47	11.83	11.22
10	10.45	9.52	8.58	7.72	8.56	8.71	9.07	8.64	9.16	10.76	11.88	11.19
15	9.55	9.49	8.62	7.89	8.66	8.77	9.04	8.73	9.22	11.01	11.69	11.12
20	9.45	9.54	8.80	7.99	8.64	8.79	8.86	8.91	9.53	11.18	11.52	11.08
25	9.48	9.58	8.91	8.18	8.49	8.90	8.76	8.98	9.96	11.39	11.22	11.05
EOM	9.59	8.74	7.73	8.34	8.50	8.95	8.64	9.08	10.40	11.74	11.09	11.07

WTR YR 1991 HIGH 7.55 JAN 5

DAY	LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.78	9.66	8.62	7.59	8.48	8.60	9.04	8.58	9.12	10.51	11.89	11.23
10	10.63	9.54	8.62	7.77	8.58	8.73	9.12	8.65	9.17	10.77	11.93	11.19
15	9.59	9.51	8.71	7.92	8.72	8.79	9.11	8.75	9.24	11.02	11.71	11.13
20	9.47	9.56	8.83	8.04	8.71	8.83	8.89	8.92	9.64	11.26	11.62	11.09
25	9.51	9.64	8.95	8.19	8.51	8.92	8.80	9.00	10.06	11.44	11.26	11.06
EOM	9.62	8.88	7.99	8.40	8.51	8.99	8.66	9.11	10.42	11.79	11.10	11.08

WTR YR 1991 LOW 12.00 AUG 7

ELKHART COUNTY

414419085595801. Local number, EH 9.

LOCATION.--Lat 41°44'19", Long 85°59'58", in NE¼NW¼ sec.19, T.38 N., R.5 E., Elkhart County, Hydrologic Unit 04050001, on the west side of Iris Avenue, about 6 mi northwest of Elkhart.
 Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 6 in, depth 33.8 ft, cased to 28.8 ft with 5 ft stainless steel screen.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 785.27 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 2.80 ft above land-surface datum.

PERIOD OF RECORD.--July 1990 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 16.09 ft below land-surface datum, Jan. 16, 1991; lowest, 18.75 ft below land-surface datum, Oct. 3, 1990.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	18.51	17.65	17.11	16.34	16.48	16.76	16.93	16.58	16.45	17.02	17.61	17.81
10	18.49	17.56	16.95	16.15	16.55	16.82	16.94	16.56	16.48	17.11	17.71	17.90
15	18.05	17.52	16.86	16.10	16.61	16.85	16.91	16.56	16.54	17.19	17.77	17.77
20	17.91	17.51	16.86	16.09	16.67	16.88	16.82	16.63	16.70	17.29	17.66	17.75
25	17.87	17.51	16.88	16.23	16.72	16.92	16.74	16.67	16.82	17.37	17.65	17.83
EOM	17.71	17.32	16.68	16.39	16.74	16.92	16.65	16.68	16.93	17.50	17.73	17.94

WTR YR 1991 HIGH 16.09 JAN 16

DAY	LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	18.58	17.67	17.16	16.39	16.49	16.78	16.94	16.60	16.46	17.04	17.64	17.86
10	18.62	17.58	16.97	16.19	16.57	16.83	16.96	16.56	16.49	17.12	17.72	17.92
15	18.10	17.53	16.88	16.11	16.64	16.86	16.94	16.57	16.57	17.21	17.79	17.77
20	17.96	17.52	16.88	16.11	16.68	16.89	16.83	16.64	16.72	17.31	17.75	17.77
25	17.90	17.54	16.90	16.26	16.73	16.93	16.76	16.67	16.84	17.39	17.67	17.84
EOM	17.73	17.37	16.75	16.43	16.75	16.94	16.66	16.72	16.95	17.52	17.79	17.95

WTR YR 1991 LOW 18.75 OCT 3

WATER-QUALITY RECORDS

414419085595801. Local number, EH 9.

WATER QUALITY DATA, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	PH (STAND- ARD UNITS) (00400)	PH LAB (STAND- ARD UNITS) (00403)	TEMPER- ATURE WATER (DEG C) (00010)	OXYGEN, DIS- SOLVED (MG/L) (00300)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	HARD- NESS NONCARB DISSOLV FLD. AS CACO3 (MG/L) (00904)	
JUL 24...	1100	17.93	352	379	7.7	7.9	10.5	8.0	180	52	
DATE		CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LITY WAT WH TOT FET FIELD MG/L AS CACO3 (00410)	ALKA- LITY WAT WH TOT IT FIELD MG/L AS CACO3 (00419)	ALKA- LITY LAB (MG/L AS CACO3) (90410)	BICAR- BONATE WATER WH IT FIELD MG/L AS HCO3 (00450)	CAR- BONATE WATER WH IT FIELD MG/L AS CO3 (00447)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)
JUL 24...	49	14	4.4	0.6	126	128	133	156	0	16	
DATE		CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	SILICA, DIS- SOLVED (MG/L AS SiO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	IRON, DIS- SOLVED (UG/L AS FE) (01046)
JUL 24...	12	0.2	0.02	11	177	184	0.014	0.007	0.04	5	

FOUNTAIN COUNTY

401200087121701. Local number, FO 3.

LOCATION.--Lat 40°12'00", long 87°12'17", in NW¼NW¼ sec.10, T.20 N., R.7 W., Fountain County, Hydrologic Unit 05120108, on the southwest corner of the Union Church property on County Road 520 North, about 6.5 mi southeast of Attica.

Owner: U.S. Geological Survey.

AQUIFER.--Shale and sandstone of the Mississippian Period.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 6 in., depth 102 ft, cased to 22 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 670.99 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.60 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.02 ft below land-surface datum, Mar. 11, 1990; lowest, 13.53 ft below land-surface datum, Dec. 21, 22, 25-27, 1988.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.71	9.11	8.43	5.44	6.20	6.92	6.20	7.33	8.14	9.51	10.94	12.00
10	9.34	9.19	8.69	6.19	5.72	7.40	5.99	7.65	8.36	9.74	11.09	12.12
15	9.57	9.50	8.57	5.51	6.15	6.09	5.78	7.91	8.57	9.97	11.29	12.23
20	9.17	9.69	8.08	5.45	5.99	5.88	6.33	7.09	8.84	10.20	11.47	12.34
25	9.42	9.80	7.33	6.29	6.49	5.38	6.85	7.40	9.05	10.44	11.63	12.41
EOM	9.70	9.03	4.12	6.92	6.74	5.69	7.10	7.79	9.27	10.72	11.86	12.50

WTR YR 1991 HIGH 3.85 DEC 30

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.71	9.80	8.49	5.63	6.41	7.00	6.25	7.39	8.19	9.57	10.98	12.03
10	9.73	9.29	8.76	6.28	5.84	7.46	6.22	7.71	8.39	9.78	11.14	12.15
15	9.66	9.52	8.83	5.78	6.43	6.20	5.96	7.95	8.63	10.02	11.33	12.25
20	9.19	9.72	8.13	5.61	6.05	5.95	6.43	7.16	8.87	10.25	11.51	12.35
25	9.48	9.86	7.47	6.39	6.59	5.45	6.89	7.44	9.11	10.49	11.66	12.41
EOM	9.74	9.08	4.38	7.05	6.81	5.78	7.17	7.88	9.32	10.76	11.89	12.51

WTR YR 1991 LOW 12.51 SEP 30

FRANKLIN COUNTY

392416085004301. Local number, FR 5.

LOCATION.--Lat 39°24'16", long 85°00'43", in SE¼NE¼NW¼ sec.32, T.9 N., R.2 W., Franklin County, Hydrologic Unit 05080003, adjacent to property of Franklin County Conservation Club, 1.0 mi south of Brookville.

Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 6 in., depth 61 ft, cased to 57 ft, screened to 59 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 621.79 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of floor of shelter, 2.70 ft above land-surface datum.

PERIOD OF RECORD.--March 1968 to October 1971, September 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 11.95 ft below land-surface datum, May 24, 1968; lowest, 27.32 ft below land-surface datum, Feb. 1, 1977.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	25.50	24.85	24.16	20.20	23.93	24.16	23.25	24.50	24.92	26.13	26.50	26.46
10	24.73	25.04	24.31	21.06	22.39	24.46	23.59	24.70	25.32	26.13	26.51	26.58
15	24.59	24.97	24.66	21.13	23.16	22.96	22.18	24.78	25.58	25.94	26.57	26.63
20	24.27	24.96	22.17	21.82	22.75	22.74	22.27	24.06	25.76	26.20	26.54	26.46
25	24.52	25.04	21.58	23.38	23.31	21.82	23.25	24.17	25.90	26.31	26.60	26.43
EOM	24.80	24.58	17.49	23.81	23.76	22.23	23.88	24.62	26.03	26.43	26.62	26.46

WTR YR 1991 HIGH 17.40 JAN 1

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	25.54	24.94	24.18	20.45	24.12	24.21	23.41	24.56	25.02	26.17	26.51	26.49
10	25.05	25.07	24.41	21.17	22.47	24.52	23.62	24.75	25.38	26.15	26.53	26.60
15	24.62	24.99	24.83	21.25	23.31	23.03	22.32	24.87	25.62	26.01	26.58	26.65
20	24.40	25.04	22.32	22.27	22.91	22.94	22.39	24.21	25.79	26.23	26.54	26.47
25	24.62	25.09	21.70	23.56	23.47	22.12	23.38	24.32	25.92	26.33	26.61	26.44
EOM	24.81	24.71	17.49	23.83	23.88	22.46	24.02	24.69	26.07	26.44	26.63	26.46

WTR YR 1991 LOW 26.65 SEP 3

FULTON COUNTY

405829086175801. Local number, FU 7.

LOCATION.--Lat 40°58'29", long 86°17'58", in NW¼NW¼SW¼ sec.10, T.29 N., R.2 E., Fulton County, Hydrologic Unit 05120106, 2.5 mi northwest of Fulton.

Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 102 ft, cased to 96 ft, screened to 102 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 776.45 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of floor of shelter, 2.50 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 6.35 ft below land-surface datum, Apr. 23-27, 1973; lowest, 13.21 ft below land-surface datum, Oct. 13, 1988.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.38	8.34	8.36	6.89	8.14	8.20	7.95	8.17	8.82	10.11	11.45	11.90
10	8.36	8.05	8.41	7.37	8.06	8.44	8.07	8.46	9.01	10.04	11.48	12.01
15	7.72	8.29	8.47	7.44	8.10	8.57	7.88	8.61	9.22	10.22	11.50	12.06
20	7.83	8.49	8.55	7.10	8.30	7.90	7.49	8.67	9.38	10.59	11.70	12.22
25	8.05	8.60	8.29	7.47	8.34	7.86	7.67	8.55	9.66	10.98	11.79	12.15
EOM	8.38	8.62	6.89	7.88	8.38	7.75	7.86	8.66	10.07	11.24	11.86	12.29

WTR YR 1991 HIGH 6.75 JAN 2

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.39	8.57	8.46	6.94	8.14	8.27	7.99	8.21	8.87	10.13	11.47	11.93
10	8.96	8.09	8.47	7.40	8.10	8.51	8.19	8.51	9.03	10.07	11.50	12.04
15	7.78	8.30	8.58	7.49	8.26	8.64	8.13	8.67	9.29	10.34	11.53	12.09
20	7.84	8.53	8.58	7.11	8.33	8.05	7.52	8.69	9.45	10.71	11.71	12.25
25	8.13	8.70	8.32	7.55	8.36	7.88	7.71	8.59	9.72	11.12	11.81	12.20
EOM	8.44	8.71	7.07	8.01	8.40	7.76	7.95	8.70	10.17	11.24	11.90	12.32

WTR YR 1991 LOW 12.32 SEP 29

GRANT COUNTY

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.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.31	3.80	2.19	2.97	2.94	3.08	3.26	3.49	3.49	4.69	6.47	7.88
10	2.43	3.74	2.90	3.58	2.48	3.62	2.28	3.78	3.82	4.72	6.63	8.05
15	2.77	4.05	2.66	2.62	2.85	2.98	1.70	3.86	4.00	5.12	6.91	8.25
20	3.43	4.21	2.09	2.43	2.29	1.52	1.91	4.04	4.37	5.38	7.18	8.58
25	3.73	4.16	2.50	3.22	2.80	2.18	2.77	3.12	4.65	5.73	7.56	8.46
EOM	4.05	2.87	1.55	3.89	3.08	2.91	3.04	2.92	4.85	6.14	7.65	8.79

WTR YR 1991 HIGH 1.34 MAR 18

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.49	4.14	2.27	3.08	3.19	3.17	3.32	3.58	3.78	4.99	6.70	8.18
10	3.32	3.82	3.02	3.66	2.55	3.70	2.67	3.89	4.01	5.14	7.02	8.43
15	3.05	4.07	3.30	3.04	3.22	3.29	1.92	4.16	4.30	5.37	7.31	8.70
20	3.45	4.27	2.16	2.45	2.34	1.76	1.96	4.35	4.70	5.76	7.40	8.91
25	3.93	4.33	2.71	3.34	2.86	2.35	2.83	3.27	4.92	6.11	7.76	8.79
EOM	4.08	2.98	2.07	4.09	3.11	3.01	3.69	3.41	5.26	6.49	7.90	8.82

WTR YR 1991 LOW 9.06 SEP 27

GRANT COUNTY

403836085374401. Local number, GT 10.

LOCATION.--Lat 40°38'36", long 85°37'44", in NE¼SE¼SW¼ sec.4, T.25 N., R.8 E., Grant County, Hydrologic Unit 05120103, 0.20 mi north of intersection of State Highway 9 and County Road 600 North on west side of road.
Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 198 ft, cased to 193 ft, screened to 198 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 912.16 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.16 ft above land-surface datum.

PERIOD OF RECORD.--August 1987 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 107.39 ft below land-surface datum, Apr. 6, 1988; lowest, 120.87 ft below land-surface datum, June 29, 1989.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	120.13	119.26	118.70	118.14	118.85	117.12	118.41	116.77	118.11	116.99	117.03	119.37
10	119.25	119.70	120.05	111.18	116.25	117.27	118.22	116.81	118.88	118.65	117.19	119.37
15	118.99	119.93	119.55	110.20	117.53	---	115.93	116.12	118.72	118.42	119.07	119.18
20	119.87	118.17	119.51	116.75	118.13	---	118.69	117.99	118.97	118.99	119.20	119.07
25	119.82	116.99	119.49	110.27	118.21	116.28	119.15	118.82	118.88	119.11	119.37	117.39
EOM	119.95	117.31	119.14	116.31	117.04	118.36	118.49	118.65	119.37	118.91	119.67	119.08

WTR YR 1991 HIGH 110.20 JAN 14

DAY	LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	120.24	119.70	119.12	119.17	119.02	118.73	118.49	118.71	118.63	117.94	117.13	119.45
10	119.44	119.87	120.23	119.77	117.90	119.13	118.96	117.34	118.97	118.75	117.59	119.50
15	120.07	120.05	119.81	118.70	118.65	---	116.83	116.23	118.84	118.83	119.44	119.25
20	119.95	118.70	119.73	118.34	118.62	---	118.82	118.56	119.03	119.07	119.27	119.75
25	119.98	117.21	119.63	118.87	118.74	116.55	119.20	119.00	119.19	119.21	119.52	119.23
EOM	120.02	117.59	119.35	117.24	117.33	118.52	118.77	118.95	119.46	119.28	119.83	119.29

WTR YR 1991 LOW 120.41 DEC 14

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, 7.39 ft below land-surface datum, Dec. 31, 1991; lowest, 11.99 ft below land-surface datum, Oct. 30-Nov. 4, 1988.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.59	10.47	9.80	8.06	9.35	9.64	9.15	9.32	9.99	10.56	11.08	11.43
10	10.30	10.50	9.79	8.55	9.15	9.77	9.16	9.52	10.09	10.64	11.11	11.48
15	10.24	10.56	9.80	8.70	9.34	8.98	8.93	9.67	10.18	10.68	11.17	11.52
20	10.28	10.62	9.59	8.85	9.34	8.95	8.67	9.79	10.27	10.77	11.23	11.56
25	10.31	10.63	9.37	9.10	9.48	8.75	8.87	9.89	10.36	10.87	11.29	11.58
EOM	10.43	10.23	7.39	9.32	9.54	8.98	9.10	9.94	10.45	10.98	11.37	11.61

WTR YR 1991 HIGH 7.39 DEC 31

DAY	LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.60	10.50	9.87	8.17	9.41	9.65	9.18	9.34	10.01	10.58	11.09	11.44
10	10.48	10.51	9.82	8.60	9.20	9.80	9.24	9.55	10.11	10.64	11.12	11.49
15	10.27	10.57	9.93	8.74	9.42	9.03	9.09	9.70	10.20	10.70	11.18	11.53
20	10.29	10.63	9.62	8.90	9.35	8.97	8.72	9.82	10.29	10.79	11.24	11.57
25	10.34	10.65	9.39	9.14	9.50	8.78	8.92	9.90	10.38	10.89	11.30	11.58
EOM	10.45	10.26	7.47	9.37	9.55	9.01	9.16	9.97	10.47	11.00	11.38	11.61

WTR YR 1991 LOW 11.61 SEP 29

HARRISON COUNTY

382323086044501. Local number, HR 8.

LOCATION.--Lat 38°23'23", long 86°04'45", in NW¼NW¼NE¼ sec.33, T.1 S., R.4 E., Harrison County, Hydrologic Unit 05140104, on Harrison County right-of-way, 2.0 mi southeast of Palmyra.
 Owner: U.S. Geological Survey.

AQUIFER.--Limestone of Mississippian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 93 ft, cased to 54 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 827 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of floor of shelter, 3.10 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.56 ft below land-surface datum, June 7, 1990; lowest, 19.90 ft below land-surface datum, Nov. 2-4, 1988.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	13.02	9.42	3.88	3.58	4.30	4.40	4.47	5.71	7.22	12.06	14.81	16.91
10	12.78	9.07	5.22	2.62	2.79	4.93	2.76	6.01	8.46	12.55	15.19	17.18
15	12.71	8.75	5.31	2.88	2.18	2.73	2.42	3.94	9.44	13.05	15.56	17.44
20	10.72	9.25	2.36	3.45	2.50	2.77	3.85	5.07	10.27	13.54	15.90	17.74
25	8.72	6.44	2.47	4.69	3.75	2.31	4.67	6.21	10.91	13.96	16.25	18.02
EOM	8.79	6.02	1.90	4.79	4.25	3.68	5.18	5.90	11.50	14.43	16.59	18.29

WTR YR 1991 HIGH .81 MAR 22

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	13.12	9.59	3.98	3.70	4.88	4.54	4.60	6.16	7.50	12.17	14.88	16.97
10	13.02	9.52	5.49	2.79	3.22	5.05	2.95	6.15	8.65	12.66	15.26	17.22
15	12.79	8.79	6.42	3.07	2.79	3.03	2.52	4.09	9.60	13.18	15.63	17.50
20	10.87	9.40	2.60	3.77	2.70	2.94	4.05	5.33	10.41	13.63	15.98	17.79
25	8.90	6.48	2.89	4.85	3.94	2.65	4.72	6.37	11.05	14.03	16.32	18.07
EOM	8.91	6.15	2.42	4.95	4.40	3.83	5.37	6.17	11.60	14.50	16.65	18.33

WTR YR 1991 LOW 18.33 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, 29.02 ft below land-surface datum, Nov. 30, 1988.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	22.93	22.12	21.09	20.96	21.65	21.27	21.19	21.32	22.96	23.81	24.34	25.31
10	21.74	21.83	21.02	21.43	20.96	21.54	21.13	21.40	23.11	23.81	24.26	25.59
15	21.30	22.04	21.46	21.33	20.87	21.29	20.74	21.69	23.28	23.02	24.60	25.63
20	21.44	22.42	20.99	20.98	21.13	20.95	20.59	22.12	23.40	23.15	24.67	26.10
25	21.40	22.28	20.82	20.92	20.91	20.56	20.77	22.47	23.53	23.52	24.99	26.02
EOM	21.85	21.54	20.63	21.40	21.08	20.85	21.06	22.63	23.63	23.96	25.20	26.31

WTR YR 1991 HIGH 20.47 MAR 26

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	23.14	22.28	21.24	21.13	21.92	21.45	21.25	21.39	23.01	23.87	24.48	25.41
10	21.96	21.93	21.26	21.53	21.05	21.62	21.24	21.60	23.29	24.15	24.44	25.72
15	21.39	22.22	21.71	21.53	21.07	21.48	21.00	21.99	23.57	23.10	24.80	25.73
20	21.59	22.81	21.23	21.11	21.32	21.14	20.69	22.37	23.48	23.27	24.93	26.24
25	21.62	22.57	20.98	21.11	21.19	20.62	20.87	22.70	23.79	23.92	25.11	26.13
EOM	22.11	21.80	20.80	21.70	21.29	20.94	21.24	22.83	23.98	24.09	25.47	26.42

WTR YR 1991 LOW 26.67 SEP 26

HUNTINGTON COUNTY

404858085284301. Local number, HJ 2.

LOCATION.--Lat 40°48'58", long 85°28'43", in SW¼SW¼SE¼ sec. 2, T.2N., R.9E., Huntington County, Hydrologic Unit 05120101, on the property of Luther Fusselman, 3.0 mi south of Huntington and 0.5 mi west of State Highway 5.

AQUIFER.--Sand and gravel of the Pleistocene Epoch.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 148 ft, cased to 143 ft, screened to 148 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 819.70 ft (revised) above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.30 ft above land-surface datum.

PERIOD OF RECORD.--August 1988 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 65.46 ft below land-surface datum, Dec. 24, 1988; lowest, 71.50 ft below land-surface datum, Dec. 23, 1989.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	69.75	68.92	69.49	69.29	68.69	68.02	69.05	68.97	69.86	69.35	70.35	70.26
10	69.71	69.33	69.39	69.19	68.43	68.61	68.79	69.51	69.50	69.49	70.24	70.21
15	69.74	69.74	68.72	68.40	68.03	68.60	68.48	69.14	69.16	69.88	70.25	69.99
20	69.98	70.05	69.30	68.50	68.68	68.72	68.68	69.70	69.38	69.56	70.12	70.54
25	69.83	69.41	69.38	69.21	68.79	68.62	69.18	69.57	69.77	69.93	70.48	69.70
EOM	69.78	69.86	69.67	68.49	68.49	68.87	68.98	69.74	69.52	70.15	70.33	70.25

WTR YR 1991 HIGH 67.72 FEB 14

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	69.99	69.48	69.98	69.62	68.84	68.40	69.15	69.38	69.95	69.59	70.45	70.40
10	70.08	69.56	69.55	69.60	68.54	68.83	69.30	69.72	69.69	69.60	70.42	70.33
15	70.12	69.87	69.07	68.89	68.69	68.91	68.87	69.29	69.29	70.03	70.30	70.20
20	70.14	70.20	69.57	68.72	68.84	68.97	69.09	69.78	69.67	69.65	70.29	70.68
25	70.13	69.75	69.61	69.35	68.91	68.81	69.35	69.72	69.88	70.13	70.64	70.19
EOM	69.93	70.16	69.94	69.02	68.72	69.06	69.17	69.94	69.71	70.25	70.55	70.50

WTR YR 1991 LOW 70.68 SEP 20

JASPER COUNTY

410249087011201. Local number, JP 4.

LOCATION.--Lat 41°02'49", long 87°01'12", in SW¼NE¼SW¼ sec.17, T.30 N., R.5 W., Jasper County, Hydrologic Unit 07120002, on property of William Gehring, Inc., 0.9 mi east of Newland. Owner: William Gehring, Inc.

AQUIFER.--Limestone of Devonian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 16 in., depth 300 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 676.93 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of floor of shelter, 0.00 ft above land-surface datum.

REMARKS.--Water level may be affected by irrigation pumpage.

PERIOD OF RECORD.--July 1956 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.95 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 1990 TO SEPTEMBER 1991												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	3.66	2.32	2.26	1.44	2.08	2.14	2.06	2.25	2.71	8.49	12.01	7.05
10	3.32	2.46	2.33	1.54	2.10	2.60	2.11	2.54	2.67	7.80	10.30	6.91
15	3.02	2.52	2.14	1.42	2.08	2.50	1.95	2.56	5.85	8.00	8.80	6.79
20	2.78	2.56	2.34	1.41	2.33	2.09	2.18	2.64	6.38	10.45	8.04	6.89
25	2.80	2.40	2.34	1.49	2.40	2.12	2.20	2.45	6.55	12.97	7.59	6.46
EOM	2.70	2.41	1.83	1.75	2.23	2.03	2.25	2.45	10.60	13.32	7.27	6.62

WTR YR 1991 HIGH 1.27 JAN 11

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	3.86	2.71	2.61	1.63	2.17	2.36	2.11	2.37	2.78	8.77	12.45	7.22
10	3.50	2.62	2.46	1.71	2.25	2.68	2.42	2.68	2.88	8.30	10.64	7.02
15	3.18	2.65	2.44	1.59	2.08	2.64	2.26	2.74	6.14	8.39	9.02	6.88
20	2.98	2.67	2.55	1.50	2.39	2.32	2.29	2.72	6.77	10.63	8.18	7.04
25	2.85	2.60	2.34	1.50	2.53	2.21	2.36	2.64	7.56	13.57	7.78	6.75
EOM	2.84	2.77	1.83	1.75	2.46	2.19	2.40	2.56	10.71	13.76	7.33	6.80

WTR YR 1991 LOW 13.98 JUL 28

JASPER COUNTY

410809087580801. Local number, JP 7.

LOCATION.--Lat 41°08'09", long 86°58'08", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.15, T.31 N., R.5 W., Jasper County, Hydrologic Unit 07120002, in northwest corner of intersection of County Roads 850 North and 400 East, 4.0 mi south of Tefft.
Owner: U.S. Geological Survey.

AQUIFER.--Dolomite of Middle Devonian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 130 ft, cased to 94 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 699.38 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of floor of shelter, 2.75 ft above land-surface datum.

REMARKS.--Water level affected by pumpage.

PERIOD OF RECORD.--May 1967 to current year. (Semi-annual tape-down readings only September 1971 to May 1978.)

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 6.04 ft below land-surface datum, Apr. 5, 1985; lowest, 18.15 ft below land-surface datum, Aug. 30, 1988.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.63	6.86	7.05	6.95	7.16	6.77	7.16	6.97	---	12.83	16.58	---
10	7.38	7.17	7.18	7.10	7.01	7.36	7.04	---	---	12.91	15.51	---
15	7.38	7.29	6.93	6.80	6.88	7.30	6.74	---	---	13.66	15.07	10.96
20	7.33	7.33	7.17	6.74	7.17	6.91	7.05	---	---	14.04	14.00	10.99
25	7.42	7.04	7.21	7.25	7.21	7.12	7.10	---	---	15.28	---	10.34
EOM	7.39	7.19	7.22	7.19	6.94	7.13	6.98	---	---	16.17	---	10.51

WTR YR 1991 HIGH 6.46 MAR 27

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.86	7.33	7.45	7.18	7.22	7.03	7.20	7.15	---	13.17	16.74	---
10	7.57	7.37	7.34	7.31	7.16	7.43	7.42	---	---	13.22	15.94	---
15	7.60	7.47	7.27	7.00	7.24	7.46	7.10	---	---	13.90	15.28	11.06
20	7.55	7.45	7.41	6.85	7.20	7.13	7.17	---	---	14.34	14.51	11.16
25	7.53	7.29	7.41	7.28	7.38	7.20	7.26	---	---	15.57	---	10.71
EOM	7.55	7.58	7.31	7.39	7.22	7.30	7.15	---	---	16.22	---	10.73

WTR YR 1991 LOW 16.93 AUG 7

JASPER COUNTY

410535087035801. Local number, JP 8.

LOCATION.--Lat 41°05'35", long 87°03'58", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$ 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, 8.52 ft below land-surface datum, Jan. 1, 1991; lowest, 25.11 ft below land-surface datum, July 26, 1980.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.82	9.79	9.56	8.73	9.60	9.60	9.42	9.64	9.75	12.67	14.86	14.21
10	10.24	9.75	9.65	9.07	9.58	9.88	9.51	9.84	9.93	12.76	14.73	13.95
15	10.00	9.89	9.62	9.10	9.58	9.83	9.43	9.78	10.11	13.08	14.55	13.71
20	9.88	10.00	9.72	8.98	9.71	9.20	9.28	9.65	10.41	13.61	14.70	13.66
25	9.96	9.96	9.67	9.31	9.80	9.18	9.46	9.51	10.99	14.08	14.37	13.31
EOM	10.05	9.67	8.61	9.51	9.74	9.28	9.47	9.59	11.91	14.61	14.33	13.30

WTR YR 1991 HIGH 8.52 JAN 1

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.87	10.05	9.67	8.84	9.63	9.69	9.45	9.69	9.82	12.76	14.93	14.28
10	10.49	9.81	9.72	9.12	9.65	9.94	9.66	9.90	9.99	12.82	14.79	14.03
15	10.07	9.93	9.75	9.14	9.72	9.89	9.57	9.83	10.15	13.21	14.60	13.75
20	9.94	10.02	9.77	9.02	9.73	9.40	9.34	9.66	10.50	13.72	14.74	13.71
25	9.99	10.05	9.74	9.38	9.84	9.21	9.50	9.63	11.18	14.21	14.45	13.45
EOM	10.10	9.80	8.68	9.61	9.83	9.32	9.53	9.66	12.07	14.65	14.45	13.38

WTR YR 1991 LOW 14.99 AUG 7

JASPER COUNTY

410713087063201. Local number, JP 9.

LOCATION.--Lat 41°07'13", long 87°06'32", in NE¼SW¼SE¼ sec.21, T.31 N., R.6 W., Jasper County, Hydrologic Unit 07120002, 4.4 mi northwest of Gifford.

Owner: William Gehring, Inc.

AQUIFER.--Silurian limestone.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 18 in., depth 260 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 685 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Lower lip of 2 in. tapedown pipe, 2.10 ft above land-surface datum.

REMARKS.--Water level may be affected by irrigation pumpage.

PERIOD OF RECORD.--July 1978 to current year. Record prior to October 1, 1978 available in District files.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.03 ft below land-surface datum, Mar. 27, 1991; lowest, 32.05 ft below land-surface datum, Aug. 5, 1988.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.07	4.96	4.78	---	---	4.49	4.42	4.48	4.76	20.74	26.04	12.85
10	5.66	4.95	4.84	---	---	4.84	4.36	4.75	4.95	14.14	18.82	11.05
15	5.34	5.05	4.74	---	4.34	4.75	4.32	4.72	5.05	21.63	21.81	10.18
20	5.23	5.09	4.83	---	4.60	4.43	4.30	4.86	5.94	24.20	19.12	9.83
25	5.23	4.94	4.83	---	4.73	4.34	4.42	4.68	17.21	25.20	13.46	9.21
EOM	5.27	4.95	---	---	4.66	4.36	4.37	4.63	21.30	25.70	19.72	9.11

WTR YR 1991 HIGH 4.03 MAR 27

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.10	5.20	4.88	---	---	4.59	4.44	4.61	4.84	22.59	26.33	13.48
10	5.82	5.00	4.89	---	---	4.90	4.53	4.78	4.98	15.69	20.58	11.26
15	5.43	5.09	4.89	---	4.54	4.87	4.43	4.77	5.11	22.49	22.74	10.31
20	5.30	5.11	4.87	---	4.65	4.53	4.35	4.87	8.18	24.56	21.67	9.91
25	5.27	5.06	4.89	---	4.75	4.38	4.45	4.78	18.37	25.54	14.10	9.39
EOM	5.30	5.07	---	---	4.72	4.39	4.44	4.71	21.71	26.19	20.54	9.23

WTR YR 1991 LOW 26.42 AUG 6

JASPER COUNTY

410322087163101. Local number, JP 11.

LOCATION.--Lat 41°03'22", long 87°16'31", in NW¼NW¼NW¼ sec.18, T.30 N., R.7 W., Jasper County, Hydrologic Unit 07120002, on Prudential Life Insurance Company of America property, 3.2 mi north of State Highway 14, and 1.5 mi southwest of Fair Oaks.

Owner: Prudential Insurance Company of America.

AQUIFER.--Limestone of Devonian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 16 in., depth 630 ft, cased to 63 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 680 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of floor of shelter, 3.50 ft above land-surface datum.

REMARKS.--Water level may be affected by irrigation pumpage.

PERIOD OF RECORD.--March 1981 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.04 ft above land-surface datum, Apr. 3, 1982; lowest, 52.19 ft below land-surface datum, July 9, 1988.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.91	2.88	2.27	---	1.72	1.23	1.15	1.17	1.32	18.64	42.70	22.98
10	4.27	2.76	---	---	1.54	1.61	1.13	1.37	1.50	22.33	35.75	19.95
15	3.80	2.75	---	---	1.39	1.49	1.03	1.33	3.58	33.66	40.41	17.39
20	3.47	2.73	---	---	1.61	1.10	1.02	1.34	25.63	48.72	30.57	15.67
25	3.42	2.63	---	---	1.74	1.01	1.15	1.11	23.30	48.60	32.75	13.97
EOM	3.31	2.48	---	---	1.49	1.07	1.11	1.14	37.22	49.15	31.43	13.01

WTR YR 1991 HIGH .62 MAR 27

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.02	3.14	2.43	---	1.74	1.39	1.17	1.30	1.40	20.68	45.74	24.04
10	4.43	2.85	---	---	1.59	1.67	1.35	1.43	1.58	23.31	39.25	20.18
15	3.87	2.81	---	---	1.61	1.58	1.17	1.41	6.46	39.07	42.96	17.82
20	3.59	2.81	---	---	1.63	1.28	1.08	1.37	28.29	49.97	32.67	16.02
25	3.45	2.68	---	---	1.84	1.06	1.19	1.23	26.09	50.11	36.14	14.34
EOM	3.35	2.62	---	---	1.63	1.11	1.19	1.21	43.16	50.46	34.50	13.28

WTR YR 1991 LOW 52.04 AUG 3

GROUND-WATER DATA

JASPER COUNTY

410145087130401. Local number, JP 12.

LOCATION.--Lat 41°01'45", long 87°13'04", in NW¼SW¼SW¼ sec.22, T.30 N., R.7 W., Jasper County, Hydrologic Unit 07120002, in Old Union Township school yard, 200 ft east of County Road 900 West, 750 ft north of State Highway 14, and in Parr.

Owner: Prudential Insurance Company of America.

AQUIFER.--Limestone/dolomite of Silurian/Devonian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 5 in., depth 150 ft, cased to 103 ft, open end.

INSTRUMENTATION.--Water-level recorder, data-collection platform, and incremental encoder.

DATUM.--Elevation of land-surface datum is 695ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of well casing, 2.6 ft above land-surface datum.

REMARKS.--Water level may be affected by irrigation pumpage.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 14.08 ft below land-surface datum, May 22, 1983; lowest, 53.41 ft below land-surface datum, Aug. 18, 1988.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	20.75	17.36	16.68	15.97	15.70	15.42	15.20	15.09	15.50	31.66	39.99	30.94
10	19.82	17.45	16.66	15.99	15.63	15.72	15.14	15.31	15.56	30.61	44.96	35.35
15	19.18	17.35	16.36	15.69	15.50	15.53	14.91	15.25	15.71	36.07	46.60	33.23
20	18.51	17.21	16.40	15.54	15.66	15.27	15.12	15.35	24.14	44.77	42.67	31.67
25	18.30	16.96	16.38	15.80	15.95	15.32	15.15	15.20	27.23	43.53	44.05	29.97
EOM	17.95	16.91	16.02	15.71	15.63	15.26	15.04	15.33	37.10	47.14	45.03	28.96

WTR YR 1991 HIGH 14.84 MAR 27

DAY	LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	20.97	17.71	16.96	16.17	15.82	15.61	15.34	15.22	15.62	32.45	48.29	40.03
10	20.11	17.60	16.79	16.19	15.83	15.87	15.41	15.49	15.76	31.23	45.42	35.87
15	19.59	17.67	16.61	15.86	15.83	15.75	15.28	15.48	16.46	37.55	47.37	33.57
20	18.85	17.45	16.58	15.65	15.77	15.47	15.35	15.48	27.14	45.84	43.36	31.99
25	18.36	17.16	16.58	15.93	16.13	15.60	15.27	15.46	27.23	44.01	46.40	30.38
EOM	18.07	17.24	16.37	15.92	15.87	15.40	15.25	15.60	38.42	48.43	47.69	29.25

WTR YR 1991 LOW 51.48 AUG 3

JASPER COUNTY

405902087141501. Local number, JP 13.

LOCATION.--Lat 40°59'02", long 87°14'15", in NW¼NW¼NW¼ sec.9, T.29 N., R.7 W., Jasper County, Hydrologic Unit 07120002, at southwest corner of North Newton school, and 4.6 mi northwest of Rensselaer.

Owner: Prudential Insurance Company of America.

AQUIFER.--Dolomite of Silurian/Devonian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 5 in., depth 150 ft, cased to 106 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 700 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of well casing, 3.4 ft above land-surface datum.

REMARKS.--Water level may be affected by irrigation pumpage.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 20.98 ft below land-surface datum, Apr. 3, 1982; lowest, 55.85 ft below land-surface datum, Aug. 19, 1988.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	28.10	25.57	24.81	24.03	23.61	23.28	23.26	22.94	23.33	38.22	52.07	47.76
10	27.53	25.60	24.78	23.99	23.52	23.73	23.14	23.17	23.42	38.06	51.61	45.55
15	27.27	25.51	24.47	23.67	23.41	23.48	22.88	23.13	23.53	41.17	50.17	43.67
20	26.85	25.40	24.51	23.52	23.53	23.23	23.09	23.23	27.08	45.09	49.87	42.07
25	26.64	25.08	24.45	23.80	23.62	23.41	23.09	23.04	32.47	47.35	49.29	40.26
EOM	26.22	25.03	24.33	23.67	23.43	23.38	22.98	23.10	37.84	49.86	49.65	31.35

WTR YR 1991 HIGH 22.88 APR 15

DAY	LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	28.31	25.93	25.13	24.18	23.68	23.51	23.32	23.08	23.42	38.51	52.36	48.17
10	27.67	25.73	24.87	24.17	23.64	23.79	23.40	23.28	23.57	38.70	51.98	45.87
15	27.40	25.63	24.71	23.83	23.66	23.59	23.13	23.26	24.03	41.52	50.25	43.98
20	27.02	25.50	24.70	23.61	23.59	23.39	23.19	23.27	28.38	45.71	50.17	42.42
25	26.67	25.22	24.60	23.85	23.73	23.50	23.23	23.18	33.28	48.07	49.38	40.70
EOM	26.33	25.33	24.41	23.82	23.63	23.53	23.11	23.21	38.70	50.52	49.78	39.46

WTR YR 1991 LOW 52.48 AUG 4

JASPER COUNTY

410839087130301. Local number, JP 14.

LOCATION.--Lat 41°08'39", long 87°13'03", in NW¼NW¼ sec.15, T.31 N., R.7 W., Jasper County, Hydrologic Unit 07120001, at the southeast corner of the intersection of State Highway 10 and County Road 900 West, about 3.5 mi southwest of Demotte.
Owner: U.S. Geological Survey

AQUIFER.--Limestone of Silurian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 97.4 ft, cased to 56 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 690 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 3.40 ft above land-surface datum.

PERIOD OF RECORD.--July 1989 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.93 ft below land-surface datum, Dec. 29, 1990; lowest, 8.80 ft below land-surface datum, July 13, 1989.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.89	5.08	5.79	5.52	5.65	5.61	5.52	5.37	5.37	6.32	7.44	7.65
10	4.95	5.88	6.01	5.71	5.56	5.93	5.82	5.74	5.67	6.41	7.49	7.67
15	5.82	6.10	5.84	5.66	5.82	5.84	4.58	5.73	5.69	6.61	7.56	7.69
20	5.96	6.25	5.92	5.38	5.61	4.65	5.31	5.38	5.58	6.81	7.54	7.76
25	6.23	6.29	5.89	5.87	5.82	4.95	5.61	4.07	5.87	7.02	7.60	7.68
EOM	6.36	5.60	4.52	6.07	5.89	5.59	5.62	4.32	6.14	7.28	7.56	7.76

WTR YR 1991 HIGH 3.93 DEC 29

DAY	LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.92	5.98	5.86	5.65	5.74	5.67	5.59	5.76	5.46	6.37	7.46	7.66
10	5.28	6.00	6.07	5.81	5.61	5.98	5.85	5.78	5.72	6.46	7.52	7.70
15	5.94	6.14	6.05	5.80	5.90	5.93	4.91	5.77	5.84	6.63	7.59	7.71
20	6.03	6.29	5.98	5.42	5.68	4.81	5.36	5.48	5.61	6.85	7.59	7.78
25	6.26	6.35	6.01	5.90	5.87	5.26	5.64	5.37	5.95	7.10	7.62	7.73
EOM	6.40	5.71	4.87	6.14	5.96	5.63	5.69	5.33	6.22	7.31	7.63	7.79

WTR YR 1991 LOW 7.79 SEP 28

JEFFERSON COUNTY

384949085251901. Local number, JF 5.

LOCATION.--Lat 38°49'49", long 85°25'19", in SE¼NW¼SW¼ sec.33, T.5 N., R.10 E., Jefferson County, Hydrologic Unit 05120207, on Jefferson Proving Ground, 500 ft north of Airfield Road, 1,000 ft southwest of the water tower, and 2.2 mi west of main gate.
Owner: U.S. Army

AQUIFER.--Limestone, dolomite, and shale of Silurian and Ordovician age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 5 in., depth 200 ft, cased to 33 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 855 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of floor of shelter, 3.00 ft above land-surface datum.

REMARKS.--This well was drilled on a mapped fracture trace.

PERIOD OF RECORD.--March 1980 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.97 ft below land-surface datum, Jan. 21, 1991; lowest, 9.22 ft below land-surface datum, Sept. 7, 16, 1988.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	4.18	---	---	3.05	3.37	4.20	---	---	6.34	7.63	7.92
10	---	4.29	---	---	3.25	3.06	4.14	---	5.27	6.52	7.62	7.85
15	---	4.25	---	---	3.47	---	4.02	---	5.48	6.86	7.74	7.90
20	---	4.12	---	2.98	3.37	3.99	4.17	---	5.75	6.99	7.74	8.00
25	---	3.86	---	3.22	3.43	3.99	---	---	5.96	7.15	7.90	7.77
EOM	---	3.97	---	3.34	3.29	3.92	---	---	6.10	7.46	7.98	8.06

WTR YR 1991 HIGH 2.97 JAN 21

DAY	LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	4.47	---	---	3.25	3.53	4.27	---	---	6.45	7.77	8.07
10	---	4.41	---	---	3.51	3.14	4.29	---	5.46	6.68	7.79	7.99
15	---	4.41	---	---	3.51	---	4.26	---	5.59	6.95	7.81	7.97
20	---	4.25	---	3.09	3.40	4.14	4.29	---	5.84	7.12	7.86	8.14
25	---	4.00	---	3.23	3.50	4.20	---	---	6.09	7.31	8.02	7.93
EOM	---	4.22	---	3.35	3.34	4.14	---	---	6.18	7.52	8.04	8.22

WTR YR 1991 LOW 8.22 SEP 30

JENNINGS COUNTY

385601085365701. Local number, JN 3.

LOCATION.--Lat 38°56'01", long 85°36'57", in SE¼SW¼NE¼ sec.27, T.6 N., R.8 E., Jennings County, Hydrologic Unit 05120207, 200 ft west of State Highway 3, 1.6 mi south of Crosley Fish and Game Office and 3.0 mi south of Vernon.

Owner: U.S. Geological Survey.

AQUIFER.--Limestones and dolomites of Devonian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 180 ft, cased to 45 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 718 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of floor of shelter, 3.50 ft above land-surface datum.

PERIOD OF RECORD.--October 1978 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 36.64 ft below land-surface datum, Jan. 21, 1979; lowest, 40.87 ft below land-surface datum, July 6, 1988.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	39.42	39.07	38.90	38.58	38.66	38.68	38.80	38.86	39.51	39.93	40.11	40.12	
10	39.24	39.26	39.00	38.46	38.35	39.09	38.71	39.08	39.66	39.95	40.05	40.14	
15	39.31	39.37	38.85	38.32	38.40	38.85	38.28	38.92	39.66	40.06	40.09	40.16	
20	39.29	39.35	38.63	38.45	38.67	38.57	38.50	39.09	39.79	40.03	40.03	40.37	
25	39.22	38.97	38.64	38.88	38.75	38.58	38.75	39.05	39.91	40.02	40.23	40.05	
EOM	39.37	39.18	38.53	38.73	38.73	38.70	38.77	39.12	39.84	40.09	40.13	40.37	

WTR YR 1991 HIGH 38.10 FEB 13

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	39.48	39.29	39.06	38.66	38.71	38.81	38.83	38.96	39.64	39.98	40.17	40.18
10	39.40	39.31	39.04	38.64	38.46	39.16	38.82	39.14	39.73	39.99	40.14	40.19
15	39.43	39.42	39.04	38.48	38.75	38.96	38.45	38.99	39.69	40.11	40.13	40.20
20	39.35	39.40	38.72	38.54	38.75	38.67	38.62	39.12	39.83	40.08	40.12	40.43
25	39.30	39.10	38.69	38.95	38.79	38.63	38.81	39.11	39.95	40.08	40.28	40.18
EOM	39.41	39.35	38.63	38.92	38.79	38.77	38.89	39.23	39.90	40.12	40.18	40.47

WTR YR 1991 LOW 40.47 SEP 30

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.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.91	9.83	8.63	5.84	7.93	8.36	8.13	8.76	9.35	9.79	10.25	10.39	
10	9.64	9.85	8.86	5.30	6.74	8.73	8.16	8.95	9.49	9.82	10.31	10.49	
15	9.71	9.92	9.01	5.47	7.25	8.05	7.86	9.05	9.64	9.94	10.36	10.52	
20	9.63	9.95	7.68	6.69	7.29	7.26	8.04	9.16	9.74	10.02	10.40	10.55	
25	9.46	9.85	7.58	7.60	7.62	6.99	8.22	9.15	9.51	10.10	10.45	10.55	
EOM	9.77	8.41	4.75	8.13	7.86	7.93	8.52	9.36	9.65	10.19	10.49	10.58	

WTR YR 1991 HIGH 4.75 DEC 31

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.92	9.89	8.72	5.93	8.23	8.40	8.16	8.82	9.38	9.81	10.27	10.41
10	9.88	9.87	8.93	5.54	7.08	8.76	8.25	8.98	9.53	9.87	10.32	10.50
15	9.76	9.93	9.11	5.55	7.53	8.11	7.98	9.07	9.66	9.95	10.37	10.53
20	9.66	9.97	7.84	7.02	7.33	7.40	8.07	9.19	9.76	10.03	10.41	10.55
25	9.48	9.86	7.66	7.64	7.74	7.22	8.24	9.20	9.56	10.12	10.46	10.55
EOM	9.80	8.49	4.89	8.24	7.92	7.97	8.58	9.39	9.67	10.20	10.50	10.58

WTR YR 1991 LOW 10.58 SEP 29

KNOX COUNTY

384951087202501. Local number, KN 8.

LOCATION.--Lat 38°49'51", long 87°20'25", in M.D. 240, T.5 N., R.8 W., Knox County, Hydrologic Unit 05120111, on the northwest side of road at the southwest boundary of Chambers Cemetery about 2.5 mi southwest of Freelandville.

Owner: U.S. Geological Survey

AQUIFER.--Interbedded sandstone, shale, and coal of Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 137 ft, cased to 41 ft, open hole.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 460 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 3.50 ft above land-surface datum.

PERIOD OF RECORD.--August 1989 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 12.00 ft below land-surface datum, Feb. 22, 1990; lowest, 15.15 ft below land-surface datum, Sept. 30, 1991.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	13.85	13.65	13.39	12.80	12.66	12.33	12.50	12.60	12.90	13.36	14.21	14.69
10	13.73	13.76	13.41	12.68	12.46	12.58	12.44	12.74	13.06	13.50	14.15	14.79
15	13.63	13.89	13.29	12.48	12.34	12.40	12.36	12.69	13.10	13.65	14.29	14.85
20	13.68	13.90	13.07	12.53	12.41	12.24	12.45	12.81	13.17	13.76	14.39	15.03
25	13.71	13.73	12.99	12.75	12.46	12.30	12.55	12.80	13.20	13.90	14.61	14.91
EOM	13.79	13.53	12.84	12.67	12.41	12.46	12.53	12.81	13.29	14.09	14.60	15.10

WTR YR 1991 HIGH 12.16 MAR 27

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	13.90	13.74	13.50	12.85	12.70	12.41	12.52	12.64	12.95	13.40	14.27	14.74
10	13.75	13.80	13.43	12.80	12.51	12.60	12.54	12.78	13.08	13.55	14.21	14.83
15	13.71	13.92	13.39	12.57	12.48	12.46	12.43	12.74	13.11	13.70	14.32	14.89
20	13.72	13.92	13.15	12.57	12.44	12.28	12.51	12.82	13.20	13.81	14.45	15.06
25	13.75	13.79	13.04	12.76	12.49	12.31	12.59	12.82	13.23	13.95	14.63	14.98
EOM	13.81	13.66	12.85	12.78	12.46	12.48	12.62	12.85	13.30	14.13	14.63	15.15

WTR YR 1991 LOW 15.15 SEP 30

KOSCIUSKO COUNTY

412554085450001. Local number, KO 6.

LOCATION.--Lat 41°25'54", long 85°45'00", in NW¼SW¼NW¼ sec.5, T.34 N., R.7E., Kosciusko County, Hydrologic Unit 04050001, west end of North Shore Drive and Lakeview Park in Syracuse, Indiana.

Owner: U.S. Geological Survey.

AQUIFER.--Sand of Pleistocene age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 2 in., depth 23 ft, cased to 20 ft, screened to 23 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 870 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of floor of shelter, 3.00 ft above land-surface datum.

PERIOD OF RECORD.--November 1978 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 6.94 ft below land-surface datum, Apr. 15, 16, 1985; lowest, 10.64 ft below land-surface datum, Feb. 9, 1979, Oct. 7, 13, 14, 1988.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.92	8.37	8.44	7.82	7.91	8.07	8.06	7.62	7.48	8.08	8.67	9.00
10	8.57	8.39	8.48	7.82	7.92	8.14	8.03	7.69	7.61	8.21	8.68	9.06
15	8.52	8.47	8.52	7.80	7.94	8.21	7.94	7.75	7.63	8.31	8.78	9.01
20	8.49	8.53	8.49	7.74	8.00	8.08	7.71	7.82	7.75	8.44	8.75	9.12
25	8.52	8.56	8.51	7.80	8.07	8.05	7.66	7.83	7.87	8.52	8.85	9.18
EOM	8.59	8.55	7.90	7.84	8.09	8.04	7.61	7.52	8.00	8.64	8.93	9.27

WTR YR 1991 HIGH 7.45 JUN 2

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.94	8.60	8.45	7.85	7.91	8.08	8.07	7.63	7.51	8.10	8.68	9.02
10	8.86	8.41	8.51	7.82	7.93	8.14	8.06	7.71	7.61	8.24	8.70	9.06
15	8.52	8.48	8.55	7.80	7.99	8.22	8.06	7.79	7.64	8.35	8.80	9.03
20	8.50	8.56	8.51	7.74	8.02	8.09	7.73	7.84	7.78	8.47	8.78	9.13
25	8.54	8.58	8.51	7.81	8.08	8.09	7.67	7.87	7.90	8.54	8.87	9.19
EOM	8.60	8.57	7.90	7.88	8.11	8.05	7.61	7.79	8.02	8.66	8.95	9.28

WTR YR 1991 LOW 9.28 SEP 30

KOSCIUSKO COUNTY

412556085513401. Local number, KO 9.

LOCATION.--Lat 41°25'56", long 85°51'34", in SW¼E¼NW¼ sec.5, T.34 N., R.6 E., Kosciusko County, Hydrologic Unit 04050001, on the north edge of property owned by the Dome Pipeline Corporation, on County Road 50 West, 1.5 mi northwest of Milford.
Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 4 in., depth 102 ft, cased to 99 ft, screened to 102 ft.

INSTRUMENTATION.--Water-stage recorder.

DATUM.--Elevation of land-surface datum is 830.90 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of floor of shelter, 3.2 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 7.24 ft below land-surface datum, Apr. 8, 9, 1985; lowest, 14.33 ft below land-surface datum, Aug. 10, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	11.17	10.02	10.33	8.67	9.60	10.19	10.29	9.78	8.99	10.86	12.83	13.12
10	10.83	9.95	10.36	8.87	9.76	10.25	10.35	9.94	9.13	11.22	12.89	13.17
15	9.79	9.99	10.32	9.03	9.88	10.29	10.39	10.05	9.35	11.58	12.93	13.22
20	9.72	10.11	10.42	9.02	10.04	10.24	10.18	10.19	9.70	11.99	13.00	13.26
25	9.81	10.18	10.42	9.23	10.12	10.22	9.83	10.28	10.17	12.29	13.02	13.32
EOM	9.99	10.29	9.01	9.38	10.17	10.23	9.76	9.50	10.69	12.64	13.07	13.37

WTR YR 1991 HIGH 8.67 JAN 5

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	11.18	10.10	10.37	8.68	9.64	10.23	10.32	9.81	9.00	10.94	12.84	13.14
10	11.10	9.97	10.38	8.88	9.79	10.27	10.39	9.97	9.17	11.29	12.90	13.18
15	9.82	10.00	10.37	9.06	9.94	10.31	10.49	10.08	9.39	11.65	12.94	13.23
20	9.73	10.13	10.44	9.07	10.06	10.28	10.25	10.20	9.79	12.07	13.00	13.27
25	9.85	10.22	10.44	9.25	10.14	10.24	9.88	10.30	10.27	12.35	13.02	13.32
EOM	10.02	10.31	9.40	9.39	10.18	10.26	9.78	10.03	10.75	12.70	13.09	13.38

WTR YR 1991 LOW 13.38 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, 16.93 ft below land-surface datum, Aug. 14, 15, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	14.61	14.03	13.95	13.22	12.86	12.97	13.24	13.13	13.14	13.92	14.92	15.10
10	14.54	14.04	13.96	13.06	12.87	13.07	13.27	13.11	13.18	13.98	14.94	15.11
15	14.31	14.02	13.93	12.95	12.89	13.11	13.23	13.07	13.36	14.29	15.06	15.14
20	14.16	13.99	13.96	12.85	12.84	13.12	13.32	13.07	13.66	14.63	15.09	15.17
25	14.11	13.95	13.94	12.86	12.92	13.18	13.30	13.07	13.92	14.53	15.04	15.19
EOM	14.07	13.96	13.63	12.85	12.94	13.21	13.21	13.09	14.23	14.71	15.09	15.24

WTR YR 1991 HIGH 12.82 JAN 27

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	14.62	14.06	13.99	13.27	12.87	13.01	13.26	13.17	13.16	13.94	14.95	15.11
10	14.61	14.05	13.98	13.10	12.89	13.09	13.31	13.12	13.19	14.12	14.95	15.13
15	14.35	14.03	13.95	12.98	12.96	13.13	13.31	13.07	13.39	14.35	15.11	15.15
20	14.19	14.00	13.98	12.87	12.86	13.15	13.33	13.08	13.72	14.65	15.10	15.18
25	14.11	13.98	13.96	12.88	12.93	13.19	13.33	13.07	13.94	14.63	15.05	15.20
EOM	14.08	13.98	13.76	12.90	12.96	13.23	13.23	13.11	14.29	14.72	15.11	15.24

WTR YR 1991 LOW 15.24 SEP 29

LAGRANGE COUNTY

414158085253401. Local number, LG 3.

LOCATION.--Lat 41°41'58", long 85°25'34", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.36, T.38 N., R.9 E., Lagrange County, Hydrologic Unit 04050001, at northwest corner of intersection of State Highway 9 and County Road 400 North, at edge of woods, and 1.4 mi south of Howe.
Owner: U.S. Geological Survey.

AQUIFER.--Fine to medium sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 6 in., depth 40 ft, cased to 35 ft, screened to 40 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 870 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of floor of shelter, 3.7 ft above land-surface datum.

PERIOD OF RECORD.--June 1981 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.48 ft below land-surface datum, Mar. 21, 1982; lowest, 8.82 ft below land-surface datum, Sept. 2, 1988.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.91	6.81	6.57	5.16	6.18	6.23	6.62	6.15	6.59	7.15	7.92	8.18
10	7.45	6.64	6.54	5.52	6.29	6.33	6.65	6.31	6.72	7.27	7.97	8.23
15	6.92	6.66	6.60	5.70	6.36	6.43	6.65	6.44	6.83	7.43	8.02	8.24
20	6.81	6.77	6.71	5.65	6.26	6.49	6.43	6.59	6.98	7.56	8.03	8.28
25	6.83	6.84	6.73	5.84	6.22	6.57	6.13	6.68	7.17	7.67	8.07	8.32
EOM	6.92	6.69	5.02	6.03	6.26	6.59	6.04	6.64	7.37	7.81	8.13	8.36

WTR YR 1991 HIGH 4.94 JAN 1

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.92	7.00	6.60	5.22	6.21	6.25	6.63	6.16	6.60	7.17	7.94	8.19
10	7.66	6.66	6.56	5.56	6.31	6.35	6.68	6.34	6.75	7.31	7.98	8.26
15	6.92	6.67	6.63	5.73	6.40	6.45	6.70	6.47	6.85	7.45	8.03	8.25
20	6.81	6.79	6.72	5.71	6.31	6.50	6.51	6.61	7.03	7.59	8.05	8.29
25	6.84	6.88	6.75	5.87	6.22	6.58	6.17	6.70	7.20	7.69	8.08	8.32
EOM	6.96	6.72	5.35	6.09	6.28	6.59	6.05	6.76	7.38	7.83	8.14	8.37

WTR YR 1991 LOW 8.37 SEP 30

LAKE COUNTY

411038087284701. Local number, LK 12.

LOCATION.--Lat 41°10'38", long 87°28'47", in SW $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.32, T.32 N., R.9 W., Lake County, Hydrologic Unit 07120001, on the northern edge of Kankakee River State Park, 2.0 mi southwest of Schneider.
Owner: U.S. Geological Survey.

AQUIFER.--Dolomite of Silurian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 82 ft, cased to 52 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 630.59 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of floor of shelter, 2.55 ft above land-surface datum.

REMARKS.--Water level may be affected by pumping.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.15 ft below land-surface datum, Jan. 12, 1973; lowest, 17.92 ft below land-surface datum, Aug. 27, 1988.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.12	2.87	1.86	1.32	2.08	2.09	2.02	1.97	2.14	7.64	14.37	13.67
10	3.45	2.61	1.96	1.50	1.98	2.27	2.10	2.13	2.31	9.10	14.51	12.55
15	3.06	2.64	2.00	1.56	2.07	2.25	2.00	2.16	2.72	10.42	14.92	11.57
20	2.88	2.73	2.09	1.56	2.19	1.78	1.74	2.09	3.10	11.57	15.14	11.10
25	2.94	2.70	2.05	1.77	2.23	1.76	1.79	2.09	4.16	12.55	15.37	10.27
EOM	3.06	2.02	1.35	2.00	2.21	1.93	1.86	1.99	6.18	13.76	14.79	10.09

WTR YR 1991 HIGH 1.27 JAN 1

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.22	3.04	2.00	1.45	2.22	2.22	2.10	2.08	2.26	7.96	14.53	13.94
10	3.64	2.85	2.08	1.64	2.11	2.59	2.26	2.25	2.47	9.35	14.61	12.89
15	3.15	2.75	2.09	1.70	2.19	2.34	2.14	2.38	2.86	10.65	15.04	11.97
20	3.29	2.80	2.25	1.66	2.30	2.02	1.91	2.21	3.28	11.80	15.24	11.38
25	3.06	2.82	2.17	1.92	2.35	2.00	1.91	2.28	4.53	12.81	15.52	10.61
EOM	3.18	2.21	1.47	2.18	2.31	2.05	2.01	2.14	6.84	13.93	14.98	10.97

WTR YR 1991 LOW 15.52 AUG 25

LAKE COUNTY

41355908727031. 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, 0.01 ft below land-surface datum, Apr. 15, 1991; lowest, 5.15 ft below land-surface datum, Sept. 10, 1986.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	2.85	.37	.27	.75	.55	.38	.40	.26	1.59	3.76	4.72	3.97
10	.62	1.08	.43	.91	.61	.52	.43	.48	2.24	3.90	4.06	4.31
15	1.34	1.27	.36	.89	.70	.40	.01	.75	2.51	4.06	4.33	4.22
20	1.63	1.47	.64	.43	.68	.34	.11	.82	2.95	4.31	3.74	4.48
25	1.88	1.33	.75	.91	.86	.38	.21	.35	3.23	4.48	4.19	4.40
EOM	2.16	.21	.36	1.22	.77	.31	.28	1.14	3.58	4.61	4.48	4.64

WTR YR 1991 HIGH .01 APR 15

DAY	LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	3.14	.76	.34	.81	.59	.41	.45	.31	1.78	4.00	4.85	4.13
10	1.10	1.15	.46	.96	.68	.54	.53	.55	2.52	4.12	4.21	4.42
15	1.53	1.29	.56	.93	.88	.48	.15	.91	2.83	4.26	4.53	4.43
20	1.72	1.50	.66	.48	.73	.36	.14	.93	3.25	4.53	3.96	4.56
25	1.95	1.40	.85	.99	.92	.39	.24	1.06	3.46	4.64	4.39	4.50
EOM	2.19	.23	.39	1.31	1.02	.36	.35	1.43	3.71	4.79	4.64	4.78

WTR YR 1991 LOW 4.88 AUG 6

LAKE COUNTY

411146087204101. Local number, LK 14.

LOCATION.--Lat 41°11'46", long 87°20'41", in SE¼SE¼NW¼ sec.28, T.32 N., R.8 W., Lake County, Hydrologic Unit 07120001, in Shelby on northwest corner of the intersection of Tyler Road and State Highway 55.

Owner: U.S. Geological Survey.

AQUIFER.--Limestone of Silurian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 96.2 ft, cased to 50 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 641 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 3.50 ft above land-surface datum.

PERIOD OF RECORD.--July 1989 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 6.19 ft below land-surface datum, Mar. 27, 1991; lowest, 22.86 ft below land-surface datum, July 28, 1991.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.68	8.49	7.45	6.46	7.53	7.39	6.83	7.35	7.67	16.12	17.34	13.16
10	9.41	8.18	7.51	6.71	7.39	7.64	7.04	7.61	7.93	14.64	15.39	12.01
15	8.98	8.16	7.52	6.77	7.39	7.61	7.07	7.75	8.62	16.52	16.82	11.63
20	8.68	8.28	7.71	6.69	7.57	6.86	6.76	7.88	14.65	17.34	16.04	11.50
25	8.68	8.29	7.73	7.03	7.60	6.53	7.02	7.82	13.97	20.87	13.14	11.26
EOM	8.71	7.81	6.83	7.37	7.56	6.54	7.16	7.48	16.95	21.07	14.39	11.34

WTR YR 1991 HIGH 6.19 MAR 27

DAY	LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.77	8.74	7.63	6.54	7.56	7.52	6.88	7.47	7.76	18.04	19.63	13.59
10	9.54	8.25	7.61	6.76	7.47	7.69	7.22	7.70	8.03	17.12	16.36	12.17
15	9.05	8.22	7.67	6.83	7.54	7.69	7.20	7.86	8.67	17.69	18.67	11.67
20	8.78	8.32	7.79	6.75	7.61	7.11	6.81	7.92	15.82	19.65	16.70	11.59
25	8.70	8.40	7.83	7.10	7.66	6.58	7.10	8.01	15.47	21.47	13.54	11.40
EOM	8.79	8.06	7.07	7.47	7.66	6.61	7.27	7.53	18.73	22.05	14.49	11.42

WTR YR 1991 LOW 22.86 JUL 28

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 1990 TO SEPTEMBER 1991												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.58	---	4.22	---	---	3.34	3.28	3.02	---	---	4.38	3.77
10	---	---	---	---	---	3.40	3.02	3.39	---	---	4.46	3.99
15	---	---	---	---	---	3.28	2.95	3.50	---	3.99	4.56	4.21
20	---	---	---	---	---	3.25	3.26	3.43	---	4.08	4.65	4.42
25	---	---	---	---	3.53	3.32	3.30	2.99	---	4.17	4.81	4.64
EOM	---	---	---	---	3.46	3.34	3.29	3.04	---	4.28	4.95	4.86

WTR YR 1991 HIGH 2.92 MAR 17

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.66	---	4.24	---	---	3.34	3.34	3.37	---	---	4.39	3.81
10	---	---	---	---	---	3.40	3.37	3.41	---	---	4.48	4.03
15	---	---	---	---	---	3.34	3.23	3.50	---	4.01	4.58	4.25
20	---	---	---	---	---	3.25	3.28	3.44	---	4.10	4.67	4.47
25	---	---	---	---	3.53	3.32	3.30	3.42	---	4.19	4.87	4.68
EOM	---	---	---	---	3.54	3.35	3.32	3.35	---	4.30	5.14	4.90

WTR YR 1991 LOW 6.48 OCT 3

LA PORTE COUNTY

412350086512801. Local number, LP 9.

LOCATION.--Lat 41°23'50", long 86°51'28", in SE¼SW¼NE¼ sec.15, T.34 N., R.4 W., La Porte County, Hydrologic Unit 07120001, at the intersection of County Roads 1450 South and 825 West, 3.0 mi southeast of Wanatah.
 Owner: U.S. Geological Survey.

AQUIFER.--Sand of Pleistocene age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 32 ft, cased to 27 ft, screened to 32 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 706.81 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of floor of shelter, 1.60 ft above land-surface datum.

PERIOD OF RECORD.--June 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.56 ft below land-surface datum, Apr. 5, 1985; lowest, 8.28 ft below land-surface datum, Oct. 16, 17, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.82	3.53	3.46	---	---	3.81	4.47	4.49	4.08	5.91	---	7.66
10	4.31	3.99	3.88	---	---	4.29	4.63	4.79	4.40	---	---	7.72
15	4.18	4.36	3.86	---	---	4.33	3.94	4.91	4.67	---	---	7.77
20	4.23	4.66	4.24	---	---	3.74	3.93	5.03	5.01	---	---	7.82
25	4.54	4.82	4.32	---	4.06	4.10	4.21	3.94	5.33	---	7.51	7.86
EOM	4.83	2.99	---	---	4.13	4.26	4.41	3.32	5.63	---	7.60	7.91

WTR YR 1991 HIGH 2.38 NOV 28

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.84	4.86	3.65	---	---	3.95	4.53	4.61	4.15	5.95	---	7.67
10	5.30	4.13	3.99	---	---	4.33	4.76	4.83	4.45	---	---	7.73
15	4.28	4.41	4.14	---	---	4.52	4.65	4.94	4.75	---	---	7.78
20	4.28	4.70	4.34	---	---	3.86	3.98	5.06	5.05	---	---	7.83
25	4.61	4.93	4.47	---	4.09	4.16	4.26	5.13	5.39	---	7.53	7.87
EOM	4.88	3.12	---	---	4.19	4.37	4.47	4.15	5.69	---	7.62	7.91

WTR YR 1991 LOW 7.91 SEP 29

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, 2.65 ft below land-surface datum, Dec. 29, 1990; lowest, 9.61 ft below land-surface datum, Sept. 17, 18, 1988.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.24	4.39	4.50	4.29	6.02	5.49	6.03	6.14	7.06	8.16	8.89	9.14
10	3.30	4.93	5.14	5.21	6.05	6.22	6.28	6.62	7.24	8.24	8.92	9.22
15	4.45	5.80	5.41	5.55	6.27	6.30	4.65	6.85	7.43	8.39	8.99	9.21
20	5.08	6.30	5.78	5.03	5.12	5.47	4.36	7.00	7.66	8.51	9.02	9.26
25	5.79	6.36	5.75	5.75	5.69	6.05	5.57	6.59	7.82	8.64	9.09	9.26
EOM	6.27	3.47	3.07	6.11	5.85	5.67	5.80	6.69	8.00	8.79	9.13	9.28

WTR YR 1991 HIGH 2.65 DEC 29

DAY	LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.32	6.39	4.71	4.56	6.07	5.62	6.10	6.29	7.11	8.18	8.91	9.16
10	4.43	5.23	5.34	5.34	6.17	6.31	6.51	6.68	7.28	8.27	8.94	9.23
15	4.63	5.87	5.67	5.66	6.50	6.40	6.30	6.95	7.49	8.42	9.00	9.22
20	5.17	6.36	5.95	5.14	5.32	5.60	4.58	7.05	7.69	8.53	9.03	9.27
25	5.90	6.59	5.96	5.82	5.76	6.14	5.63	6.84	7.86	8.67	9.11	9.27
EOM	6.36	3.69	3.24	6.33	5.91	5.83	5.91	6.79	8.04	8.81	9.14	9.30

WTR YR 1991 LOW 9.30 SEP 30

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, 0.82 ft below land-surface datum, Dec. 30, 1990; lowest, 10.18 ft below land-surface datum, Oct. 17, 1988.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.71	4.10	2.80	2.42	3.21	3.13	3.76	3.84	3.11	4.83	5.68	6.74
10	4.59	3.96	3.19	2.99	3.16	3.59	3.91	4.02	3.52	4.25	5.85	6.89
15	4.45	4.22	3.23	3.17	3.40	3.79	3.70	4.12	3.80	4.66	6.03	7.04
20	4.29	4.42	3.51	2.62	3.35	3.02	3.35	4.23	4.09	4.91	6.19	7.24
25	4.46	4.52	3.61	3.16	3.53	3.40	3.68	3.75	4.36	5.15	6.41	7.27
EOM	4.71	2.40	1.19	3.56	3.64	3.56	3.77	2.39	4.60	5.45	6.59	7.50

WTR YR 1991 HIGH .82 DEC 30

DAY	LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.78	4.74	2.91	2.60	3.31	3.20	3.80	3.98	3.22	4.89	5.73	6.78
10	5.32	4.04	3.28	3.08	3.20	3.65	4.01	4.06	3.57	4.34	5.90	6.95
15	4.51	4.24	3.38	3.23	3.59	3.85	3.97	4.15	3.86	4.71	6.07	7.07
20	4.32	4.44	3.58	2.64	3.41	3.07	3.43	4.25	4.13	4.97	6.23	7.26
25	4.52	4.60	3.70	3.22	3.57	3.45	3.71	4.35	4.41	5.22	6.43	7.35
EOM	4.74	2.46	1.54	3.68	3.67	3.63	3.85	3.58	4.65	5.49	6.66	7.55

WTR YR 1991 LOW 7.55 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, 14.96 ft below land-surface datum, Jan. 16, 1991; lowest, 22.82 ft below land-surface datum, Jan. 27, 28, 31, 1990..

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	18.53	17.71	16.33	15.29	15.36	15.16	15.42	15.16	15.46	15.83	17.01	17.74
10	18.52	17.70	16.12	15.06	15.36	15.33	15.46	15.34	15.30	16.01	17.15	17.78
15	18.31	17.62	15.98	15.00	15.31	15.31	15.43	15.37	15.20	16.17	17.24	17.83
20	18.06	17.52	16.08	15.00	15.42	15.23	15.51	15.52	15.33	16.36	17.39	17.93
25	17.91	17.44	16.14	15.23	15.39	15.34	15.31	15.55	15.52	16.54	17.51	17.97
EOM	17.81	17.02	15.93	15.26	15.28	15.38	15.20	15.59	15.68	16.80	17.62	18.09

WTR YR 1991 HIGH 14.96 JAN 16

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	18.54	17.82	16.42	15.38	15.39	15.25	15.45	15.23	15.48	15.86	17.05	17.74
10	18.55	17.73	16.13	15.13	15.40	15.36	15.54	15.37	15.34	16.03	17.18	17.80
15	18.33	17.66	16.06	15.02	15.44	15.36	15.56	15.40	15.22	16.22	17.27	17.85
20	18.12	17.55	16.13	15.05	15.47	15.31	15.53	15.53	15.35	16.42	17.41	17.94
25	17.92	17.49	16.18	15.25	15.40	15.37	15.38	15.57	15.56	16.57	17.52	17.99
EOM	17.82	17.24	16.04	15.36	15.32	15.43	15.22	15.64	15.70	16.84	17.68	18.09

WTR YR 1991 LOW 18.56 OCT 7

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, 2.72 ft below land-surface datum, Dec. 30, 1990; lowest, 8.84 ft below land-surface datum, Nov. 23-25, 1987.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.05	6.13	5.64	4.31	4.77	4.99	4.39	4.80	5.48	6.21	7.02	7.35
10	5.56	6.21	5.74	4.46	4.52	5.13	4.55	5.05	---	5.98	7.02	7.43
15	5.99	6.35	5.60	4.41	4.66	4.66	4.37	4.88	5.66	6.27	6.96	7.52
20	5.98	6.42	5.28	4.54	4.57	4.63	4.33	5.19	5.64	6.46	7.06	7.59
25	6.02	6.26	5.25	4.77	4.82	4.21	4.67	5.01	5.81	6.63	7.18	7.62
EOM	6.17	5.76	3.55	4.85	4.89	4.26	4.82	5.29	6.03	6.85	7.28	7.69

WTR YR 1991 HIGH 2.72 DEC 30

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.13	6.24	5.66	4.34	4.85	5.01	4.42	4.96	5.53	6.28	7.04	7.38
10	5.96	6.25	5.77	4.52	4.57	5.15	4.61	5.08	---	6.39	7.06	7.46
15	6.02	6.36	5.79	4.49	4.75	4.74	4.52	5.05	5.73	6.34	7.04	7.54
20	6.00	6.43	5.34	4.59	4.63	4.65	4.45	5.23	5.69	6.50	7.11	7.60
25	6.05	6.28	5.29	4.79	4.85	4.26	4.70	5.08	5.87	6.69	7.21	7.63
EOM	6.19	5.80	3.93	4.89	4.92	4.29	4.85	5.34	6.10	6.89	7.30	7.70

WTR YR 1991 LOW 7.70 SEP 30

MARION COUNTY

394632086092701. Local number, MA 35.

LOCATION.--Lat 39°46'32", long 86°09'27", in NW¼SW¼NW¼ sec.1, T.15 N., R.3 E., Marion County, Hydrologic Unit 05120201, in the northeast corner of the intersection of Meridian and North Streets in Indianapolis.
 Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 83 ft, cased to 77.5 ft, screened to 83 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 716.40 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.50 ft above land-surface datum.

PERIOD OF RECORD.--September 1987 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 30.30 ft below land-surface datum, Mar. 27, 1991; lowest, 36.95 ft below land-surface datum, Sept. 25, 1987.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	32.50	31.91	31.70	31.89	32.25	31.32	32.58	31.43	31.09	31.84	32.85	32.60
10	32.42	31.83	---	32.01	32.23	31.13	32.43	30.80	31.32	31.86	32.98	33.36
15	32.24	31.81	31.56	32.16	31.80	30.89	32.32	30.46	31.33	32.00	32.92	33.12
20	32.14	31.79	31.52	32.27	31.77	30.78	32.09	30.60	31.49	32.13	32.95	33.35
25	32.05	31.70	31.46	31.90	31.57	30.60	31.95	30.85	31.61	32.35	33.03	33.54
EOM	31.94	31.79	31.52	32.04	31.39	30.44	31.43	30.88	31.79	32.64	32.75	33.25

WTR YR 1991 HIGH 30.30 MAR 27

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	32.79	31.97	31.77	31.95	32.31	31.38	32.77	31.56	31.32	32.10	33.06	32.87
10	32.49	31.89	---	32.12	32.27	31.15	32.50	31.11	31.62	32.13	33.17	33.70
15	32.44	32.07	31.58	32.27	31.97	30.99	32.46	30.75	31.56	32.36	33.20	33.37
20	32.21	31.84	31.73	32.34	31.84	30.87	32.20	31.00	31.76	32.27	33.31	33.44
25	32.09	31.76	31.50	32.09	31.69	30.69	32.08	30.96	31.88	32.40	33.18	33.61
EOM	32.14	31.87	31.75	32.07	31.47	30.46	31.69	31.16	31.94	32.70	32.96	33.60

WTR YR 1991 LOW 33.70 SEP 10

MARION COUNTY

394626086100201. Local number, MA 36.

LOCATION.--Lat 39°46'26", long 86°10'02", in SW¼SW¼NE¼ sec.2, T.15 N., R.3 E., Marion County, Hydrologic Unit 05120201, in the southwest corner of the intersection of West and Michigan Streets in Indianapolis.
 Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 70.6 ft, cased to 65.1 ft, screened to 70.6 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 710.06 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.00 ft above land-surface datum.

PERIOD OF RECORD.--September 1987 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 26.86 ft below land-surface datum, May 14, 1991; lowest, 33.12 ft below land-surface datum, Sept. 24, 25, 1987.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	28.90	28.63	27.74	---	---	---	---	27.45	28.39	---	---
10	---	28.88	28.56	---	---	---	---	---	27.59	28.59	---	---
15	---	28.83	28.51	---	---	---	---	26.88	27.75	28.81	---	---
20	---	28.80	28.47	---	---	---	---	27.01	27.88	29.00	---	---
25	---	28.76	28.42	---	---	---	---	27.16	27.99	29.18	---	---
EOM	28.97	28.71	28.15	---	---	---	---	27.33	28.17	29.36	---	---

WTR YR 1991 HIGH 26.86 MAY 14

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	28.93	28.66	27.81	---	---	---	---	27.47	28.43	---	---
10	---	28.88	28.58	---	---	---	---	---	27.63	28.63	---	---
15	---	28.84	28.53	---	---	---	---	26.91	27.78	28.85	---	---
20	---	28.80	28.49	---	---	---	---	27.04	27.92	29.04	---	---
25	---	28.77	28.43	---	---	---	---	27.19	28.03	29.21	---	---
EOM	28.99	28.73	28.28	---	---	---	---	27.36	28.21	29.38	---	---

WTR YR 1991 LOW 29.39 AUG 1

MARION COUNTY

394732086115501. Local number, MA 37.

LOCATION.--Lat 39°47'32", long 86°11'55", in SE¼NE¼NE¼ sec. 33, T.16N., R.3W., Marion County, Hydrologic Unit 05120201, on the South Grove Municipal Golf Course property, west of the 11th fairway and east of White River Parkway in Indianapolis.
Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene Epoch.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 6 in., depth 74 ft, cased to 69 ft, screened to 74 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 690 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 3.35 ft above land-surface datum.

PERIOD OF RECORD.--July 1988 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.22 ft below land-surface datum, Mar. 20, 1991; lowest, 10.54 ft below land-surface datum, Aug. 18, 1988.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.62	5.28	---	4.66	4.14	4.25	3.81	4.08	6.09	6.29	6.48	6.49
10	6.59	5.37	---	4.01	3.77	4.40	3.77	4.27	4.97	6.43	6.29	6.77
15	6.87	5.57	---	3.76	4.08	3.53	3.44	4.58	5.36	6.48	6.29	6.90
20	5.40	5.51	---	3.65	3.88	3.22	4.94	4.24	5.43	6.71	6.25	6.38
25	5.37	5.42	---	3.96	4.04	4.30	3.88	4.62	5.61	7.03	6.32	6.18
EOM	5.54	4.85	---	5.58	4.16	3.61	4.13	4.71	5.95	6.27	6.56	6.33

WTR YR 1991 HIGH 3.22 MAR 20

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.80	5.69	---	4.79	4.34	4.33	3.91	4.17	6.33	6.34	6.62	6.59
10	6.87	5.41	---	4.16	3.89	4.47	3.87	4.40	5.22	6.52	6.44	6.88
15	7.00	5.75	---	3.81	4.19	3.61	3.71	4.66	5.46	6.58	6.38	6.99
20	5.54	5.63	---	3.73	3.98	3.39	5.10	5.85	5.75	6.76	6.32	6.48
25	5.43	5.55	---	3.99	4.19	4.68	4.01	4.73	5.78	7.28	6.38	6.50
EOM	5.72	4.93	---	5.63	4.30	3.71	4.19	4.98	6.05	6.45	6.68	6.57

WTR YR 1991 LOW 8.38 JUL 24

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: Marjorie A. Arvin.

AQUIFER.--Sandstone of Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 143 ft, cased to 53 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 565 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of floor of shelter, 2.80 ft above land-surface datum.

PERIOD OF RECORD.--May 1958 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 23.91 ft below land-surface datum, Apr. 14, 1980; lowest, 34.10 ft below land-surface datum, Jan. 1, 5, 22, 23, 1960, and Dec. 18, 19, 1964.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	25.92	26.78	26.85	26.29	25.20	25.57	25.00	25.31	25.45	26.14	26.65
10	25.96	26.39	26.89	26.65	26.09	25.95	25.31	25.38	25.42	25.53	26.13	26.74
15	26.08	26.79	26.55	26.13	25.68	25.71	25.04	25.14	25.17	25.89	26.28	26.80
20	26.29	26.73	26.79	26.17	26.12	25.39	25.24	25.36	25.38	25.87	26.25	27.23
25	26.38	26.36	27.06	26.67	26.05	25.55	25.25	25.14	25.53	25.88	26.61	26.73
EOM	26.55	26.95	27.10	26.44	25.74	25.60	25.11	25.08	25.39	26.06	26.50	27.25

WTR YR 1991 HIGH 24.88 MAR 27

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	26.38	27.09	27.04	26.39	25.56	25.65	25.16	25.46	25.52	26.22	26.74
10	26.19	26.59	26.93	27.12	26.24	26.06	25.63	25.47	25.54	25.60	26.29	26.83
15	26.35	26.83	26.82	26.51	26.25	25.91	25.36	25.22	25.29	25.98	26.34	26.89
20	26.38	26.81	26.92	26.40	26.26	25.63	25.35	25.42	25.46	25.96	26.38	27.35
25	26.51	26.53	27.13	26.82	26.10	25.67	25.41	25.25	25.59	25.98	26.72	26.95
EOM	26.63	27.21	27.30	26.78	25.89	25.75	25.29	25.16	25.52	26.13	26.60	27.41

WTR YR 1991 LOW 27.41 SEP 30

MONTGOMERY COUNTY

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, 33.97 ft below land-surface datum, Sept. 20, 1991.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	31.98	31.35	31.50	29.90	29.79	29.97	29.09	29.02	30.43	32.04	32.95	33.55
10	31.78	31.60	31.40	29.62	29.69	30.26	28.84	29.32	30.66	32.25	32.95	33.63
15	31.68	31.74	31.14	29.35	29.62	30.21	28.70	29.52	30.94	32.37	33.04	33.72
20	31.69	31.71	31.14	29.28	30.01	29.94	28.73	29.79	31.30	32.54	33.11	33.93
25	31.64	31.55	31.09	29.64	29.96	29.64	29.01	29.84	31.59	32.66	33.32	33.58
EOM	31.66	31.60	30.63	29.75	30.03	29.27	28.96	30.06	31.79	32.77	33.49	33.70

WTR YR 1991 HIGH 28.69 APR 19

DAY	LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	32.01	31.54	31.58	30.09	29.84	30.06	29.13	29.10	30.52	32.09	32.99	33.58
10	31.84	31.65	31.42	29.73	29.74	30.32	28.96	29.41	30.69	32.46	33.02	33.68
15	31.76	31.78	31.27	29.46	29.84	30.27	28.79	29.59	30.99	32.48	33.07	33.76
20	31.74	31.72	31.17	29.32	30.04	30.02	28.81	29.81	31.35	32.57	33.14	33.97
25	31.67	31.61	31.15	29.70	30.01	29.68	29.05	29.90	31.64	32.73	33.35	33.71
EOM	31.70	31.67	30.64	29.89	30.07	29.35	29.02	30.13	31.82	32.79	33.54	33.75

WTR YR 1991 LOW 33.97 SEP 20

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, 2.93 ft below land-surface datum, Jan. 1, 1991; lowest, 16.09 ft below land-surface datum, Nov. 2-4, 1988.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	12.26	12.26	12.00	5.36	---	---	---	9.69	10.79	12.02	13.13	14.10
10	12.21	12.36	11.89	6.91	---	---	---	9.95	10.99	12.19	13.27	14.24
15	12.00	12.48	11.85	7.55	---	---	9.14	10.16	11.16	12.32	13.45	14.36
20	11.96	12.59	11.52	---	---	---	9.12	10.29	11.36	12.51	13.61	14.49
25	11.98	12.67	11.01	---	---	---	9.23	10.49	11.58	12.69	13.78	14.60
EOM	12.13	12.37	3.15	---	---	---	9.42	10.71	11.80	12.92	13.96	14.72

WTR YR 1991 HIGH 2.93 JAN 1

DAY	LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	12.29	12.27	12.07	5.73	---	---	---	9.72	10.84	12.06	13.17	14.13
10	12.29	12.39	11.91	7.07	---	---	---	9.99	11.03	12.21	13.31	14.27
15	12.02	12.50	11.88	7.65	---	---	9.18	10.21	11.20	12.36	13.48	14.38
20	11.97	12.61	11.61	---	---	---	9.15	10.33	11.40	12.54	13.64	14.52
25	12.01	12.69	11.06	---	---	---	9.26	10.52	11.62	12.73	13.81	14.62
EOM	12.16	12.45	6.31	---	---	---	9.47	10.74	11.84	12.96	13.99	14.74

WTR YR 1991 LOW 14.74 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, 18.82 ft below land-surface datum, Oct. 29, 1988.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	13.88	11.28	10.35	8.62	11.05	10.94	10.04	10.97	11.51	13.87	15.77	16.75
10	12.43	10.63	10.73	9.72	10.89	11.27	10.47	11.29	11.95	14.18	15.79	16.93
15	10.98	10.95	10.84	10.15	11.04	10.98	10.49	11.45	12.56	14.24	15.95	17.15
20	10.69	11.27	10.94	9.82	11.17	9.07	10.07	11.04	12.94	14.52	16.05	17.30
25	11.00	11.33	10.54	10.39	11.16	8.98	10.45	10.91	13.59	14.87	16.25	17.31
EOM	11.40	10.64	8.72	10.92	11.14	9.49	10.74	11.07	14.08	15.29	16.65	17.46

WTR YR 1991 HIGH 8.40 JAN 2

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	13.93	11.58	10.54	8.80	11.11	11.09	10.16	11.05	11.61	13.97	15.81	16.79
10	13.16	10.73	10.83	9.77	10.96	11.32	10.70	11.34	12.02	14.22	15.84	16.99
15	11.04	11.00	10.99	10.17	11.23	11.03	10.75	11.50	12.65	14.26	15.99	17.17
20	10.74	11.31	11.03	9.89	11.26	9.38	10.14	11.15	13.02	14.56	16.10	17.37
25	11.10	11.48	10.66	10.47	11.19	9.02	10.50	10.95	13.74	14.93	16.32	17.37
EOM	11.49	10.88	9.12	11.09	11.20	9.60	10.82	11.17	14.27	15.37	16.74	17.50

WTR YR 1991 LOW 17.50 SEP 30

NEWTON COUNTY

405959087282901. Local number, NE 7.

LOCATION.--Lat 40°59'59", long 87°28'29", in SE¼SW¼SE¼ sec.32, T.30 N., R.9 W., Newton County, Hydrologic Unit 07120002, in the Willow Slough Game Preserve, 2.0 mi southwest of Enos.

Owner: State of Indiana.

AQUIFER.--Limestone of Silurian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 150 ft, cased to 136 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 680.83 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of floor of shelter, 2.03 ft above land-surface datum.

PERIOD OF RECORD.--February 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 34.65 ft below land-surface datum, Apr 14, 1980; lowest, 97.33 ft below land-surface datum, Aug. 29, 30, 1988.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	51.75	47.64	45.02	42.76	41.37	40.70	39.59	38.84	38.66	---	---	---
10	50.91	47.33	44.75	42.53	41.13	40.68	39.45	38.92	38.64	---	---	---
15	50.38	46.92	44.21	42.12	40.86	40.65	39.16	38.72	38.72	---	---	91.22
20	49.66	46.46	43.94	41.86	40.77	39.80	39.23	38.70	40.28	---	---	90.09
25	49.19	45.91	43.62	41.88	40.74	39.78	39.14	38.54	---	---	---	88.54
EOM	48.50	45.48	43.15	41.59	40.73	39.68	38.99	38.53	53.61	---	---	87.39

WTR YR 1991 HIGH 38.53 MAY 31

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	51.96	47.94	45.28	42.90	41.39	40.71	39.63	38.96	38.71	---	---	---
10	51.05	47.42	44.79	42.70	41.18	40.68	39.61	38.99	38.74	---	---	---
15	50.44	47.06	44.38	42.26	40.99	40.66	39.31	38.80	38.82	---	---	91.47
20	49.85	46.59	44.10	41.90	40.82	39.93	39.28	38.74	40.98	---	---	90.35
25	49.27	45.97	43.70	41.92	40.75	39.84	39.21	38.64	---	---	---	88.93
EOM	48.63	45.72	43.23	41.67	40.73	39.77	39.06	38.62	54.96	---	---	87.72

WTR YR 1991 LOW 92.04 SEP 13

NEWTON COUNTY

410428087231501. Local number, NE 8.

LOCATION.--Lat 41°04'28", long 87°25'44", in NW¼SW¼SW¼ sec.2, T.30 N., R.9 W., Newton County, Hydrologic Unit 07120001, in the Beaver Lake Prairie Chicken Refuge, 3.0 mi north of Enos.

Owner: State of Indiana.

AQUIFER.--Limestone of Silurian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 150 ft, cased to 97 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 663.34 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of floor of shelter, 2.83 ft above land-surface datum.

REMARKS.--Water level may be affected by irrigation pumpage.

PERIOD OF RECORD.--February 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.04 ft below land-surface datum, May 31, 1976; lowest, 98.40 ft below land-surface datum, July 29, 1988.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	19.03	14.94	12.88	11.05	9.86	8.76	7.99	7.26	6.98	50.89	95.41	74.21
10	18.08	14.73	12.69	10.91	9.64	8.90	7.85	7.35	6.91	57.93	92.42	67.86
15	17.50	14.41	12.22	10.55	9.41	8.52	7.49	7.18	18.07	70.78	94.56	63.04
20	16.84	14.05	12.05	10.30	9.42	8.25	7.56	7.13	37.63	74.87	89.63	59.26
25	16.37	13.57	11.79	10.36	9.29	8.19	7.48	6.92	44.76	86.10	91.81	55.50
EOM	15.73	13.27	11.33	10.08	9.03	8.11	7.35	6.90	64.40	91.56	84.87	52.69

WTR YR 1991 HIGH 6.87 JUN 11

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	19.25	15.25	13.14	11.19	9.88	8.89	8.03	7.37	7.07	55.22	95.83	75.70
10	18.25	14.83	12.73	11.05	9.69	8.94	8.01	7.42	7.01	60.71	92.78	68.86
15	17.57	14.53	12.40	10.65	9.58	8.65	7.63	7.29	22.02	71.71	95.71	63.87
20	17.02	14.15	12.21	10.34	9.46	8.32	7.60	7.15	42.71	78.49	94.26	60.02
25	16.45	13.64	11.87	10.41	9.39	8.23	7.56	7.04	47.19	87.04	92.62	56.27
EOM	15.85	13.50	11.40	10.17	9.21	8.19	7.43	6.98	69.40	92.27	89.98	53.32

WTR YR 1991 LOW 96.20 AUG 7

NEWTON COUNTY

405959087282902. Local number, NE 9.

LOCATION.--Lat 40°59'59", long 87°28'29", in SE¼SW¼SE¼ sec.32, T.30 N., R.9 W., Newton County, Hydrologic Unit 07120002, in the Willow Slough Game Preserve, 2.0 mi southwest of Enos.

Owner: U.S. Geological Survey.

AQUIFER.--Sand of Pleistocene age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 2 in., depth 45 ft, cased to 42 ft, screened to 45 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 681 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of "Y" in well casing, 3.10 ft above land-surface datum.

PERIOD OF RECORD.--May 1978 to current year. Fragmentary record prior to March 1981.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.07 ft below land-surface datum, May 3, 1978; lowest, 15.44 ft below land-surface datum, Oct. 19-21, 26-31, 1988.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	12.23	10.93	10.09	8.26	8.65	8.51	7.84	8.17	9.05	11.23	12.85	13.71
10	11.61	10.70	10.08	8.39	8.52	8.67	7.99	8.44	9.48	11.49	12.94	13.86
15	11.23	10.68	9.95	8.37	8.55	8.54	7.92	8.38	9.94	11.78	13.09	14.01
20	11.09	10.67	9.88	8.29	8.58	7.77	7.87	8.24	10.40	12.07	13.19	14.09
25	11.07	10.66	9.81	8.51	8.64	7.60	8.03	8.41	10.80	12.33	13.36	14.19
EOM	11.13	10.26	8.29	8.76	8.76	7.70	8.13	8.73	11.26	12.65	13.53	14.32

WTR YR 1991 HIGH 7.58 MAR 27

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	12.23	11.18	10.10	8.28	8.73	8.52	7.85	8.33	9.15	11.27	12.88	13.75
10	11.91	10.71	10.10	8.41	8.53	8.72	8.07	8.48	9.54	11.56	12.98	13.86
15	11.25	10.70	10.07	8.41	8.68	8.58	8.07	8.39	10.00	11.87	13.12	14.03
20	11.09	10.68	9.88	8.29	8.59	7.78	7.88	8.25	10.48	12.13	13.21	14.12
25	11.07	10.70	9.82	8.59	8.66	7.67	8.07	8.46	10.93	12.41	13.38	14.20
EOM	11.15	10.31	8.38	8.95	8.77	7.73	8.21	8.98	11.33	12.73	13.57	14.34

WTR YR 1991 LOW 14.34 SEP 30

NEWTON COUNTY

410428087231502. Local number, NE 10.

LOCATION.--Lat 41°04'28", long 87°25'44", in NW¼SW¼SW¼ sec.2, T.30 N., R.9 W., Newton County, Hydrologic Unit 07120001, in the Beaver Lake Prairie Chicken Refuge, 3.0 mi north of Enos.
 Owner: U.S. Geological Survey.

AQUIFER.--Sand of Pleistocene age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 2 in., depth 45 ft, cased to 41 ft, screened to 44 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 663 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of "Y" in well casing, 2.65 ft above land-surface datum.

PERIOD OF RECORD.--May 1978 to current year. Fragmentary record prior to March 1981.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.03 ft below land-surface datum, Mar. 16, 1982; lowest, 6.48 ft below land-surface datum, Sept. 30, Oct. 1, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	2.44	---	---	3.38	2.67	2.71	3.11	3.64	5.42	5.52	5.73
10	---	2.51	---	---	3.04	2.57	3.00	3.33	4.15	5.47	5.54	5.78
15	---	2.68	---	---	2.97	2.47	1.94	3.60	4.54	5.50	5.54	5.82
20	---	3.28	---	---	2.94	2.30	2.06	3.05	4.94	5.59	5.55	5.82
25	---	---	---	---	2.81	2.10	2.63	3.24	5.29	5.59	5.59	5.82
EOM	3.33	---	---	3.50	2.74	2.34	2.88	3.48	5.48	5.58	5.68	5.82

WTR YR 1991 HIGH 1.74 APR 17

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	3.50	---	---	3.40	2.70	2.72	3.19	3.80	5.45	5.54	5.74
10	---	2.59	---	---	3.07	2.60	3.08	3.38	4.21	5.50	5.54	5.78
15	---	2.68	---	---	2.99	2.50	3.03	3.62	4.65	5.55	5.55	5.82
20	---	3.36	---	---	2.96	2.34	2.21	3.07	5.02	5.62	5.55	5.82
25	---	---	---	---	2.83	2.12	2.68	3.28	5.35	5.61	5.61	5.82
EOM	3.37	---	---	3.53	2.77	2.47	3.02	3.64	5.49	5.60	5.68	5.82

WTR YR 1991 LOW 5.82 SEP 12

NEWTON COUNTY

410235087305901. Local number, NE 11.

LOCATION.--Lat 41°02'35", long 87°30'59", in SW¼SW¼SE¼ sec.13, T.30 N., R.10 W., Newton County, Hydrologic Unit 07120001, on right-of-way of County Road 300 North, 0.5 mi west of County Road 600 West, and 4.0 mi northwest of Enos.
 Owner: U.S. Geological Survey.

AQUIFER.--Limestone of Silurian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 5 in., depth of 150 ft, cased to 90 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 670 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 3.30 ft above land-surface datum.

PERIOD OF RECORD.--October 1981 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 22.78 ft below land-surface datum, May 6, 1982; lowest recorded, 98.83 ft below land-surface datum, Aug. 5, 6, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	40.27	35.32	32.69	30.33	28.77	27.19	26.78	25.88	25.68	45.75	---	---
10	39.26	35.15	32.46	30.05	28.45	27.72	26.59	26.11	25.51	54.28	---	---
15	38.64	34.76	31.72	29.50	28.12	27.48	26.15	25.87	33.95	54.72	---	---
20	37.80	34.23	31.57	29.23	28.13	26.88	26.41	25.90	34.19	---	---	---
25	37.34	33.56	31.30	29.42	28.03	27.00	26.29	25.54	38.50	---	---	---
EOM	36.48	33.26	30.96	29.06	27.61	26.92	26.08	25.48	45.84	---	---	---

WTR YR 1991 HIGH 25.43 MAY 30

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	40.53	35.76	33.16	30.57	28.81	27.56	26.85	26.10	25.75	45.92	---	---
10	39.49	35.33	32.57	30.42	28.55	27.81	26.92	26.22	25.66	54.57	---	---
15	38.79	34.95	32.03	29.74	28.45	27.81	26.49	25.98	36.97	56.84	---	---
20	38.05	34.43	31.84	29.36	28.25	27.16	26.47	25.96	39.50	---	---	---
25	37.42	33.73	31.51	29.54	28.18	27.12	26.42	25.71	38.67	---	---	---
EOM	36.64	33.67	31.10	29.27	27.87	27.10	26.19	25.55	46.12	---	---	---

WTR YR 1991 LOW 86.19 SEP 14

NEWTON COUNTY

410917087285801. Local number, NE 14.

LOCATION.--Lat 41°09'17", long 87°28'58", in NE $\frac{1}{4}$ SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.8, T.31 N., R.9 W., Newton County, Hydrologic Unit 07120001, 100 ft south of wildlife area parking lot in La Salle State Fish and Wildlife Area.
 Owner: U.S. Geological Survey.

AQUIFER.--Dolomitic limestone of Silurian/Devonian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 150 ft, cased to 82 ft, open end.

INSTRUMENTATION.--Water-level recorder, data-collection platform, and incremental encoder.

DATUM.--Elevation of land-surface datum is 636.62 ft (revised) above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of casing, 3.30 ft above land-surface datum.

REMARKS.--Water level may be affected by pumpage.

PERIOD OF RECORD.--August 1985 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 6.18 ft below land-surface datum, Mar. 27, 1991; lowest, 31.19 ft below land-surface datum, Aug. 26, 1988.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.84	8.30	7.51	6.75	6.81	6.63	6.48	6.23	6.49	16.89	---	24.53
10	9.40	8.34	7.43	6.73	6.78	6.87	6.46	6.38	6.80	---	26.19	23.03
15	9.15	8.23	7.18	6.51	6.67	6.74	6.36	6.34	6.86	---	26.83	21.84
20	8.93	8.13	7.25	6.49	6.87	6.51	6.34	6.42	7.46	---	27.12	21.07
25	8.85	7.95	7.22	6.74	6.86	6.46	6.29	6.32	11.22	---	27.47	20.09
EOM	8.67	7.76	6.86	6.71	6.73	6.48	6.19	6.37	14.60	---	26.34	19.58

WTR YR 1991 HIGH 6.18 MAR 27

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.91	8.52	7.64	6.83	6.85	6.75	6.50	6.33	6.53	17.37	---	24.83
10	9.51	8.38	7.47	6.83	6.84	6.92	6.58	6.43	6.97	---	26.39	23.28
15	9.19	8.28	7.31	6.58	6.84	6.82	6.47	6.39	7.28	---	26.97	22.04
20	9.02	8.17	7.30	6.55	7.01	6.62	6.38	6.50	7.59	---	27.15	21.23
25	8.89	8.08	7.30	6.77	6.88	6.50	6.34	6.44	11.98	---	27.57	20.36
EOM	8.71	7.91	6.93	6.86	6.82	6.52	6.25	6.40	15.24	---	26.52	19.77

WTR YR 1991 LOW 27.57 AUG 25

NOBLE COUNTY

411922085221801. Local number, NO 8.

LOCATION.--Lat 41°19'22", long 85°22'18", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ 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 artesian (revised) well, diameter 6 in., depth 149 ft, cased to 146 ft, screened to 148 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 928 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of floor of shelter, 2.65 ft above land-surface datum.

PERIOD OF RECORD.--December 1966 to September 1971, August 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 27.68 ft below land-surface datum, Feb. 14, 1991; lowest, 32.49 ft below land-surface datum, Jan. 18, 1967.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	29.36	28.64	28.95	28.63	28.48	28.21	28.52	28.14	28.36	28.37	28.83	29.07
10	29.18	28.98	29.01	28.64	28.35	28.61	28.33	28.47	28.22	28.47	28.74	29.07
15	29.18	29.10	28.75	28.32	28.07	28.61	28.14	28.27	28.09	28.68	28.81	29.09
20	29.26	29.10	29.05	28.22	28.55	28.38	28.37	28.43	28.28	28.59	28.86	29.39
25	29.23	28.77	29.05	28.66	28.57	28.57	28.44	28.23	28.37	28.61	29.10	28.96
EOM	29.19	29.14	28.92	28.40	28.38	28.58	28.19	28.04	28.25	28.70	28.97	29.30

WTR YR 1991 HIGH 27.88 FEB 14

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	29.42	29.00	29.19	28.88	28.53	28.40	28.57	28.40	28.41	28.42	28.89	29.12
10	29.35	29.10	29.14	28.83	28.41	28.75	28.70	28.52	28.31	28.50	28.88	29.15
15	29.41	29.19	29.03	28.45	28.52	28.77	28.40	28.33	28.14	28.74	28.86	29.15
20	29.38	29.17	29.21	28.30	28.62	28.54	28.47	28.49	28.35	28.66	28.97	29.44
25	29.31	29.04	29.15	28.72	28.62	28.65	28.54	28.31	28.41	28.73	29.18	29.18
EOM	29.22	29.38	29.10	28.73	28.51	28.74	28.30	28.20	28.33	28.75	29.15	29.47

WTR YR 1991 LOW 29.55 OCT 1

NOBLE COUNTY

413106085232701. Local number, MO 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.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	13.73	11.47	11.17	9.84	11.37	10.98	11.68	10.87	10.60	11.63	14.33	15.39
10	10.95	10.68	11.45	10.66	11.11	11.33	11.79	11.10	11.33	12.37	14.44	15.53
15	10.44	11.26	11.63	10.64	11.31	11.68	11.71	11.54	11.81	12.92	14.68	15.47
20	10.78	11.66	11.67	10.34	11.07	11.62	10.24	11.99	12.34	13.26	14.94	15.72
25	11.18	11.81	11.29	10.87	11.06	11.84	10.08	11.63	12.73	13.64	15.15	15.64
EOM	11.72	11.50	8.77	11.40	11.32	11.56	10.27	10.58	12.98	14.07	15.26	15.87

WTR YR 1991 HIGH 8.77 DEC 31

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	13.93	12.07	11.33	9.95	11.50	11.05	11.71	10.91	10.80	11.79	14.39	15.45
10	12.58	10.81	11.57	10.74	11.15	11.45	11.96	11.21	11.41	12.45	14.54	15.59
15	10.68	11.30	11.81	10.70	11.64	11.78	11.82	11.64	11.89	12.99	14.75	15.51
20	10.81	11.77	11.82	10.40	11.34	11.67	10.83	12.02	12.38	13.37	14.98	15.73
25	11.32	12.02	11.34	10.94	11.14	11.86	10.18	11.94	12.78	13.75	15.16	15.74
EOM	11.82	11.72	8.86	11.65	11.37	11.62	10.43	11.35	13.06	14.12	15.31	15.93

WTR YR 1991 LOW 15.93 SEP 28

NOBLE COUNTY

412405085154501. Local number, MO 11.

LOCATION.--Lat 41°24'05", long 85°15'45", in NW¼NE¼SW¼ sec.16, T.34 N., R.11 E., Noble County, Hydrologic Unit 04100003, on the property of Ron Karst on the south side of County Road 350 North, 0.6 mi west of State Highway 3 and about 22 mi north of Fort Wayne.
Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 216 ft, cased to 211 ft, screened to 216 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 1,036.94 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.45 ft above land-surface datum.

PERIOD OF RECORD.--November 1987 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 113.24 ft below land-surface datum, Nov. 6, 1988; lowest, 115.00 ft below land-surface datum, Feb. 17, 1989.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	114.10	113.67	114.11	114.28	114.22	113.63	114.14	113.81	114.08	113.89	114.08	114.11
10	114.00	114.06	114.19	114.44	114.02	114.04	113.75	114.25	114.11	113.99	113.98	114.08
15	113.97	114.36	113.93	113.94	113.37	114.04	113.71	113.94	113.85	114.14	114.02	114.00
20	114.25	114.30	114.20	113.76	114.01	113.90	113.88	114.25	114.09	114.03	113.87	114.32
25	114.19	113.74	114.23	114.26	114.20	113.90	114.01	113.93	114.14	113.99	114.29	113.80
EOM	114.31	114.34	114.14	114.01	113.96	114.06	113.77	113.75	113.94	114.07	114.05	114.20

WTR YR 1991 HIGH 113.27 FEB 14

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	114.15	114.13	114.27	114.51	114.26	113.77	114.18	114.08	114.19	113.90	114.20	114.15
10	114.14	114.13	114.31	114.56	114.07	114.24	114.14	114.32	114.20	114.02	114.10	114.13
15	114.27	114.46	114.28	114.02	113.81	114.28	113.91	114.02	113.95	114.24	114.03	114.02
20	114.30	114.38	114.28	113.85	114.12	114.02	114.03	114.30	114.13	114.08	114.01	114.40
25	114.30	114.00	114.28	114.38	114.22	114.07	114.10	114.03	114.18	114.09	114.34	114.13
EOM	114.35	114.50	114.49	114.36	114.08	114.15	113.87	113.85	114.03	114.10	114.16	114.38

WTR YR 1991 LOW 114.66 DEC 27

NOBLE COUNTY

412405085154504. Local number, MO 14.

LOCATION.--Lat 41°24'05", long 85°15'45", in NW¼NE¼SW¼ sec.16, T.34 N., R.11 E., Noble County, Hydrologic Unit 04100003, on the property of Ron Karst on the south side of County Road 350 North, 0.6 mi west of State Highway 3 and about 22 mi north of Fort Wayne.
Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 145 ft, cased to 140 ft, screened to 145 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 1,037.24 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.50 ft above land-surface datum.

PERIOD OF RECORD.--November 1987 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 112.21 ft below land-surface datum, Dec. 15, 1987; lowest, 114.29 ft below land-surface datum, Feb. 17, 1989.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	113.18	112.51	113.11	113.37	113.40	112.62	113.28	112.90	113.38	112.90	113.21	113.19
10	113.03	113.11	113.27	113.53	113.19	113.27	112.92	113.46	113.21	113.02	113.05	113.11
15	113.11	113.40	112.85	113.02	112.60	113.34	112.63	113.15	112.87	113.28	113.06	113.05
20	113.20	113.45	113.37	112.89	113.27	112.97	113.10	113.41	113.15	113.14	112.97	113.46
25	113.34	112.78	113.44	113.57	113.36	113.21	113.24	113.11	113.21	113.05	113.36	112.71
EOM	113.41	113.37	113.54	113.22	113.06	113.20	112.95	113.02	112.94	113.10	113.09	113.19

WTR YR 1991 HIGH 112.24 MAR 27

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	113.32	113.08	113.54	113.72	113.50	112.95	113.38	113.27	113.47	112.94	113.30	113.26
10	113.32	113.37	113.50	113.90	113.27	113.50	113.51	113.55	113.35	113.07	113.23	113.23
15	113.46	113.56	113.24	113.28	113.24	113.57	113.10	113.23	113.04	113.39	113.10	113.11
20	113.48	113.57	113.57	113.06	113.40	113.24	113.23	113.51	113.28	113.21	113.14	113.56
25	113.49	113.21	113.64	113.71	113.44	113.33	113.39	113.23	113.29	113.23	113.47	113.08
EOM	113.48	113.71	113.82	113.75	113.25	113.44	113.09	113.13	113.05	113.21	113.36	113.47

WTR YR 1991 LOW 114.00 DEC 26

PARKE COUNTY

393619087043001. Local number, PA 6.

LOCATION.--Lat 39°36'19", long 87°04'30", in SE¼SW¼SE¼ sec.33, T.14 N., R.6 W., Parke County, Hydrologic Unit 05120111, on county right-of-way on north side of road at the Parke-Clay county line, 1.7 mi east of Carbon, 2.6 mi east of State Highway 59, and 6.2 mi north of Brazil.
Owner: U.S. Geological Survey.

AQUIFER.--Sandstone of Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 155 ft, cased to 46 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 703 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 2.40 ft above land-surface datum.

PERIOD OF RECORD.--July 1967 to August 1971, October 1981 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 11.53 ft below land-surface datum, Apr. 19, 1970; lowest, 16.87 ft below land-surface datum, Oct. 30, 1988.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	15.34	14.09	13.78	13.00	12.71	12.19	12.12	11.98	12.58	13.09	14.13	14.80
10	15.13	14.28	13.70	12.96	12.61	12.41	12.05	12.13	12.59	13.31	14.16	14.94
15	15.07	14.28	13.44	12.76	12.51	12.32	11.95	12.15	12.65	13.50	14.33	14.99
20	14.89	14.20	13.41	12.69	12.53	12.18	11.99	12.29	12.81	13.61	14.46	15.17
25	14.81	14.04	13.33	12.81	12.50	12.20	11.96	12.28	12.93	13.80	14.71	15.05
EOM	14.73	13.99	13.26	12.72	12.35	12.16	12.00	12.33	13.02	14.00	14.77	15.29

WTR YR 1991 HIGH 11.88 APR 23

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	15.43	14.29	13.96	13.09	12.73	12.31	12.16	12.08	12.64	13.13	14.20	14.86
10	15.17	14.34	13.74	13.12	12.70	12.44	12.16	12.23	12.67	13.39	14.26	15.00
15	15.15	14.36	13.58	12.90	12.63	12.39	12.05	12.20	12.69	13.55	14.36	15.05
20	14.99	14.25	13.49	12.77	12.56	12.26	12.04	12.32	12.86	13.67	14.53	15.25
25	14.83	14.12	13.39	12.85	12.56	12.24	12.05	12.36	12.99	13.87	14.76	15.16
EOM	14.81	14.16	13.33	12.82	12.46	12.24	12.08	12.40	13.05	14.03	14.81	15.37

WTR YR 1991 LOW 15.57 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 54ft, screened to 56 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 380 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of floor of shelter, 3.00 ft above land-surface datum.

REMARKS.--Water level affected by Wabash River floods.

PERIOD OF RECORD.--April 1967 to September 1971, September 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.95 ft below land-surface datum, May 14, 1983; lowest, 21.40 ft below land-surface datum, Nov. 4, 8-15, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	17.25	17.11	17.13	10.13	10.40	10.08	8.62	11.17	13.60	15.79	17.57	18.86
10	17.21	17.33	16.80	7.51	9.47	10.93	9.36	11.79	13.84	16.11	17.81	19.03
15	17.05	17.42	16.75	8.69	8.93	11.14	9.81	12.11	14.23	16.42	18.03	19.18
20	16.80	17.56	16.37	9.33	9.01	9.85	10.01	12.42	14.70	16.66	18.24	19.35
25	16.75	17.66	15.23	9.96	9.44	7.99	10.14	12.70	15.09	16.95	18.46	19.49
EOM	16.95	17.56	13.01	10.24	9.60	8.29	10.56	13.19	15.45	17.29	18.67	19.64

WTR YR 1991 HIGH 7.34 MAR 23

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	17.27	17.21	17.22	11.10	10.52	10.21	8.73	11.36	13.66	15.85	17.62	18.89
10	17.23	17.36	16.85	7.69	9.62	11.01	9.61	11.88	13.90	16.18	17.86	19.06
15	17.10	17.44	16.84	8.80	9.18	11.23	10.04	12.22	14.32	16.47	18.08	19.21
20	16.84	17.59	16.50	9.63	9.12	10.07	10.07	12.50	14.77	16.72	18.29	19.37
25	16.77	17.70	15.39	10.08	9.51	8.06	10.23	12.78	15.17	17.01	18.49	19.52
EOM	16.99	17.68	13.36	10.38	9.70	8.42	10.65	13.29	15.51	17.35	18.71	19.67

WTR YR 1991 LOW 19.67 SEP 30

POSEY COUNTY

380546087474301. Local number, PY 5.

LOCATION.--Lat 38°05'46", long 87°47'43", in NE¼NW¼NE¼ sec. 18, T.5S., R.12W., Posey County, Hydrologic Unit 05120113, about 0.5 mi southwest of Wadesville along the west edge of Laurel Hill Cemetery.

Owner: U.S. Geological Survey

AQUIFER.--Sandstone of Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 221 ft, cased to 160 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 460.60 ft (revised) above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.60 ft above land-surface datum.

PERIOD OF RECORD.--September 1988 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 132.83 ft below land-surface datum, Mar. 27, 1991; lowest, 142.09 ft below land-surface datum, Sept. 19, 1991.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	137.46	136.88	136.23	135.73	134.78	133.69	133.27	133.46	135.29	138.30	140.98	141.43
10	137.38	136.84	136.11	135.47	134.68	133.97	133.31	133.98	136.05	138.66	141.12	141.30
15	137.18	136.82	135.70	135.12	134.44	133.87	133.26	133.87	136.50	139.02	141.30	141.43
20	137.15	136.73	135.62	135.16	134.55	133.48	133.35	134.24	137.95	139.22	141.31	141.87
25	137.21	136.49	135.67	135.25	134.31	133.28	133.38	134.58	138.31	140.14	141.34	141.55
EOM	137.12	136.47	135.78	135.01	134.07	133.24	133.39	134.76	138.19	140.58	141.52	141.85

WTR YR 1991 HIGH 132.83 MAR 27

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	137.60	137.12	136.51	135.84	134.85	133.94	133.40	133.71	135.61	138.36	141.19	141.55
10	137.43	136.97	136.19	135.74	134.92	134.05	133.45	134.11	136.18	138.81	141.30	141.44
15	137.32	136.96	135.88	135.38	134.65	134.00	133.44	134.10	136.69	139.08	141.40	141.87
20	137.24	136.83	135.78	135.34	134.67	133.68	133.43	134.40	138.14	139.39	141.40	142.01
25	137.34	136.57	135.75	135.34	134.46	133.38	133.52	134.68	138.42	140.35	141.47	141.74
EOM	137.25	136.73	135.90	135.12	134.20	133.38	133.51	134.85	138.39	140.68	141.62	141.97

WTR YR 1991 LOW 142.09 SEP 19

PULASKI COUNTY

405916086530701. Local number, PU 6.

LOCATION.--Lat 40°59'16", long 86°53'07", in NW¼SE¼SW¼ sec.4, T.29 N., R.4 W., Pulaski County, Hydrologic Unit 05120106, on private property at the north edge of Francesville.

Owner: Earl Overmeyer.

AQUIFER.--Limestone of Devonian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 8 in., depth 663 ft, cased to 11 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 678.60 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of floor of shelter, 3.00 ft above land-surface datum.

REMARKS.--Water level affected by pumpage and earthquakes.

PERIOD OF RECORD.--July 1956 to February 1971, January 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.03 ft below land-surface datum, June 15, 1958; lowest, 25.33 ft below land-surface datum, Nov. 22, 1988.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	18.33	15.20	14.74	12.97	14.93	14.95	13.59	15.06	15.70	18.26	---	23.61
10	16.78	14.45	14.95	13.99	14.64	15.52	14.05	15.70	15.98	18.87	21.79	23.97
15	14.38	14.86	15.05	14.01	14.74	15.73	14.25	15.83	16.38	---	22.29	24.27
20	14.42	15.30	15.57	13.14	15.23	13.39	13.91	15.13	17.16	---	22.63	24.58
25	14.76	15.46	15.27	14.17	15.06	12.66	14.50	14.67	17.86	---	23.12	24.64
EOM	15.21	15.25	13.38	14.74	14.90	13.09	14.70	14.91	18.17	---	23.42	25.07

WTR YR 1991 HIGH 11.95 MAR 27

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	18.53	15.66	15.27	13.25	15.13	15.20	13.84	15.35	15.98	18.61	---	23.93
10	17.89	14.84	15.29	14.17	14.95	15.76	14.68	15.98	16.20	19.15	22.15	24.38
15	14.82	15.08	15.54	14.25	15.44	16.03	14.68	16.07	16.63	---	22.60	24.47
20	14.73	15.54	15.82	13.44	15.46	14.31	14.17	15.30	17.49	---	22.88	24.79
25	15.05	15.85	15.54	14.37	15.33	12.94	14.72	14.80	18.03	---	23.51	24.94
EOM	15.58	15.88	13.75	15.22	15.12	13.33	14.99	15.25	18.32	---	23.68	25.25

WTR YR 1991 LOW 25.29 SEP 29

PULASKI COUNTY

410739086365201. Local number, PU 7.

LOCATION.--Lat 41°07'39", long 86°36'52", in NE¼NE¼NW¼ sec.23, T.31 N., R.2 W., Pulaski County, Hydrologic Unit 05120106, in the Winamac State Fish and Game Area, 0.8 mi southwest of Beardstown.

Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 105 ft, cased to 98 ft, screened to 100 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 715.26 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of floor of shelter, 2.50 ft above land-surface datum.

PERIOD OF RECORD.--August 1967 to September 1971, September 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.69 ft below land-surface datum, June 15, 1981; lowest, 11.86 ft below land-surface datum, Nov. 6-9, 1988.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.37	8.39	7.82	6.32	6.90	7.00	6.62	6.54	6.88	8.80	10.18	10.71
10	8.59	7.99	7.95	6.63	6.89	7.32	6.83	6.79	7.30	8.87	10.17	10.82
15	8.21	8.16	7.97	6.49	7.11	7.41	6.18	6.98	7.71	9.18	10.30	10.91
20	8.22	8.34	7.97	6.19	7.04	6.52	5.97	6.10	7.95	9.45	10.37	11.01
25	8.38	8.38	7.80	6.61	7.21	6.40	6.29	6.34	8.34	9.73	10.52	11.04
EOM	8.58	7.93	6.03	6.97	7.28	6.43	6.43	6.57	8.63	9.97	10.60	11.15

WTR YR 1991 HIGH 5.84 APR 17

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.40	8.64	7.92	6.41	6.96	7.06	6.64	6.70	6.98	8.87	10.22	10.74
10	9.10	8.05	8.01	6.68	6.96	7.37	6.96	6.85	7.36	8.93	10.22	10.86
15	8.25	8.18	8.05	6.58	7.24	7.46	6.81	7.03	7.74	9.21	10.33	10.93
20	8.25	8.36	8.04	6.23	7.07	6.57	6.04	6.21	8.04	9.49	10.40	11.04
25	8.42	8.47	7.85	6.68	7.25	6.42	6.32	6.47	8.39	9.77	10.55	11.08
EOM	8.62	8.04	6.08	7.06	7.32	6.47	6.51	6.60	8.69	10.02	10.66	11.17

WTR YR 1991 LOW 11.17 SEP 29

PULASKI COUNTY

405605086551701. Local number, PU 8.

LOCATION.--Lat 40°56'05", long 86°55'17", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.30, T.29 N., R.4 W., Pulaski County, Hydrologic Unit 05120106, at the Arrowhead Country Resource Conservation and Development Office property, 11 mi east of Rensselaer on State Highway 114.
Owner: U.S. Geological Survey.

AQUIFER.--Limestone of Middle Silurian Period, Wabash Formation.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 6 in., depth 102 ft, cased to 12 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 683.76 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.50 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.68 ft below land-surface datum, Dec. 29, 1991; lowest, 11.74 ft below land-surface datum, Aug. 25, 1988.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	2.05	2.57	2.48	2.53	2.35	2.62	2.86	3.40	4.90	7.37	---
10	---	2.81	2.98	2.75	2.48	2.92	2.84	3.13	3.61	5.10	---	---
15	2.58	3.20	2.62	1.68	2.77	2.52	1.27	2.69	3.84	5.46	---	8.12
20	2.95	3.39	2.78	1.91	2.18	1.00	2.35	1.80	4.20	5.97	---	8.21
25	3.30	3.43	2.59	2.81	2.75	1.58	2.83	2.22	4.52	6.14	---	8.07
EOM	3.52	2.46	1.05	3.17	2.82	2.44	2.59	3.00	4.75	6.86	---	8.37

WTR YR 1991 HIGH .68 DEC 29

DAY	LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	3.43	2.69	2.66	2.70	2.47	2.68	2.96	3.46	4.99	7.49	---
10	---	3.01	3.08	2.94	2.58	2.99	3.00	3.18	3.67	5.22	---	---
15	2.74	3.26	3.02	2.20	2.96	2.78	1.96	2.83	3.90	5.51	---	8.37
20	3.00	3.46	2.86	2.00	2.29	1.15	2.47	2.11	4.38	6.01	---	8.27
25	3.37	3.55	2.80	2.89	2.79	1.79	2.88	2.46	4.58	6.30	---	8.18
EOM	3.56	2.58	1.49	3.33	2.90	2.54	2.75	3.10	4.83	6.96	---	8.42

WTR YR 1991 LOW 8.78 SEP 14

RANDOLPH COUNTY

401532085085301. Local number, RA 3.

LOCATION.--Lat 40°15'32", long 85°08'53", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$ 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, 7.68 ft below land-surface datum, Dec. 30, 1990; lowest, 15.18 ft below land-surface datum, Oct. 12, 13, 1988.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.39	10.22	9.41	9.39	9.36	9.74	9.80	10.11	10.74	11.89	12.90	13.83
10	9.66	10.44	9.88	9.90	9.07	10.24	10.02	10.52	11.07	11.71	12.88	14.00
15	9.85	10.70	9.26	9.39	9.27	9.82	9.36	10.68	11.26	11.91	13.10	14.15
20	9.92	10.83	9.10	9.22	9.17	9.00	9.24	10.00	11.59	12.16	13.21	14.32
25	9.95	10.49	9.16	9.84	9.46	9.06	9.59	10.99	11.65	12.41	13.51	14.11
EOM	10.34	9.86	8.24	10.17	9.61	9.46	9.79	10.85	11.79	12.72	13.65	14.34

WTR YR 1991 HIGH 7.68 DEC 30

DAY	LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.47	10.45	9.55	9.56	9.68	9.86	9.88	10.22	10.86	11.93	12.96	13.91
10	10.05	10.55	9.97	10.04	9.22	10.35	10.30	10.60	11.11	11.77	13.00	14.11
15	10.09	10.75	10.12	9.63	9.81	10.03	9.56	10.77	11.33	11.99	13.18	14.19
20	9.97	10.89	9.16	9.30	9.28	9.09	9.30	10.99	11.62	12.21	13.33	14.41
25	10.07	10.69	9.30	9.91	9.53	9.17	9.63	11.03	11.69	12.54	13.57	14.23
EOM	10.41	10.03	8.90	10.39	9.68	9.52	9.97	11.18	11.83	12.74	13.78	14.46

WTR YR 1991 LOW 14.48 SEP 28

ST. JOSEPH COUNTY

413120086055601. Local number, SJ 31.

LOCATION.--Lat 41°31'20", long 86°05'56", in SW¼SW¼SW¼ sec.31, T.36 N., R.4 E., St. Joseph County, Hydrologic Unit 07120001, 4 mi west of Wakarusa.

Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 6 in., depth 109 ft, cased to 104 ft, screened to 109 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 830.50 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.40 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 7.71 ft below land-surface datum, Jan. 23, 1991; lowest, 12.64 ft below land-surface datum, Oct. 6, 1988.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.14	8.31	8.11	7.88	8.14	7.87	8.07	7.85	8.44	9.73	11.68	12.24
10	8.76	8.29	8.10	8.00	8.05	8.05	8.03	8.01	8.59	9.98	11.85	12.41
15	8.60	8.37	8.02	7.84	7.89	8.10	7.98	8.19	8.66	10.27	12.05	12.37
20	8.49	8.42	8.05	7.73	8.08	8.01	7.88	8.25	9.08	10.60	11.95	12.47
25	8.47	8.30	8.00	7.87	8.08	8.01	7.83	8.29	9.40	11.08	11.87	12.32
EOM	8.52	8.27	7.85	7.96	8.04	8.01	7.77	8.40	9.71	11.22	12.06	12.44

WTR YR 1991 HIGH 7.71 JAN 23

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.20	8.50	8.19	7.96	8.16	7.93	8.11	7.95	8.48	9.84	11.75	12.32
10	8.89	8.33	8.15	8.04	8.08	8.11	8.15	8.08	8.65	10.05	11.93	12.46
15	8.66	8.40	8.12	7.88	8.01	8.16	8.09	8.25	8.74	10.35	12.08	12.39
20	8.53	8.43	8.09	7.76	8.09	8.06	7.91	8.30	9.17	10.73	11.99	12.51
25	8.49	8.37	8.05	7.93	8.12	8.05	7.86	8.33	9.54	11.15	11.91	12.41
EOM	8.56	8.34	7.91	8.07	8.09	8.04	7.81	8.44	9.85	11.27	12.16	12.48

WTR YR 1991 LOW 12.51 SEP 20

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.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	20.33	19.91	20.34	18.31	18.34	---	17.71	18.51	19.50	20.43	21.23	21.76
10	20.25	20.08	20.34	18.31	---	---	18.08	18.82	19.74	20.47	21.23	21.87
15	19.52	20.28	20.34	18.31	---	---	18.34	19.03	19.89	20.47	21.41	21.87
20	19.59	20.34	18.31	18.31	---	---	18.34	18.95	20.11	20.67	21.45	21.72
25	19.60	20.34	18.31	18.31	---	---	18.34	19.03	20.31	20.87	21.69	21.73
EOM	19.91	20.34	18.31	18.44	---	---	18.34	19.28	20.44	21.04	21.71	21.89

WTR YR 1991 HIGH 17.17 FEB 8

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	20.47	19.99	20.34	18.31	18.34	---	17.75	18.51	19.58	20.44	21.23	21.78
10	20.26	20.13	20.34	18.31	---	---	18.29	18.86	19.78	20.47	21.29	21.87
15	19.68	20.28	20.34	18.31	---	---	18.34	19.07	19.92	20.55	21.42	21.89
20	19.59	20.34	18.31	18.31	---	---	18.34	18.95	20.17	20.77	21.52	21.72
25	19.67	20.34	18.31	18.31	---	---	18.34	19.07	20.37	20.93	21.69	21.73
EOM	19.91	20.34	18.31	18.56	---	---	18.35	19.40	20.44	21.09	21.71	21.89

WTR YR 1991 LOW 21.92 SEP 12

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, Sept. 17, 18, 1988.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.32	4.00	4.17	3.55	4.00	4.16	4.23	4.04	3.80	5.33	6.26	6.52
10	3.83	4.19	4.39	3.87	4.05	4.45	4.44	4.32	4.32	5.36	6.17	6.61
15	4.04	4.49	4.33	3.66	4.31	4.40	3.57	4.45	4.42	5.65	6.33	6.58
20	4.24	4.69	4.42	3.48	4.19	3.90	3.59	3.84	4.68	5.83	6.24	6.63
25	4.50	4.73	4.31	3.95	4.40	3.82	3.97	3.81	4.97	6.04	6.40	6.60
EOM	4.73	4.03	2.55	4.28	4.47	4.05	3.94	3.34	5.16	6.15	6.45	6.65

WTR YR 1991 HIGH 2.40 DEC 30

DAY	LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.36	4.72	4.19	3.63	4.08	4.20	4.27	4.29	3.94	5.37	6.28	6.55
10	4.38	4.29	4.45	3.89	4.12	4.49	4.53	4.36	4.37	5.42	6.24	6.63
15	4.13	4.52	4.55	3.80	4.39	4.52	4.39	4.50	4.59	5.70	6.38	6.61
20	4.29	4.71	4.44	3.50	4.21	3.93	3.70	3.94	4.77	5.91	6.27	6.65
25	4.55	4.80	4.37	4.03	4.44	3.89	4.02	4.17	5.01	6.09	6.42	6.62
EOM	4.76	4.07	2.87	4.34	4.53	4.09	4.07	3.74	5.18	6.19	6.50	6.66

WTR YR 1991 LOW 6.66 SEP 27

STEBEN 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.

REVISED RECORDS.--WDR IN-91-1: 1989.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 14.79 ft below land-surface datum, May 5, 1991; lowest, 19.12 ft below land-surface datum, Oct. 17, 1988.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	19.00	18.95	18.36	18.21	17.83	17.85	17.62	17.33	17.00	16.75	16.83	16.98
10	18.98	18.88	18.33	18.10	17.82	17.81	17.54	17.39	16.88	16.78	16.92	16.95
15	19.08	18.88	18.39	18.01	17.85	17.75	17.45	17.39	16.76	16.77	16.90	16.95
20	18.99	18.63	18.32	17.96	17.79	17.72	17.40	17.36	---	16.76	16.91	16.98
25	18.98	18.53	18.35	17.90	17.81	17.72	17.36	17.34	16.69	16.80	16.97	16.98
EOM	18.95	18.43	18.25	17.84	17.85	17.67	17.39	17.30	16.69	16.83	16.98	17.05

WTR YR 1989 HIGH 16.68 JUN 26

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1988 TO SEPTEMBER 1989

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	19.03	19.00	18.40	18.25	17.89	17.89	17.65	17.39	17.06	16.79	16.89	17.00
10	19.06	19.05	18.42	18.14	17.89	17.86	17.58	17.42	16.91	16.81	16.97	16.98
15	19.10	18.96	18.42	18.05	17.92	17.90	17.48	17.42	16.78	16.81	16.95	16.98
20	19.05	18.75	18.40	18.07	17.85	17.79	17.45	17.42	---	16.80	16.96	16.99
25	19.02	18.57	18.37	17.98	17.85	17.77	17.40	17.41	16.71	16.84	17.01	17.03
EOM	19.00	18.47	18.29	17.88	17.89	17.71	17.43	17.36	16.73	16.86	17.02	17.08

WTR YR 1989 LOW 19.12 OCT 17

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	16.01	15.79	15.96	15.38	15.04	14.95	15.08	14.79	14.98	15.31	15.76	16.13
10	15.92	15.88	15.99	15.28	15.02	15.07	15.10	14.84	14.99	15.38	15.79	16.20
15	15.85	15.92	15.92	15.19	15.03	15.10	15.02	14.84	15.04	15.47	15.87	16.27
20	15.84	15.98	16.01	15.09	15.02	15.05	15.04	14.89	15.13	15.55	15.88	16.36
25	15.88	15.95	16.01	15.09	15.02	15.14	14.93	14.88	15.22	15.57	16.00	16.37
EOM	15.91	15.98	15.70	15.06	14.99	15.09	14.86	14.91	15.29	15.66	16.07	16.47

WTR YR 1991 HIGH 14.79 MAY 5

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	16.05	15.95	16.06	15.45	15.06	15.02	15.13	14.84	15.00	15.35	15.78	16.18
10	15.98	15.94	16.05	15.36	15.06	15.11	15.20	14.88	15.03	15.44	15.84	16.24
15	15.90	15.95	16.02	15.24	15.12	15.14	15.13	14.88	15.06	15.49	15.90	16.29
20	15.88	16.00	16.08	15.13	15.06	15.11	15.07	14.93	15.16	15.59	15.94	16.39
25	15.90	16.03	16.04	15.13	15.05	15.17	14.98	14.93	15.26	15.63	16.03	16.40
EOM	15.94	16.05	15.80	15.13	15.05	15.15	14.91	14.98	15.32	15.68	16.12	16.51

WTR YR 1991 LOW 16.51 SEP 29

TIPPECANOE COUNTY

402734087033401. Local number, TC 17.

LOCATION.--Lat 40°27'34", long 87°03'34", NW¼NE¼NE¼ sec.11, T.23 N., R.6 W., Tippecanoe County, Hydrologic Unit 05120108, on the property of Purdue University and at the southeast corner of the intersection of County Roads 300 North and 825 West, about 3.0 mi southeast of Otterbein.
Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age (Teays Valley aquifer).

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 212.5 ft, cased to 207.5 ft, screened to 212.5 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 681 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 3.60 ft above land-surface datum.

PERIOD OF RECORD.--August 1989 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 110.98 ft below land-surface datum, October 2, 1989; lowest, 121.28 ft below land-surface datum, August 18, 1989.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	119.10	118.33	118.60	118.34	117.88	116.81	117.05	116.34	116.14	115.74	115.69	115.73
10	118.91	118.77	118.66	118.27	117.69	117.48	116.75	116.69	116.13	115.77	115.54	115.68
15	118.90	118.95	118.26	117.85	117.08	117.43	116.50	116.31	115.83	115.93	115.71	115.52
20	119.08	118.84	118.49	117.72	117.59	117.01	116.68	116.44	116.00	115.76	115.54	115.91
25	119.10	118.32	118.62	118.21	117.65	117.15	116.69	116.06	116.02	115.74	115.90	115.29
EOM	119.08	118.86	118.63	117.87	117.22	117.15	116.37	115.88	115.80	115.69	115.66	115.79

WTR YR 1991 HIGH 115.29 SEP 25

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	119.15	118.68	118.89	118.62	117.91	117.10	117.13	116.56	116.30	115.77	115.74	115.74
10	119.07	118.87	118.71	118.56	117.74	117.61	117.12	116.75	116.26	115.83	115.68	115.68
15	119.19	119.05	118.54	117.98	117.64	117.64	116.72	116.36	115.89	116.03	115.71	115.55
20	119.21	118.88	118.61	117.79	117.67	117.25	116.78	116.51	116.08	115.81	115.65	115.97
25	119.19	118.52	118.74	118.31	117.69	117.23	116.79	116.17	116.06	115.81	115.93	115.62
EOM	119.11	119.13	118.82	118.22	117.42	117.30	116.52	115.96	115.88	115.74	115.74	115.85

WTR YR 1991 LOW 119.35 OCT 29

TIPPECANOE COUNTY

402734087033402. Local number, TC 18.

LOCATION.--Lat 40°27'34", long 87°03'34", NW¼NE¼NE¼ sec.11, T.23 N., R.6 W., Tippecanoe County, Hydrologic Unit 05120108, on the property of Purdue University and at the southeast corner of the intersection of County Roads 300 North and 825 West, about 3.0 mi southeast of Otterbein.
Owner: U.S. Geological Survey

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 6 in., depth 64 ft, cased to 59 ft, screened to 64 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 681 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 3.50 ft above land-surface datum.

PERIOD OF RECORD.--August 1989 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 16.67 ft below land-surface datum, Mar. 27, 1991; lowest, 21.46 ft below land-surface datum, Sept. 30, 1991.

HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	20.98	20.50	20.20	18.14	18.77	19.03	17.66	18.82	19.11	20.04	20.76	21.15
10	20.58	20.45	20.21	18.49	18.77	19.26	18.00	19.06	19.31	20.20	20.77	21.21
15	20.45	20.53	20.14	18.38	18.77	17.97	18.11	19.08	19.44	20.32	20.88	21.27
20	20.45	20.59	20.05	17.98	18.95	17.07	18.18	18.94	19.64	20.41	20.92	21.36
25	20.51	20.59	19.70	18.35	19.03	17.06	18.46	18.88	19.79	20.52	21.04	21.35
EOM	20.61	20.43	17.81	18.63	19.02	17.21	18.63	18.93	19.92	20.66	21.09	21.43

WTR YR 1991 HIGH 16.67 MAR 27

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	20.99	20.64	20.29	18.20	18.78	19.09	17.75	18.86	19.18	20.08	20.78	21.18
10	20.76	20.48	20.24	18.54	18.82	19.29	18.14	19.10	19.33	20.23	20.82	21.24
15	20.51	20.55	20.22	18.51	18.91	18.21	18.17	19.11	19.47	20.34	20.90	21.28
20	20.46	20.60	20.10	18.03	18.97	17.15	18.25	18.94	19.66	20.44	20.96	21.38
25	20.54	20.64	19.74	18.40	19.05	17.08	18.49	18.90	19.82	20.56	21.05	21.38
EOM	20.64	20.51	17.92	18.73	19.05	17.28	18.69	19.03	19.94	20.68	21.12	21.46

WTR YR 1991 LOW 21.46 SEP 30

VANDERBURGH COUNTY

380608087395901. Local number, VA 6.

LOCATION.--Lat 38°06'08", long 87°39'59", in SE¼SW¼NW¼ sec.8, T.5 S., R.11 W., Vanderburgh County, Hydrologic Unit 05120113, on county right-of-way at the intersection of Buente and New Harmony Roads, 1.0 mi southwest of Armstrong.

Owner: U.S. Geological Survey.

AQUIFER.--Sandstone of Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 125 ft, cased to 80 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 446.57 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of floor of shelter, 3.40 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 24.88 ft below land-surface datum, Apr. 3, 4, 1968; lowest, 35.43 ft below land-surface datum, Sept. 2, 3, 1988.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	34.29	34.13	34.45	34.15	33.44	32.85	32.71	32.84	33.54	34.06	34.80	35.14	
10	34.20	34.35	34.52	33.91	33.20	32.54	32.88	33.02	33.71	34.16	34.76	35.10	
15	34.19	34.66	34.35	33.51	33.02	32.61	32.81	33.02	33.83	34.12	34.87	35.06	
20	34.25	34.57	34.37	33.39	33.06	32.39	32.71	33.16	34.01	34.32	34.87	35.13	
25	34.26	34.46	34.45	33.73	32.76	32.41	32.74	33.12	33.93	34.32	35.10	34.87	
EOM	34.43	34.56	34.37	33.58	32.71	32.78	32.78	33.22	34.01	34.64	35.21	35.20	

WTR YR 1991 HIGH 32.39 MAR 20

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	34.42	34.42	34.67	34.30	33.56	32.93	32.77	33.01	33.64	34.09	34.86	35.23
10	34.29	34.52	34.64	34.17	33.36	32.66	32.97	33.14	33.84	34.26	34.94	35.22
15	34.37	34.74	34.56	33.80	33.28	32.75	32.93	33.13	33.95	34.21	34.92	35.11
20	34.34	34.65	34.47	33.60	33.11	32.47	32.81	33.19	34.04	34.45	34.98	35.23
25	34.32	34.49	34.55	33.81	32.93	32.65	32.81	33.22	34.02	34.43	35.21	35.03
EOM	34.54	34.72	34.50	33.71	32.75	32.84	32.90	33.30	34.08	34.76	35.24	35.26

WTR YR 1991 LOW 35.35 SEP 3

VANDERBURGH COUNTY

380626087344401. Local number, VA 7.

LOCATION.--Lat 38°06'26", long 87°34'44", in NE¼NW¼NW¼ sec.7, T.5 S., R.10 W., Vanderburgh County, Hydrologic Unit 05120113, on north side of Salem United Church of Christ 0.5 mi north of Darmstadt.

Owner: U.S. Geological Survey.

AQUIFER.--Inglefield Sandstone Member, Patoka Formation of Pennsylvanian Period.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 6 in., depth 70 ft, cased to 39.3 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 475.35 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of floor of shelter, 4.04 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 19.93 ft below land-surface datum, Mar. 27, 1991; lowest, 25.06 ft below land-surface datum, Oct. 29, 1988.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	23.07	22.45	22.81	21.99	21.28	20.32	20.86	21.11	21.70	22.20	23.03	23.60	
10	22.87	22.88	22.85	21.47	20.98	21.24	20.79	21.47	21.82	22.34	23.06	23.67	
15	22.86	23.12	22.58	20.95	20.68	21.08	20.62	21.28	21.74	22.67	23.20	23.74	
20	22.95	23.05	22.60	21.06	21.05	20.53	20.92	21.59	21.99	22.66	23.28	24.05	
25	23.01	22.82	22.60	21.67	20.93	20.56	21.04	21.38	22.15	22.74	23.51	23.58	
EOM	23.02	23.07	22.59	21.65	20.71	20.79	21.09	21.36	22.06	22.94	23.47	24.04	

WTR YR 1991 HIGH 19.93 MAR 27

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	23.16	22.92	23.16	22.16	21.43	20.72	20.94	21.28	21.87	22.29	23.12	23.77
10	23.10	23.09	22.92	22.00	21.13	21.36	21.09	21.57	21.94	22.44	23.23	23.84
15	23.13	23.27	22.87	21.35	21.20	21.27	20.93	21.36	21.85	22.76	23.26	23.85
20	23.07	23.14	22.80	21.34	21.17	20.84	21.04	21.66	22.08	22.85	23.41	24.25
25	23.11	23.02	22.74	21.83	20.98	20.69	21.19	21.51	22.20	22.85	23.64	23.77
EOM	23.11	23.46	22.76	21.93	20.83	20.91	21.26	21.48	22.18	23.01	23.62	24.21

WTR YR 1991 LOW 24.30 SEP 19

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, 41.13 ft below land-surface datum, Jan. 27, 1991; lowest, 51.90 ft below land-surface datum, Sept. 29 to Oct. 1, 1972.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	45.30	44.27	44.71	42.99	41.20	42.17	41.15	41.56	42.30	43.57	44.73	45.57
10	45.39	44.31	44.60	41.99	41.39	42.43	41.28	41.74	42.26	43.83	44.86	45.68
15	45.19	44.28	44.53	41.52	41.48	42.67	41.44	41.95	42.42	43.92	44.99	45.82
20	44.73	44.37	44.59	41.36	41.68	42.55	41.44	42.17	42.68	44.06	45.11	45.97
25	44.42	44.52	44.44	41.20	41.94	42.18	41.32	42.18	42.97	44.25	45.26	46.05
EOM	44.23	44.73	43.94	41.18	42.00	41.51	41.43	42.25	43.27	44.52	45.45	46.08

WTR YR 1991 HIGH 41.13 JAN 27

DAY	LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	45.34	44.31	44.75	43.23	41.23	42.19	41.17	41.61	42.33	43.62	44.77	45.59
10	45.40	44.33	44.62	42.15	41.43	42.48	41.32	41.79	42.28	43.87	44.89	45.69
15	45.24	44.29	44.56	41.60	41.53	42.71	41.48	41.99	42.46	43.94	45.01	45.85
20	44.83	44.40	44.61	41.38	41.73	42.61	41.48	42.19	42.73	44.10	45.14	45.98
25	44.47	44.57	44.47	41.23	41.97	42.29	41.33	42.20	43.03	44.30	45.29	46.06
EOM	44.25	44.74	44.05	41.22	42.01	41.62	41.46	42.28	43.32	44.56	45.48	46.09

WTR YR 1991 LOW 46.09 SEP 29

WABASH COUNTY

404424085422801. Local number, WB 3.

LOCATION.--Lat 40°44'24", long 85°42'28", in SE¼SE¼SW¼ sec.35, T.27 N., R.7 E., Wabash County, Hydrologic Unit 05120101, on State Highway 124, 3.5 mi west of the county line and in the southwest corner of United Telephone Company property.
 Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 105 ft, cased to 100 ft, screened to 105 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 850.45 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.50 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 43.85 ft below land-surface datum, Mar. 27, 1991; lowest, 48.20 ft below land-surface datum, Oct. 30, 1988.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	45.70	44.90	44.89	44.50	44.76	44.28	44.39	44.21	44.59	45.25	45.98	46.43
10	45.49	45.11	44.88	44.63	44.57	44.66	44.18	44.57	44.78	45.32	45.85	46.48
15	45.24	45.36	44.72	44.39	44.19	44.69	44.28	44.52	44.77	45.51	46.03	46.50
20	45.22	45.35	44.78	44.26	44.63	44.44	44.13	44.82	45.00	45.55	45.96	46.79
25	45.19	45.02	44.67	44.61	44.62	44.31	44.12	44.69	45.18	45.66	46.33	46.53
EOM	45.28	45.24	44.63	44.58	44.46	44.26	44.04	44.48	45.28	45.82	46.31	46.86

WTR YR 1991 HIGH 43.85 MAR 27

DAY	LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	45.74	45.23	45.05	44.61	44.80	44.39	44.43	44.33	44.67	45.36	46.02	46.49
10	45.62	45.21	44.98	44.78	44.64	44.84	44.45	44.63	44.86	45.37	45.98	46.55
15	45.39	45.44	44.95	44.50	44.53	44.86	44.47	44.60	44.82	45.59	46.06	46.54
20	45.31	45.38	44.87	44.32	44.68	44.58	44.21	44.84	45.06	45.70	46.06	46.86
25	45.26	45.21	44.81	44.69	44.68	44.37	44.19	44.74	45.35	45.76	46.38	46.72
EOM	45.35	45.41	44.71	44.81	44.59	44.31	44.13	44.51	45.47	45.92	46.39	46.96

WTR YR 1991 LOW 46.96 SEP 30

WABASH COUNTY

403948085414601. Local number, WB 4.

LOCATION.--Lat 40°39'48", long 85°41'46", in NE¼SE¼NE¼ sec. 35, T.26N., R.7E., Wabash County, Hydrologic Unit 05120103, on America Road, 1.3 mi southeast of La Fontaine.

Owner: U.S. Geological Survey

AQUIFER.--Sand and gravel of the Pleistocene age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 118 ft, cased to 113 ft, screened to 118 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 837.40 ft (revised) above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.30 ft above land-surface datum.

PERIOD OF RECORD.--August 1988 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 38.19 ft below land-surface datum, Nov. 5, 1988; lowest, 44.58 ft below land-surface datum, Dec. 23, 1989.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	43.02	42.34	43.01	42.66	42.58	42.20	42.22	41.86	42.40	42.59	43.18	43.43
10	42.85	42.77	43.05	42.70	42.47	42.67	41.95	42.16	42.46	42.67	43.08	43.45
15	42.83	43.01	42.80	42.32	42.09	42.56	41.81	41.99	42.38	42.88	43.19	43.44
20	42.94	43.02	43.01	42.23	42.68	42.20	42.01	42.26	42.61	42.89	43.15	43.75
25	42.95	42.67	43.09	42.72	42.70	42.28	42.14	42.14	42.72	42.90	43.53	43.29
EOM	42.81	43.17	42.90	---	42.49	42.29	41.90	42.11	42.63	43.07	43.34	43.62

WTR YR 1991 HIGH 41.70 MAR 27

DAY	LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	43.08	42.68	43.23	42.88	42.60	42.42	42.28	42.08	42.50	42.64	43.24	43.48
10	43.00	42.87	43.13	42.88	42.53	42.79	42.27	42.22	42.53	42.70	43.21	43.49
15	43.05	43.09	43.05	42.48	42.57	42.73	42.01	42.06	42.43	42.98	43.24	43.50
20	43.04	43.07	43.14	42.29	42.77	42.38	42.12	42.29	42.65	42.96	43.28	43.82
25	43.01	42.89	43.17	42.79	42.76	42.35	42.22	42.21	42.75	43.01	43.56	43.53
EOM	42.87	43.36	43.06	---	42.63	42.41	42.02	42.22	42.69	43.11	43.47	43.77

WTR YR 1991 LOW 43.82 SEP 20

WARRICK COUNTY

380624087164801. Local number, WK 4.

LOCATION.--Lat 38°06'24", long 87°16'48", in S½SW¼SW¼ sec.2, T.5 S., R.8 W., Warrick County, Hydrologic Unit 05140201, on State Highway 61, 4.2 mi north of Boonville.

Owner: U.S. Geological Survey.

AQUIFER.--Sandstone from lower Dugger Formation of Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 6 in., depth 105 ft, cased to 30 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 446.18 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of floor of shelter, 4.09 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 8.01 ft below land-surface datum, Mar. 22, 1991; lowest, 18.20 ft below land-surface datum, Oct. 30, 1988.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.27	9.61	9.03	8.44	8.54	8.46	8.75	9.04	9.73	10.11	11.62	12.05
10	9.90	9.61	9.07	8.18	8.35	8.73	8.87	9.25	10.02	10.25	11.78	11.98
15	9.66	9.70	9.09	8.07	8.20	8.53	8.89	9.34	10.26	10.52	11.94	11.93
20	9.69	9.73	8.65	8.18	8.21	8.27	8.76	9.53	10.50	10.82	12.04	11.96
25	9.55	9.44	8.42	8.53	8.37	8.12	8.75	9.62	10.11	11.11	12.27	11.85
EOM	9.65	9.30	8.33	8.53	8.50	8.47	8.82	9.53	10.17	11.40	12.20	12.02

WTR YR 1991 HIGH 8.01 MAR 22

DAY	LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.33	9.69	9.08	8.48	8.62	8.49	8.78	9.07	9.80	10.12	11.65	12.07
10	10.00	9.63	9.09	8.27	8.40	8.79	8.96	9.29	10.06	10.30	11.84	12.04
15	9.70	9.72	9.14	8.12	8.29	8.56	8.93	9.38	10.29	10.60	11.97	11.95
20	9.71	9.74	8.72	8.23	8.24	8.31	8.77	9.57	10.54	10.88	12.09	11.98
25	9.56	9.46	8.46	8.60	8.42	8.17	8.77	9.67	10.13	11.17	12.30	11.89
EOM	9.68	9.37	8.35	8.58	8.53	8.53	8.87	9.56	10.20	11.45	12.32	12.04

WTR YR 1991 LOW 12.39 AUG 28

WASHINGTON COUNTY

383012086124501. Local number, WA 2.

LOCATION.--Lat 38°30'12", long 86°12'45", IN NE¼SW¼SW¼ sec.20, T.1 N., R.3 E., Washington County, Hydrologic Unit 05140104, on West Washington School Road, 5.1 mi north of Fredericksburg.
 Owner: U.S. Geological Survey.

AQUIFER.--Limestone of Mississippian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 142.5 ft, cased to 101 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 780 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 3.50 ft above land-surface datum.

PERIOD OF RECORD.--August 1989 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 65.57 ft below land-surface datum, June 8, 1990; lowest, 74.07 ft below land-surface datum, Sept. 19, 1991.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	73.10	72.76	72.67	70.66	70.85	70.69	70.30	71.15	72.19	73.31	73.84	73.71
10	73.09	72.91	72.76	70.19	70.28	70.94	70.45	71.44	72.33	73.47	73.83	73.87
15	73.09	73.05	72.54	70.10	70.10	70.85	70.46	71.75	72.58	73.51	73.85	74.01
20	72.80	73.12	71.32	70.08	70.37	70.72	70.63	71.96	72.69	73.60	73.72	74.07
25	72.75	72.86	71.35	70.62	70.62	69.40	70.81	72.04	72.77	73.72	73.87	73.87
EOM	73.08	72.85	69.66	70.89	70.75	70.20	71.03	72.03	72.89	73.86	73.87	73.93

WTR YR 1991 HIGH 67.44 MAR 23

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	73.22	72.90	72.75	70.72	70.89	70.77	70.37	71.19	72.24	73.38	73.85	73.77
10	73.18	72.98	72.80	70.29	70.43	70.99	70.61	71.58	72.39	73.49	73.84	73.90
15	73.18	73.13	72.70	70.18	70.48	70.96	70.64	71.85	72.64	73.52	73.88	74.05
20	72.82	73.15	71.50	70.18	70.44	70.79	70.73	71.97	72.73	73.66	73.80	74.07
25	72.76	72.95	71.50	70.71	70.70	69.81	70.87	72.11	72.80	73.75	73.89	74.04
EOM	73.21	72.97	70.31	70.98	70.87	70.21	71.10	72.11	72.89	73.87	73.88	73.95

WTR YR 1991 LOW 74.07 SEP 19

WAYNE COUNTY

394426085080601. Local number, WE 6.

LOCATION.--Lat 39°44'26", long 85°08'06", in SE¼NW¼NE¼ sec.24, T.15 N., R.12 E., Wayne County, Hydrologic Unit 05080003, on county right-of-way, 750 ft east of State Highway 1, and 4.0 mi south of East Germantown.
 Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 6 in., depth 49 ft, cased to 47 ft, screened to 49 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 888 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of collar in shelter, 3.60 ft above land-surface datum.

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

REVISED RECORDS.--WDR IN-81-1: 1980.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 9.03 ft below land-surface datum, Jan. 1, 1991; lowest, 21.68 ft below land-surface datum, Feb. 1, 1977.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	13.81	13.63	14.18	9.65	12.27	12.38	10.98	12.19	11.36	13.27	14.85	16.24
10	13.76	13.81	14.00	10.58	11.98	12.54	11.46	12.40	11.88	13.51	15.10	16.46
15	13.26	14.00	13.94	10.86	12.08	11.65	11.30	12.60	12.21	13.71	15.37	16.67
20	13.17	14.19	12.65	11.28	12.11	11.24	11.44	11.50	12.51	13.93	15.59	16.88
25	13.28	14.36	11.61	11.71	12.17	10.13	11.66	10.71	12.78	14.19	15.79	17.07
EOM	13.46	14.49	9.06	12.08	12.26	10.37	11.93	10.86	13.02	14.55	16.04	17.27

WTR YR 1991 HIGH 9.03 JAN 1

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	13.83	13.67	14.26	9.85	12.29	12.40	11.06	12.22	11.47	13.32	14.91	16.28
10	13.84	13.85	14.02	10.71	11.99	12.57	11.55	12.43	11.96	13.55	15.15	16.50
15	13.31	14.03	14.00	10.94	12.13	11.85	11.37	12.64	12.27	13.76	15.41	16.71
20	13.17	14.23	12.87	11.36	12.17	11.25	11.45	11.62	12.57	13.98	15.63	16.91
25	13.31	14.39	11.68	11.79	12.20	10.18	11.71	10.74	12.82	14.25	15.83	17.11
EOM	13.49	14.49	9.73	12.13	12.28	10.49	11.98	10.96	13.07	14.61	16.08	17.31

WTR YR 1991 LOW 17.31 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, 25.21 ft below land-surface datum, Sept. 24, 1988.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	22.28	21.62	21.18	19.99	20.79	20.52	20.53	20.46	21.54	22.90	23.95	24.17	
10	21.71	21.85	21.49	20.65	20.31	21.04	20.31	20.97	21.75	22.88	23.78	24.19	
15	21.55	22.05	21.32	20.41	20.50	21.21	19.75	21.06	21.94	23.25	23.93	24.31	
20	21.75	22.17	21.10	20.12	20.48	20.45	19.82	21.18	22.30	23.42	23.95	24.41	
25	21.84	21.93	20.86	20.82	20.55	20.45	19.99	21.37	22.59	23.54	24.05	24.12	
EOM	22.02	21.71	19.50	20.99	20.60	20.40	20.20	21.42	22.82	23.72	24.14	24.32	

WTR YR 1991 HIGH 19.16 JAN 1

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	22.45	21.95	21.55	20.20	20.91	20.74	20.67	20.66	21.66	22.98	24.00	24.25
10	21.95	22.02	21.69	20.86	20.47	21.17	20.70	21.19	21.82	23.03	23.93	24.30
15	21.84	22.13	21.61	20.63	21.00	21.31	19.97	21.16	22.07	23.32	24.01	24.36
20	21.90	22.23	21.39	20.27	20.68	20.67	19.88	21.24	22.34	23.56	24.00	24.51
25	22.20	22.15	21.05	20.90	20.65	20.52	20.10	21.63	22.66	23.69	24.14	24.30
EOM	22.09	21.97	20.07	21.25	20.74	20.53	20.33	21.60	22.92	23.77	24.33	24.44

WTR YR 1991 LOW 24.51 SEP 20

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, in the southwest corner of the Pious Chapel property, 4.25 mi north of Idaville. Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled water-table well, diameter 6 in., depth 134 ft, cased to 129 ft, screened to 134 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 683.06 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.20 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.94 ft below land-surface datum, Mar. 27, 1991; lowest, 13.66 ft below land-surface datum, Aug. 3, 1991.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.95	3.75	3.62	2.36	3.35	3.30	2.79	3.19	3.39	8.31	12.73	6.47	
10	3.72	3.44	3.74	2.92	3.13	3.61	3.01	3.34	3.62	8.39	7.35	6.59	
15	3.13	3.72	3.76	2.83	3.26	3.68	2.82	3.47	---	8.34	6.67	6.56	
20	3.29	3.93	3.82	2.38	3.41	2.23	2.63	2.92	4.14	12.25	6.37	6.62	
25	3.56	3.99	3.60	2.91	3.47	2.23	2.94	2.94	---	12.66	6.42	6.50	
EOM	3.84	3.87	2.12	3.30	3.50	2.44	3.07	3.09	9.63	11.10	6.50	6.60	

WTR YR 1991 HIGH 1.94 MAR 27

LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.01	3.99	3.76	2.46	3.40	3.40	2.85	3.29	3.46	8.77	13.10	6.51
10	4.32	3.51	3.80	2.94	3.19	3.66	3.18	3.40	3.66	8.67	8.90	6.69
15	3.24	3.76	3.87	2.95	3.45	3.74	3.01	3.53	---	9.02	6.76	6.59
20	3.31	3.96	3.89	2.44	3.46	2.54	2.69	2.98	5.39	12.79	6.39	6.67
25	3.63	4.10	3.67	2.99	3.52	2.27	2.97	3.00	---	13.01	6.45	6.58
EOM	3.92	4.02	2.36	3.43	3.55	2.51	3.14	3.16	10.52	12.70	6.54	6.66

WTR YR 1991 LOW 13.66 AUG 3

WHITLEY COUNTY

410337085264201. Local number, WY 3.

LOCATION.--Lat 41°03'37", long 85°26'42", in NW¼SE¼NW¼ sec.18, T.30 N., R.10 E., Whitley County, Hydrologic Unit 05120104, on the county right-of-way of Evergreen Road, and 0.75 mi north of Laud.
 Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 191 ft, cased to 187 ft, screened to 191 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 870 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of floor of shelter, 2.68 ft above land-surface datum.

PERIOD OF RECORD.--December 1966 to September 1971, August 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 49.30 ft below land-surface datum, Mar. 27, 1976; lowest, 52.96 ft below land-surface datum, Dec. 7, 1989.

DAY	HIGHEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	51.64	51.08	51.32	50.86	50.83	50.41	50.73	50.47	50.74	50.99	51.70	51.87
10	51.53	51.40	51.40	50.85	50.70	50.74	50.56	50.71	50.71	51.09	51.56	52.01
15	51.55	51.49	51.17	50.60	50.44	50.77	50.43	50.63	50.65	51.39	51.67	---
20	51.58	51.51	51.34	50.53	50.73	50.59	50.57	50.79	50.85	51.50	51.58	---
25	51.54	51.18	51.24	50.85	50.77	50.68	50.58	50.64	50.96	51.50	51.82	---
EOM	51.50	51.46	51.14	50.76	50.61	50.68	50.47	50.58	51.05	51.65	51.84	---

WTR YR 1991 HIGH 50.26 MAR 27

DAY	LOWEST WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	51.74	51.44	51.55	51.04	50.89	50.60	50.79	50.61	50.81	51.06	51.80	51.97
10	51.65	51.53	51.52	51.00	50.80	50.86	50.83	50.81	50.86	51.22	51.69	52.09
15	51.71	51.61	51.40	50.73	50.71	50.89	50.66	50.74	50.72	51.56	51.70	---
20	51.71	51.56	51.47	50.62	50.79	50.75	50.67	50.84	50.93	51.61	51.67	---
25	51.59	51.33	51.35	50.92	50.87	50.77	50.71	50.77	51.06	51.62	51.93	---
EOM	51.60	51.63	51.26	50.92	50.80	50.81	50.56	50.65	51.11	51.71	51.94	---

WTR YR 1991 LOW 52.12 SEP 8

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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
<i>Length</i>		
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)
<i>Area</i>		
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)
<i>Volume</i>		
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)
<i>Flow</i>		
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)
<i>Mass</i>		
tons (short)	9.072×10^{-1}	megagrams (Mg) or metric tons

