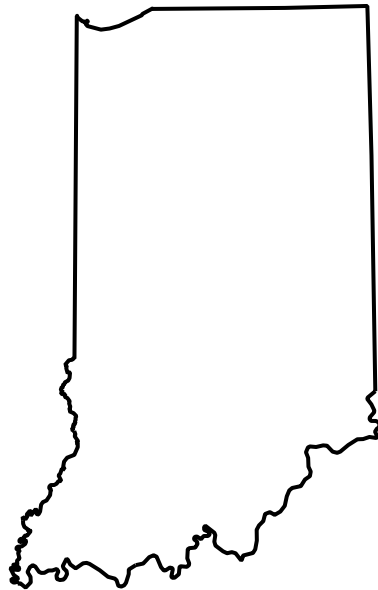


Water Resources Data Indiana Water Year 2003

By Scott E. Morlock, Hieu T. Nguyen and Deborah K. Majors



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

Water-Data Report IN-03-1

**U.S. Department of the Interior
U.S. Geological Survey**

U.S. Department of the Interior
Gale A. Norton, Secretary

U.S. Geological Survey
Charles G. Groat, Director

U.S. Geological Survey, Reston, Virginia: 2004

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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 U.S. Geological Survey policy and established guidelines, the following individuals contributed significantly to the collection, processing, and tabulation of the data:

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REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY (Leave blank)

2. REPORT DATE

March 2004

3. REPORT TYPE AND DATES COVERED

Annual-Oct. 1, 2002 to Sept. 30, 2003

4. TITLE AND SUBTITLE

Water Resources Data--Indiana, Water Year 2003

5. FUNDING NUMBERS

6. AUTHOR(S)

S.E. Morlock, H.T. Nguyen, and D.K. Majors

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)

**U.S. Geological Survey, Water Resources Division
5957 Lakeside Boulevard
Indianapolis, Indiana 46278-1996**

8. PERFORMING ORGANIZATION
REPORT NUMBER

USGS-WDR-IN-03-1

9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)

**U.S. Geological Survey, Water Resources Division
5957 Lakeside Boulevard
Indianapolis, Indiana 46278-1996**

10. SPONSORING / MONITORING
AGENCY REPORT NUMBER

USGS-WDR-IN-03-1

11. SUPPLEMENTARY NOTES

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

12a. DISTRIBUTION / AVAILABILITY STATEMENT

No restriction on distribution. This report may be purchased from: National Technical Information Service, Springfield, Virginia 22161.

12b. DISTRIBUTION CODE

13. ABSTRACT (Maximum 200 words)

Water resources data for the 2003 water year for Indiana consists of records of discharge, stage, and water quality of streams and wells; reservoir stage and contents; and water levels in lakes and wells. This report contains records of discharge for 148 stream-gaging stations, stage for 16 stream stations, stage and contents for 1 reservoir, water quality for 5 streams, water temperature at 17 sites, sediment analysis for 2 streams, water levels for 8 lakes and 88 observation wells. Also included are records of miscellaneous discharge measurements, miscellaneous levels and miscellaneous water-quality, not part of the systematic data-collection program. Data contained in this report represent that part of the National Water Information System operated by the U.S. Geological Survey in Indiana in cooperation with State and Federal agencies.

14. SUBJECT TERMS

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

15. NUMBER OF PAGES

630

16. PRICE CODE

17. SECURITY CLASSIFICATION
OF REPORT

Unclassified

18. SECURITY CLASSIFICATION
OF THIS PAGE

Unclassified

19. SECURITY CLASSIFICATION
OF ABSTRACT

20. LIMITATION OF ABSTRACT

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FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME**

(d-discharge, e-gage heights, c-chemical, h-hydrograph, n-nutrients, p-pesticide, s-sediment,
t-temperature, v-contents)

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

(e - gage heights)

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**GROUND-WATER WELLS, IN ALPHANUMERIC ORDER BY COUNTY,
FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME**

(e - gage heights, h-hydrographs)

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Allen 6 (e, h)	AL 6	410932084561101	494
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Bartholomew 10 (e, h)	BA 10	390317085523701	499
Bartholomew 13 (e, h)	BA 13	390658085572201	500
Benton 4 (e, h)	BE 4	402851087213501	501
Boone 17 (e, h)	BO 17	400532086183901	502
Cass 3 (e, h)	CS 3	403407086175701	503
Clay 6 (e, h)	CY 6	392653087120501	504
Clay 7 (e, h)	CY 7	391124087134701	505
Decatur 2 (e,h)	DC 2	392022085371801	506
Delaware 4 (e, h)	DW 4	400541085213701	507
Elkhart 4 (e,h)	EH 4	413121085481301	508
Elkhart 7 (e, h)	EH 7	414514085505001	509
Elkhart 9 (e, h)	EH 9	414419085595801	510
Fountain 3 (e, h)	FO 3	401200087121701	511
Franklin 5 (e, h)	FR 5	392416085004301	512
Fulton 7 (e, h)	FU 7	405829086175801	513
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**GROUND-WATER WELLS, IN ALPHANUMERIC ORDER BY COUNTY,
FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME--Continued**

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Jasper 7 (e, h)	JP 7	410809087580801	521
Jasper 11 (e, h)	JP 11	410322087163101	522
Jasper 12 (e, h)	JP 12	410145087130401	523
Jasper 13 (e, h)	JP 13	405902087141501	524
Jasper 15 (e, h)	JP 15	405550087092301	525
Jefferson 5 (e, h)	JF 5	384949085251901	526
Jennings 3 (e, h)	JN 3	385601085365701	527
Knox 7 (e, h)	KN 7	383247087361001	528
Knox 8 (e, h)	KN 8	384951087202501	529
Kosciusko 9 (e, h)	KO 9	412556085513401	530
Lagrange 2 (e, h)	LG 2	414318085200601	531
Lagrange 3 (e, h)	LG 3	414158085253401	532
Lake 12 (e, h)	LK 12	411038087284701	533
Lake 13 (e, h)	LK 13	413559087270301	534
Lake 14 (e, h)	LK 14	411146087204101	535
LaPorte 9 (e, h)	LP 9	412350086512801	536
LaPorte 10 (e, h)	LP 10	413139086341401	537
LaPorte 11 (e, h)	LP 11	412839086533101	538
LaPorte 12 (e, h)	LP 12	413434086434701	539
Marion 34 (e, h)	MA 34	393855086120701	540
Marion 35 (e, h)	MA 35	394632086092701	541
Marion 37 (e, h)	MA 37	394732086115501	542
Marion 38 (e, h)	MA 38	393950086124701	543
Martin 5 (e, h)	MT 5	383659086545901	544
Montgomery 7 (e, h)	MY 7	400247086482101	545
Morgan 4 (e, h)	MG 4	393423086161001	546
Newton 6 (e, h)	NE 6	405105087173301	547
Newton 7 (e, h)	NE 7	405959087282901	548
Newton 8 (e, h)	NE 8	410428087231501	549
Newton 9 (e, h)	NE 9	405959087282902	550
Newton 10 (e, h)	NE 10	410428087235021	551
Newton 11 (e, h)	NE 11	410235087305901	552
Newton 14 (e, h)	NE 14	410917087285801	553
Noble 8 (e, h)	NO 8	411922085221801	554
Noble 9 (e, h)	NO 9	413106085232701	555
Noble 11 (e, h)	NO 11	412405085154501	556
Noble 14 (e, h)	NO 14	412405085154504	557
Parke 6 (e, h)	PA 6	393619087043001	558
Posey 3 (e, h)	PY 3	380758087551001	559
Posey 5 (e, h)	PY 5	380546087474301	560
Pulaski 6 (e, h)	PU 6	405916086530701	561
Pulaski 7 (e, h)	PU 7	410739086365201	562

**GROUND-WATER WELLS, IN ALPHANUMERIC ORDER BY COUNTY,
FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME--Continued**

	Local Number	Well Number	Page
Randolph 3 (e, h).....	RA 3	401532085085301	563
St. Joseph 31 (e, h).....	SJ 31	413120086055601	564
Shelby 2 (e, h).....	SH 2	393943085490901	565
Starke 2 (e, h).....	SK 2	411342086365601	566
Steuben 6 (e, h).....	SB 6.....	414204085054002	567
Tippecanoe 17 (e, h).....	TC 17	402734087033401	568
Tippecanoe 18 (e, h).....	TC 18	402734087033402	569
Vanderburgh 6 (e, h).....	VA 6	380608087395901	570
Vanderburgh 7 (e, h).....	VA 7	380626087344401	571
Vigo 7 (e, h).....	VI 7	392820087242601	572
Wabash 3 (e, h).....	WB 3	404424085422801	573
Wabash 4 (e, h).....	WB 4.....	403948085414601	574
Warrick 4 (e, h).....	WK 4.....	380624087164801	575
Washington 2 (e, h).....	WA 2	383012086124501	576
Wayne 6 (e, h).....	WE 6	394426085080601	577
Wells 4 (e, h).....	WL 4	404331085064701	578
White 4 (e, h).....	WT 4	404914086403001	579
Whitley 3 (e, h).....	WY 3.....	410337085264201	580

DISCONTINUED SURFACE-WATER DISCHARGE OR STAGE-ONLY STATIONS

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
OHIO RIVER BASIN			
Little Williams Creek at Connersville	03274950	9.16	1968-1991
East Fork Whitewater River at Richmond	03275500	121	1949-1978
South Hogan Creek near Dillsboro	03276700	38.1	1961-1993
Laughery Creek near Farmers Retreat (a)	03277000	248	1941-1973
Indian Creek near Corydon	03302500	129	1943-1993
Friday Branch tributary near Saint Meinrad (b)	03303276	.096	1981
Little Pigeon Creek near Tennyson	03304000	150	1944-1947
Pigeon Creek near Fort Branch	03322011	35.4	1986-2001
Pigeon Creek at Evansville	03322100	323	1960-1985
WABASH RIVER BASIN			
Wabash River near New Corydon	03322500	262	1951-1988
Wabash River at Bluffton	03323000	532	1930-1971, 1987-1992 (d)
Salamonie River at Portland	03324200	85.6	1959-1993
Little Mississinewa River at Union City	03325311	9.67	1982-1997
Mississinewa River near Eaton (b)	03326000	310	1952-1971
Wabash River at Delphi	03329500	4,072	1940-1971
Tippecanoe River near Warsaw	03331000	126	1943-1949
Tippecanoe River at Pulaski	03332000	1,089	1928-1931
Little Indian Creek near Royal Center (a)	03332300	35.0	1959-1973
Tippecanoe River at Buffalo (e)	03332345	1,285	1986-1992
Big Monon Creek near Francesville (a)	03332400	152	1959-1973
Tippecanoe River near Monticello (c)	03332500	1,732	1932-1981
Weesau Creek near Deedsville	03328430	8.87	1970-2001
Rattlesnake Creek near Patton	03329400	6.83	1968-1993
Wildcat Creek at Greentown	03333500	168	1945-1961
Marshall Ditch near Montmorenci	03335677	1.58	1990-1994
Indian Creek near Montmorenci	03335678	27.8	1990-1994
Little Pine Creek at Green Hill	03335679	42.3	1990-1994
Big Pine Creek near Williamsport	03335700	323	1955-1987
East Fork Coal Creek near Hillsboro	03339108	33.4	1968-1991
Coal Creek at Coal Creek	03339120	214	1965-1972
Little Vermilion River near Newport	03339150	237	1965-1972
Sugar Creek tributary near Deer Mill (b)	03339855	.45	1981
Sugar Creek near Byron (b)	03340000	670	1941-1971
Big Raccoon Creek at Mansfield (d)	03341000	248	1939-1958
Little Raccoon Creek near Catlin (d,g)	03341200	134	1957-1971
Big Raccoon Creek near Mecca	03341315	473	1988-1992
Brouillets Creek near Universal (b)	03341420	321	1966-1971
North Coal Creek near Terre Haute	03341470	1.91	1974-1976
Honey Creek near Riley (b)	03341570	5.79	1981
West Fork Busseron Creek near Hymera	03342150	14.4	1966-1986
Mud Creek near Cass	03342244	9.16	1981-1991
Mud Creek near Dugger	03342250	11.9	1966-1981
Busseron Creek near Sullivan	03342300	138	1966-1986
Buttermilk Creek near Paxton	03342350	16.5	1966-1973
Buttermilk Creek near Sullivan	03342360	17.6	1975-1978
South Fork Smalls Creek at Bruceville (b,g)	03342800	4.94	1972-1975
Killbuck Creek near Gaston	03348020	25.5	1968-1991
Killbuck Creek near Anderson	03348100	97.8	1964-1968
White River near Noblesville	03348500	828	1915-1926, 1929-1974 (b)

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

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Station name	Station number	Drainage area (mi ²)	Period of record
WABASH RIVER BASIN--Continued			
Cicero Creek near Arcadia (a)	03349500	131	1955-1976
Little Cicero Creek near Arcadia (a)	03349700	40.4	1956-1976
Cicero Creek near Cicero	03350000	196	1946-1954
Hinkle Creek near Cicero (a)	03350100	18.5	1956-1976
Cicero Creek at Noblesville	03350500	216	1950-1980, 1986-1992
Sugar Creek near Middletown	03351400	5.80	1969-1989
Lawrence Creek at Fort Benjamin Harrison	03352000	2.74	1952-1956, 1958-1969
Mud Creek at Indianapolis (a)	03352200	42.4	1958-1976
Fall Creek at 16th St. at Indianapolis	03352875	317	1986-1991
Pleasant Run at Brookville Road at Indianapolis	03353160	10.1	1960-1981
Bean Creek at Indianapolis	03353180	4.4	1970-1993
Little Eagle Creek at 52 nd St. at Indianapolis	03353551	6.28	1989-2000
Guion Creek abv 52 nd St. at Indianapolis	03353560	4.10	1989-2001
Falcon Creek at 30th St. at Indianapolis	03353583	4.15	1989-2001
Little Buck Creek near Southport	03353630	5.75	1989-2000
Derbyshire Creek at Southport	03353635	1.76	1989-2001
Little Buck Creek at Southport	03353636	10.8	1989-2001
White River at Waverly	03353660	2,026	1986-1988
Beanblossom Creek at Beanblossom	03354500	14.6	1952-1993
Bear Creek near Trevlac (a)	03355000	6.94	1952-1973
Beanblossom Creek at Dolan	03356000	100	1946-1978
Beanblossom Creek near Bloomington	03356500	112	1931-1933
Big Walnut Creek at Greencastle	03357420	216	1975-1982
Deer Creek near Putnamville	03359500	59.0	1955-1965, 1968-1972
Jordan Creek near Jordan (b)	03359980	25.9	1981
Kessinger Ditch near Monroe City	03360895	56.2	1992-1998
Driftwood River near Edinburgh	03363000	1,060	1940-1991
Haw Creek near Clifford	03364200	47.5	1967-1991
Sand Creek near Brewersville	03365000	155	1948-1986
Von Fange Ditch at Seymour	03365575	4.17	1994-1997
Graham Creek near Vernon	03366000	77.2	1955-1973
Muscatatuck River near Austin	03367000	359	1932-1943, 1944-1971 (f)
Stucker Creek near Austin	03367500	127	1932-1933
Vernon Fork Muscatatuck River near Butlerville	03369000	85.9	1942-2001
Vernon Fork near Crothersville	03370000	391	1932-1933
Muscatatuck River near Tampico	03370500	960	1939
Muscatatuck River near Vallonia	03371000	1,134	1932-1933
South Fork Salt Creek at Kurtz	03371600	38.2	1961-1971, 1972-1975 (e)
North Fork Salt Creek at Nashville (a)	03371650	76.1	1962-1976
North Fork Salt Creek near Belmont	03372000	120	1946-1971
Stephens Creek near Bloomington	03372300	10.9	1970-1991
Clear Creek near Harrodsburg	03372700	55.2	1960-1971
Salt Creek near Peerless	03373000	573	1939-1950, 1957-1971, 1971-1984 (d)
Indian Creek near Springville (a)	03373200	60.7	1961-1973
Lost River near Leipsic	03373530	34.8	1992-2001
Lost River near West Baden Springs	03373700	287	1964-1993
White River at Hazelton (h)	03374100	11,305	1928-1938
Hall Creek at St. Anthony	03375800	21.8	1970-2001
Patoka River near Jasper (g)	03376000	348	1944-1947
Flat Creek near Otwell	03376260	21.3	1965-1982
Little Flat Creek near Otwell (b)	03376279	6.56	1981

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

Station name	Station number	Drainage area (mi ²)	Period of record
STREAMS TRIBUTARY TO LAKE MICHIGAN			
Little Calumet at Gary	04093200	5.82	1958-1971 1984-2002(e)
Burns Ditch at Gary (g)	04093500	160	1943-1991
Salt Creek near McCool	04094500	74.6	1945-1991
Dunes Creek at Porter	04095050	3.40	1979-1982
Derby Ditch at Beverly Shores	04095100	4.64	1980
Trail Creek at Michigan City	04095300	54.1	1969-1994
Lime Lake outlet at Panama	04097970	17.5	1969-1986
Fawn River at Orland	04098000	86.4	1943-1947
Pigeon Creek and Hogback Lake near Angola	04099500	103	1946-1974
Pretty Lake Inlet near Stroh	04099610	1.96	1963-1980
Christiana Creek at Elkhart	04100000	127	1947-1952
North Branch Elkhart River near Cosperville	04100220	134	1951-1971
Rimmel Branch near Albion	04100295	10.7	1979-2001
Turkey Creek at Syracuse	04100465	43.8	1969-1987
STREAMS TRIBUTARY TO LAKE ERIE			
St. Joseph River at Hursh	04178500	734	1950-1954
St. Joseph River at Cedarville	04179000	763	1931-1932, 1956-1981
Cedar Creek near Auburn (a)	04179500	87.3	1943-1973
Harber Ditch at Fort Wayne	04182590	21.9	1960-1964 (g), 1961-1964 (e), 1964-1991
St. Marys River at Fort Wayne	04182700	810	1905-1906
Spy Run Creek at Fort Wayne	04182810	14.0	1983-2001
UPPER MISSISSIPPI RIVER BASIN			
Kingsbury Creek near LaPorte	05515400	7.08	1970-1986
Yellow River near Bremen (a)	05516000	135	1955-1973
Singleton Ditch near Hebron	05518500	34.2	1949-1951
Singleton Ditch near Schneider	05519000	123	1948-2001
West Creek near Schneider	05519500	54.7	1948-1952, 1954-1972
Singleton Ditch at Illinois, IL	05520000	220	1945-1977
Oliver Ditch near Aix	05521500	79.6	1948-1951
Iroquois River near North Marion	05522000	144	1948-1993
Bice Ditch at South Marion	05523000	21.8	1948-1993
Slough Creek near Collegeville	05523500	83.7	1948-1952, 1953-1982
Carpenter Creek at Egypt	05524000	44.8	1948-1952, 1953-1982

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.

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

The following stations were discontinued as surface-water-quality stations. Records of temperature (T), specific conductance, pH, dissolved oxygen (C) or sediment (S) 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 ¹ (mi ²)	Type of Record	Period of record
OHIO RIVER BASIN				
Whitewater River near Alpine	03275000	529	C,T,S	1987-94, 1999-2000
East Fork Whitewater River at Abington	03275600	198	C T T	1968-79 1969-76, 1970-71, 1973-76
East Fork Whitewater at Brookville	03276000	380	C,T	1974-75
Whitewater River at Brookville	03276500	1224	T C	1974-81, 1974-86
South Hogan Creek near Dillsboro	03276700	38.1	C,T,S	1961-93
Trib to Friday Branch at St. Meinard	03303276	.096	C,T,S	1980-81
WABASH RIVER BASIN				
Wabash River near New Corydon	03322500	262	C	1969-73
Wabash River at Huntington	03323500	710	T	1963-77
Salamonie Creek at Warren	03324288	402	T	1980-81
Mississinewa River at Marion	03326500	682	C,T	1975-76,79
Eel River near Logansport	03328500	789	S,T	1969-80
Wildecreek near Lafayette	03335000	794	C T	1970-79, 1970-74
Wabash River at Lafayette	03335500	7247	T T S	1954-64, 1967-75, 1978-80
Big Pine Creek at Williamsport	03335700	323	C T C,T,S	1970-76, 1970-75, 1980-81
Big Raccoon Creek near Fincastle	03340800	132	T C	1965-77, 1975-77
Honey Creek at Riley	03341570	5.79	C,T,S	1980-81
Wabash River near Sullivan	03341805	12,600	C,T	1963-64
Wabash River at Riverton	03342000	13,100	T T T	1954-61, 1962-65, 1967-78
South Fork Smalls Creek at Bruceville	03342800	4.94	C	1973-75
White River at Noblesville	03348500	814	T	1952-76
White River near Nora	03351000	1200	T T	1954-60, 1962-72
White River near Centerton	03354000	2,444	C,S T	1986-95 1953-56 1966-67 1970-72 1977-80 1982-85 1965-77
Big Walnut Creek at Greencastle	03357420	216	S C,T	1973-77
Mill Creek at Cataract	03358000	245	C,T	1978-82
Jordan Creek at Jordan	03359980	25.9	C,T	1980-81
Big Blue River at Carthage	03361000	184	T C,T S C	1974-77, 1979-82, 1977-81, 1973-77
Flatrock River at St. Paul	03363500	303	C,T	1976-79
Clifty Creek at Hartsville	03364500	91.4	C,T	1970-75
East Fork White River at Seymour	03365500	2333	S T	1966-80, 1954-79
North Fork Salt Creek near Nashville	03371650	761	C,T	1974-76
Salt Creek near Harrodsburg	03372500	441	T	1966-76
White River at Petersburg	03374000	11125	T	1964-77
White River near Hazelton	03374100	11305	T S C	1973-81, 1973-83, 1973-86
Patoka River near English	03374470	308	T C	1970-76, 1969-76
Little Flat Creek near Otwell	03376279	6.36	C,T,S	1980-81
Wabash River at New Harmony	03378500	29234	T C S	1974-80 1974-86 1974-83

DISCONTINUED SURFACE-WATER-QUALITY STATIONS--Continued

Station name	Station number	Drainage area (mi ²)	Type of Record	Period of record
STREAM TRIBUTARY TO LAKE MICHIGAN				
Trail Creek near Michigan City	04095300	54.1	C,T S	1977-81 1990-94
STREAMS TRIBUTARY TO LAKE ERIE				
St. Joseph River near Newville	04178100	615	C	1996-99, 1969-73
St. Marys River at Wilshire	04181050	435	C	1969-73
St. Marys River near Ft Wayne	04182000	762	S T	1953-67, 1964-67
UPPER MISSISSIPPI RIVER BASIN				
Yellow Creek near Plymouth	05516500	29.4	S,T	1979-81

WATER RESOURCES DATA—INDIANA, 2003

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 2003 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 148 gaging stations, stage at 16 gaging stations, stage and contents at 1 reservoir, water quality at 7 stream sites, water temperature at 17 sites, sediment data at 2 sites, water levels at 8 lakes, and 88 observation wells. Also included are streamflow records for discharge at miscellaneous sites, and observation well water levels from special studies done in Lake county. Locations of the streamflow and water-quality sites are shown on figures 6 and 7. The locations of lakes and ground-water observation wells having 2003 water-level records are shown on figures 8, 9 and 10. 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 the present format, 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, Branch of Information Services, Box 25286, Denver, CO 80225-0286.

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-03-1.” 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.

The U.S. Geological Survey has compiled and disseminated estimates of water use for the Nation at 5-year intervals since 1950. A large amount of the Indiana withdrawal data presented in the publication, “Estimated Use of Water in the United States in 2000” U.S. Geological Survey Circular 1268, were provided by the Indiana Department of Natural Resources, Division of Water. The data indicated that in 2000 over 10.1 billion gallons per day were withdrawn from the surface- and ground-water resources of Indiana to meet the needs of its citizens. Approximately 94 percent of this withdrawal was from surface-water sources. Nearly 6.7 billion gallons per day of surface water was used for thermoelectric power production, making it the largest category of use in Indiana. A small percentage of those withdrawals were consumed in the power-production process and the rest of the water was returned to the source, making it available for future use.

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

COOPERATION

The U.S. Geological Survey and 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, John Goss, Director, through the Bureau of Resource and Regulation, Paul Ehret, Deputy Director

State of Indiana, Department of Environmental Management, Lori F. Kaplan, Commissioner, Mary Bruce Palin, Deputy Assistant Commissioner, Office of Water Management

State of Indiana, Department of Transportation, J. Bryan Nicol, Commissioner

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

The following organizations aided in collecting records: The cities of Anderson, Carmel, Elkhart, Fort Wayne, and Indianapolis; Hoosier Energy; Indianapolis Water Co.; AES Energy; CINERGY; Jefferson Smurfit Corp.; Eli Lilly and Co.; Northern Indiana Public Service Co.

SUMMARY OF HYDROLOGIC CONDITIONS

Descriptions of precipitation and flooding during the 2003 water year in the summary of Hydrologic Conditions are based on information from the National Weather Service, Monthly Reports of River Flood Conditions, October 2002 through September 2003, by the National Weather Service Indianapolis, Indiana; North Webster, Indiana; and Paducah, Kentucky offices.

Precipitation

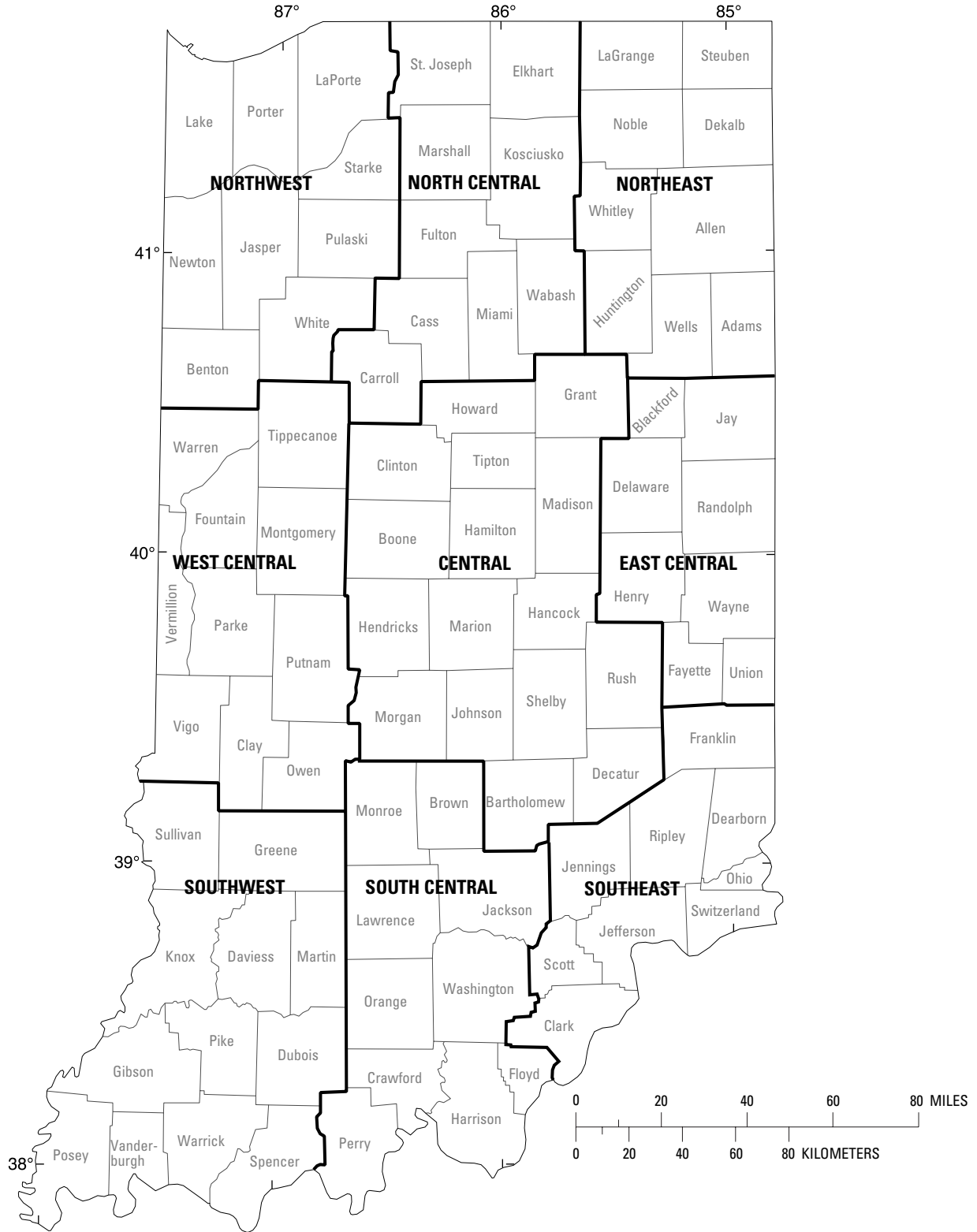
The climate of Indiana is continental, influenced mainly by eastward-moving cold polar and warm gulf air masses. The low-pressure centers formed by the interaction of these air masses are the major sources of Indiana precipitation. Spring and early summer are normally the wettest periods of the year, as storm systems tap moisture from the Gulf of Mexico and travel across Indiana. Early fall is generally the driest period. Seasonal patterns may vary geographically, particularly in the summer when isolated thunderstorms are common and during the winter when lake-effect snows can affect northern Indiana. The average annual precipitation ranges geographically from 37 inches in northern Indiana to 46 inches in southern Indiana (fig. 2). Snowfall accounts for 2 to 7 inches of the average annual precipitation, with the greatest amount of snowfall in northern Indiana (Clark, 1980).

An “overall picture” of precipitation patterns in Indiana during the 2003 water year is presented in table 1. Table 1 shows monthly precipitation by Indiana climate division (fig. 1) during the 2003 water year, expressed as percentage of the mean monthly precipitation for 1971–2000 (mean monthly precipitation for 1971–2000 was obtained from the Midwest Climate Center, <http://mcc.sws.uiuc.edu>). For purposes of this discussion, mean precipitation for 1971–2000 is termed “normal”. Table 1 can be viewed as a record by month and geographic area of precipitation departures from normal.

The 2003 water year began with dry conditions across northern and central Indiana. Precipitation was below normal across all three northern climate divisions from October through April. Precipitation was below normal across central Indiana during the same period, except for February. A major winter storm on February 14 and 15 brought heavy rain and snow to parts of central Indiana.

This storm caused above-normal precipitation in all three southern Indiana climate divisions for February. Southern Indiana also received above-normal precipitation in October and December from several storm systems that were confined to southern parts of the state. In April, there was below-normal precipitation across northern and central Indiana and near-normal precipitation across southern Indiana.

A series of widespread storms May 4–19 produced above normal precipitation for May across all Indiana climate divisions. June was drier than normal across the northern and central climate divisions and was near normal across the southern climate divisions. Heavy localized rain occurred across southern Indiana,

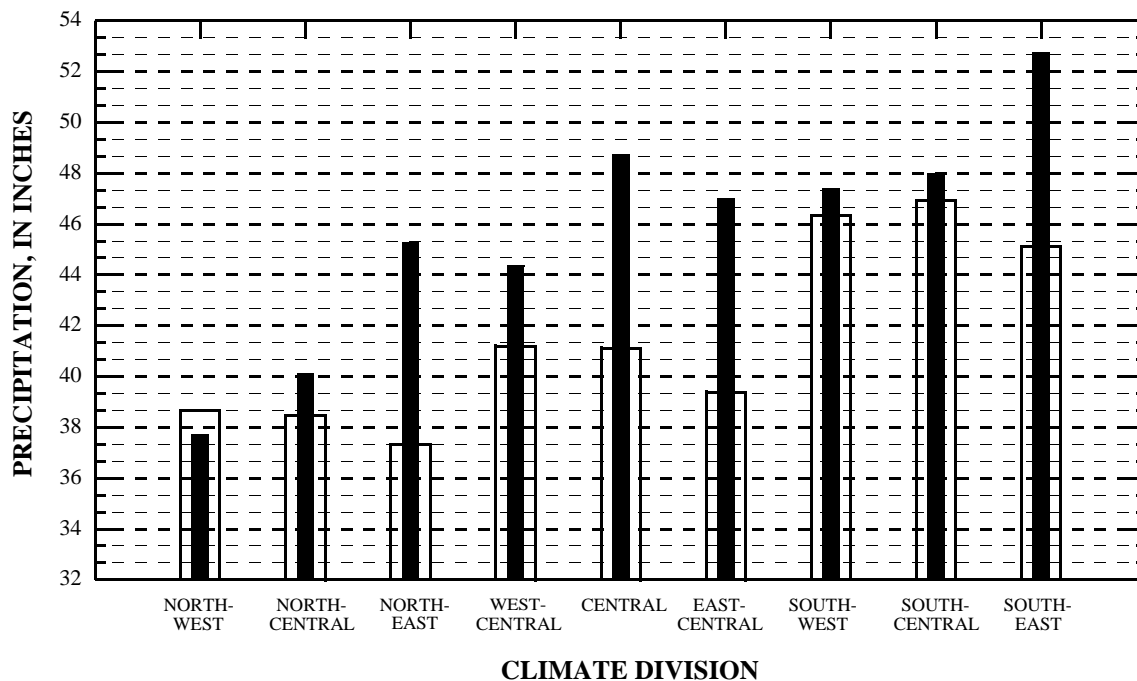


Base from U.S. Geological Survey digital data, 1:2,000,000, 1996
Albers Equal-Area Conic projection
Standard parallels 29°30' and 45°30' central meridian -96°

EXPLANATION
Climate division boundaries

Figure 1.--Climate divisions in Indiana.

(Data from National Oceanic and Atmospheric Administrations, 1994.)



EXPLANATION

Total precipitation, 2003 water year
 Mean annual precipitation, 1971-2000

Figure 2.--Indiana precipitation during water-year 2003 and mean annual precipitation for 1971-2000.

Table 1.--Monthly precipitation during water-year 2003 as a percentage of mean monthly precipitation, 1971-2000.

Climate Division	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
Northwest	63	55	55	49	58	39	78	155	66	289	56	119
North-central	57	61	61	50	74	53	86	166	52	237	103	173
Northeast	61	83	67	52	93	84	83	189	79	241	139	199
West-central	96	62	70	55	105	51	72	136	72	190	71	296
Central	87	79	91	64	135	81	60	149	74	225	96	265
East-central	86	80	98	70	112	80	36	139	81	224	135	268
Southwest	130	66	123	50	170	66	92	140	100	101	73	130
South-central	132	70	92	51	154	62	89	133	102	141	64	146
Southeast	116	86	131	73	142	61	101	139	89	170	104	208

June 10–16. July brought 2 weeks of torrential rains across much of Indiana, starting on July 4. The heaviest rains fell in north-central Indiana July 5–10 (Arvin, 2003), where rainfall totals were as high as 13 inches (about one third of the normal total annual precipitation for north-central Indiana). Because of these storms, July precipitation amounts were 200 to 300 percent above normal across northern and central Indiana climate divisions.

In August, localized thunderstorms caused above-normal precipitation in the eastern climate divisions; the western and central climate divisions were below or near normal. An intense storm began September 1. Central Indiana received 6 to 8 inches of rain in less than 24 hours. Indianapolis in central Indiana received 7.2 inches of rain, breaking the previous 108-year-old rainfall record. Rainfall totals for September were up to nearly 300 percent of normal in the central climate divisions. Though not as affected by this storm as central Indiana, northern and southern parts of the state also received up to 4 inches of rainfall. While the 2003 water year was relatively dry across much of Indiana for 9 of 12 months, the widespread rainfall in May, torrential rains in July, and intense September storm caused total annual precipitation amounts to be greater than normal in all climate divisions except for the northwest (fig. 2).

Surface Water

The Ohio River, Upper Mississippi River, Lake Michigan, and Lake Erie Basins are the major drainage basins in Indiana. Most of Indiana (24,000 square miles) is drained by the Wabash River of the Ohio River Basin.

The sources of flow in Indiana streams and rivers are ground water and direct runoff from precipitation. The majority of streamflow during normal and low-flow periods is from ground water; during high-flow periods, a significant amount of streamflow is runoff. Of the 38 inches of average annual precipitation in Indiana, it is estimated that about 26 inches are lost to evapotranspiration (Clark, 1980). The remaining 12 inches are considered the total-average annual runoff for Indiana. Of the 12-inch total-average annual runoff, about 9 inches are direct-surface runoff to streams and lakes, while the remaining 3 inches recharge ground water (Clark, 1980).

A predominant characteristic of streamflow across Indiana is variability. Streamflow is ultimately reflective of the runoff resulting from precipitation, which is highly variable depending on geography and time (Clark, 1980). Thus low-flow periods resulting from droughts or floods resulting from storms have occurred historically in every month. The variability of flows in Indiana streams and rivers was evident during the 2003 water year.

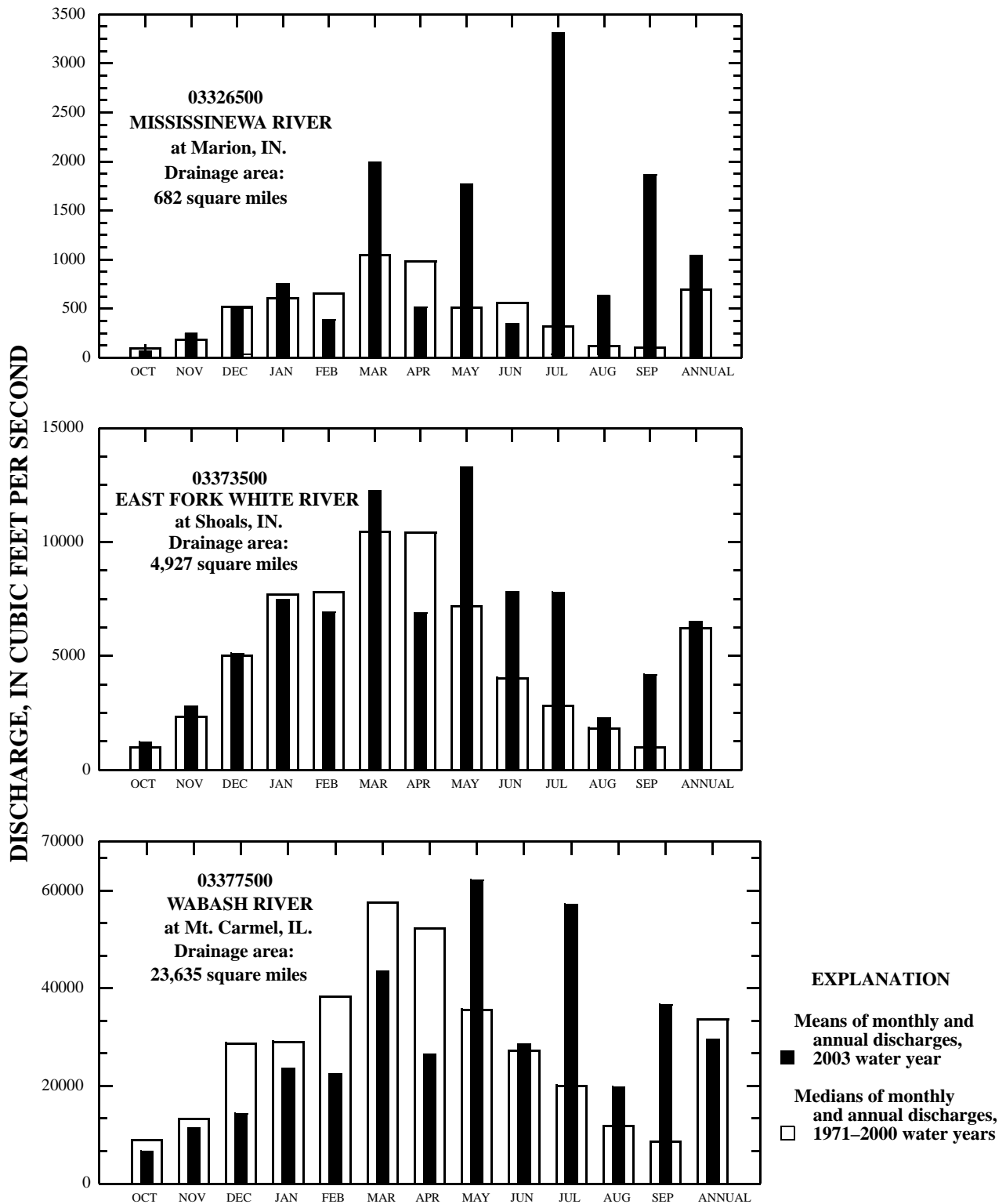


Figure 3.--Mean discharges at three Indiana streamflow-gaging stations during water-year 2003 and median discharges for period of 1971–2000.

Figure 3 illustrates discharge during the 2003 water year, as compared to medians of monthly and yearly discharges during 1971–2000 for three USGS Indiana discharge-gaging stations: Mississinewa River at Marion (03326500); East Fork White River at Shoals (03373500); and Wabash River at Mount Carmel, Illinois (03377500). Median monthly and yearly discharges for 1971–2000 are considered to be normal streamflows in this discussion because the period includes 30 years of record (this allows the 2003 water year streamflows to be quantified relative to normal streamflows).

The Wabash River at Mount Carmel station drains more than 95 percent of Indiana and is influenced by climate factors across the entire State. Mean streamflows for the 2003 water year at this station were below normal October through April, reflecting the below-normal to near-normal precipitation amounts across much of the State (fig. 3). In June and August mean streamflows were slightly above normal, as streamflow declined after the rainfall of the preceding months. Mean streamflows were much greater than normal in May, August, and September because of widespread heavy rainfall in those months.

While precipitation and streamflows were near or below normal for much of the 2003 water year, Indiana did not experience drought conditions. Flooding occurred in the State during the year; in some cases it was severe. Flooding during the period October through April and during June and August was mainly confined to small geographic areas and limited to lowland flooding, with little damage to property.

In May, there was widespread flooding across Indiana from rainfall May 4–19. Rivers affected by the flooding included the Wabash, White, East Fork White, and Muscatatuck. While May flooding was widespread, it was mostly confined to lowlands, with little damage to property.

Severe flooding resulted from the torrential rains of early July. During this flooding, new record gage heights or streamflows were set at 12 USGS streamflow-gaging stations (Arvin, 2003). Affected rivers and streams included the Wabash, Tippecanoe, White, St. Marys, Maumee, and Iroquois Rivers and Deer, Wildcat, and Kokomo Creeks. The July flooding resulted in loss of life and extensive damage to public and private property. Significant flooding occurred in Huntington and Decatur in northeastern Indiana and Kokomo and Delphi in north-central Indiana. By the end of July, 40 Indiana counties were listed by the Federal Emergency Management Agency as declared disaster areas (Arvin, 2003).

Extensive flooding affected much of central Indiana because of record rainfalls on September 1. The flooding resulted in loss of life and affected hundreds of homes and numerous roads. Parts of Indianapolis and surrounding communities were affected by the flooding. Flooded rivers and streams included White and Big Blue Rivers and Sugar, Pipe, Youngs, Pipe, Fall, and White Lick Creeks. A record gage height and streamflow was set at the USGS streamflow-gaging stations White River near Centerton and White Lick Creek at Mooresville, both in central Indiana. Normally Indiana streamflows in September are relatively low because of dry conditions, but September of the 2003 water year ended with lowland flooding in parts of Indiana, mainly along the lower reaches of the Wabash River.

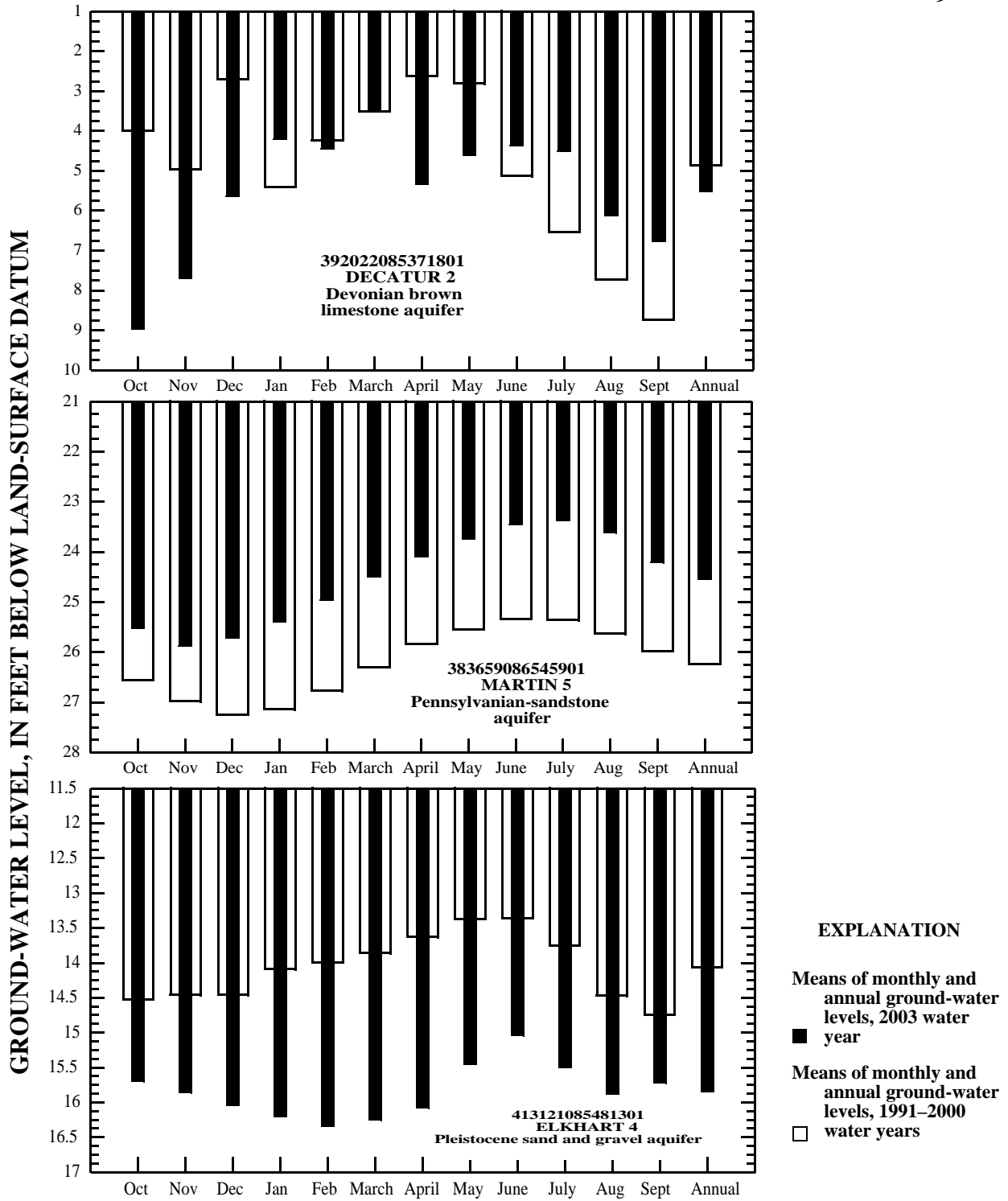


Figure 4.--Monthly and annual mean of daily minimum ground-water levels at three Indiana ground-water-observation wells during water-year 2003 and mean of monthly and annual minimum ground-water levels for period of 1991–2000.

Ground Water

Ground water in Indiana occurs in a variety of unconsolidated- and bedrock-aquifer systems. Changes in ground-water levels are produced by natural influences such as precipitation and by man-made causes such as ground-water withdrawals. Normal annual ground-water-level changes are typically in the range of 3 to 7 feet in most aquifers. Statewide, ground-water levels have shown no long-term rising or declining trends (Clark, 1980).

Generally in Indiana, ground-water levels follow a consistent seasonal pattern, reaching annual high levels in late April or early May and then beginning a slow but continuous decline throughout the summer. In the fall, ground-water levels begin to rise with increasing precipitation and reduction in evapotranspiration (Clark, 1980).

This seasonal pattern is seen in plots of mean ground-water levels for 1991 to 2000 for three USGS index ground-water-observation wells in Indiana: Decatur 2, Martin 5, and Elkhart 4 (fig. 4). Mean ground-water levels for this period are considered to be normal for purposes of this discussion. Figure 4 compares the 2003 water year with normal ground-water levels for the three wells. In this discussion, the term “ground-water level(s)” refers to a height above an arbitrary datum; however, ground-water-level data normally are quantified in terms of distance lower than a land-surface datum.

The observation well Decatur 2 is in a Devonian brown limestone aquifer in central Indiana. For Decatur 2, ground-water levels were lower than normal for October, November, December, February, April, and May; they were normal for March and above normal for January, June, July, August, and September (fig. 4).

Martin 5 is in a Pennsylvanian-sandstone aquifer in southwestern Indiana. Ground-water levels for Martin 5 were higher than normal for the 2003 water year (fig. 4).

The index observation well Elkhart 4 is in north-central Indiana in a Pleistocene sand and gravel aquifer. Ground-water levels were lower than normal for the entire 2003 water year (fig. 4).

Of 88 USGS ground-water-observation wells in Indiana, 5 wells had record-high water levels and 16 wells had record-low water levels at some time during the 2003 water year.

DOWNSTREAM ORDER AND STATION NUMBER

Since October 1, 1950, hydrologic-station records in USGS reports have been listed in order of downstream direction along the main stream. All stations on a tributary entering upstream from a main-stream station are listed before that station. A station on a tributary entering between two main-stream stations is listed between those stations. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary on which a station is located with respect to the stream to which it is immediately tributary is indicated by an indentation in that list of stations in the front of this report. Each indentation represents one rank. This downstream order and system of indentation indicates which stations are on tributaries between any two stations and the rank of the tributary on which each station is located.

As an added means of identification, each hydrologic station and partial-record station has been assigned a station number. These station numbers are in the same downstream order used in this report. In assigning a station number, 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 composed of both types of stations. Gaps are consecutive. The complete 8-digit (or 10-digit) number for each station such as 03335500, which appears just to the left of the station name, includes a 2-digit part number "03" plus the 6-digit (or 8-digit) downstream order number "335500." In areas of high station density, an additional two digits may be added to the station identification number to yield a 10-digit number. The stations are numbered in downstream order as described above between stations of consecutive 8-digit numbers.

NUMBERING SYSTEM FOR WELLS AND MISCELLANEOUS SITES

The USGS well and miscellaneous site-numbering system is based on the grid system of latitude and longitude. The system provides the geographic location of the well or miscellaneous site and a unique number for each site. The number consists of 15 digits. The first 6 digits denote the degrees, minutes, and seconds of latitude, and the next 7 digits denote degrees, minutes, and seconds of longitude; the last 2 digits are a sequential number for wells within a 1-second grid. In the event that the latitude-longitude coordinates for a well and miscellaneous site are the same, a sequential number such as "01," "02," and so forth, would be assigned as one would for wells (see fig. 5). The 8-digit, downstream order station numbers are not assigned to wells and miscellaneous sites where only random water-quality samples or discharge measurements are taken.

WATER RESOURCES DATA—INDIANA, 2003

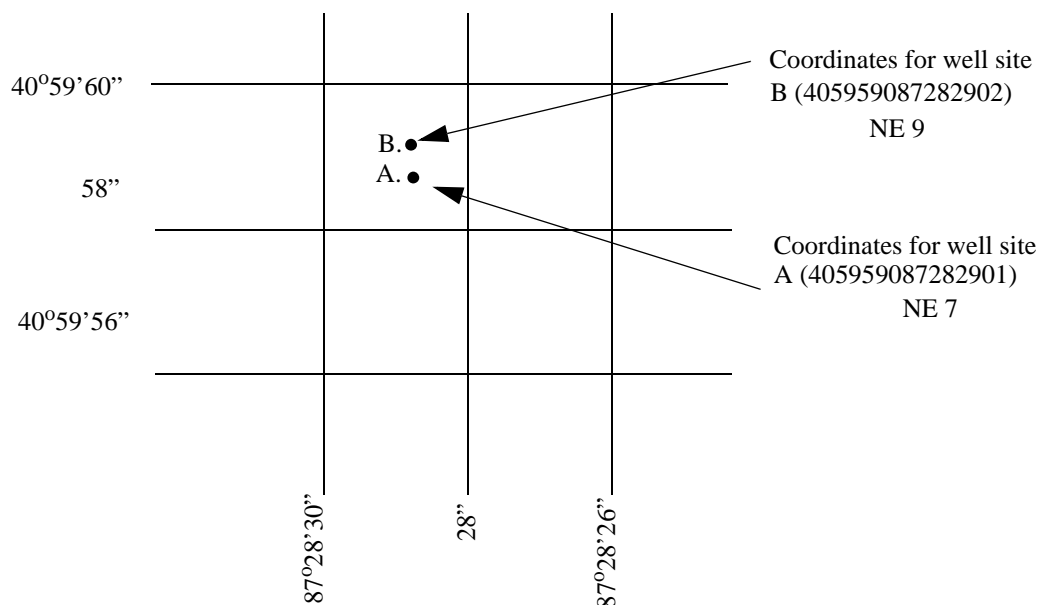


Figure 5.--System for numbering wells and miscellaneous sites (latitude and longitude).

In addition, each well in Indiana carries dual-identification numbers for example, NE 7. 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.

SPECIAL NETWORKS AND PROGRAMS

Hydrologic Benchmark Network is a network of 61 sites in small drainage basins in 39 States that was established in 1963 to provide consistent streamflow data representative of undeveloped watersheds nationwide, and from which data could be analyzed on a continuing basis for use in comparison and contrast with conditions observed in basins more obviously affected by human activities. At selected sites, water-quality information is being gathered on major ions and nutrients, primarily to assess the effects of acid deposition on stream chemistry. Additional information on the Hydrologic Benchmark Program may be accessed from <http://water.usgs.gov/hbn/>.

National Stream-Quality Accounting Network (NASQAN) is a network of sites used to monitor the water quality of large rivers within the Nation's largest river basins. From 1995 through 1999, a network of approximately 40 stations was operated in the Mississippi, Columbia, Colorado, and Rio Grande River basins. For the period 2000 through 2004, sampling was reduced to a few index stations on the Colorado and Columbia Rivers so that a network of 5 stations could be implemented on the Yukon River. Samples are collected with sufficient frequency that the flux of a wide range of constituents can be estimated. The objective of NASQAN is to characterize the water quality of these large rivers by measuring concentration and mass transport of a wide range of dissolved and suspended constituents, including nutrients, major ions,

dissolved and sediment-bound heavy metals, common pesticides, and inorganic and organic forms of carbon. This information will be used (1) to describe the long-term trends and changes in concentration and transport of these constituents; (2) to test findings of the National Water-Quality Assessment (NAWQA) Program; (3) to characterize processes unique to large-river systems such as storage and remobilization of sediments and associated contaminants; and (4) to refine existing estimates of off-continent transport of water, sediment, and chemicals for assessing human effects on the world's oceans and for determining global cycles of carbon, nutrients, and other chemicals. Additional information about the NASQAN Program may be accessed from <http://water.usgs.gov/nasqan/>.

The National Atmospheric Deposition Program/National Trends Network (NADP/NTN) is a network of monitoring sites that provide continuous measurement and assessment of the chemical constituents in precipitation throughout the United States. As the lead Federal agency, the USGS works together with over 100 organizations to provide a long-term, spatial and temporal record of atmospheric deposition generated from this network of 250 precipitation-chemistry monitoring sites. The USGS supports 74 of these 250 sites. This long-term, nationally consistent monitoring program, coupled with ecosystem research, provides critical information toward a national scorecard to evaluate the effectiveness of ongoing and future regulations intended to reduce atmospheric emissions and subsequent impacts to the Nation's land and water resources. Reports and other information on the NADP/NTN Program, as well as data from the individual sites, may be accessed from <http://bqs.usgs.gov/acidrain/>.

The USGS National Water-Quality Assessment (NAWQA) Program is a long-term program with goals to describe the status and trends of water-quality conditions for a large, representative part of the Nation's ground- and surface-water resources; to provide an improved understanding of the primary natural and human factors affecting these observed conditions and trends; and to provide information that supports development and evaluation of management, regulatory, and monitoring decisions by other agencies.

Assessment activities are being conducted in 42 study units (major watersheds and aquifer systems) that represent a wide range of environmental settings nationwide and that account for a large percentage of the Nation's water use. A wide array of chemical constituents is measured in ground water, surface water, streambed sediments, and fish tissues. The coordinated application of comparative hydrologic studies at a wide range of spatial and temporal scales will provide information for water-resources managers to use in making decisions and a foundation for aggregation and comparison of findings to address water-quality issues of regional and national interest.

Communication and coordination between USGS personnel and other local, State, and Federal interests are critical components of the NAWQA Program. Each study unit has a local liaison committee consisting of representatives from key Federal, State, and local water-resources agencies, Indian nations, and universities in the study unit. Liaison committees typically meet semi-annually to discuss their information needs, monitoring plans and progress, desired information products, and opportunities to collaborate efforts among the agencies. Additional information about the NAWQA Program may be accessed from <http://water.usgs.gov/nawqa/>.

The USGS National Streamflow Information Program (NSIP) is a long-term program with goals to provide framework streamflow data across the Nation. Included in the program are creation of a permanent Federally funded streamflow network, research on the nature of streamflow, regional assessments of streamflow data and databases, and upgrades in the streamflow information delivery systems. Additional information about NSIP may be accessed from <http://water.usgs.gov/nsip/>.

EXPLANATION OF STAGE- AND WATER-DISCHARGE RECORDS

Data Collection and Computation

The base data collected at gaging stations (figs. 6 and 7) consist of records of stage and measurements of discharge of streams or canals, and stage, surface area, and volume of lakes or reservoirs. In addition, observations of factors affecting the stage-discharge relation or the stage-capacity relation, weather records, and other information are used to supplement base data in determining the daily flow or volume of water in storage. Records of stage are obtained from a water-stage recorder that is either downloaded electronically in the field to a laptop computer or similar device or is transmitted using telemetry such as GOES satellite, land-line or cellular-phone modems, or by radio transmission. Measurements of discharge are made with mechanical or hydroacoustic current meters, using the general methods adopted by the USGS. These methods are described in standard textbooks, USGS Water-Supply Paper 2175, and the Techniques of Water-Resources Investigations of the United States Geological Survey (TWRI's), Book 3, Chapters A1 through A19 and Book 8, Chapters A2 and B2. The methods are consistent with the American Society for Testing and Materials (ASTM) standards and generally follow the standards of the International Organization for Standards (ISO). USGS guidelines, policies, and reports regarding hydroacoustic current meters may be accessed from <http://hydroacoustics.usgs.gov>.

For stream-gaging stations, discharge-rating tables for any stage are prepared from stage-discharge curves. If extensions to the rating curves are necessary to express discharge greater than measured, the extensions are made on the basis of indirect measurements of peak discharge (such as slope-area or contracted-opening measurements, or computation of flow over dams and weirs), step-backwater techniques, velocity-area studies, and logarithmic plotting. The daily mean discharge is computed from gage heights and rating tables, then the monthly and yearly mean discharges are computed from the daily values. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features of the stream channel, the daily mean discharge is computed by the shifting-control method in which correction factors based on individual discharge measurements and notes by engineers and observers are used when applying the gage heights to the rating tables. If the stage-discharge relation for a station is temporarily changed by the presence of aquatic growth or debris on the controlling section, the daily mean discharge is computed by the shifting-control method.

The stage-discharge relation at some stream-gaging stations is affected by backwater from reservoirs, tributary streams, or other sources. Such an occurrence 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 at some distance from the base gage.

An index velocity is measured using fixed hydroacoustic current meters at some stream-gaging stations and this index velocity is used to calculate an average velocity for the flow in the stream. This average velocity along with a stage-area relation is then used to calculate average discharge.

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.

At some stream-gaging stations in the northern United States, the stage-discharge relation is affected by ice in the winter; therefore, computation of the discharge in the usual manner is impossible. Discharge for periods of ice effect is computed on the basis of gage-height record and occasional winter-discharge measurements. Consideration is given to the available information on temperature and precipitation, notes by gage observers and hydrologists, and comparable records of discharge from other stations in the same or nearby basins.

For a lake or reservoir station, capacity tables giving the volume or contents for any stage are prepared from stage-area relation curves defined by surveys. The application of the stage to the capacity table gives the contents, from which the daily, monthly, or yearly changes are computed.

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

For some stream-gaging stations, periods of time occur when no gage-height record is obtained or the recorded gage height is faulty and cannot be used to compute daily discharge or contents. Such a situation can happen when the recorder stops or otherwise fails to operate properly, the intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods, the daily discharges are estimated on the basis of recorded range in stage, prior and subsequent records, discharge measurements, weather records, and comparison with records from other stations in the same or nearby basins. Likewise, lake or reservoir volumes may be estimated on the basis of operator's log, prior and subsequent records, inflow-outflow studies, and other information.

Data Presentation

The records published for each continuous-record surface-water discharge station (stream-gaging station) consist of five parts: (1) the station manuscript or description; (2) the data table of daily mean values of discharge for the current water year with summary data; (3) a tabular statistical summary of monthly mean flow data for a designated period, by water year; (4) 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; and (5) a hydrograph of discharge.

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 follow that clarify information presented under the various headings of the station description.

LOCATION.—Location information is obtained from the most accurate maps available. The location of the gaging station 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, given for only a few stations, 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. Because the type of maps available varies from one drainage basin to another, the accuracy of drainage areas likewise varies. Drainage areas are updated as better maps become available.

PERIOD OF RECORD.—This term indicates the time period for which records have been published 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 its flow reasonably can be considered equivalent to flow at the present station.

REVISED RECORDS.—If a critical error in published records is discovered, a revision is included in the first report published following discovery of the error.

GAGE.—The type of gage in current use, the datum of the current gage referred to a standard datum, 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 either will be identified by date in this paragraph of the station description for water-discharge stations or flagged in the daily discharge table. (See section titled Identifying Estimated Daily Discharge.) Information is presented relative to the accuracy of the records, to special methods of computation, and to conditions that affect natural flow at the station. In addition, information may be presented pertaining to average discharge data for the period of record; to extremes data for the period of record and the current year; and, possibly, to other pertinent items. For reservoir stations, information is given on the dam forming the reservoir, the capacity, the outlet works and spillway, and the purpose and use of the reservoir.

COOPERATION.—Records provided by a cooperating organization or obtained for the USGS by a cooperating organization are identified here.

EXTREMES OUTSIDE PERIOD OF RECORD.—Information here documents 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 USGS.

REVISIONS.—Records are revised if errors in published records are discovered. Appropriate updates are made in the USGS distributed data system, NWIS, and subsequently to its Web-based National data system, NWISWeb (<http://water.usgs.gov/nwis>). Users are encouraged to obtain all required data from NWIS or NWISWeb to ensure that they have the most recent data updates. Updates to NWISWeb are made on an annual basis.

Although rare, occasionally the records of a discontinued gaging station may need revision. Because no current or, possibly, future station manuscript would be published for these stations 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 District Office (address given on the back of the title page of this report) to determine if the published records were revised after the station was discontinued. If, however, the data for a discontinued station were obtained by computer retrieval, the data would be current. 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 stage-capacity table when daily volumes are given.

Peak Discharge Greater than Base Discharge

Tables of peak discharge above base discharge are included for some stations where secondary instantaneous peak discharge data are used in flood-frequency studies of highway and bridge design, flood-control structures, and other flood-related projects. The base discharge value is selected so an average of three peaks a year will be reported. This base discharge value has a recurrence interval of approximately 1.1 years or a 91-percent chance of exceedence in any 1 year.

Data Table of Daily Mean Values

The daily table of discharge records 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 arithmetic average flow in cubic feet per second for the month; and the lines headed MAX and MIN give the maximum and minimum daily mean discharges, respectively, for each month. Discharge for the month is 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). Values for cubic feet per second per square mile and runoff in inches or in acre-feet may be omitted if extensive regulation or diversion is in effect 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 volumes are given. These values are identified by a symbol and a corresponding footnote.

Statistics of Monthly Mean Data

A tabular summary of the mean (line headed MEAN), maximum (MAX), and minimum (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 minimum monthly flows are provided immediately below those values. The designated period 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. The designated period will consist of all of the station record within the specified water years, including complete months of record for partial water years, and may coincide with the period of record for the station. The water years for which the statistics are computed are 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 records within the specified water years, including complete months of record for partial water years, and may coincide with the period of record for the station. The water years for which the statistics are computed are 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 heading. When the dates of occurrence do not fall within the selected water years listed in the heading, it will be noted in the REMARKS paragraph or in footnotes. Selected streamflow duration-curve statistics and runoff data also are given. Runoff data may be omitted if extensive regulation or diversion of flow is in effect in the drainage basin.

The following summary statistics data are provided with each continuous record of discharge. Comments that 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.

ANNUAL MEAN.—The arithmetic mean for the individual daily mean discharges for the year noted or 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 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.

MAXIMUM PEAK FLOW.—The maximum instantaneous peak discharge occurring for the water year or designated period. Occasionally the maximum flow for a year may occur at midnight at the beginning or end of the year, on a recession from or rise toward a higher peak in the adjoining year. In this case, the maximum peak flow is given in the table and the maximum flow may be reported in a footnote or in the REMARKS paragraph in the manuscript.

MAXIMUM PEAK STAGE.—The maximum instantaneous peak stage occurring for the water year or designated period. Occasionally the maximum stage for a year may occur at midnight at the beginning or end of the year, on a recession from or rise toward a higher peak in the adjoining year. In this case, the maximum peak stage is given in the table and the maximum stage may be reported in the REMARKS paragraph in the manuscript or in a footnote. If the dates of occurrence of the maximum peak stage and maximum peak flow are different, 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.—Indicates the total quantity of water in runoff for a drainage area for the year. Data reports may use any of the following units of measurement in presenting annual runoff data:

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

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

Inches (INCHES) indicate the depth to which the drainage area would be covered if all of the runoff for a given time period were uniformly distributed on it.

10 PERCENT EXCEEDS.—The discharge that has been exceeded 10 percent of the time for the designated period.

50 PERCENT EXCEEDS.—The discharge that has been exceeded 50 percent of the time for the designated period.

90 PERCENT EXCEEDS.—The discharge that has been exceeded 90 percent of the time for the designated period.

Data collected at partial-record stations follow the information for continuous-record sites. Data for partial-record discharge stations are presented in two tables. The first table lists annual maximum stage and discharge at crest-stage stations, and the second table lists discharge measurements at low-flow partial-record stations. The tables of partial-record stations are followed by a listing of discharge measurements made at sites other than continuous-record or partial-record stations. These measurements are often made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for a special reason are called measurements at miscellaneous sites.

Hydrographs

Hydrographs are a graphic display of streamflow fluctuations over a period of time. In this report, current water year and, when appropriate, period-of-record hydrographs are shown. Hydrographs that display recorder data show a solid line representing the mean water level recorded for each day.

Identifying Estimated Daily Discharge

Estimated daily-discharge values published in the water-discharge tables of annual State data reports are identified. This identification is shown either by flagging individual daily values with the letter “e” and noting in a table footnote, “e—Estimated,” or by listing the dates of the estimated record in the REMARKS paragraph of the station description.

Accuracy of Field Data and Computed Results

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

The degree of accuracy of the records is stated in the REMARKS in the station description. “Excellent” indicates that about 95 percent of the daily discharges are within 5 percent of the true value; “good” within 10 percent; and “fair,” within 15 percent. “Poor” indicates that daily discharges have less than “fair” accuracy. Different accuracies may be attributed to different parts of a given record.

Values of daily mean discharge in this report are shown to the nearest hundredth of a cubic foot per second for discharges of less than 1 ft³/s; to the nearest tenths between 1.0 and 10 ft³/s; to whole numbers between 10 and 1,000 ft³/s; and to 3 significant figures above 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 discharge values listed for partial-record stations.

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, values 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 Data Records Available

Information of a more detailed nature than that published for most of the stream-gaging stations such as discharge measurements, gage-height records, and rating tables is available from the District office. Also, most stream-gaging station records are available in computer-usable form and many statistical analyses have been made.

Information on the availability of unpublished data or statistical analyses may be obtained from the District office (see address that is shown on the back of the title page of this report).

EXPLANATION OF PRECIPITATION RECORDS

Data Collection and Computation

Rainfall data generally are collected using electronic data loggers that measure the rainfall in 0.01-inch increments every 15 minutes using either a tipping-bucket rain gage or a collection well gage. Twenty-four hour rainfall totals are tabulated and presented. A 24-hour period extends from just past midnight of the previous day to midnight of the current day. Snowfall-affected data can result during cold weather when snow fills the rain-gage funnel and then melts as temperatures rise. Snowfall-affected data are subject to errors. Missing values are indicated by this symbol “---” in the table.

Data Presentation

Precipitation records collected at surface-water gaging stations are identified with the same station number and name as the stream-gaging station. Where a surface-water daily-record station is not available, the precipitation record is published with its own name and latitude-longitude identification number.

Information pertinent to the history of a precipitation station is provided in descriptive headings preceding the tabular data. These descriptive headings give details regarding location, period of record, and general remarks.

The following information is provided with each precipitation station. Comments that follow clarify information presented under the various headings of the station description.

LOCATION.—See Data Presentation in the EXPLANATION OF STAGE- AND WATER-DISCHARGE RECORDS section of this report (same comments apply).

PERIOD OF RECORD.—See Data Presentation in the EXPLANATION OF STAGE- AND WATER-DISCHARGE RECORDS section of this report (same comments apply).

INSTRUMENTATION.—Information on the type of rainfall collection system is given.

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

EXPLANATION OF WATER-QUALITY RECORDS

Collection and Examination of Data

Surface-water samples for analysis usually are collected at or near stream-gaging stations. The quality-of-water records are given immediately following the discharge records at these stations.

The descriptive heading for water-quality records gives the period of record for all water-quality data; the period of daily record for parameters that are measured on a daily basis (specific conductance, water temperature, sediment discharge, and so forth); extremes for the current year; and general remarks.

For ground-water records, no descriptive statements are given; however, the well number, depth of well, sampling date, or other pertinent data are given in the table containing the chemical analyses of the ground water.

Water Analysis

Most of the methods used for collecting and analyzing water samples are described in the TWRIs. A list of TWRIs is provided in this report.

One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross-section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled at several verticals to obtain a representative sample needed for an accurate mean concentration and for use in calculating load.

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

For chemical-quality stations equipped with digital monitors, the records consist of daily maximum and minimum values (and sometimes mean or median values) for each constituent measured, and are based on 15-minute or 1-hour intervals of recorded data beginning at 0000 hours and ending at 2400 hours for the day of record.

SURFACE-WATER-QUALITY RECORDS

Records of surface-water quality ordinarily are obtained at or near stream-gaging stations because discharge data is useful in the interpretation of surface-water quality. Records of surface-water quality in this report involve a variety of types of data and measurement frequencies.

Classification of Records

Water-quality data for surface-water sites are grouped into one of three classifications. A *continuous-record station* is a site where data are collected on a regularly scheduled basis. Frequency may be one or more times daily, weekly, monthly, or quarterly. A *partial-record station* is a site where limited water-quality data are collected systematically over a period of years. Frequency of sampling is usually less than quarterly. A *miscellaneous sampling site* is a location other than a continuous- or partial-record station, where 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 *continuous records* as used in this report and *continuous recordings* that refer to a continuous graph or a series of discrete values recorded at short intervals. Some records of water quality, such as temperature and specific conductance, may be obtained through continuous recordings; however, because of costs, most data are obtained only monthly or less frequently. Locations of stations for which records on the quality of surface water appear in this report are shown in figures 6 and 7.

Accuracy of the Records

One of four accuracy classifications is applied for measured physical properties at continuous-record stations on a scale ranging from poor to excellent. The accuracy rating is based on data values recorded before any shifts or corrections are made. Additional consideration also is given to the amount of publishable record and to the amount of data that have been corrected or shifted.

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Rating classifications for continuous water-quality records

[≤, less than or equal to; ±, plus or minus value shown; °C, degree Celsius; >, greater than; %, percent; mg/L, milligram per liter; pH unit, standard pH unit]

Measured physical property	Rating			
	Excellent	Good	Fair	Poor
Water temperature	≤ ±0.2 °C	> ±0.2 to 0.5 °C	> ±0.5 to 0.8 °C	> ±0.8 °C
Specific conductance	≤ ±3%	> ±3 to 10%	> ±10 to 15%	> ±15%
Dissolved oxygen	≤ ±0.3 mg/L	> ±0.3 to 0.5 mg/L	> ±0.5 to 0.8 mg/L	> ±0.8 mg/L
pH	≤ ±0.2 unit	> ±0.2 to 0.5 unit	> ±0.5 to 0.8 unit	> ±0.8 unit
Turbidity	≤ ±5%	> ±5 to 10%	> ±10 to 15%	> ±15%

Arrangement of Records

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

On-Site Measurements and Sample Collection

In obtaining water-quality data, a major concern is assuring that the data obtained represent the naturally occurring quality of the water. To ensure this, certain measurements, such as water temperature, pH, and dissolved oxygen, must be made on site when the samples are taken. To assure that measurements made in the laboratory also represent the naturally occurring water, carefully prescribed procedures must 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 TWRI's Book 1, Chapter D2; Book 3, Chapters A1, A3, and A4; and Book 9, Chapters A1-A9. These TWRI's are listed in this report. Also, detailed information on collecting, treating, and shipping samples can be obtained from the USGS District office (see address that is shown on the back of title page in this report).

Water Temperature

Water temperatures are measured at most of the water-quality stations. In addition, water temperatures are taken at the time of discharge measurements for water-discharge stations. For stations where water temperatures are taken manually once or twice daily, the water temperatures are taken at about the same time each day. Large streams have a small diurnal temperature change; shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

At stations where recording instruments are used, either mean temperatures or maximum and minimum temperatures for each day are published. Water temperatures measured at the time of water-discharge measurements are on file in the District office.

Sediment

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

During periods of rapidly changing flow or rapidly changing concentration, samples may be collected more frequently (twice daily or, in some instances, hourly). The published sediment discharges for days of rapidly changing flow or concentration were computed by the subdivided-day method (time-discharge weighted average). Therefore, for those days when the published sediment discharge value differs from the value computed as the product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided-day method. For periods when no samples were collected, daily discharges of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge.

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

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

Laboratory Measurements

Samples for biochemical oxygen demand (BOD) and indicator bacteria are analyzed locally. All other samples are analyzed in the USGS laboratory in Lakewood, Colorado, unless otherwise noted. Methods used in analyzing sediment samples and computing sediment records are given in TWRI, Book 5, Chapter

C1. Methods used by the USGS laboratories are given in the TWRI, Book 1, Chapter D2; Book 3, Chapter C2; and Book 5, Chapters A1, A3, and A4. These methods are consistent with ASTM standards and generally follow ISO standards.

Data Presentation

For continuing-record stations, information pertinent to the history of station operation is provided in descriptive headings preceding the tabular data. These descriptive headings give details regarding location, drainage area, period of record, type of data available, instrumentation, general remarks, cooperation, and extremes for parameters currently measured daily. Tables of chemical, physical, biological, radiochemical data, and so forth, obtained at a frequency less than daily are presented first. Tables of “daily values” of specific conductance, pH, water temperature, dissolved oxygen, and suspended sediment then follow in sequence.

In the descriptive headings, if the location is identical to that of the discharge gaging station, neither the LOCATION nor the DRAINAGE AREA statements are repeated. The following information 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 information in the EXPLANATION OF STAGE- AND WATER-DISCHARGE RECORDS section of this report (same comments apply).

DRAINAGE AREA.—See Data Presentation information in the EXPLANATION OF STAGE- AND WATER-DISCHARGE RECORDS section of this report (same comments apply).

PERIOD OF RECORD.—This indicates the time periods for which published water-quality records for the station are available. The periods are shown separately for records of parameters measured daily or continuously and those measured less than daily. For those measured daily or continuously, periods of record are given for the parameters individually.

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

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

COOPERATION.—Records provided by a cooperating organization or obtained for the USGS by a cooperating organization are identified here.

EXTREMES.—Maximums and minimums are given only for parameters measured daily or more frequently. For parameters measured weekly or less frequently, true maximums or minimums may not have been obtained. Extremes, when given, are provided for both the period of record and for the current water year.

REVISIONS.—Records are revised if errors in published water-quality records are discovered. Appropriate updates are made in the USGS distributed data system, NWIS, and subsequently to its Web-based National data system, NWISWeb (<http://waterdata.usgs.gov/nwis>). Users of USGS water-quality data are encouraged to obtain all required data from NWIS or NWISWeb to ensure that they have the most recent updates. Updates to the NWISWeb are made on an annual basis.

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

Remark Codes

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

Printed Output	Remark
E or 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 (non-ideal 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).
V	Analyte was detected in both the environmental sample and the associated blanks.
&	Biological organism estimated as dominant.

Water-Quality Control Data

The USGS National Water Quality Laboratory collects quality-control data on a continuing basis to evaluate selected analytical methods to determine long-term method detection levels (LT-MDLs) and laboratory reporting levels (LRLs). These values are re-evaluated each year on the basis of the most recent quality-control data and, consequently, may change from year to year.

This reporting procedure limits the occurrence of false positive error. Falsely reporting a concentration greater than the LT-MDL for a sample in which the analyte is not present is 1 percent or less. Application of the LRL limits the occurrence of false negative error. The chance of falsely reporting a non-detection for a sample in which the analyte is present at a concentration equal to or greater than the LRL is 1 percent or less.

Accordingly, concentrations are reported as less than LRL for samples in which the analyte was either not detected or did not pass identification. Analytes detected at concentrations between the LT-MDL and the LRL and that pass identification criteria are estimated. Estimated concentrations will be noted with a remark code of "E." These data should be used with the understanding that their uncertainty is greater than that of data reported without the E remark code.

Data generated from quality-control (QC) samples are a requisite for evaluating the quality of the sampling and processing techniques as well as data from the actual samples themselves. Without QC data, environmental sample data cannot be adequately interpreted because the errors associated with the sample data are unknown. The various types of QC samples collected by this District office are described in the following section. Procedures have been established for the storage of water-quality-control data within the USGS. These procedures allow for storage of all derived QC data and are identified so that they can be related to corresponding environmental samples. These data are not presented in this report but are available from the District office.

Blank Samples

Blank samples are collected and analyzed to ensure that environmental samples have not been contaminated in the overall data-collection process. The blank solution used to develop specific types of blank samples is a solution that is free of the analytes of interest. Any measured value signal in a blank sample for an analyte (a specific component measured in a chemical analysis) that was absent in the blank solution is believed to be due to contamination. Many types of blank samples are possible; each is designed to segregate a different part of the overall data-collection process. The types of blank samples collected in this district are:

Field blank—A blank solution that is subjected to all aspects of sample collection, field processing preservation, transportation, and laboratory handling as an environmental sample.

Trip blank—A blank solution that is put in the same type of bottle used for an environmental sample and kept with the set of sample bottles before and after sample collection.

Equipment blank—A blank solution that is processed through all equipment used for collecting and processing an environmental sample (similar to a field blank but normally done in the more controlled conditions of the office).

Sampler blank—A blank solution that is poured or pumped through the same field sampler used for collecting an environmental sample.

Filter blank—A blank solution that is filtered in the same manner and through the same filter apparatus used for an environmental sample.

Splitter blank—A blank solution that is mixed and separated using a field splitter in the same manner and through the same apparatus used for an environmental sample.

Preservation blank—A blank solution that is treated with the sampler preservatives used for an environmental sample.

Reference Samples

Reference material is a solution or material prepared by a laboratory. The reference material composition is certified for one or more properties so that it can be used to assess a measurement method. Samples of reference material are submitted for analysis to ensure that an analytical method is accurate for the known properties of the reference material. Generally, the selected reference material properties are similar to the environmental sample properties.

Replicate Samples

Replicate samples are a set of environmental samples collected in a manner such that the samples are thought to be essentially identical in composition. Replicate is the general case for which a duplicate is the special case consisting of two samples. Replicate samples are collected and analyzed to establish the amount of variability in the data contributed by some part of the collection and analytical process. Many types of replicate samples are possible, each of which may yield slightly different results in a dynamic hydrologic setting, such as a flowing stream. The types of replicate samples collected in this district are:

Concurrent samples—A type of replicate sample in which the samples are collected simultaneously with two or more samplers or by using one sampler and alternating the collection of samples into two or more compositing containers.

Sequential samples—A type of replicate sample in which the samples are collected one after the other, typically over a short time.

Split sample—A type of replicate sample in which a sample is split into subsamples, each subsample contemporaneous in time and space.

Spike Samples

Spike samples are samples to which known quantities of a solution with one or more well-established analyte concentrations have been added. These samples are analyzed to determine the extent of matrix interference or degradation on the analyte concentration during sample processing and analysis.

EXPLANATION OF LAKE-LEVEL RECORDS

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. Locations of lakes having current water-level records are shown on figure 8.

Data Collection and Computation

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

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

Lake-level records are obtained from direct measurement with a steel tape, from observation of steel staff gages, or from an electronic 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 sea level (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 sea level at which the lake is to be maintained, the date 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.

EXPLANATION OF GROUND-WATER-LEVEL RECORDS

Generally, only ground-water-level data from selected wells with continuous recorders from a basic network of observation wells are published in this report. This basic network contains observation wells located so that the most significant data are obtained from the fewest wells in the most important aquifers.

Site Identification Numbers

Each well is identified by means of (1) a 15-digit number that is based on latitude and longitude and (2) a local number that is produced for local needs. See NUMBERING SYSTEM FOR WELLS AND MISCELLANEOUS SITES in this report for a detailed explanation.

Data Collection and Computation

Measurements are made in many types of wells, under varying conditions of access and at different temperatures; hence, neither the method of measurement nor the equipment can be standardized. At each observation well, however, the equipment and techniques used are those that will ensure that measurements at each well are consistent.

Most methods for collecting and analyzing water samples are described in the TWRI's referred to in the On-site Measurements and Sample Collection and the Laboratory Measurements sections in this report. In addition, TWRI Book 1, Chapter D2, describes guidelines for the collection and field analysis of ground-water samples for selected unstable constituents. Procedures for on-site measurements and for collecting, treating, and shipping samples are given in TWRI's Book 1, Chapter D2; Book 3, Chapters A1, A3, and A4; and Book 9, Chapters A1 through A9. The values in this report represent water-quality conditions at the time of sampling, as much as possible, and that are consistent with available sampling techniques and methods of analysis. These methods are consistent with ASTM standards and generally follow ISO standards. Trained personnel collected all samples. The wells sampled were pumped long enough to ensure that the water collected came directly from the aquifer and had not stood for a long time in the well casing where it would have been exposed to the atmosphere and to the material, possibly metal, comprising the casings.

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 above sea level 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 in wells equipped with recording gages are reported for every fifth day and the end of each month (EOM).

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 of water of several hundred feet, the error in determining the absolute value of the total depth to water may be a few tenths of a foot, whereas the error in determining the net change of water level between successive measurements may be only a hundredth or a few hundredths of a foot. For lesser depths to water the accuracy is greater. Accordingly, most measurements are reported to a hundredth of a foot, but some are given only to a tenth of a foot or a larger unit.

Data Presentation

Water-level data are presented in alphabetical order by county. The primary identification number for a given well is the 15-digit site identification number that appears in the upper left corner of the table. The secondary identification number is the local or county well number. Well locations are shown in figures 9 and 10; each well is identified on the map by its local well or county well number.

Each well record consists of three parts: the well description, the data table of water levels observed during the water year, and, for most wells, a hydrograph following the data table. Well descriptions are presented in the headings preceding the tabular data.

The following comments clarify information presented in these various headings.

LOCATION.—This paragraph follows the well-identification number and reports the hydrologic-unit number and a geographic point of reference. Latitudes and longitudes used in this report are reported as North American Datum of 1927 unless otherwise specified.

AQUIFER.—This entry designates by name and geologic age the aquifer that the well taps.

WELL CHARACTERISTICS.—This entry describes the well in terms of depth, casing diameter and depth or screened interval, method of construction, use, and 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 continuous, monthly, or some other frequency of measurement.

DATUM.—This entry describes both the measuring point and the land-surface elevation at the well. The altitude of the land-surface datum is described in feet above the altitude datum; it is reported with a precision depending on the method of determination. The measuring point is described physically (such as top of casing, top of instrument shelf, 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 National Geodetic Vertical Datum of 1929 (NGVD 29); 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, when various methods of measurement were begun, and the network (climatic, terrane, local, or areal effects) or the special project to which the well belongs.

PERIOD OF RECORD.—This entry indicates the time period for which records are published for the well, the month and year at the start of publication of water-level records by the USGS, and the words “to current year” if the records are to be continued into the following year. Time periods for which water-level records are available, but are not published by the USGS, may be noted.

EXTREMES FOR PERIOD OF RECORD.—This entry contains the highest and lowest instantaneously recorded or measured water levels of the period of published record, with respect to land-surface datum or sea level, and the dates of occurrence.

Water-Level Tables

A table of water levels follows the well description for each well. Water-level measurements in this report are given in feet with reference to either sea level or land-surface datum (lsd). Missing records are indicated by dashes in place of the water-level value.

For wells not equipped with recorders, water-level measurements were obtained periodically by steel or electric tape. Tables of periodic water-level measurements in these wells show the date of measurement and the measured water-level value.

Hydrographs

Hydrographs are a graphic display of water-level fluctuations over a period of time. In this report, five water years and, when appropriate, period-of-record hydrographs are shown. Hydrographs that display periodic water-level measurements show points that may be connected with a dashed line from one measurement to the next. Hydrographs that display recorder data show a solid line representing the mean water level recorded for each day. Missing data are indicated by a blank space or break in a hydrograph. Missing data may occur as a result of recorder malfunctions, battery failures, or mechanical problems related to the response of the recorder's float mechanism to water-level fluctuations in a well.

GROUND-WATER-QUALITY DATA

Data Collection and Computation

The ground-water-quality data in this report were obtained as a part of special studies in specific areas. Consequently, a number of chemical analyses are presented for some wells within a county but not for others. As a result, the records for this year, by themselves, do not provide a balanced view of ground-water quality Statewide.

Most methods for collecting and analyzing water samples are described in the TWRI. Procedures for on-site measurements and for collecting, treating, and shipping samples are given in TWRI, Book 1, Chapter D2; Book 3, Chapter C2; and Book 5, Chapters A1, A3, and A4. Also, detailed information on collecting, treating, and shipping samples may be obtained from the USGS District office (see address shown on back of title page in this report).

Laboratory Measurements

Analysis for sulfide and measurement of alkalinity, pH, water temperature, specific conductance, and dissolved oxygen are performed on site. All other sample analyses are performed at the USGS laboratory in Lakewood, Colorado, unless otherwise noted. Methods used by the USGS laboratory are given in TWRI, Book 1, Chapter D2; Book 3, Chapter C2; and Book 5, Chapters A1, A3, and A4.

ACCESS TO USGS WATER DATA

The USGS provides near real-time stage and discharge data for many of the gaging stations equipped with the necessary telemetry and historic daily-mean and peak-flow discharge data for most current or discontinued gaging stations through the World Wide Web (WWW). These data may be accessed from <http://water.usgs.gov>.

Water-quality data and ground-water data also are available through the WWW. In addition, data can be provided in various machine-readable formats on various media. Information about the availability of specific types of data or products, and user charges, can be obtained locally from each Water Discipline District Office (See address that is shown on the back of the title page of this report.)

DEFINITION OF TERMS

Specialized technical terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. Terms such as algae, water level, and precipitation are used in their common everyday meanings, definitions of which are given in standard dictionaries. Not all terms defined in this alphabetical list apply to every State. See also table for converting English units to International System (SI) Units. Other glossaries that also define water-related terms are accessible from <http://water.usgs.gov/glossaries.html>.

Acid neutralizing capacity (ANC) is the equivalent sum of all bases or base-producing materials, solutes plus particulates, in an aqueous system that can be titrated with acid to an equivalence point. This term designates titration of an “unfiltered” sample (formerly reported as alkalinity).

Acre-foot (AC-FT, acre-ft) is a unit of volume, commonly used to measure quantities of water used or stored, equivalent to the volume of water required to cover 1 acre to a depth of 1 foot and equivalent to 43,560 cubic feet, 325,851 gallons, or 1,233 cubic meters. (See also “Annual runoff”)

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

Adjusted discharge is discharge data that have been mathematically adjusted (for example, to remove the effects of a daily tide cycle or reservoir storage).

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

Alkalinity is the capacity of solutes in an aqueous system to neutralize acid. This term designates titration of a “filtered” sample.

Annual runoff is the total quantity of water that is discharged (“runs off”) from a drainage basin in a year. Data reports may present annual runoff data as volumes in acre-feet, as discharges per unit of drainage area in cubic feet per second per square mile, or as depths of water on the drainage basin in inches.

Annual 7-day minimum is the lowest mean value for any 7-consecutive-day period in a year. Annual 7-day minimum values are reported herein for the calendar year and the water year (October 1 through September 30). Most

low-flow frequency analyses use a climatic year (April 1-March 31), which tends to prevent the low-flow period from being artificially split between adjacent years. 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.)

Aroclor is the registered trademark for a group of polychlorinated biphenyls that were manufactured by the Monsanto Company prior to 1976. Aroclors are assigned specific 4-digit reference numbers dependent upon molecular type and degree of substitution of the biphenyl ring hydrogen atoms by chlorine atoms. The first two digits of a numbered aroclor represent the molecular type, and the last two digits represent the percentage weight of the hydrogen-substituted chlorine.

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

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

Aspect is the direction toward which a slope faces with respect to the compass.

Bacteria are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, whereas 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.

Bankfull stage, as used in this report, is the stage at which a stream first overflows its natural banks formed by floods with 1- to 3-year recurrence intervals.

Base discharge (for peak discharge) is a discharge value, determined for selected stations, above which peak discharge data are published. The base discharge at each station is selected so that an average of about three peak flows per year will be published. (See also "Peak flow")

Base flow is sustained flow of a stream in the absence of direct runoff. It includes natural and human-induced streamflows. Natural base flow is sustained largely by ground-water discharge.

Bed material is the sediment mixture of which a streambed, lake, pond, reservoir, or estuary bottom is composed. (See also "Bedload" and "Sediment")

Bedload is material in transport that primarily is supported by the streambed. In this report, bedload is considered to consist of particles in transit from the bed to the top of the bedload sampler nozzle (an elevation ranging from 0.25 to 0.5 foot). These particles are retained in the bedload sampler. A sample collected with a pressure-differential bedload sampler also may contain a component of the suspended load.

Bedload discharge (tons per day) is the rate of sediment moving as bedload, reported as dry weight, that passes through a cross section in a given time. NOTE: Bedload discharge values in this report may include a component of the suspended-sediment discharge. A correction may be necessary when computing the total sediment discharge by summing the bedload discharge and the suspended-sediment discharge. (See also "Bedload," "Dry weight," "Sediment," and "Suspended-sediment discharge")

Benthic organisms are the group of organisms inhabiting the bottom of an aquatic environment. They include a number of types of organisms, such as bacteria, fungi, insect larvae and nymphs, snails, clams, and crayfish. They are useful as indicators of water quality.

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

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

Biomass pigment ratio is an indicator of the total proportion of periphyton that are autotrophic (plants). This also is called the Autotrophic Index.

Blue-green algae (*Cyanophyta*) are a group of phytoplankton and periphyton organisms with a blue pigment in addition to a green pigment called chlorophyll. Blue-green algae can cause nuisance water-quality conditions in lakes and slow-flowing rivers; however, they are found commonly in streams throughout the year. The abundance of blue-green algae in phytoplankton samples is expressed as the number of cells per milliliter (cells/mL) or biovolume in cubic micrometers per milliliter ($\mu\text{m}^3/\text{mL}$). The abundance of blue-green algae in periphyton samples is given in cells per square centimeter (cells/cm²) or biovolume per square centimeter ($\mu\text{m}^3/\text{cm}^2$). (See also "Phytoplankton" and "Periphyton")

Bottom material (See "Bed material")

Bulk electrical conductivity is the combined electrical conductivity of all material within a doughnut-shaped volume surrounding an induction probe. Bulk conductivity is affected by different physical and chemical properties of the material including the dissolved-solids content of the pore water, and the lithology and porosity of the rock.

Canadian Geodetic Vertical Datum 1928 is a geodetic datum derived from a general adjustment of Canada's first order level network in 1928.

Cell volume (biovolume) determination is one of several common methods used to estimate biomass of algae in aquatic systems. Cell members of algae are used frequently in aquatic surveys as an indicator of algal production. However, cell numbers alone cannot represent true biomass because of considerable cell-size variation among the algal species. Cell volume (μm^3) is determined by obtaining critical cell measurements or cell dimensions (for example, length, width, height, or radius) for 20 to 50 cells of each important species to obtain an average biovolume per cell. Cells are categorized according to the correspondence of their cellular shape to the nearest geometric solid or combinations of simple solids (for example, spheres, cones, or cylinders). Representative formulae used to compute biovolume are as follows:

$$\text{sphere } \frac{4}{3} \pi r^3 \quad \text{cone } \frac{1}{3} \pi r^2 h \quad \text{cylinder } \pi r^2 h.$$

pi (π) is the ratio of the circumference to the diameter of a circle; $\pi = 3.14159\dots$

From cell volume, total algal biomass expressed as biovolume ($\mu\text{m}^3/\text{mL}$) is thus determined by multiplying the number of cells of a given species by its average cell volume and then summing these volumes for all species.

Cells/volume refers to the number of cells of any organism that is counted by using a microscope and grid or counting cell. Many planktonic organisms are multicelled and are counted according to the number of contained cells per

sample volume, and generally are reported as cells or units per milliliter (mL) or liter (L).

Cfs-day (See “Cubic foot per second-day”)

Channel bars, as used in this report, are the lowest prominent geomorphic features higher than the channel bed.

Chemical oxygen demand (COD) is a measure of the chemically oxidizable material in the water and furnishes an approximation of the amount of organic and reducing material present. The determined value may correlate with BOD or with carbonaceous organic pollution from sewage or industrial wastes. [See also “Biochemical oxygen demand (BOD)”]

Clostridium perfringens (*C. perfringens*) is a spore-forming bacterium that is common in the feces of human and other warmblooded animals. Clostridial spores are being used experimentally as an indicator of past fecal contamination and the presence of microorganisms that are resistant to disinfection and environmental stresses. (See also “Bacteria”)

Coliphages are viruses that infect and replicate in coliform bacteria. They are indicative of sewage contamination of water and of the survival and transport of viruses in the environment.

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

Confined aquifer is a term used to describe an aquifer containing water between two relatively impermeable boundaries. The water level in a well tapping a confined aquifer stands above the top of the confined aquifer and can be higher or lower than the water table that may be present in the material above it. In some cases, the water level can rise above the ground surface, yielding a flowing well.

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.

Continuous-record station is a site where data are collected with sufficient frequency to define daily mean values and variations within a day.

Control designates a feature in the channel that physically affects the water-surface elevation and thereby determines the stage-discharge relation at the gage. This feature may be a constriction of the channel, a bedrock outcrop, a gravel bar, an artificial structure, or a uniform cross section over a long reach of the channel.

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

Cubic foot per second (CFS, ft³/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point in 1 second. It is equivalent to approximately 7.48 gallons per second or approximately 449 gallons per minute, or 0.02832 cubic meters per second. The term “second-foot” sometimes is used synonymously with “cubic foot per second” but is now obsolete.

Cubic foot per second-day (CFS-DAY, Cfs-day, [(ft³/s)/d]) is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, 1.98347 acre-feet, 646,317 gallons, or 2,446.6 cubic meters. The daily mean discharges reported in the daily value data tables numerically are equal to the daily volumes in cfs-days, and the totals also represent volumes in cfs-days.

Cubic foot per second per square mile [CFSM, (ft³/s)/mi²] is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming the runoff is distributed uniformly in time and area. (See also “Annual runoff”)

Daily mean suspended-sediment concentration is the time-weighted mean concentration of suspended sediment passing a stream cross section during a 24-hour day. (See also “Sediment” and “Suspended-sediment concentration”)

Daily record station is a site where data are collected with sufficient frequency to develop a record of one or more data values per day. The frequency of data collection can range from continuous recording to data collection on a daily or near-daily basis.

Data collection platform (DCP) is an electronic instrument that collects, processes, and stores data from various sensors, and transmits the data by satellite data relay, line-of-sight radio, and/or landline telemetry.

Data logger is a microprocessor-based data acquisition system designed specifically to acquire, process, and store data. Data usually are downloaded from onsite data loggers for entry into office data systems.

Datum is a surface or point relative to which measurements of height and/or horizontal position are reported. A vertical datum is a horizontal surface used as the zero point for measurements of gage height, stage, or elevation; a horizontal datum is a reference for positions given in terms of latitude-longitude, State Plane coordinates, or Universal Transverse Mercator (UTM) coordinates. (See also “Gage datum,” “Land-surface datum,” “National Geodetic Verti-

cal Datum of 1929,” and “North American Vertical Datum of 1988”)

Diatoms (*Bacillariophyta*) are unicellular or colonial algae with a siliceous cell wall. The abundance of diatoms in phytoplankton samples is expressed as the number of cells per milliliter (cells/mL) or biovolume in cubic micrometers per milliliter ($\mu\text{m}^3/\text{mL}$). The abundance of diatoms in periphyton samples is given in cells per square centimeter (cells/cm^2) or biovolume per square centimeter ($\mu\text{m}^3/\text{cm}^2$). (See also “Phytoplankton” and “Periphyton”)

Diel is of or pertaining to a 24-hour period of time; a regular daily cycle.

Discharge, or flow, is the rate that matter passes through a cross section of a stream channel or other water body per unit of time. The term commonly refers to the volume of water (including, unless otherwise stated, any sediment or other constituents suspended or dissolved in the water) that passes a cross section in a stream channel, canal, pipeline, and so forth, within a given period of time (cubic feet per second). Discharge also can apply to the rate at which constituents, such as suspended sediment, bedload, and dissolved or suspended chemicals, pass through a cross section, in which cases the quantity is expressed as the mass of constituent that passes the cross section in a given period of time (tons per day).

Dissolved refers to that material in a representative water sample that passes through a 0.45-micrometer membrane filter. This is a convenient operational definition used by Federal and State agencies that collect water-quality data. Determinations of “dissolved” constituent concentrations are made on sample water that has been filtered.

Dissolved oxygen (DO) is the molecular oxygen (oxygen gas) dissolved in water. The concentration in water is a function of atmospheric pressure, temperature, and dissolved-solids concentration of the water. The ability of water to retain oxygen decreases with increasing temperature or dissolved-solids concentration. Photosynthesis and respiration by plants commonly cause diurnal variations in dissolved-oxygen concentration in water from some streams.

Dissolved solids concentration in water is the quantity of dissolved material in a sample of water. It 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, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. In the mathematical calculation, the bicarbonate value, in milligrams per liter, is multiplied by 0.4926 to convert it to carbonate. Alterna-

tively, alkalinity concentration (as mg/L CaCO_3) can be converted to carbonate concentration by multiplying by 0.60.

Diversity index (H) (Shannon index) is a numerical expression of evenness of distribution of aquatic organisms. The formula for diversity index is:

$$\bar{d} = - \sum_{i=1}^s \frac{n_i}{n} \log_2 \frac{n_i}{n},$$

where n_i is the number of individuals per taxon, n is the total number of individuals, and s is the total number of taxa in the sample of the community. Index values range from zero, when all the organisms in the sample are the same, to some positive number, when some or all of the organisms in the sample are different.

Drainage area of a stream at a specific location is that area upstream from the location, measured in a horizontal plane, that has a common outlet at the site for its surface runoff from precipitation that normally drains by gravity into a stream. Drainage areas given herein include all closed basins, or noncontributing areas, within the area unless otherwise specified.

Drainage basin is a part of the Earth’s surface that contains a drainage system with a common outlet for its surface runoff. (See “Drainage area”)

Dry mass refers to the mass of residue present after drying in an oven at 105 °C, until the mass remains unchanged. This mass represents the total organic matter, ash and sediment, in the sample. Dry-mass values are expressed in the same units as ash mass. (See also “Ash mass,” “Biomass,” and “Wet mass”)

Dry weight refers to the weight of animal tissue after it has been dried in an oven at 65 °C until a constant weight is achieved. Dry weight represents total organic and inorganic matter in the tissue. (See also “Wet weight”)

Embeddedness is the degree to which gravel-sized and larger particles are surrounded or enclosed by finer-sized particles. (See also “Substrate embeddedness class”)

Enterococcus bacteria commonly are found in the feces of humans and other warmblooded animals. Although some strains are ubiquitous and not related to fecal pollution, the presence of enterococci in water is an indication of fecal pollution and the possible presence of enteric pathogens. Enterococcus bacteria are those bacteria that produce pink to red colonies with black or reddish-brown precipitate after incubation at 41 °C on mE agar (nutrient medium for bacterial growth) and subsequent transfer to EIA medium. Enterococci include *Streptococcus faecalis*, *Streptococcus*

faecium, *Streptococcus avium*, and their variants. (See also "Bacteria")

EPT Index is the total number of distinct taxa within the insect orders Ephemeroptera, Plecoptera, and Trichoptera. This index summarizes the taxa richness within the aquatic insects that generally are considered pollution sensitive; the index usually decreases with pollution.

***Escherichia coli* (*E. coli*)** are bacteria present in the intestine and feces of warmblooded animals. *E. coli* are a member species of the fecal coliform group of indicator bacteria. In the laboratory, they are defined as those bacteria that produce yellow or yellow-brown colonies on a filter pad saturated with urea substrate broth after primary culturing for 22 to 24 hours at 44.5 °C on mTEC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample. (See also "Bacteria")

Estimated (E) value of a concentration is reported when an analyte is detected and all criteria for a positive result are met. If the concentration is less than the method detection limit (MDL), an E code will be reported with the value. If the analyte is identified qualitatively as present, but the quantitative determination is substantially more uncertain, the National Water Quality Laboratory will identify the result with an E code even though the measured value is greater than the MDL. A value reported with an E code should be used with caution. When no analyte is detected in a sample, the default reporting value is the MDL preceded by a less than sign (<). For bacteriological data, concentrations are reported as estimated when results are based on non-ideal colony counts.

Euglenoids (*Euglenophyta*) are a group of algae that usually are free-swimming and rarely creeping. They have the ability to grow either photosynthetically in the light or heterotrophically in the dark. (See also "Phytoplankton")

Extractable organic halides (EOX) are organic compounds that contain halogen atoms such as chlorine. These organic compounds are semivolatile and extractable by ethyl acetate from air-dried streambed sediment. The ethyl acetate extract is combusted, and the concentration is determined by microcoulometric determination of the halides formed. The concentration is reported as micrograms of chlorine per gram of the dry weight of the streambed sediment.

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

Fecal streptococcal bacteria are present in the intestines of warmblooded animals and are ubiquitous in the environment. They are characterized as gram-positive, cocci bacteria that are capable of growth in brain-heart infusion broth. In the laboratory, they are defined as all the organisms that produce red or pink colonies within 48 hours at 35 °C plus or minus 1.0 °C on KF-streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample. (See also "Bacteria")

Fire algae (*Pyrrhophyta*) are free-swimming unicells characterized by a red pigment spot. (See also "Phytoplankton")

Flow-duration percentiles are values on a scale of 100 that indicate the percentage of time for which a flow is not exceeded. For example, the 90th percentile of river flow is greater than or equal to 90 percent of all recorded flow rates.

Gage datum is a horizontal surface used as a zero point for measurement of stage or gage height. This surface usually is located slightly below the lowest point of the stream bottom such that the gage height is usually slightly greater than the maximum depth of water. Because the gage datum is not an actual physical object, the datum is usually defined by specifying the elevations of permanent reference marks such as bridge abutments and survey monuments, and the gage is set to agree with the reference marks. Gage datum is a local datum that is maintained independently of any national geodetic datum. However, if the elevation of the gage datum relative to the national datum (North American Vertical Datum of 1988 or National Geodetic Vertical Datum of 1929) has been determined, then the gage readings can be converted to elevations above the national datum by adding the elevation of the gage datum to the gage reading.

Gage height (G.H.) is the water-surface elevation, in feet above the gage datum. If the water surface is below the gage datum, the gage height is negative. Gage height often is used interchangeably with the more general term "stage," although gage height is more appropriate when used in reference to a reading on a gage.

Gage values are values that are recorded, transmitted, and/or computed from a gaging station. Gage values typically are collected at 5-, 15-, or 30-minute intervals.

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

Gas chromatography/flame ionization detector (GC/FID) is a laboratory analytical method used as a screening tech-

nique for semivolatile organic compounds that are extractable from water in methylene chloride.

Geomorphic channel units, as used in this report, are fluvial geomorphic descriptors of channel shape and stream velocity. Pools, riffles, and runs are types of geomorphic channel units considered for National Water-Quality Assessment (NAWQA) Program habitat sampling.

Green algae (*Chlorophyta*) are unicellular or colonial algae with chlorophyll pigments similar to those in terrestrial green plants. Some forms of green algae produce mats or floating “moss” in lakes. The abundance of green algae in phytoplankton samples is expressed as the number of cells per milliliter (cells/mL) or biovolume in cubic micrometers per milliliter ($\mu\text{m}^3/\text{mL}$). The abundance of green algae in periphyton samples is given in cells per square centimeter (cells/cm^2) or biovolume per square centimeter ($\mu\text{m}^3/\text{cm}^2$). (See also “Phytoplankton” and “Periphyton”)

Habitat, as used in this report, includes all nonliving (physical) aspects of the aquatic ecosystem, although living components like aquatic macrophytes and riparian vegetation also are usually included. Measurements of habitat typically are made over a wider geographic scale than are measurements of species distribution.

Habitat quality index is the qualitative description (level 1) of instream habitat and riparian conditions surrounding the reach sampled. Scores range from 0 to 100 percent with higher scores indicative of desirable habitat conditions for aquatic life. Index only applicable to wadable streams.

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 (primarily calcium and magnesium) and is expressed as the equivalent concentration of calcium carbonate (CaCO_3).

High tide is the maximum height reached by each rising tide. The high-high and low-high tides are the higher and lower of the two high tides, respectively, of each tidal day. See NOAA Web site:
<http://www.co-ops.nos.noaa.gov/tideglos.html>

Hilsenhoff’s Biotic Index (HBI) is an indicator of organic pollution that uses tolerance values to weight taxa abundances; usually increases with pollution. It is calculated as follows:

$$HBI = \sum \frac{(n)(a)}{N},$$

where n is the number of individuals of each taxon, a is the tolerance value of each taxon, and N is the total number of organisms in the sample.

Horizontal datum (See “Datum”)

Hydrologic index stations referred to in this report are continuous-record gaging stations that have been selected as representative of streamflow patterns for their respective regions. Station locations are shown on index maps.

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

Inch (IN., in.), in reference to streamflow, as used in this report, refers to the depth to which the drainage area would be covered with water if all of the runoff for a given time period were distributed uniformly on it. (See also “Annual runoff”)

Instantaneous discharge is the discharge at a particular instant of time. (See also “Discharge”)

International Boundary Commission Survey Datum refers to a geodetic datum established at numerous monuments along the United States-Canada boundary by the International Boundary Commission.

Island, as used in this report, is a mid-channel bar that has permanent woody vegetation, is flooded once a year, on average, and remains stable except during large flood events.

Laboratory reporting level (LRL) generally is equal to twice the yearly determined long-term method detection level (LT-MDL). The LRL controls false negative error. The probability of falsely reporting a nondetection for a sample that contained an analyte at a concentration equal to or greater than the LRL is predicted to be less than or equal to 1 percent. The value of the LRL will be reported with a “less than” (<) remark code for samples in which the analyte was not detected. The National Water Quality Laboratory (NWQL) collects quality-control data from selected analytical methods on a continuing basis to determine LT-MDLs and to establish LRLs. These values are reevaluated annually on the basis of the most current quality-control data and, therefore, may change. The LRL replaces the term ‘non-detection value’ (NDV).

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

Latent heat flux (often used interchangeably with latent heat-flux density) is the amount of heat energy that converts water from liquid to vapor (evaporation) or from vapor to liquid (condensation) across a specified cross-

sectional area per unit time. Usually expressed in watts per square meter.

Light-attenuation coefficient, also known as the extinction coefficient, is a measure of water clarity. Light is attenuated according to the Lambert-Beer equation:

$$I = I_o e^{-\lambda L},$$

where I_o is the source light intensity, I is the light intensity at length L (in meters) from the source, λ is the light-attenuation coefficient, and e is the base of the natural logarithm. The light-attenuation coefficient is defined as

$$\lambda = -\frac{1}{L} \log_e \frac{I}{I_o}.$$

Lipid is any one of a family of compounds that are insoluble in water and that make up one of the principal components of living cells. Lipids include fats, oils, waxes, and steroids. Many environmental contaminants such as organochlorine pesticides are lipophilic.

Long-term method detection level (LT-MDL) is a detection level derived by determining the standard deviation of a minimum of 24 method detection limit (MDL) spike-sample measurements over an extended period of time. LT-MDL data are collected on a continuous basis to assess year-to-year variations in the LT-MDL. The LT-MDL controls false positive error. The chance of falsely reporting a concentration at or greater than the LT-MDL for a sample that did not contain the analyte is predicted to be less than or equal to 1 percent.

Low tide is the minimum height reached by each falling tide. The high-low and low-low tides are the higher and lower of the two low tides, respectively, of each tidal day. *See NOAA Web site:*
<http://www.co-ops.nos.noaa.gov/tideglos.html>

Macrophytes are the macroscopic plants in the aquatic environment. The most common macrophytes are the rooted vascular plants that usually are arranged in zones in aquatic ecosystems and restricted in the area by the extent of illumination through the water and sediment deposition along the shoreline.

Mean concentration of suspended sediment (Daily mean suspended-sediment concentration) is the time-weighted concentration of suspended sediment passing a stream cross section during a given time period. (See also "Daily mean suspended-sediment concentration" and "Suspended-sediment concentration")

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

Mean high or low tide is the average of all high or low tides, respectively, over a specific period.

Mean sea level is a local tidal datum. It is the arithmetic mean of hourly heights observed over the National Tidal Datum Epoch. Shorter series are specified in the name; for example, monthly mean sea level and yearly mean sea level. In order that they may be recovered when needed, such datums are referenced to fixed points known as benchmarks. (See also "Datum")

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

Megahertz is a unit of frequency. One megahertz equals one million cycles per second.

Membrane filter is a thin microporous material of specific pore size used to filter bacteria, algae, and other very small particles from water.

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

Method detection limit (MDL) is the minimum concentration of a substance that can be measured and reported with 99-percent confidence that the analyte concentration is greater than zero. It is determined from the analysis of a sample in a given matrix containing the analyte. At the MDL concentration, the risk of a false positive is predicted to be less than or equal to 1 percent.

Method of Cubatures is a method of computing discharge in tidal estuaries based on the conservation of mass equation.

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

Micrograms per gram (UG/G, $\mu\text{g/g}$) 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 kilogram (UG/KG, $\mu\text{g/kg}$) is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the constituent per unit mass

(kilogram) of the material analyzed. One microgram per kilogram is equivalent to 1 part per billion.

Micrograms per liter (UG/L, $\mu\text{g/L}$) is a unit expressing the concentration of chemical constituents in water as mass (micrograms) of constituent per unit volume (liter) of water. One thousand micrograms per liter is equivalent to 1 milligram per liter. One microgram per liter is equivalent to 1 part per billion.

Microsiemens per centimeter (US/CM, $\mu\text{S/cm}$) is a unit expressing the amount of electrical conductivity of a solution as measured between opposite faces of a centimeter cube of solution at a specified temperature. Siemens is the International System of Units nomenclature. It is synonymous with mhos and is the reciprocal of resistance in ohms.

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

Minimum reporting level (MRL) is the smallest measured concentration of a constituent that may be reliably reported by using a given analytical method.

Miscellaneous site, miscellaneous station, or miscellaneous sampling site is a site where streamflow, sediment, and/or water-quality data or water-quality or sediment samples are collected once, or more often on a random or discontinuous basis to provide better areal coverage for defining hydrologic and water-quality conditions over a broad area in a river basin.

Most probable number (MPN) is an index of the number of coliform bacteria that, more probably than any other number, would give the results shown by the laboratory examination; it is not an actual enumeration. MPN is determined from the distribution of gas-positive cultures among multiple inoculated tubes.

Multiple-plate samplers are artificial substrates of known surface area used for obtaining benthic invertebrate samples. They consist of a series of spaced, hardboard plates on an eyebolt.

Nanograms per liter (NG/L, ng/L) is a unit expressing the concentration of chemical constituents in solution as mass (nanograms) of solute per unit volume (liter) of water. One million nanograms per liter is equivalent to 1 milligram per liter.

National Geodetic Vertical Datum of 1929 (NGVD 29) is a fixed reference adopted as a standard geodetic datum for

elevations determined by leveling. It formerly was called "Sea Level Datum of 1929" or "mean sea level." Although the datum was derived from the mean sea level at 26 tide stations, it does not necessarily represent local mean sea level at any particular place. See NOAA Web site: <http://www.ngs.noaa.gov/faq.shtml#WhatVD29VD88> (See "North American Vertical Datum of 1988")

Natural substrate refers to any naturally occurring immersed or submersed solid surface, such as a rock or tree, upon which an organism lives. (See also "Substrate")

Nekton are the consumers in the aquatic environment and consist of large, free-swimming organisms that are capable of sustained, directed mobility.

Nephelometric turbidity unit (NTU) is the measurement for reporting turbidity that is based on use of a standard suspension of formazin. Turbidity measured in NTU uses nephelometric methods that depend on passing specific light of a specific wavelength through the sample.

North American Datum of 1927 (NAD 27) is the horizontal control datum for the United States that was defined by a location and azimuth on the Clarke spheroid of 1866.

North American Datum of 1983 (NAD 83) is the horizontal control datum for the United States, Canada, Mexico, and Central America that is based on the adjustment of 250,000 points including 600 satellite Doppler stations that constrain the system to a geocentric origin. NAD 83 has been officially adopted as the legal horizontal datum for the United States by the Federal government.

North American Vertical Datum of 1988 (NAVD 88) is a fixed reference adopted as the official civilian vertical datum for elevations determined by Federal surveying and mapping activities in the United States. This datum was established in 1991 by minimum-constraint adjustment of the Canadian, Mexican, and United States first-order terrestrial leveling networks.

Open or screened interval is the length of unscreened opening or of well screen through which water enters a well, in feet below land surface.

Organic carbon (OC) is a measure of organic matter present in aqueous solution, suspension, or bottom sediment. May be reported as dissolved organic carbon (DOC), particulate organic carbon (POC), or total organic carbon (TOC).

Organic mass or **volatile mass** of a living substance is the difference between the dry mass and ash mass and represents the actual mass of the living matter. Organic mass is expressed in the same units as for ash mass and dry mass. (See also "Ash mass," "Biomass," and "Dry mass")

Organism count/area refers to the number of organisms collected and enumerated in a sample and adjusted to the number per area habitat, usually square meter (m²), acre, or hectare. Periphyton, benthic organisms, and macrophytes are expressed in these terms.

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

Organochlorine compounds are any chemicals that contain carbon and chlorine. Organochlorine compounds that are important in investigations of water, sediment, and biological quality include certain pesticides and industrial compounds.

Parameter code is a 5-digit number used in the USGS computerized data system, National Water Information System (NWIS), to uniquely identify a specific constituent or property.

Partial-record station is a site where discrete measurements of one or more hydrologic parameters are obtained over a period of time without continuous data being recorded or computed. A common example is a crest-stage gage partial-record station at which only peak stages and flows are recorded.

Particle size is the diameter, in millimeters (mm), of a particle determined by sieve or sedimentation methods. The sedimentation method uses the principle of Stokes Law to calculate sediment particle sizes. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube, sedigraph) 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, as used in this report, agrees with the recommendation made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

Classification	Size (mm)	Method of analysis
Clay	>0.00024 - 0.004	Sedimentation
Silt	>0.004 - 0.062	Sedimentation
Sand	>0.062 - 2.0	Sedimentation/sieve
Gravel	>2.0 - 64.0	Sieve
Cobble	>64 - 256	Manual measurement
Boulder	>256	Manual measurement

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. For the sedimentation method, most of the organic matter is removed, and the sample is subjected to mechani-

cal and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native water analysis.

Peak flow (peak stage) is an instantaneous local maximum value in the continuous time series of streamflows or stages, preceded by a period of increasing values and followed by a period of decreasing values. Several peak values ordinarily occur in a year. The maximum peak value in a year is called the annual peak; peaks lower than the annual peak are called secondary peaks. Occasionally, the annual peak may not be the maximum value for the year; in such cases, the maximum value occurs at midnight at the beginning or end of the year, on the recession from or rise toward a higher peak in the adjoining year. If values are recorded at a discrete series of times, the peak recorded value may be taken as an approximation of the true peak, which may occur between the recording instants. If the values are recorded with finite precision, a sequence of equal recorded values may occur at the peak; in this case, the first value is taken as the peak.

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

Percent shading is a measure of the amount of sunlight potentially reaching the stream. A clinometer is used to measure left and right bank canopy angles. These values are added together, divided by 180, and multiplied by 100 to compute percentage of shade.

Periodic-record station is a site where stage, discharge, sediment, chemical, physical, or other hydrologic measurements are made one or more times during a year but at a frequency insufficient to develop a daily record.

Periphyton is the assemblage of microorganisms attached to and living upon submerged solid surfaces. Although primarily consisting of algae, they also include bacteria, fungi, protozoa, rotifers, and other small organisms. Periphyton are useful indicators of water quality.

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

pH of water is the negative logarithm of the hydrogen-ion activity. Solutions with pH less than 7.0 standard units are termed "acidic," and solutions with a pH greater than 7.0 are termed "basic." Solutions with a pH of 7.0 are neutral. The presence and concentration of many dissolved chemical constituents found in water are affected, in part, by the hydrogen-ion activity of water. Biological processes including growth, distribution of organisms, and toxicity of

the water to organisms also are affected, in part, by the hydrogen-ion activity of water.

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

Picocurie (PC, pCi) is one-trillionth (1×10^{-12}) of the amount of radioactive nuclide represented by a curie (Ci). A curie is the quantity of radioactive nuclide that yields 3.7×10^{10} radioactive disintegrations per second (dps). A picocurie yields 0.037 dps, or 2.22 dpm (disintegrations per minute).

Plankton is the community of suspended, floating, or weakly swimming organisms that live in the open water of lakes and rivers. Concentrations are expressed as a number of cells per milliliter (cells/mL) of sample.

Polychlorinated biphenyls (PCBs) are industrial chemicals that are mixtures of chlorinated biphenyl compounds having various percentages of chlorine. They are similar in structure to organochlorine insecticides.

Polychlorinated naphthalenes (PCNs) are industrial chemicals that are mixtures of chlorinated naphthalene compounds. They have properties and applications similar to polychlorinated biphenyls (PCBs) and have been identified in commercial PCB preparations.

Pool, as used in this report, is a small part of a stream reach with little velocity, commonly with water deeper than surrounding areas.

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

Primary productivity (carbon method) is expressed as milligrams of carbon per area per unit time [$\text{mg C}/(\text{m}^2/\text{time})$] for periphyton and macrophytes or per volume [$\text{mg C}/(\text{m}^3/\text{time})$] for phytoplankton. The carbon method defines the amount of carbon dioxide consumed as measured by radioactive carbon (carbon-14). The carbon-14 method is of greater sensitivity than the oxygen light- and dark-bottle method and is preferred for use with unenriched water samples.

Unit time may be either the hour or day, depending on the incubation period. (See also "Primary productivity")

Primary productivity (oxygen method) is expressed as milligrams of oxygen per area per unit time [$\text{mg O}/(\text{m}^2/\text{time})$] for periphyton and macrophytes or per volume [$\text{mg O}/(\text{m}^3/\text{time})$] for phytoplankton. The oxygen method defines production and respiration rates as estimated from changes in the measured dissolved-oxygen concentration. The oxygen light- and dark-bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made within 24 hours. Unit time may be either the hour or day, depending on the incubation period. (See also "Primary productivity")

Radioisotopes are isotopic forms of elements that exhibit radioactivity. Isotopes are varieties of a chemical element that differ in atomic weight but are very nearly alike in chemical properties. The difference arises because the atoms of the isotopic forms of an element differ in the number of neutrons in the nucleus; for example, ordinary chlorine is a mixture of isotopes having atomic weights of 35 and 37, and the natural mixture has an atomic weight of about 35.453. Many of the elements similarly exist as mixtures of isotopes, and a great many new isotopes have been produced in the operation of nuclear devices such as the cyclotron. There are 275 isotopes of the 81 stable elements, in addition to more than 800 radioactive isotopes.

Reach, as used in this report, is a length of stream that is chosen to represent a uniform set of physical, chemical, and biological conditions within a segment. It is the principal sampling unit for collecting physical, chemical, and biological data.

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

Recurrence interval, also referred to as return period, is the average time, usually expressed in years, between occurrences of hydrologic events of a specified type (such as exceedances of a specified high flow or nonexceedance of a specified low flow). The terms "return period" and "recurrence interval" do not imply regular cyclic occurrence. The actual times between occurrences vary randomly, with most of the times being less than the average

and a few being substantially greater than the average. For example, the 100-year flood is the flow rate that is exceeded by the annual maximum peak flow at intervals whose average length is 100 years (that is, once in 100 years, on average); almost two-thirds of all exceedances of the 100-year flood occur less than 100 years after the previous exceedance, half occur less than 70 years after the previous exceedance, and about one-eighth occur more than 200 years after the previous exceedance. Similarly, the 7-day, 10-year low flow ($7Q_{10}$) is the flow rate below which the annual minimum 7-day-mean flow dips at intervals whose average length is 10 years (that is, once in 10 years, on average); almost two-thirds of the nonexceedances of the $7Q_{10}$ occur less than 10 years after the previous nonexceedance, half occur less than 7 years after, and about one-eighth occur more than 20 years after the previous nonexceedance. The recurrence interval for annual events is the reciprocal of the annual probability of occurrence. Thus, the 100-year flood has a 1-percent chance of being exceeded by the maximum peak flow in any year, and there is a 10-percent chance in any year that the annual minimum 7-day-mean flow will be less than the $7Q_{10}$.

Replicate samples are a group of samples collected in a manner such that the samples are thought to be essentially identical in composition.

Return period (See “Recurrence interval”)

Riffle, as used in this report, is a shallow part of the stream where water flows swiftly over completely or partially submerged obstructions to produce surface agitation.

River mileage is the curvilinear distance, in miles, measured upstream from the mouth along the meandering path of a stream channel in accordance with Bulletin No. 14 (October 1968) of the Water Resources Council and typically is used to denote location along a river.

Run, as used in this report, is a relatively shallow part of a stream with moderate velocity and little or no surface turbulence.

Runoff is the quantity of water that is discharged (“runs off”) from a drainage basin during a given time period. Runoff data may be presented as volumes in acre-feet, as mean discharges per unit of drainage area in cubic feet per second per square mile, or as depths of water on the drainage basin in inches. (See also “Annual runoff”)

Sea level, as used in this report, refers to one of the two commonly used national vertical datums (NGVD 1929 or NAVD 1988). See separate entries for definitions of these datums.

Sediment is solid material that originates mostly from disintegrated rocks; when transported by, suspended in, or deposited from water, it is referred to as “fluvial sediment.” Sediment 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 affected by environmental and land-use factors. Some major factors are topography, soil characteristics, land cover, and depth and intensity of precipitation.

Sensible heat flux (often used interchangeably with latent sensible heat-flux density) is the amount of heat energy that moves by turbulent transport through the air across a specified cross-sectional area per unit time and goes to heating (cooling) the air. Usually expressed in watts per square meter.

Seven-day, 10-year low flow ($7Q_{10}$) is the discharge below which the annual 7-day minimum flow falls in 1 year out of 10 on the long-term average. The recurrence interval of the $7Q_{10}$ is 10 years; the chance that the annual 7-day minimum flow will be less than the $7Q_{10}$ is 10 percent in any given year. (See also “Annual 7-day minimum” and “Recurrence interval”)

Shelves, as used in this report, are streambank features extending nearly horizontally from the flood plain to the lower limit of persistent woody vegetation.

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. Sodium hazard in water is an index that can be used to evaluate the suitability of water for irrigating crops.

Soil heat flux (often used interchangeably with soil heat-flux density) is the amount of heat energy that moves by conduction across a specified cross-sectional area of soil per unit time and goes to heating (or cooling) the soil. Usually expressed in watts per square meter.

Soil-water content is the water lost from the soil upon drying to constant mass at 105 °C; expressed either as mass of water per unit mass of dry soil or as the volume of water per unit bulk volume of soil.

Specific electrical conductance (conductivity) is a measure of the capacity of water (or other media) to conduct an electrical current. It is expressed in microsiemens per centimeter at 25 °C. Specific electrical conductance is a function of the types and quantity of dissolved substances in water and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is from 55 to 75 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.

Stable isotope ratio (per MIL) is a unit expressing the ratio of the abundance of two radioactive isotopes. Isotope ratios are used in hydrologic studies to determine the age or source of specific water, to evaluate mixing of different water, as an aid in determining reaction rates, and other chemical or hydrologic processes.

Stage (See “Gage height”)

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

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

Substrate is the physical surface upon which an organism lives.

Substrate embeddedness class is a visual estimate of riffle streambed substrate larger than gravel that is surrounded or covered by fine sediment (<2 mm, sand or finer). Below are the class categories expressed as the percentage covered by fine sediment:

0	no gravel or larger substrate	3	26-50 percent
1	> 75 percent	4	5-25 percent
2	51-75 percent	5	< 5 percent

Surface area of a lake is that area (acres) encompassed by the boundary of the lake as shown on USGS topographic maps, or other available maps or photographs. Because surface area changes with lake stage, surface areas listed in this report represent those determined for the stage at the time the maps or photographs were obtained.

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

Surrogate is an analyte that behaves similarly to a target analyte, but that is highly unlikely to occur in a sample. A surrogate is added to a sample in known amounts before extraction and is measured with the same laboratory procedures used to measure the target analyte. Its purpose is to monitor method performance for an individual sample.

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

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a representative suspended water-sediment sample that is retained on a 0.45-micrometer 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 directly analyzing the suspended material collected on the filter or, more commonly, by difference, on the basis of determinations of (1) dissolved and (2) total recoverable concentrations of the constituent. (See also “Suspended”)

Suspended sediment is the sediment maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid. (See also “Sediment”)

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 foot above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L). The analytical technique uses the mass of all of the sediment and the net weight of the water-sediment mixture in a sample to compute the suspended-sediment concentration. (See also “Sediment” and “Suspended sediment”)

Suspended-sediment discharge (tons/d) is the rate of sediment transport, as measured by dry mass or volume, that passes a cross 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. (See also “Sediment,” “Suspended sediment,” and “Suspended-sediment concentration”)

Suspended-sediment load is a general term that refers to a given characteristic of the material in suspension that passes a point during a specified period of time. The term needs to be qualified, such as “annual suspended-sediment load” or “sand-size suspended-sediment load,” and so on. It is not synonymous with either suspended-sediment discharge or concentration. (See also “Sediment”)

Suspended solids, total residue at 105 °C concentration is the concentration of inorganic and organic material retained on a filter, expressed as milligrams of dry material per liter of water (mg/L). An aliquot of the sample is used for this analysis.

Suspended, total is the total amount of a given constituent in the part of a water-sediment sample that is retained on a 0.45-micrometer membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. 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 directly analyzing portions of the suspended material collected on the filter or, more commonly, by difference, on the basis of determinations of (1) dissolved and (2) total concentrations of the constituent. (See also “Suspended”)

Synoptic studies are short-term investigations of specific water-quality conditions during selected seasonal or hydrologic periods to provide improved spatial resolution for critical water-quality conditions. For the period and conditions sampled, they assess the spatial distribution of selected water-quality conditions in relation to causative factors, such as land use and contaminant sources.

Taxa (Species) richness is the number of species (taxa) present in a defined area or sampling unit.

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

Kingdom:	Animal
Phylum:	Arthropoda
Class:	Insecta
Order:	Ephemeroptera
Family:	Ephemeridae
Genus:	<i>Hexagenia</i>
Species:	<i>Hexagenia limbata</i>

Thalweg is the line formed by connecting points of minimum streambed elevation (deepest part of the channel).

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

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water resulting from the mixing of flow proportionally to the duration of the concentration.

Tons per acre-foot (T/acre-ft) is the dry mass (tons) of a constituent per unit volume (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, tons/d) is a common chemical or sediment discharge unit. It is the quantity of a substance in solution, in suspension, or as bedload that passes a stream section during a 24-hour period. It is equivalent to 2,000 pounds per day, or 0.9072 metric ton per day.

Total is the amount of a given constituent in a representative whole-water (unfiltered) 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 at least 95 percent of the constituent in the sample.)

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

Total discharge is the quantity of a given constituent, measured as dry mass or volume, that passes a stream cross section per unit of time. When referring to constituents other than water, this term needs to be qualified, such as “total sediment discharge,” “total chloride discharge,” and so on.

Total in bottom material is the amount of a given constituent in a representative sample of bottom material. 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 judge when the results should be reported as “total in bottom material.”

Total length (fish) is the straight-line distance from the anterior point of a fish specimen’s snout, with the mouth closed, to the posterior end of the caudal (tail) fin, with the lobes of the caudal fin squeezed together.

Total load refers to all of a constituent in transport. When referring to sediment, it includes suspended load plus bed load.

Total organism count is the number of organisms collected and enumerated in any particular sample. (See also “Organism count/volume”)

Total recoverable is the amount of a given constituent in a whole-water sample after a 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 for whole-water samples, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures may produce different analytical results.

Total sediment discharge is the mass of suspended-sediment plus bed-load transport, measured as dry weight, that passes a cross section in a given time. It is a rate and is reported as tons per day. (See also “Bedload,” “Bedload discharge,” “Sediment,” “Suspended sediment,” and “Suspended-sediment concentration”)

Total sediment load or **total load** is the sediment in transport as bedload and suspended-sediment load. The term may be qualified, such as “annual suspended-sediment load” or “sand-size suspended-sediment load,” and so on. It differs from total sediment discharge in that load refers to the material, whereas discharge refers to the quantity of material, expressed in units of mass per unit time. (See also “Sediment,” “Suspended-sediment load,” and “Total load”)

Transect, as used in this report, is a line across a stream perpendicular to the flow and along which measurements are taken, so that morphological and flow characteristics along the line are described from bank to bank. Unlike a cross section, no attempt is made to determine known elevation points along the line.

Turbidity is the reduction in the transparency of a solution because of the presence of suspended and some dissolved substances. The measurement technique records the collective optical properties of the solution that cause light to be scattered and attenuated rather than transmitted in straight lines; the higher the intensity of scattered or attenuated light, the higher the value of the turbidity. Turbidity is expressed in nephelometric turbidity units (NTU). Depending on the method used, the turbidity units as NTU can be defined as the intensity of light of a specified wavelength scattered or attenuated by suspended particles or absorbed at a method specified angle, usually 90 degrees, from the path of the incident light. Currently approved methods for the measurement of turbidity in the USGS include those that conform to USEPA Method 180.1, ASTM D1889-00, and ISO 7027. Measurements of turbidity by these different methods and different instruments are unlikely to yield equivalent values.

Ultraviolet (UV) absorbance (absorption) at 254 or 280 nanometers is a measure of the aggregate concentration of the mixture of UV absorbing organic materials dissolved in the analyzed water, such as lignin, tannin, humic substances, and various aromatic compounds. UV absorbance (absorption) at 254 or 280 nanometers is measured in UV absorption units per centimeter of path length of UV light through a sample.

Unconfined aquifer is an aquifer whose upper surface is a water table free to fluctuate under atmospheric pressure. (See “Water-table aquifer”)

Vertical datum (See “Datum”)

Volatile organic compounds (VOCs) are organic compounds that can be isolated from the water phase of a sample by purging the water sample with inert gas, such as helium, and, subsequently, analyzed by gas chromatography. Many VOCs are human-made chemicals that are used and produced in the manufacture of paints, adhesives, petroleum products, pharmaceuticals, and refrigerants. They often are components of fuels, solvents, hydraulic fluids, paint thinners, and dry-cleaning agents commonly used in urban settings. VOC contamination of drinking-water supplies is a human-health concern because many are toxic and are known or suspected human carcinogens.

Water table is that surface in a ground-water body at which the water pressure is equal to the atmospheric pressure.

Water-table aquifer is an unconfined aquifer within which the water table is found.

Water year in USGS 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, 2002, is called the “2002 water year.”

Watershed (See “Drainage basin”)

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.

Wet mass is the mass of living matter plus contained water. (See also “Biomass” and “Dry mass”)

Wet weight refers to the weight of animal tissue or other substance including its contained water. (See also “Dry weight”)

WSP is used as an acronym for “Water-Supply Paper” in reference to previously published reports.

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

Table 2.--Factors for conversion of chemical constituents in milligrams or micrograms per liter to milliequivalents or microequivalents per liter

Ion	Multiply by	Ion	Multiply by
Aluminum (Al ⁺³)	0.11119	Iodide (I ⁻¹)	0.00788
Ammonia as NH ₄ ⁺¹	.05544	Iron (Fe ⁺³)*	.05372
Barium (Ba ⁺²)	.01456	Lead (Pb ⁺²)*	.00965
Bicarbonate (HCO ₃ ⁻¹)	.01639	Lithium (Li ⁺¹)*	.14411
Bromide (Br ⁻¹)	.01251	Magnesium (Mg ⁺²)	.08226
Calcium (Ca ⁺²)	.04990	Manganese (Mn ⁺²)*	.03640
Carbonate (CO ₃ ⁻²)	.03333	Nickel (Ni ⁺²)*	.03406
Chloride (Cl ⁻¹)	.02821	Nitrate (NO ₃ ⁻¹)	.01613
Chromium (Cr ⁺⁶)*	.11539	Nitrite (NO ₂ ⁻¹)	.02174
Cobalt (Co ⁺²)*	.03394	Phosphate (PO ₄ ⁻³)	.03159
Copper (Cu ⁺²)*	.03148	Potassium (K ⁺¹)	.02557
Cyanide (CN ⁻¹)	.03844	Sodium (Na ⁺¹)	.04350
Fluoride (F ⁻¹)	.05264	Strontium (Sr ⁺²)*	.02283
Hydrogen (H ⁺¹)	.99209	Sulfate (SO ₄ ⁻²)	.02082
Hydroxide (OH ⁻¹)	.05880	Zinc (Zn ⁺²)*	.03060

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

Table 3.--Factors for conversion of sediment concentrations in milligrams per liter to parts per million*

(All values calculated to three significant figures)

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

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

52 TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS OF THE U.S. GEOLOGICAL SURVEY

The USGS publishes a series of manuals, the Techniques of Water-Resources Investigations, 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.

Reports in the Techniques of Water-Resources Investigations series, which are listed below, are online at <http://water.usgs.gov/pubs/twri/>. Printed copies are for sale by the USGS, Information Services, Box 25286, Federal Center, Denver, Colorado 80225 (authorized agent of the Superintendent of Documents, Government Printing Office), telephone 1-888-ASK-USGS. Please telephone 1-888-ASK-USGS for current prices, and refer to the title, book number, chapter number, and mention the "U.S. Geological Survey Techniques of Water-Resources Investigations." Products can then be ordered by telephone, or online at <http://www.usgs.gov/sales.html>, or by FAX to (303)236-469 of an order form available online at <http://mac.usgs.gov/isb/pubs/forms/>. Prepayment by major credit card or by a check or money order payable to the "U.S. Geological Survey" is required.

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- 1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents*, by W.W. Wood: USGS–TWRI book 1, chap. D2. 1976. 24 p.

Book 2. Collection of Environmental Data

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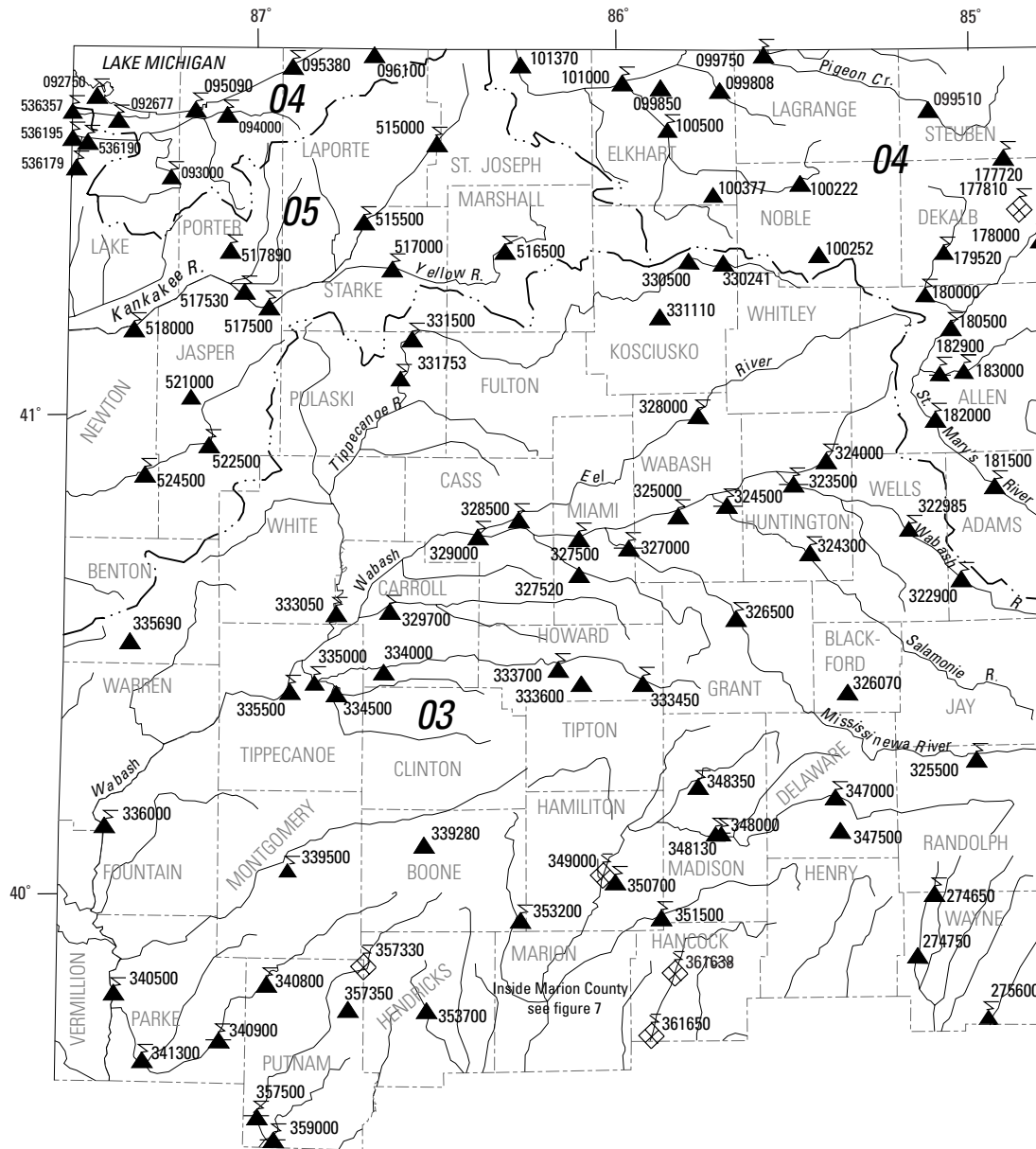
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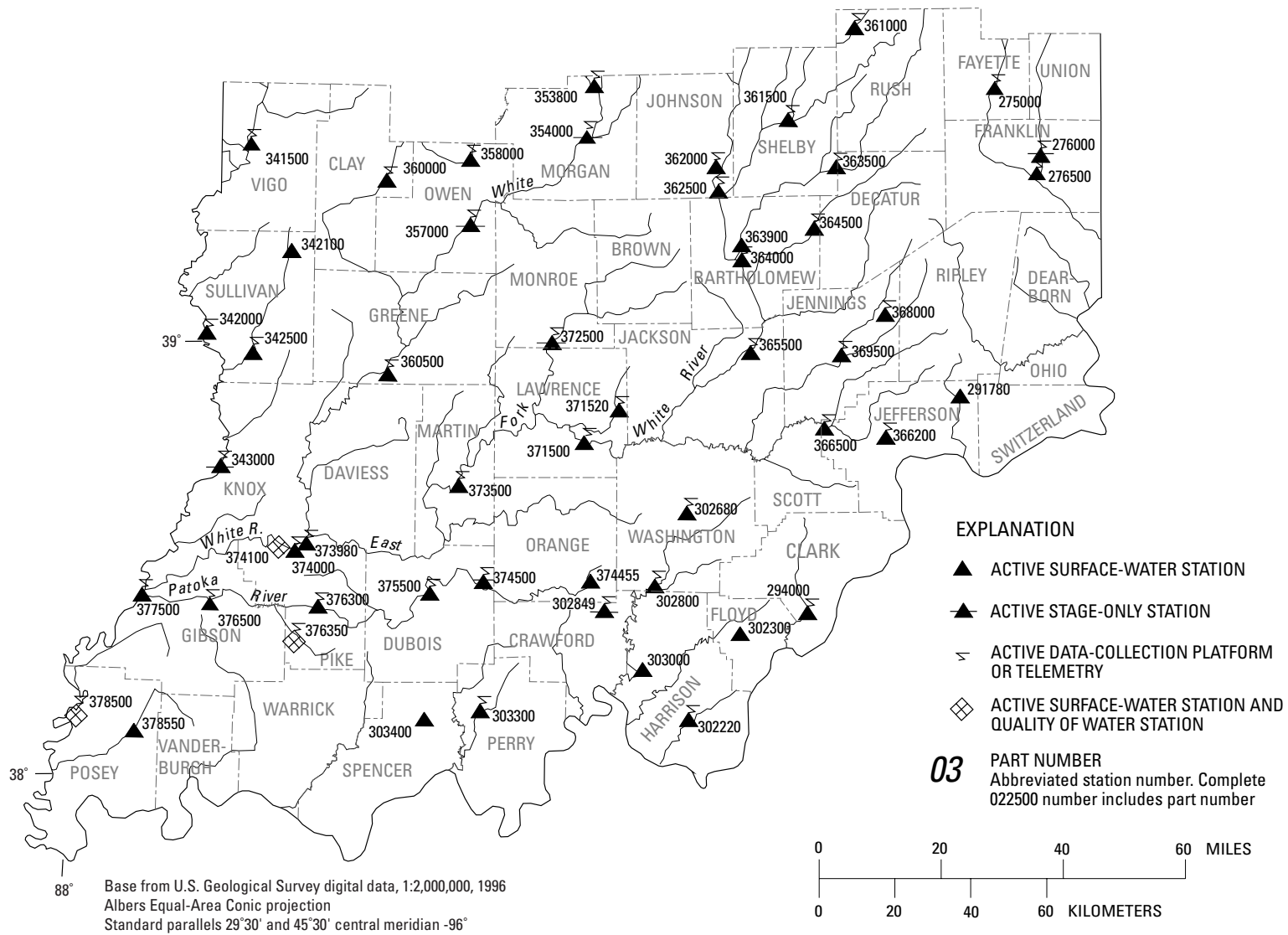
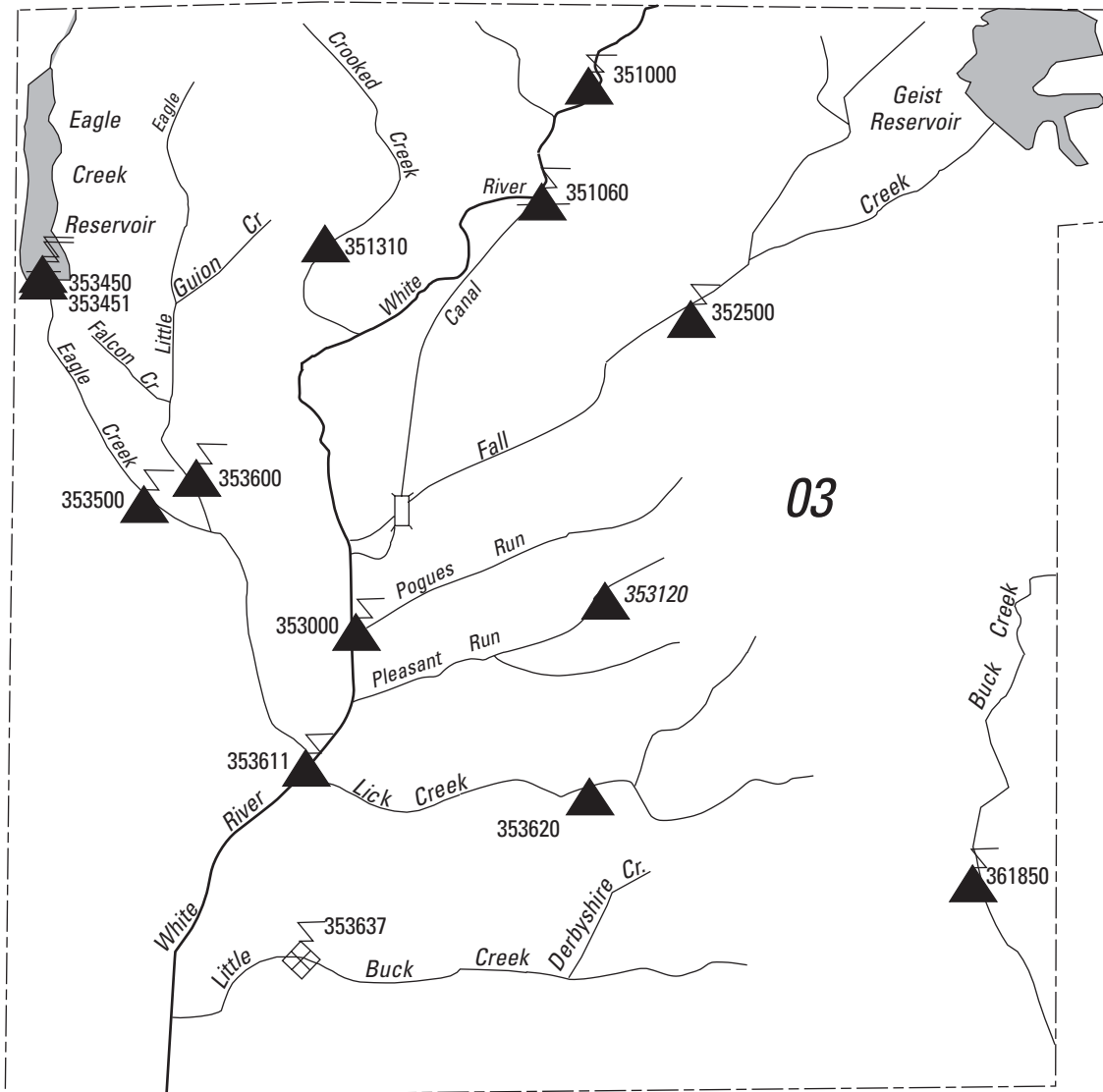
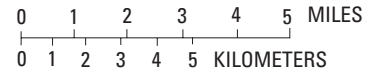


Figure 6.--Locations of streamflow and water-quality gaging stations in Indiana.



Base from U.S. Geological Survey digital data, 1:2,000,000, 1996
 Albers Equal-Area Conic projection
 Standard parallels 29°30' and 45°30' central meridian -96°







- EXPLANATION**
-  ACTIVE STAGE-ONLY STATION
 -  ACTIVE SURFACE-WATER STATION
 -  ACTIVE DATA-COLLECTION PLATFORM OR TELEMETRY
 -  ACTIVE SURFACE-WATER STATION AND QUALITY OF WATER STATION
 - 03** PART NUMBER
Abbreviated station number: complete
302500 number includes part number

Figure 7.--Locations of streamflow-gaging stations in Marion County.

STATION RECORDS FOR

GAGING STATIONS

IN THE

STATE OF INDIANA

GREAT MIAMI RIVER BASIN

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, (CARLOS, IN quadrangle), 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.

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

REMARKS.--Records fair except for estimated daily discharges and those below 1.0 ft³/s, which are poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.30	e0.58	0.97	64	e1.3	e2.6	15	7.5	4.1	3.0	5.3	465
2	0.28	e0.58	1.6	35	e1.3	e2.5	13	7.6	3.8	3.1	157	227
3	0.28	e0.56	1.1	18	e3.8	e2.5	12	7.3	4.8	3.0	105	80
4	0.41	e0.56	0.75	11	22	e2.6	12	7.3	5.1	3.1	36	45
5	0.44	e0.60	0.73	7.2	e8.0	38	20	21	4.4	188	22	32
6	0.36	e0.64	0.70	5.4	e3.8	30	15	15	3.9	63	13	26
7	0.33	e0.60	0.67	4.9	e2.7	e18	18	13	3.8	416	8.7	22
8	0.33	e0.58	0.67	7.0	e2.1	65	18	11	3.7	142	6.8	18
9	0.33	e0.56	0.65	18	e1.7	85	15	26	3.6	487	6.0	16
10	0.33	e2.7	0.62	9.2	e1.6	e32	14	154	3.5	234	5.5	14
11	0.31	4.8	0.70	e5.2	e1.5	e24	13	112	3.3	92	5.1	13
12	0.30	2.3	0.69	e3.6	e1.4	36	12	40	5.5	58	4.7	12
13	0.29	1.5	0.79	e3.0	e1.4	95	11	26	34	41	4.7	10
14	0.29	1.3	e0.76	e2.5	e1.5	45	10	20	42	32	4.4	8.2
15	0.31	1.2	e0.74	e2.2	e1.5	39	10	18	15	28	4.0	7.1
16	0.30	1.2	e0.72	e2.0	e1.3	35	10	15	9.2	24	3.9	6.3
17	0.30	1.0	e0.70	e1.9	e1.4	29	9.7	13	7.3	19	4.3	5.8
18	0.29	0.95	e0.90	e1.8	e1.2	23	9.3	15	6.2	17	3.9	5.6
19	0.44	0.94	22	e1.7	e1.2	23	9.2	10	5.4	14	3.4	5.5
20	0.39	0.89	31	e1.6	e1.2	25	9.3	9.0	4.7	13	3.3	5.3
21	0.38	0.89	11	e1.5	e1.3	39	9.2	7.8	4.3	14	3.5	5.3
22	0.38	0.96	5.8	e1.5	e8.0	26	8.6	6.8	4.1	12	3.9	21
23	0.38	0.90	3.9	e1.5	e22	20	8.2	6.0	3.8	9.7	4.1	15
24	0.40	1.1	3.2	e1.4	e13	17	8.2	5.6	3.6	7.2	4.2	9.9
25	0.76	1.2	3.0	e1.4	e8.0	17	8.5	5.3	3.5	6.0	4.2	8.0
26	0.89	1.2	2.2	e1.4	e5.6	28	8.5	5.0	3.6	5.5	4.6	7.8
27	0.75	1.1	2.0	e1.3	e4.0	20	7.8	4.7	4.0	5.3	5.4	76
28	0.57	1.0	1.9	e1.4	e3.0	16	7.5	4.5	3.5	5.4	5.4	27
29	e0.70	1.2	1.8	e1.4	---	27	7.5	4.6	3.2	5.2	5.3	18
30	e0.64	1.1	21	e1.3	---	20	7.5	4.3	3.1	4.9	4.2	12
31	e0.60	---	50	e1.3	---	16	---	4.7	---	4.7	17	---
TOTAL	13.06	34.69	173.26	220.6	126.8	898.2	337.0	607.0	210.0	1,960.1	506.6	1,223.8
MEAN	0.42	1.16	5.59	7.12	4.53	29.0	11.2	19.6	7.00	63.2	16.3	40.8
MAX	0.89	4.8	50	64	22	95	20	154	42	487	157	465
MIN	0.28	0.56	0.62	1.3	1.2	2.5	7.5	4.3	3.1	3.0	3.3	5.3
CFSM	0.04	0.11	0.54	0.68	0.44	2.79	1.08	1.88	0.67	6.08	1.57	3.92
IN.	0.05	0.12	0.62	0.79	0.45	3.21	1.21	2.17	0.75	7.01	1.81	4.38

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 2003, BY WATER YEAR (WY)

	4.39	10.3	12.3	12.8	17.4	19.7	19.0	14.4	9.24	8.72	4.59	4.16
MEAN	4.39	10.3	12.3	12.8	17.4	19.7	19.0	14.4	9.24	8.72	4.59	4.16
MAX	39.9	67.0	39.7	37.7	56.0	41.6	46.0	58.4	24.8	63.2	61.5	40.8
(WY)	(1987)	(1994)	(1978)	(1996)	(1985)	(1978)	(1996)	(1996)	(1998)	(2003)	(1979)	(2003)
MIN	0.14	0.097	0.19	0.33	3.31	2.58	2.96	1.47	1.03	0.57	0.40	0.15
(WY)	(2000)	(2000)	(2000)	(1977)	(1978)	(1981)	(1971)	(1988)	(1977)	(1977)	(1999)	(1999)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

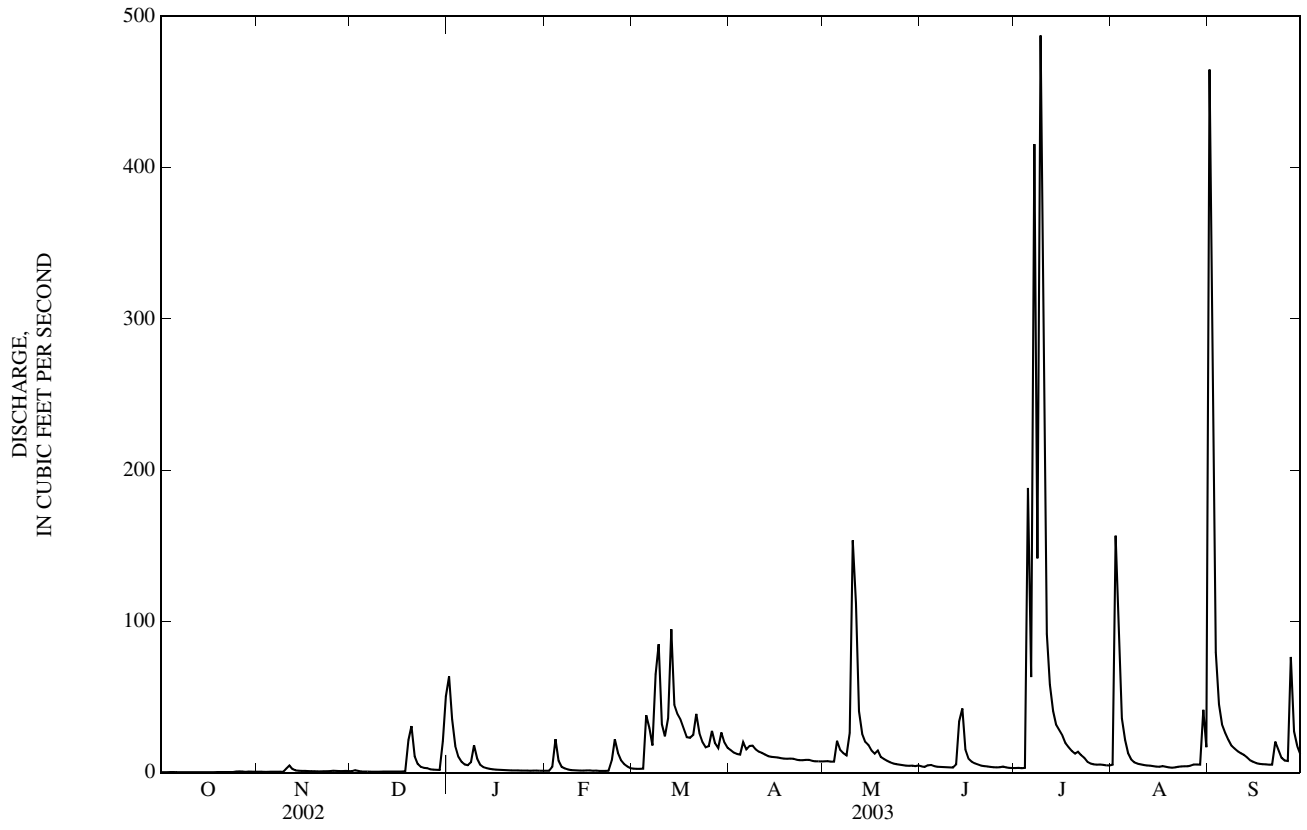
FOR 2003 WATER YEAR

WATER YEARS 1971 - 2003

ANNUAL TOTAL	3,747.00	6,311.11	
ANNUAL MEAN	10.3	17.3	11.4
HIGHEST ANNUAL MEAN			18.8
LOWEST ANNUAL MEAN			3.26
HIGHEST DAILY MEAN	223	487	647
LOWEST DAILY MEAN	0.28	0.28	0.00
ANNUAL SEVEN-DAY MINIMUM	0.30	0.30	0.00
MAXIMUM PEAK FLOW		1,040	1,120
MAXIMUM PEAK STAGE		8.76	8.91
ANNUAL RUNOFF (CFSM)	0.99	1.66	1.09
ANNUAL RUNOFF (INCHES)	13.40	22.57	14.86
10 PERCENT EXCEEDS	26	32	25
50 PERCENT EXCEEDS	3.1	5.2	4.0
90 PERCENT EXCEEDS	0.41	0.64	0.70

e Estimated

03274650 WHITEWATER RIVER NEAR ECONOMY, IN—Continued



GREAT MIAMI RIVER BASIN

03274750 WHITEWATER RIVER NEAR HAGERSTOWN, IN

LOCATION.--Lat 39°52'25", long 85°09'47", in NE¼NE¼ sec.3, T.16 N., R.12 E., Wayne County, Hydrologic Unit 05080003, (CAMBRIDGE CITY, IN quadrangle), on right bank at upstream 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 October 2003 (discontinued).

REVISED RECORDS.--WDR IN-01-1: 1997-2000 (P).

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 fair except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	17	14	232	e20	e36	66	35	39	28	41	1,500
2	15	17	14	157	e20	e36	62	35	38	27	514	1,290
3	15	17	14	89	e24	e35	59	34	42	26	681	284
4	17	17	14	68	82	e36	58	34	41	29	159	174
5	16	18	14	59	45	152	92	85	38	448	110	130
6	16	19	13	51	38	136	71	62	37	169	89	107
7	15	18	13	47	34	81	77	53	36	695	75	93
8	15	18	13	46	e25	206	79	50	36	296	67	81
9	15	17	12	71	e25	e400	71	69	35	1,650	72	74
10	15	26	12	59	e24	e130	65	473	34	835	75	66
11	15	33	13	46	e22	e100	61	604	34	309	60	61
12	15	26	14	e37	e21	131	57	197	40	211	57	56
13	15	23	14	e34	e20	420	53	123	45	158	60	52
14	15	21	14	e32	e21	223	51	101	112	131	52	49
15	15	20	13	e29	e21	175	49	97	63	119	48	46
16	15	19	13	e28	e19	156	47	83	53	106	46	42
17	15	18	13	e27	e20	128	46	75	49	92	46	40
18	15	17	15	e26	e20	105	45	74	44	85	43	38
19	19	17	58	e25	e19	96	43	67	39	78	40	36
20	17	16	104	e24	e19	101	44	63	38	72	39	35
21	16	16	55	e23	e19	158	43	58	36	169	37	34
22	16	17	41	e22	e56	119	41	54	37	110	35	86
23	16	16	34	e22	e130	89	40	52	36	74	34	70
24	16	16	30	e21	e80	77	39	49	36	62	32	50
25	23	15	30	e21	e58	72	41	47	32	55	31	44
26	21	15	27	e21	e50	104	40	45	33	51	32	43
27	19	15	25	e20	e45	80	37	42	30	49	31	289
28	18	15	24	e21	e39	70	36	42	28	49	30	108
29	20	15	23	e21	---	107	36	42	27	46	33	78
30	19	14	48	e20	---	87	35	41	27	43	80	62
31	18	---	135	e20	---	73	---	46	---	42	53	---
TOTAL	513	548	876	1,419	1,016	3,919	1,584	2,932	1,215	6,314	2,802	5,118
MEAN	16.5	18.3	28.3	45.8	36.3	126	52.8	94.6	40.5	204	90.4	171
MAX	23	33	135	232	130	420	92	604	112	1,650	681	1,500
MIN	15	14	12	20	19	35	35	34	27	26	30	34
CFSM	0.28	0.31	0.48	0.78	0.62	2.15	0.90	1.61	0.69	3.47	1.54	2.91
IN.	0.33	0.35	0.56	0.90	0.64	2.48	1.00	1.86	0.77	4.00	1.78	3.24

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 2003, BY WATER YEAR (WY)

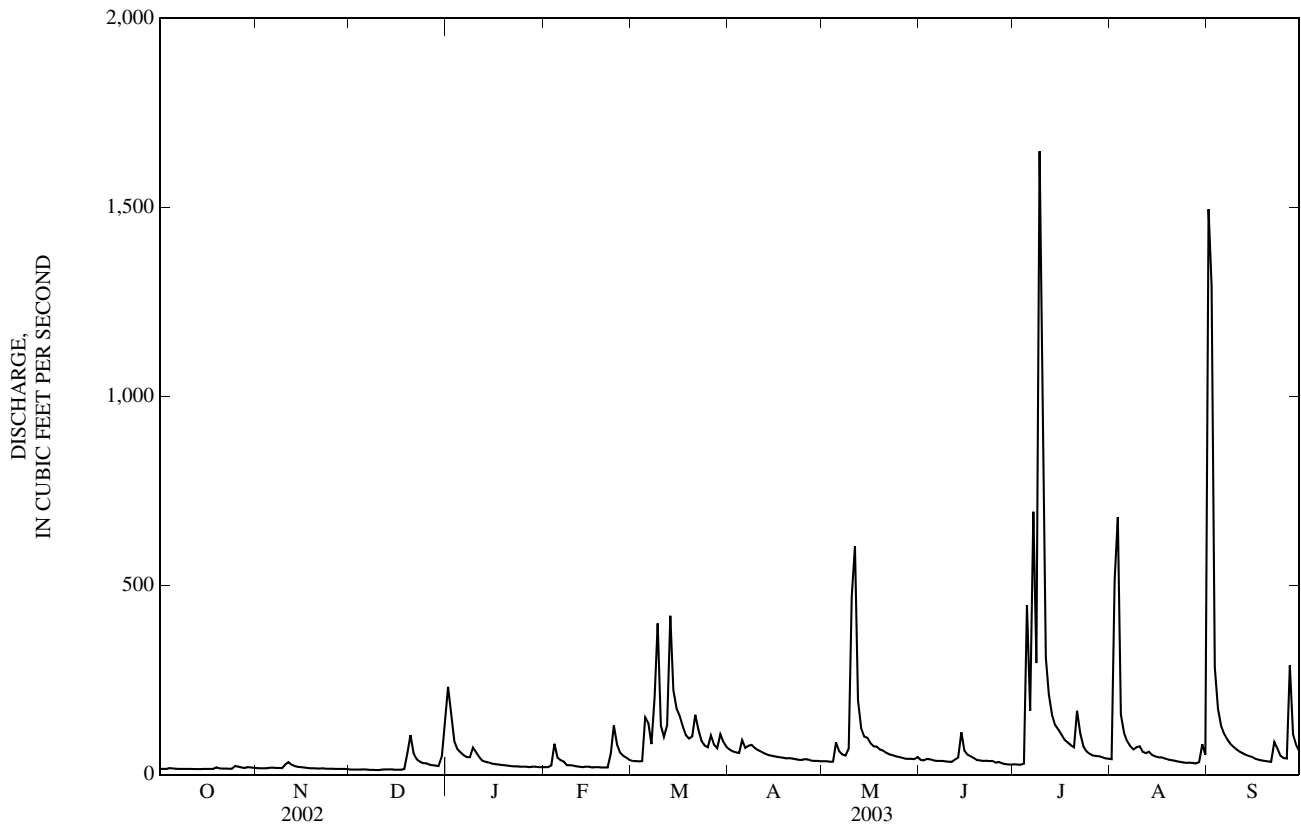
	MEAN	31.8	53.0	70.7	74.5	95.3	110	116	95.9	67.0	56.0	36.2	28.3
MAX	188	235	205	208	233	224	286	420	212	219	312	171	
(WY)	(1987)	(1994)	(1978)	(1996)	(1975)	(1973)	(1996)	(1996)	(1996)	(1979)	(1979)	(2003)	
MIN	6.67	7.26	6.58	8.48	23.0	25.6	28.0	23.0	14.6	8.18	8.56	6.93	
(WY)	(2000)	(2000)	(2000)	(1977)	(1995)	(1981)	(1971)	(1988)	(1977)	(1977)	(1988)	(1999)	

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1971 - 2003	
ANNUAL TOTAL	27,593		28,256			
ANNUAL MEAN	75.6		77.4		69.4	
HIGHEST ANNUAL MEAN					121	
LOWEST ANNUAL MEAN					25.4	
HIGHEST DAILY MEAN	2,000		1,650		2,000	
LOWEST DAILY MEAN	11		12		3.9	
ANNUAL SEVEN-DAY MINIMUM	11		13		4.3	
MAXIMUM PEAK FLOW			3,020		3,210	
MAXIMUM PEAK STAGE			11.04		11.52	
ANNUAL RUNOFF (CFSM)	1.29		1.32		1.18	
ANNUAL RUNOFF (INCHES)	17.49		17.91		16.07	
10 PERCENT EXCEEDS	160		130		128	
50 PERCENT EXCEEDS	41		40		37	
90 PERCENT EXCEEDS	14		15		14	

03274750 WHITEWATER RIVER NEAR HAGERSTOWN, IN—Continued

e Estimated



GREAT MIAMI RIVER BASIN

03275000 WHITEWATER RIVER NEAR ALPINE, IN

(Former National stream-quality accounting network station)

LOCATION.--Lat 39°34'46", long 85°09'29", in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.14, T.13 N., R.12 E., Fayette County, Hydrologic Unit 05080003, (ALPINE, IN quadrangle), 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 mi².

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 at site .5 mi downstream and same datum. Oct. 1, 1982 to June 30, 1993, at same site and datum. July 1, 1993 to Oct. 22, 1998 gage at site .5 mi downstream and at same datum.

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

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e150	148	143	2,620	219	392	614	263	368	223	365	3,040
2	e140	140	142	2,700	220	392	561	267	334	222	3,030	14,400
3	134	135	139	1,290	236	386	507	265	365	211	3,260	5,170
4	153	137	136	863	434	391	484	263	375	204	1,660	1,880
5	151	142	139	700	481	1,380	688	716	356	1,640	1,260	1,280
6	144	145	136	597	375	2,160	690	851	327	1,830	877	952
7	145	139	133	518	331	1,150	624	585	317	2,990	695	760
8	146	133	134	496	273	1,610	668	518	309	5,410	585	645
9	150	131	132	581	283	4,620	612	531	298	5,830	548	571
10	151	299	131	651	267	2,080	559	2,160	284	9,620	682	513
11	152	479	140	496	249	1,290	515	6,570	332	3,180	525	466
12	150	292	140	397	239	1,130	478	2,740	443	1,870	470	428
13	142	236	142	391	219	1,960	444	1,390	742	1,350	470	399
14	137	208	154	367	231	3,000	408	1,010	1,310	1,030	423	386
15	133	193	154	317	235	1,680	389	1,200	2,070	890	387	388
16	135	184	156	314	213	1,430	376	953	1,690	814	363	354
17	133	175	158	302	210	1,240	366	788	956	690	348	332
18	131	169	170	278	220	1,030	357	714	703	619	335	317
19	138	163	483	278	219	914	340	659	580	560	317	306
20	131	160	1,570	278	215	1,010	335	668	490	507	301	298
21	126	159	911	266	216	1,800	341	660	430	560	289	287
22	119	164	570	248	490	1,710	327	594	388	1,720	280	430
23	118	159	424	236	1,630	1,070	313	534	359	929	270	703
24	118	154	359	223	1,170	875	297	491	332	720	260	539
25	151	153	340	232	697	776	314	459	308	577	254	445
26	180	150	302	230	580	834	323	434	294	496	248	413
27	158	149	274	212	491	804	293	402	288	456	263	2,040
28	146	149	259	231	432	702	281	385	265	531	256	1,500
29	166	147	254	228	---	717	274	398	245	451	252	916
30	171	147	391	223	---	766	265	366	233	407	346	690
31	158	---	1,330	217	---	672	---	390	---	381	514	---
TOTAL	4,457	5,339	10,046	16,980	11,075	39,971	13,043	28,224	15,791	46,918	20,133	40,848
MEAN	144	178	324	548	396	1,289	435	910	526	1,513	649	1,362
MAX	180	479	1,570	2,700	1,630	4,620	690	6,570	2,070	9,620	3,260	14,400
MIN	118	131	131	212	210	386	265	263	233	204	248	287
CFSM	0.28	0.34	0.62	1.05	0.76	2.47	0.83	1.74	1.01	2.90	1.24	2.61
IN.	0.32	0.38	0.72	1.21	0.79	2.85	0.93	2.01	1.13	3.34	1.43	2.91

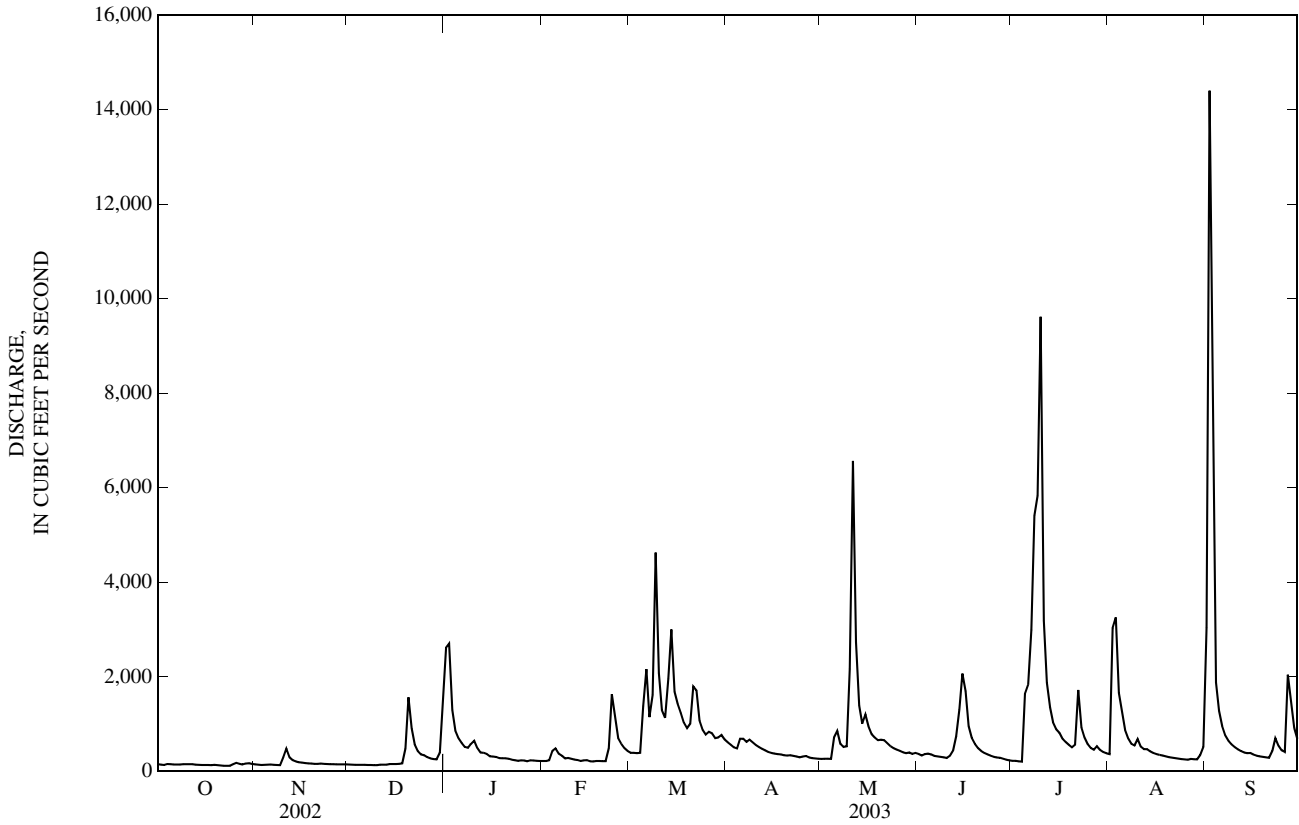
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2003, BY WATER YEAR (WY)

MEAN	202	349	556	810	857	999	1,009	791	552	384	244	191
MAX	1,685	1,978	2,531	4,409	2,639	2,522	2,665	3,763	2,609	1,777	2,342	1,362
(WY)	(1987)	(1994)	(1991)	(1937)	(1950)	(1963)	(2002)	(1996)	(1998)	(1979)	(1979)	(2003)
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)

03275000 WHITEWATER RIVER NEAR ALPINE, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1929 - 2003	
ANNUAL TOTAL	293,256		252,825		577	
ANNUAL MEAN	803		693		1,066	
HIGHEST ANNUAL MEAN					117	
LOWEST ANNUAL MEAN					26,300	
HIGHEST DAILY MEAN	14,300	May 13	14,400	Sep 2	37,100	Jan 14, 1937
LOWEST DAILY MEAN	114	Sep 12	118	Oct 23	19,700	Dec 31, 1990
ANNUAL SEVEN-DAY MINIMUM	116	Sep 8	126	Oct 18	1,110	Aug 2, 1934
MAXIMUM PEAK FLOW			17,700	Sep 2	33	Aug 2, 1934
MAXIMUM PEAK STAGE			18.63	Sep 2	15.02	Jan 14, 1937
ANNUAL RUNOFF (CFSM)	1.54		1.33		1.11	
ANNUAL RUNOFF (INCHES)	20.90		18.02		15.02	
10 PERCENT EXCEEDS	1,620		1,460		1,160	
50 PERCENT EXCEEDS	389		368		280	
90 PERCENT EXCEEDS	134		145		88	

e Estimated



03275600 EAST FORK WHITEWATER RIVER AT ABINGTON, IN

LOCATION.--Lat 39°43'59", long 84°57'35", in NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.2, T.12 N., R.2 W., Wayne County, Hydrologic Unit 05080003, (LIBERTY, IN quadrangle), 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 except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	46	41	1,310	80	188	275	95	136	87	136	2,800
2	30	41	40	871	84	197	244	145	113	84	3,650	5,500
3	30	40	38	474	105	195	223	123	160	78	2,390	972
4	48	39	37	339	285	201	215	110	163	75	1,540	536
5	58	46	40	281	209	871	362	396	141	1,020	1,060	354
6	37	64	39	252	167	924	291	279	119	566	537	278
7	32	48	36	224	148	499	322	236	115	4,450	383	234
8	30	43	37	220	115	736	343	218	111	1,760	302	201
9	30	40	35	303	123	1,960	293	443	106	5,400	340	181
10	31	201	36	278	117	767	257	2,080	93	2,730	318	162
11	30	430	44	207	106	489	234	2,030	193	1,090	239	145
12	28	166	48	166	99	472	212	719	297	644	219	133
13	28	113	47	166	85	1,170	191	439	e450	440	213	123
14	26	89	61	155	92	1,080	177	331	e750	340	174	119
15	27	74	63	126	99	667	167	356	e1,400	291	158	141
16	27	70	61	122	82	584	159	283	e1,100	266	148	116
17	29	62	65	129	88	493	154	271	e600	218	160	106
18	29	57	111	116	93	403	147	292	e430	195	136	98
19	41	54	474	116	93	406	139	249	324	179	125	97
20	37	52	829	115	91	584	139	273	251	159	119	94
21	32	51	416	107	94	2,310	150	311	207	539	113	85
22	32	63	264	93	318	1,010	133	244	180	1,540	109	201
23	30	57	199	88	826	583	118	208	162	473	102	192
24	30	53	167	98	490	443	112	185	142	470	94	148
25	97	51	165	83	303	382	119	168	128	298	88	123
26	120	50	137	85	259	415	130	153	131	226	85	111
27	58	47	116	79	223	357	108	139	136	197	114	825
28	46	45	109	87	203	314	100	140	112	208	102	453
29	86	45	106	86	---	377	94	153	101	179	124	284
30	84	45	312	81	---	347	92	128	91	156	275	216
31	55	---	947	78	---	301	---	176	---	143	235	---
TOTAL	1,330	2,282	5,120	6,935	5,077	19,725	5,700	11,373	8,442	24,501	13,788	15,028
MEAN	42.9	76.1	165	224	181	636	190	367	281	790	445	501
MAX	120	430	947	1,310	826	2,310	362	2,080	1,400	5,400	3,650	5,500
MIN	26	39	35	78	80	188	92	95	91	75	85	85
CFSM	0.21	0.38	0.83	1.12	0.91	3.18	0.95	1.83	1.41	3.95	2.22	2.50
IN.	0.25	0.42	0.95	1.29	0.94	3.67	1.06	2.12	1.57	4.56	2.56	2.80

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2003, BY WATER YEAR (WY)

MEAN	85.8	163	274	268	310	371	397	348	205	175	112	68.3
MAX	615	732	929	708	901	884	1,052	1,049	789	790	773	501
(WY)	(1987)	(1994)	(1991)	(1969)	(1975)	(1978)	(2002)	(1968)	(1998)	(2003)	(1979)	(2003)
MIN	18.8	25.5	26.5	21.3	83.8	111	88.7	55.9	24.6	22.9	18.6	12.9
(WY)	(2000)	(2000)	(1977)	(1977)	(1992)	(1992)	(1976)	(1976)	(1988)	(1988)	(1988)	(1999)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

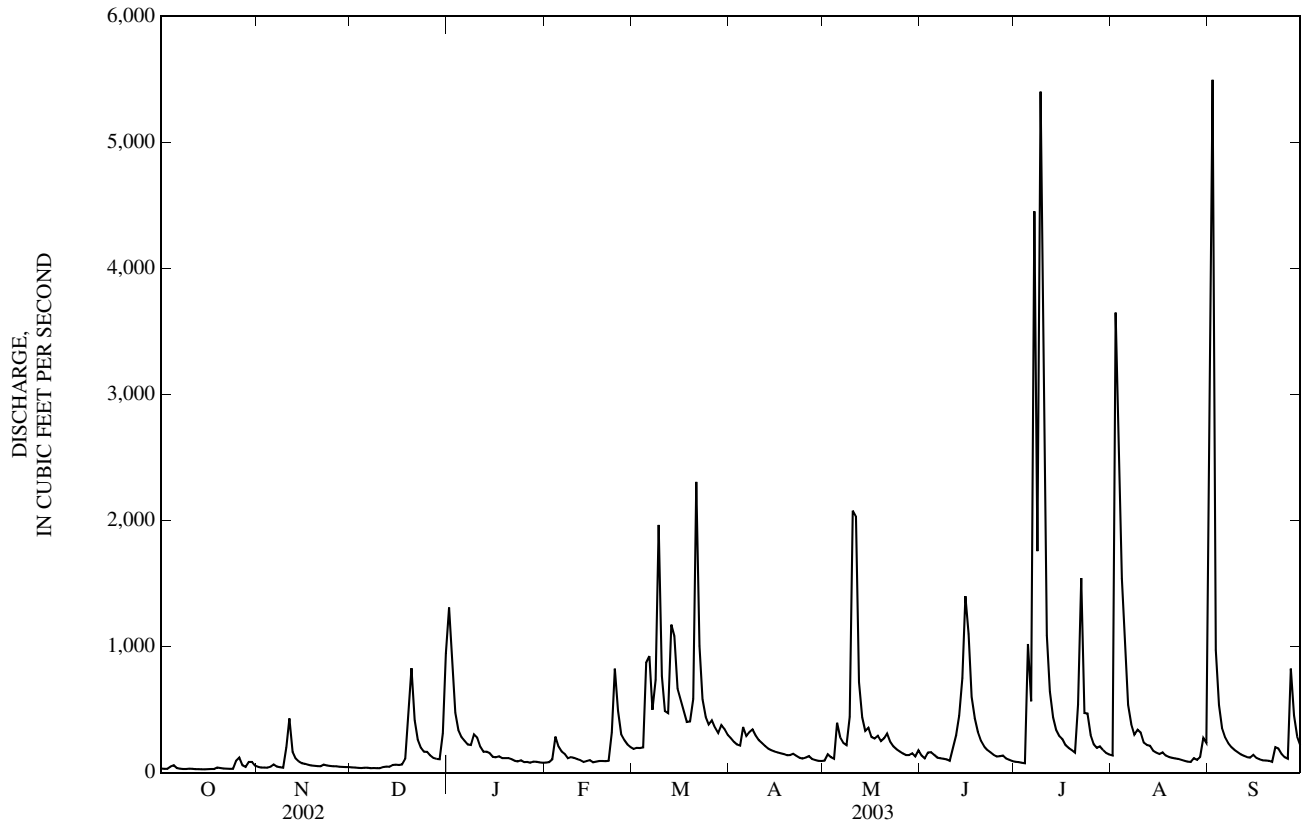
FOR 2003 WATER YEAR

WATER YEARS 1966 - 2003

ANNUAL TOTAL	106,519	119,301	
ANNUAL MEAN	292	327	231
HIGHEST ANNUAL MEAN			388
LOWEST ANNUAL MEAN			92.3
HIGHEST DAILY MEAN	6,880	May 13	5,500
LOWEST DAILY MEAN	14	Sep 14	26
ANNUAL SEVEN-DAY MINIMUM	16	Sep 8	28
MAXIMUM PEAK FLOW			11,100
MAXIMUM PEAK STAGE			13.96
ANNUAL RUNOFF (CFSM)	1.46		1.63
ANNUAL RUNOFF (INCHES)	19.81		22.19
10 PERCENT EXCEEDS	606		653
50 PERCENT EXCEEDS	127		150
90 PERCENT EXCEEDS	28		42
			33

e Estimated

03275600 EAST FORK WHITEWATER RIVER AT ABINGTON, IN—Continued



03276000 EAST FORK WHITEWATER RIVER AT BROOKVILLE, IN

LOCATION.--Lat 39°26'02", long 85°00'12", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.20, T.9 N., R.2 W., Franklin County, Hydrologic Unit 05080003, (BROOKVILLE, IN quadrangle), 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 September 1981 (discharge). October 1981 to September 2001 (discharge provided by U.S. Army Corps of Engineers). October 2001 to current year (stage only).

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 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. Data Collection Platform with water temperature probe since Nov. 5, 1986.

REMARKS.--Flow regulated by The U.S. Army Corps of Engineers from Brookville Lake since January 1974.

COOPERATION.--Records of daily discharge provided by U.S. Army Corps of Engineers October 1981 to September 2001.

EXTREMES FOR PERIOD OF RECORD.--(October 2001 to current year) maximum gage height, 8.21 ft, May 19, 2002; minimum gage height, 1.87 ft, Dec. 3, 2002. (March 1954 to September 1981) maximum discharge, 36,100 ft³/s, Jan. 21, 1959; maximum gage height, 17.35 ft, May 24, 1968; minimum discharge, no flow, Nov. 27, 1991, July 14-16, 21-26, Aug. 4-27, 1992.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 8.14 ft, July 12; minimum gage height, 1.87 ft, Dec. 3.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.69	3.77	1.93	3.38	3.11	4.45	3.67	2.92	3.03	3.08	3.79	3.61
2	2.69	3.77	1.92	4.41	3.11	4.45	3.67	2.94	3.31	3.08	3.78	3.62
3	2.69	3.77	2.68	5.50	3.13	4.44	3.67	2.95	3.08	3.08	3.79	3.62
4	2.69	3.77	1.94	5.48	3.10	4.45	3.68	2.97	3.04	3.12	5.62	5.80
5	2.69	3.77	1.95	5.48	3.10	4.45	3.36	2.94	3.33	3.79	7.22	7.30
6	2.69	---	3.35	5.47	3.10	4.45	3.36	2.93	3.30	4.47	6.49	6.54
7	2.69	5.74	3.35	4.86	3.37	4.45	3.37	2.93	3.07	5.49	3.72	4.54
8	2.69	5.74	3.35	4.32	3.37	4.46	3.37	2.93	3.03	4.50	3.72	4.54
9	2.69	3.70	3.35	4.32	3.37	3.70	3.35	2.93	3.68	4.46	3.26	3.84
10	2.69	5.40	3.35	3.65	3.37	4.52	3.19	2.94	3.66	2.61	3.26	3.29
11	2.69	5.38	3.35	3.65	3.36	4.52	2.85	2.94	3.68	6.41	3.16	3.29
12	2.69	5.56	3.35	3.21	3.36	4.52	2.85	2.93	3.67	8.12	3.16	3.29
13	2.69	5.55	3.36	3.20	3.36	4.52	2.85	3.97	3.68	8.09	3.17	2.85
14	2.69	5.54	3.36	3.20	3.36	4.52	2.84	3.93	3.68	8.02	3.17	2.85
15	2.69	5.54	3.36	3.20	3.36	4.52	2.84	4.60	4.48	8.00	3.75	2.85
16	2.69	4.47	3.35	3.19	3.36	4.52	2.85	5.58	4.47	4.52	3.75	2.85
17	2.69	3.89	3.35	3.20	3.36	5.12	2.85	5.56	5.46	3.33	3.75	2.85
18	2.69	1.97	3.35	3.20	3.36	5.12	2.86	5.55	6.41	3.33	3.02	2.85
19	2.69	1.95	3.42	3.20	3.36	5.12	2.86	5.55	6.75	3.60	3.02	2.85
20	2.69	1.93	3.37	3.20	3.37	4.45	2.88	4.52	6.73	3.60	3.02	2.85
21	2.69	1.95	3.36	3.21	3.37	4.46	2.87	4.51	6.69	3.62	2.87	2.85
22	3.39	1.94	3.66	3.21	3.41	4.65	2.88	4.51	6.36	3.85	1.97	3.63
23	3.37	1.94	4.41	3.21	3.38	4.65	2.88	4.51	4.94	3.79	1.97	3.63
24	3.12	1.94	4.41	3.21	3.37	4.65	2.89	3.80	3.58	3.78	2.56	3.10
25	3.11	1.93	4.41	3.17	3.37	4.46	2.88	3.74	3.21	4.55	2.56	2.80
26	3.09	1.93	4.41	3.17	3.37	4.46	2.89	3.24	3.21	3.86	2.57	2.82
27	3.39	1.93	4.41	3.17	3.68	4.45	2.89	3.25	3.10	4.25	2.57	2.81
28	3.28	1.94	4.41	3.17	4.45	4.45	2.90	3.08	3.10	4.26	2.57	3.94
29	3.13	1.94	3.64	3.12	---	4.45	2.90	3.04	3.08	4.25	3.08	4.28
30	3.79	1.93	3.66	3.11	---	4.05	2.91	3.04	3.08	3.09	3.61	4.28
31	3.78	---	3.66	3.11	---	3.68	---	3.03	---	3.79	3.61	---
MEAN	2.90	---	3.39	3.68	3.36	4.49	3.07	3.69	4.06	4.44	3.47	3.67
MAX	3.79	---	4.41	5.50	4.45	5.12	3.68	5.58	6.75	8.12	7.22	7.30
MIN	2.69	---	1.92	3.11	3.10	3.68	2.84	2.92	3.03	2.61	1.97	2.80

03276000 EAST FORK WHITEWATER RIVER AT BROOKVILLE, IN—Continued

WATER-QUALITY RECORDS

INSTRUMENTATION.--Temperature recorder.

PERIOD OF RECORD.--

WATER TEMPERATURE.--September 1987 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 27.8°C, July 7, 1999; minimum, 1.1°C, Jan. 31, 1996.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 23.9°C, July 10 - 11, minimum, 1.4°C, Feb. 15 - 22.

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	18.7	17.9	18.4	13.7	13.3	13.4	8.6	5.6	6.4	3.9	3.9	3.9
2	19.1	18.3	18.6	13.3	13.2	13.3	9.6	5.6	7.1	3.9	3.9	3.9
3	19.1	18.3	18.6	13.2	13.1	13.2	7.7	4.7	6.2	3.9	3.9	3.9
4	18.7	16.4	17.9	13.1	12.6	12.9	6.7	4.7	6.2	4.0	3.9	4.0
5	20.7	18.3	19.4	12.6	12.2	12.5	7.7	4.7	5.8	4.0	4.0	4.0
6	19.1	17.5	18.5	---	---	---	6.7	5.7	6.3	4.0	4.0	4.0
7	20.7	17.5	19.4	12.5	11.4	12.4	6.7	6.7	6.7	4.0	3.0	3.9
8	19.2	18.4	18.8	11.4	11.4	11.4	6.7	5.7	6.1	4.0	3.0	3.0
9	19.2	18.4	18.9	11.4	11.4	11.4	5.7	5.7	5.7	4.0	3.0	4.0
10	19.2	18.8	19.0	11.4	11.4	11.4	5.7	5.7	5.7	4.0	3.0	3.4
11	20.0	18.8	19.4	11.5	11.4	11.4	5.7	5.7	5.7	3.0	3.0	3.0
12	19.2	18.8	18.8	11.5	11.5	11.5	5.7	5.7	5.7	3.0	3.0	3.0
13	20.0	18.8	19.4	11.5	11.5	11.5	5.8	5.7	5.7	3.0	3.0	3.0
14	19.2	18.0	18.8	11.5	11.5	11.5	5.8	5.8	5.8	3.1	3.0	3.0
15	18.8	18.0	18.4	11.5	11.5	11.5	5.8	4.8	5.4	3.1	3.1	3.1
16	18.4	18.4	18.4	11.5	10.5	11.0	5.8	4.8	5.0	3.1	2.1	2.9
17	18.4	16.8	17.9	10.5	10.5	10.5	4.8	4.8	4.8	3.1	2.1	2.7
18	18.1	16.9	17.5	10.5	8.5	9.9	4.8	4.8	4.8	3.1	3.1	3.1
19	17.3	16.9	17.1	11.5	7.5	9.4	4.8	4.8	4.8	3.1	3.1	3.1
20	17.3	17.3	17.3	11.5	7.5	8.9	4.8	4.8	4.8	3.1	3.1	3.1
21	17.3	16.9	17.1	10.5	7.5	8.6	4.8	4.8	4.8	3.1	2.1	2.5
22	17.3	16.9	16.9	8.6	6.5	7.6	4.8	4.8	4.8	2.1	2.1	2.1
23	17.2	16.8	17.0	8.6	6.6	7.8	4.8	4.8	4.8	2.1	2.1	2.1
24	16.8	16.4	16.7	10.6	6.6	8.1	4.9	4.8	4.8	2.1	2.1	2.1
25	16.4	15.9	16.3	8.6	6.6	7.6	4.9	4.9	4.9	2.2	2.1	2.1
26	15.9	15.8	15.8	7.6	6.6	6.8	4.9	4.9	4.9	2.2	2.2	2.2
27	15.8	15.7	15.7	8.6	6.6	7.2	4.9	3.9	4.5	2.2	2.2	2.2
28	15.7	15.6	15.6	7.6	6.6	6.9	3.9	3.9	3.9	2.2	2.2	2.2
29	15.6	14.7	14.9	9.6	6.6	7.6	3.9	3.9	3.9	2.2	2.2	2.2
30	14.7	13.5	14.0	7.6	6.6	7.2	3.9	3.9	3.9	2.2	2.2	2.2
31	13.5	13.4	13.5	---	---	---	3.9	3.9	3.9	2.2	2.2	2.2
MONTH	20.7	13.4	17.5	---	---	---	9.6	3.9	5.3	4.0	2.1	3.0

GREAT MIAMI RIVER BASIN

03276000 EAST FORK WHITEWATER RIVER AT BROOKVILLE, IN—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	2.2	2.2	2.2	2.5	2.5	2.5	6.9	4.9	5.8	11.1	10.1	10.6
2	2.2	2.2	2.2	2.6	2.5	2.6	7.0	5.9	6.0	12.1	11.1	11.2
3	2.2	2.2	2.2	2.6	2.6	2.6	7.0	6.0	6.5	12.1	11.0	11.1
4	2.2	2.2	2.2	2.6	2.6	2.6	7.0	6.0	6.4	11.0	11.0	11.0
5	2.3	2.2	2.3	2.6	2.6	2.6	8.0	7.0	7.4	11.0	10.0	10.9
6	2.3	2.3	2.3	2.6	2.6	2.6	9.0	8.0	8.3	12.0	11.0	11.2
7	2.3	2.3	2.3	2.6	2.6	2.6	9.0	8.0	8.8	11.0	11.0	11.0
8	2.3	2.3	2.3	2.6	2.6	2.6	9.0	9.0	9.0	12.0	11.0	11.1
9	2.3	2.3	2.3	2.6	2.6	2.6	9.0	9.0	9.0	11.0	11.0	11.0
10	2.3	2.3	2.3	2.7	2.6	2.7	9.1	9.0	9.0	12.0	11.0	11.1
11	2.3	2.3	2.3	2.7	2.7	2.7	9.1	9.1	9.1	11.0	11.0	11.0
12	2.3	2.3	2.3	2.7	2.7	2.7	9.1	9.1	9.1	13.0	11.0	11.7
13	2.3	2.3	2.3	2.7	2.7	2.7	10.1	9.1	9.2	13.0	11.0	12.3
14	2.4	2.3	2.3	2.7	2.7	2.7	9.1	9.1	9.1	13.0	11.0	11.7
15	2.4	1.4	2.1	2.7	2.7	2.7	9.1	9.1	9.1	12.0	9.0	10.1
16	1.4	1.4	1.4	3.7	2.7	2.7	9.1	9.1	9.1	9.0	9.0	9.0
17	1.4	1.4	1.4	3.7	2.7	3.4	10.1	9.1	9.5	10.0	9.0	9.1
18	1.4	1.4	1.4	3.8	3.7	3.8	10.1	9.1	9.3	10.0	9.0	9.4
19	1.4	1.4	1.4	3.8	3.8	3.8	10.1	9.1	9.5	10.0	9.0	9.9
20	2.4	1.4	1.7	3.8	3.8	3.8	10.1	9.1	9.2	10.0	9.0	9.5
21	1.4	1.4	1.4	3.8	3.8	3.8	10.1	9.1	9.5	10.0	9.0	9.4
22	2.5	1.4	2.0	4.8	3.8	3.8	11.1	10.1	10.2	10.0	9.0	9.5
23	2.5	2.5	2.5	4.8	4.8	4.8	11.1	10.1	10.7	10.0	10.0	10.0
24	2.5	1.5	2.1	4.8	3.8	4.5	10.1	9.1	10.0	15.0	10.0	13.1
25	2.5	1.5	2.0	4.8	3.8	4.8	12.1	9.1	10.5	15.0	14.0	14.6
26	2.5	1.5	1.5	5.9	4.8	5.1	13.1	11.1	12.2	15.0	15.0	15.0
27	2.5	1.5	1.9	4.9	4.9	4.9	12.1	10.1	11.3	15.0	14.0	14.9
28	2.5	2.5	2.5	4.9	4.9	4.9	11.1	10.1	10.6	15.0	14.0	14.8
29	---	---	---	5.9	4.9	5.0	11.1	10.1	10.8	16.0	15.0	15.3
30	---	---	---	5.9	4.9	5.8	11.1	10.1	10.8	15.0	14.0	14.6
31	---	---	---	5.9	5.9	5.9	---	---	---	18.0	15.0	16.0
MONTH	2.5	1.4	2.0	5.9	2.5	3.6	13.1	4.9	9.2	18.0	9.0	11.6
	JUNE			JULY			AUGUST			SEPTEMBER		
1	17.0	15.0	15.4	18.9	18.9	18.9	18.8	18.8	18.8	20.8	20.8	20.8
2	15.0	15.0	15.0	18.9	18.9	18.9	18.8	18.8	18.8	20.8	20.8	20.8
3	16.0	15.0	15.4	18.9	18.9	18.9	18.8	18.8	18.8	20.8	20.8	20.8
4	16.0	15.0	15.2	19.9	18.9	19.0	19.8	18.8	19.4	21.8	20.8	21.4
5	16.0	15.0	15.4	19.9	18.9	18.9	20.8	19.8	20.5	22.8	21.8	22.4
6	16.0	15.0	15.1	18.9	12.9	16.1	21.8	20.8	20.8	22.8	22.8	22.8
7	16.0	15.0	15.5	14.9	13.9	14.6	20.8	19.8	20.4	22.8	21.8	22.1
8	15.0	15.0	15.0	15.9	13.9	15.3	19.8	19.8	19.8	21.8	21.8	21.8
9	16.0	14.9	15.3	15.9	14.9	15.0	19.8	19.8	19.8	21.8	21.8	21.8
10	15.9	14.9	15.1	23.9	14.9	19.6	19.8	19.8	19.8	21.8	21.8	21.8
11	15.9	14.9	15.7	23.9	15.9	19.3	19.8	19.8	19.8	21.8	20.8	21.8
12	15.9	14.9	15.5	17.9	16.9	17.5	19.8	19.8	19.8	21.8	21.8	21.8
13	15.9	15.9	15.9	18.9	17.9	18.4	19.8	19.8	19.8	21.8	20.8	21.1
14	15.9	15.9	15.9	18.9	18.9	18.9	19.8	19.8	19.8	20.8	20.8	20.8
15	15.9	9.9	12.3	19.9	18.9	19.4	20.8	19.8	20.4	20.8	20.8	20.8
16	10.9	9.9	9.9	19.9	17.9	18.9	20.8	20.8	20.8	21.8	20.8	20.9
17	10.9	9.9	10.5	17.9	16.8	17.1	20.8	20.8	20.8	21.8	20.8	21.0
18	11.9	10.9	11.5	16.8	16.8	16.8	20.8	19.8	20.4	21.8	20.8	20.9
19	12.9	11.9	12.2	22.8	16.8	20.4	20.8	19.8	20.0	21.8	20.8	20.8
20	13.9	11.9	12.9	22.8	21.8	22.0	20.8	19.8	20.2	21.8	20.8	20.9
21	13.9	11.9	12.8	22.8	21.8	22.3	20.8	19.8	20.0	21.8	20.8	20.9
22	13.9	12.9	13.5	22.8	22.8	22.8	20.8	16.8	19.3	21.8	20.8	21.3
23	14.9	13.9	14.2	22.8	22.8	22.8	20.8	14.8	17.3	21.8	21.8	21.8
24	18.9	12.9	15.4	22.8	21.8	22.6	19.8	13.8	17.0	21.8	21.8	21.8
25	18.9	18.9	18.9	22.8	17.8	19.6	19.8	18.8	19.1	21.8	20.8	21.5
26	18.9	18.9	18.9	18.8	17.8	18.2	19.8	18.8	19.4	20.8	20.8	20.8
27	18.9	18.9	18.9	18.8	17.8	18.4	19.8	18.8	19.6	21.8	20.8	20.8
28	18.9	18.9	18.9	18.8	18.8	18.8	19.8	18.8	19.7	21.8	20.8	21.4
29	18.9	18.9	18.9	18.8	18.8	18.8	20.8	18.8	19.9	21.8	21.8	21.8
30	18.9	18.9	18.9	18.8	17.8	18.4	20.8	19.8	20.6	21.8	21.8	21.8
31	---	---	---	18.8	17.8	18.2	20.8	20.8	20.8	---	---	---
MONTH	18.9	9.9	15.1	23.9	12.9	18.9	21.8	13.8	19.7	22.8	20.8	21.4

03276500 WHITEWATER RIVER AT BROOKVILLE, IN

(Former National stream-quality accounting network station)

LOCATION.--Lat 39°24'24", long 85°00'46", in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.32, T.9 N., R.2 W., Franklin County, Hydrologic Unit 05080003, (BROOKVILLE, IN quadrangle), on right bank at downstream side of highway bridge, 0.3 mi downstream from East Fork Whitewater River, 1.1 mi south of Brookville, and at mile 29.3.

DRAINAGE AREA.--1,224 mi².

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

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

GAGE.--Water-stage recorder. Datum of gage is 595.71 ft above National Geodetic Vertical Datum of 1929. Prior to July 1923, nonrecording gage at same site at datum 1.5 ft higher. July 1923 to Sept. 27, 1928, nonrecording gage at same site and datum.

REMARKS.--Records fair. Flow partially 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).

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	196	636	183	5,620	440	1,880	1,670	610	735	528	848	1,100
2	185	617	178	4,730	445	2,220	1,550	600	712	523	1,380	8,760
3	181	605	197	3,950	543	2,110	1,440	591	835	512	3,990	7,930
4	182	596	198	3,740	1,370	2,070	1,370	572	845	526	3,190	3,720
5	186	600	171	3,440	1,010	4,130	1,800	5,370	788	2,040	4,210	4,500
6	179	962	295	3,290	807	4,380	1,630	2,640	763	3,100	4,150	4,370
7	174	2,290	407	2,910	785	3,360	1,610	1,690	676	3,420	2,360	2,610
8	172	2,550	409	2,220	690	3,490	1,620	1,330	627	6,240	1,150	1,850
9	171	1,410	405	1,900	702	5,880	1,460	1,150	795	5,040	982	1,470
10	170	1,810	402	1,720	685	4,070	1,310	2,780	852	8,330	945	1,020
11	170	3,940	413	1,300	633	3,250	1,100	6,160	858	5,700	857	826
12	168	2,750	466	982	628	2,910	955	4,190	1,280	5,950	731	773
13	167	2,660	488	820	587	3,340	878	2,750	2,780	6,190	701	656
14	165	2,570	685	788	590	4,730	821	2,310	4,590	5,920	670	587
15	165	2,520	632	695	721	3,610	788	2,740	5,220	5,730	774	583
16	165	2,000	577	670	709	3,240	761	3,240	4,420	3,780	836	557
17	160	1,110	547	651	643	3,320	758	3,250	3,670	1,440	804	533
18	161	443	588	617	628	3,290	862	3,190	3,770	1,050	676	514
19	171	238	1,820	605	623	3,140	755	3,050	4,170	1,050	506	502
20	170	226	3,880	605	682	2,860	747	2,750	4,140	1,010	486	486
21	168	218	2,250	587	765	4,200	1,120	2,520	2,990	1,270	451	476
22	248	229	1,610	559	2,990	4,000	846	2,160	2,880	2,230	377	665
23	342	232	1,660	529	4,330	3,210	747	1,990	2,980	1,850	333	1,080
24	288	219	1,800	496	2,690	2,840	687	1,580	1,450	1,480	331	992
25	303	209	1,770	429	1,860	2,580	684	1,250	773	1,580	342	689
26	473	204	1,660	404	1,510	2,910	958	1,040	685	1,410	334	585
27	407	198	1,570	437	1,410	2,670	778	878	650	1,210	327	2,020
28	410	192	1,520	447	1,710	2,420	688	791	605	1,350	344	2,650
29	451	189	1,290	453	---	2,540	656	798	567	1,320	369	2,040
30	730	187	2,300	448	---	2,430	633	749	541	1,030	541	1,780
31	689	---	2,910	441	---	1,920	---	760	---	717	781	---
TOTAL	7,967	32,610	33,281	46,483	31,186	99,000	31,682	65,479	56,647	83,526	34,776	56,324
MEAN	257	1,087	1,074	1,499	1,114	3,194	1,056	2,112	1,888	2,694	1,122	1,877
MAX	730	3,940	3,880	5,620	4,330	5,880	1,800	6,160	5,220	8,330	4,210	8,760
MIN	160	187	171	404	440	1,880	633	572	541	512	327	476
CFSM	0.21	0.89	0.88	1.23	0.91	2.61	0.86	1.73	1.54	2.20	0.92	1.53
IN.	0.24	0.99	1.01	1.41	0.95	3.01	0.96	1.99	1.72	2.54	1.06	1.71

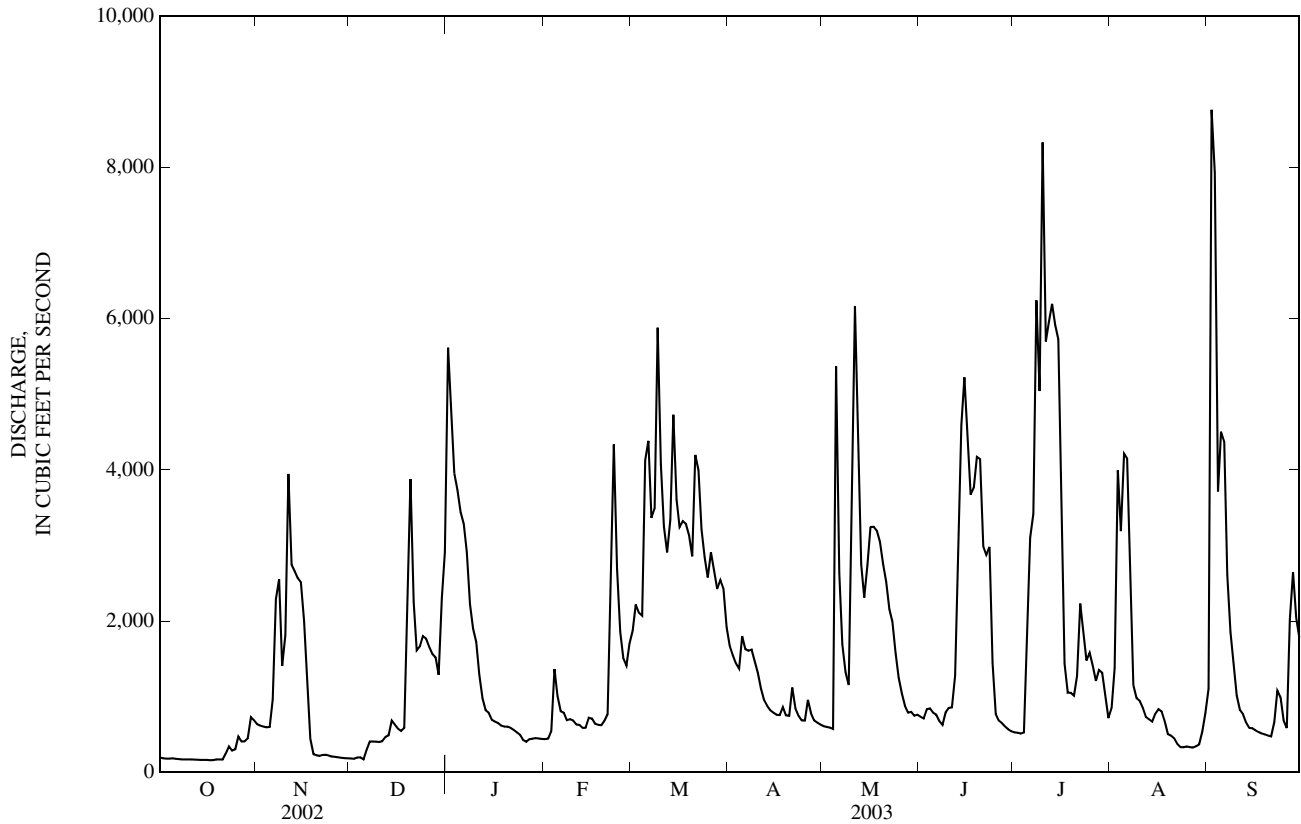
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1916 - 2003, BY WATER YEAR (WY)

MEAN	500	922	1,314	1,924	1,986	2,257	2,179	1,794	1,267	790	504	423
MAX	2,796	4,160	5,468	9,401	6,290	5,909	5,146	8,618	5,273	3,390	4,271	4,239
(WY)	(1927)	(1994)	(1991)	(1937)	(1950)	(1963)	(2002)	(1996)	(1998)	(1958)	(1979)	(1926)
MIN	95.5	98.1	95.1	102	122	294	275	186	161	138	102	85.7
(WY)	(1935)	(1935)	(1935)	(1977)	(1935)	(1941)	(1941)	(1941)	(1934)	(1934)	(1930)	(1999)

GREAT MIAMI RIVER BASIN

03276500 WHITEWATER RIVER AT BROOKVILLE, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1916 - 2003	
ANNUAL TOTAL	663,264		578,961			
ANNUAL MEAN	1,817		1,586		1,318	
HIGHEST ANNUAL MEAN					2,398	
LOWEST ANNUAL MEAN					271	
HIGHEST DAILY MEAN	20,300	May 13	8,760	Sep 2	55,000	Jan 21, 1959
LOWEST DAILY MEAN	160	Oct 17	160	Oct 17	60	Jul 27, 1934
ANNUAL SEVEN-DAY MINIMUM	164	Oct 12	164	Oct 12	66	Sep 25, 1941
MAXIMUM PEAK FLOW			12,200	Sep 3	81,800	Jan 21, 1959
MAXIMUM PEAK STAGE			10.33	Sep 3	27.78	Jan 21, 1959
ANNUAL RUNOFF (CFSM)	1.48		1.30		1.08	
ANNUAL RUNOFF (INCHES)	20.16		17.60		14.63	
10 PERCENT EXCEEDS	4,510		3,820		2,910	
50 PERCENT EXCEEDS	1,020		852		640	
90 PERCENT EXCEEDS	182		231		168	



03291780 INDIAN-KENTUCK CREEK NEAR CANAAN, IN

LOCATION.--Lat 38°52'41", long 85°15'26", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.13, T.5 N., R.11 E., Jefferson County, Hydrologic Unit 05140101, (REXVILLE, IN quadrangle), 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 fair except for estimated daily discharges and those below 1 ft³/s, which are poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.3	16	4.3	570	e4.1	73	29	9.5	11	3.4	1.6	293
2	2.9	11	3.6	140	e4.9	129	23	8.5	9.5	3.3	1.5	712
3	2.2	9.9	3.5	72	e8.0	73	19	7.5	28	3.0	1.4	109
4	2.7	9.2	3.0	47	35	83	17	7.0	24	2.9	22	26
5	5.9	26	3.0	38	e18	160	21	615	16	2.5	16	13
6	3.4	50	3.4	32	e12	76	16	112	12	2.1	4.2	7.9
7	2.1	23	3.7	26	e9.0	46	35	55	11	1.9	2.4	5.6
8	1.6	16	3.6	25	e8.0	38	31	38	11	409	2.0	4.3
9	1.3	12	3.5	21	e7.0	32	23	35	17	55	1.8	3.5
10	1.2	428	3.3	17	e6.6	24	20	692	10	247	1.8	2.9
11	1.6	179	59	14	e6.4	21	17	186	25	24	1.7	2.5
12	1.7	48	67	e12	e6.0	19	15	79	111	11	1.6	2.2
13	1.4	29	129	e10	e7.0	29	13	49	58	7.0	1.5	2.0
14	1.1	20	111	e9.2	e9.0	33	11	38	37	4.6	1.4	2.0
15	0.96	16	47	e8.2	e160	26	10	42	37	3.6	1.3	4.3
16	0.84	13	31	e8.0	e100	23	9.8	32	356	4.0	1.3	2.9
17	0.77	10	30	e7.2	e56	21	45	84	43	3.1	1.2	2.0
18	0.67	8.6	39	e6.6	e37	19	42	91	25	2.2	1.2	1.7
19	1.3	7.9	664	e6.0	e29	20	24	51	23	2.0	1.1	1.4
20	2.4	6.6	293	e5.8	e32	25	23	135	27	1.9	1.0	1.3
21	2.5	7.0	71	e5.7	87	51	77	110	16	1.9	0.98	1.3
22	1.9	10	39	e5.0	715	36	33	56	12	2.5	0.89	14
23	1.6	8.6	26	e4.4	204	27	24	39	9.6	2.2	0.86	10
24	1.4	7.6	21	e3.9	76	22	19	30	8.0	2.0	0.77	4.7
25	192	6.6	24	e3.5	50	20	18	25	6.9	1.8	0.74	3.0
26	69	5.9	16	e3.4	41	101	17	22	6.2	1.6	0.66	2.3
27	22	5.8	14	e3.2	31	42	13	18	6.4	1.5	26	81
28	15	5.0	14	e3.0	27	32	11	16	5.5	2.1	9.2	19
29	201	5.1	14	e4.3	---	80	13	18	4.6	2.4	2.6	10
30	62	5.5	126	e3.9	---	49	10	14	4.0	1.9	8.0	6.6
31	27	---	315	e3.7	---	35	---	14	---	1.7	7.7	---
TOTAL	635.74	1,006.3	2,184.9	1,119.0	1,786.0	1,465	678.8	2,728.5	970.7	815.1	126.40	1,351.4
MEAN	20.5	33.5	70.5	36.1	63.8	47.3	22.6	88.0	32.4	26.3	4.08	45.0
MAX	201	428	664	570	715	160	77	692	356	409	26	712
MIN	0.67	5.0	3.0	3.0	4.1	19	9.8	7.0	4.0	1.5	0.66	1.3
CFSM	0.75	1.22	2.56	1.31	2.32	1.72	0.82	3.20	1.18	0.96	0.15	1.64
IN.	0.86	1.36	2.96	1.51	2.42	1.98	0.92	3.69	1.31	1.10	0.17	1.83

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2003, BY WATER YEAR (WY)

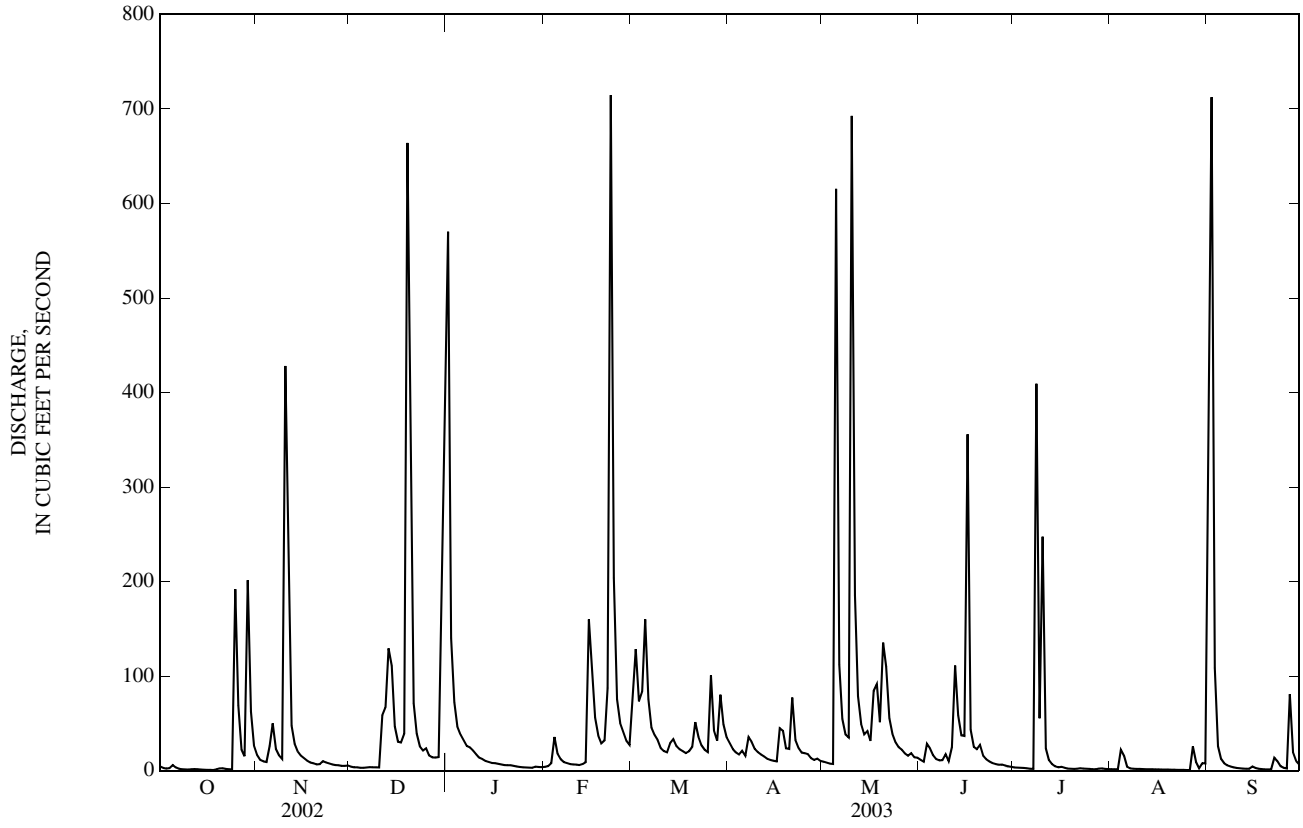
	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	
MEAN	12.8	32.7	53.1	50.5	58.0	66.8	62.1	52.2	30.6	15.8	13.7	12.0																							
MAX	104	137	173	169	136	134	216	198	152	60.5	78.9	81.9																							
(WY)	(2002)	(1980)	(1991)	(1982)	(1990)	(1975)	(1996)	(1996)	(1996)	(2000)	(1995)	(2001)																							
MIN	0.000	0.000	3.95	0.60	5.24	11.7	5.68	3.82	0.44	0.12	0.000	0.000																							
(WY)	(1988)	(2000)	(1977)	(1977)	(1992)	(1983)	(2001)	(1992)	(1988)	(1975)	(1999)	(1987)																							

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1970 - 2003
ANNUAL TOTAL	19,443.06	14,867.84	
ANNUAL MEAN	53.3	40.7	38.3
HIGHEST ANNUAL MEAN			77.2
LOWEST ANNUAL MEAN			17.0
HIGHEST DAILY MEAN	1,210	May 8	715
LOWEST DAILY MEAN	0.00	Jul 25	0.66
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 25	0.84
MAXIMUM PEAK FLOW			3,400
MAXIMUM PEAK STAGE			8.58
ANNUAL RUNOFF (CF SM)	1.94		1.48
ANNUAL RUNOFF (INCHES)	26.30		20.11
10 PERCENT EXCEEDS	126		82
50 PERCENT EXCEEDS	9.9		12
90 PERCENT EXCEEDS	0.00		1.7

e Estimated

03291780 INDIAN-KENTUCK CREEK NEAR CANAAN, IN—Continued



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. (JEFFERSONVILLE, IN. quadrangle), 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.

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

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

REMARKS.--Records fair except for daily discharges below 10 ft³/s, which are poor. Some regulation by Deam Lake.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	92	104	44	4,000	38	471	175	274	80	13	4.3	186
2	70	77	40	2,700	42	537	149	226	69	18	17	1,430
3	60	63	40	755	52	411	132	191	127	15	13	1,270
4	59	60	36	468	319	314	120	162	167	11	34	391
5	115	96	38	354	179	312	254	3,260	105	8.9	127	169
6	74	422	38	290	133	330	207	3,260	79	8.8	50	104
7	51	196	38	238	116	259	323	1,110	70	8.1	38	74
8	43	133	43	219	80	217	345	755	63	5.9	24	57
9	43	105	51	195	80	194	238	672	70	4.9	18	44
10	42	967	53	161	79	166	202	941	59	58	29	35
11	110	1,530	194	131	76	150	171	743	70	119	35	30
12	112	476	323	105	75	147	145	441	130	41	32	26
13	72	282	253	98	62	175	122	293	135	22	20	20
14	48	213	617	90	78	232	108	231	92	17	14	25
15	40	178	334	74	1,340	182	105	377	73	13	9.9	30
16	35	163	230	71	927	159	91	472	66	17	7.2	24
17	28	134	207	60	432	144	1,030	709	56	23	5.2	17
18	23	113	521	53	292	134	1,890	1,480	48	16	3.6	13
19	22	102	1,840	51	237	399	536	604	42	14	2.8	11
20	22	91	3,610	49	331	745	338	455	37	9.3	2.5	8.9
21	22	84	899	45	873	592	402	711	31	11	2.4	7.7
22	20	86	471	38	2,660	437	282	408	27	24	2.7	141
23	19	80	324	32	3,110	299	216	283	24	25	3.5	181
24	29	71	259	27	924	235	184	217	23	21	4.8	80
25	25	65	394	26	526	200	409	194	18	14	4.9	43
26	174	61	279	28	393	256	2,850	235	16	12	4.8	29
27	98	64	217	23	333	231	967	182	21	9.1	5.4	250
28	70	51	193	23	333	190	457	155	22	6.3	292	172
29	144	49	177	33	---	272	503	143	16	7.3	59	81
30	267	51	413	45	---	281	386	117	14	7.4	426	58
31	147	---	1,080	39	---	207	---	97	---	6.4	143	---
TOTAL	2,176	6,167	13,256	10,521	14,120	8,878	13,337	19,398	1,850	586.4	1,435.0	5,007.6
MEAN	70.2	206	428	339	504	286	445	626	61.7	18.9	46.3	167
MAX	267	1,530	3,610	4,000	3,110	745	2,850	3,260	167	119	426	1,430
MIN	19	49	36	23	38	134	91	97	14	4.9	2.4	7.7
CFSM	0.37	1.09	2.26	1.80	2.67	1.52	2.35	3.31	0.33	0.10	0.24	0.88
IN.	0.43	1.21	2.61	2.07	2.78	1.75	2.63	3.82	0.36	0.12	0.28	0.99

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 2003, BY WATER YEAR (WY)

	MEAN	37.3	119	259	307	414	513	395	328	161	68.7	46.4	40.2
MAX	384	805	862	1,150	1,323	2,252	1,117	1,369	1,337	316	514	390	
(WY)	(2002)	(1980)	(1979)	(1959)	(1956)	(1964)	(1970)	(1983)	(1960)	(1973)	(1978)	(1979)	
MIN	0.21	0.61	0.60	5.43	32.0	112	68.7	25.4	3.07	2.75	0.53	0.12	
(WY)	(1965)	(1964)	(1964)	(1977)	(1992)	(1981)	(2001)	(1988)	(1988)	(1959)	(1999)	(1999)	

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

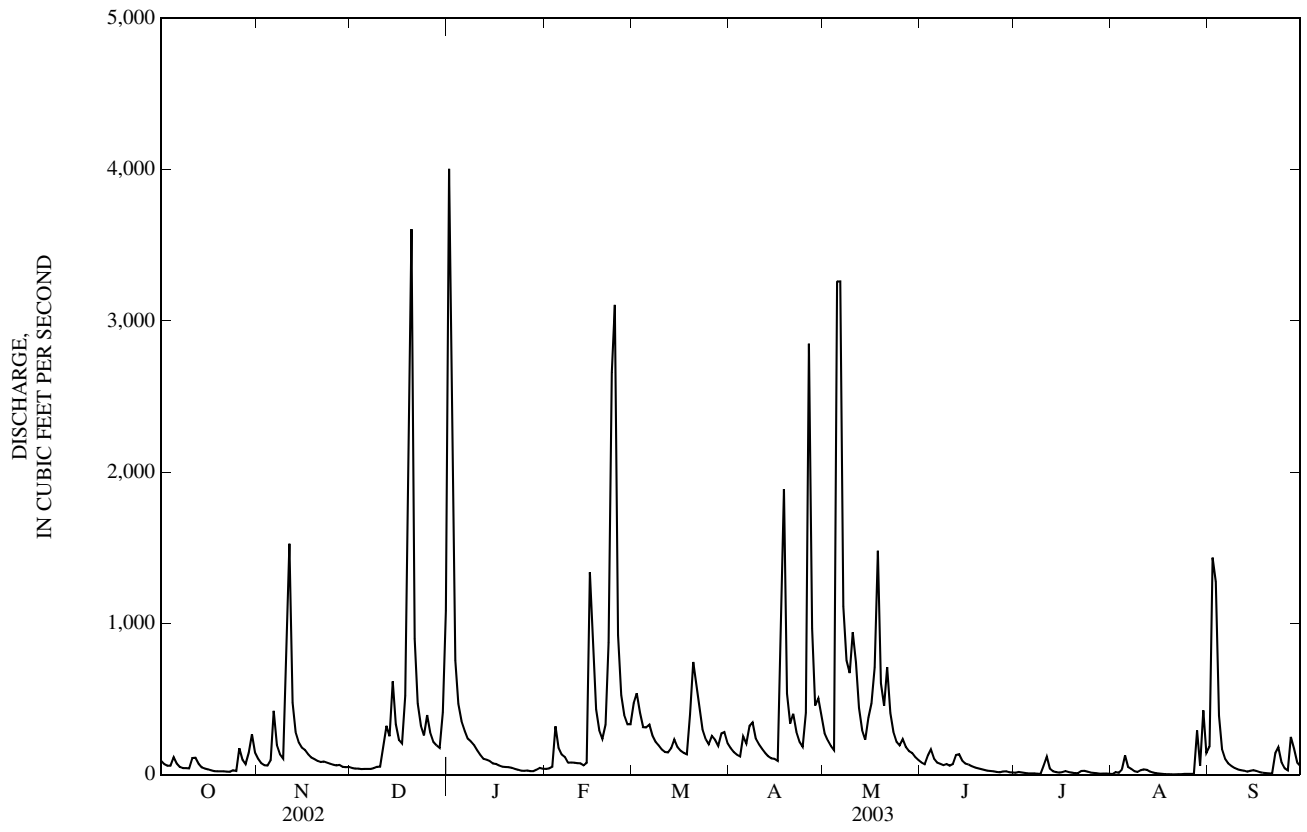
FOR 2003 WATER YEAR

WATER YEARS 1955 - 2003

ANNUAL TOTAL	109,160.20	96,732.0	
ANNUAL MEAN	299	265	223
HIGHEST ANNUAL MEAN			423
LOWEST ANNUAL MEAN			92.8
HIGHEST DAILY MEAN	5,070	May 14	4,000
LOWEST DAILY MEAN	0.28	Sep 12	2.4
ANNUAL SEVEN-DAY MINIMUM	0.35	Sep 8	3.2
MAXIMUM PEAK FLOW			4,630
MAXIMUM PEAK STAGE			18.76
ANNUAL RUNOFF (CFSM)	1.58		1.40
ANNUAL RUNOFF (INCHES)	21.49		19.04
10 PERCENT EXCEEDS	637		536
50 PERCENT EXCEEDS	106		102
90 PERCENT EXCEEDS	4.5		14
			3.1

SILVER CREEK BASIN

03294000 SILVER CREEK NEAR SELLERSBURG, IN—Continued



03302220 BUCK CREEK NEAR NEW MIDDLETOWN, IN

LOCATION.--Lat 38°07'13", long 86°05'16", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.32, T.4 S., R.4 E., Harrison County, Hydrologic Unit 05140104, (LACONIA, IN. quadrangle), 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 14.6 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 fair except for estimated daily discharges and those below 10 ft³/s, which are poor. Flow can be affected by regulation of Spring Hills Lake during periods of low flow.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	31	28	29	974	24	89	52	76	29	13	20	68
2	26	24	29	425	25	85	48	68	26	13	58	483
3	23	24	28	263	26	74	44	57	32	13	38	216
4	23	24	28	134	80	68	42	51	29	11	32	108
5	33	74	30	115	55	65	44	798	24	11	29	72
6	27	112	27	95	45	62	40	363	22	11	40	54
7	27	66	27	83	42	58	80	192	22	12	53	44
8	21	51	28	79	39	78	81	166	21	11	34	38
9	17	42	28	72	37	91	102	396	19	20	30	32
10	22	473	29	61	37	42	144	221	17	47	45	28
11	103	547	75	52	35	40	113	325	47	32	37	25
12	65	213	87	47	33	41	89	182	102	18	30	25
13	46	143	114	44	32	40	70	126	73	12	26	26
14	35	115	156	42	35	38	59	98	58	9.9	24	32
15	29	103	114	39	512	37	52	94	61	9.2	23	37
16	25	84	91	36	394	37	47	82	69	19	23	28
17	21	57	144	34	192	36	213	152	51	12	24	27
18	18	51	183	31	125	37	214	131	43	9.4	25	36
19	18	48	1,370	33	101	106	123	100	38	9.0	25	38
20	19	44	816	31	149	135	152	84	32	8.1	26	39
21	17	44	336	29	336	110	586	75	27	12	26	39
22	15	42	159	27	1,140	92	235	66	23	16	28	134
23	13	39	118	24	593	78	131	59	20	17	32	88
24	13	37	130	e21	302	67	104	53	18	12	28	62
25	14	35	225	e20	198	61	480	52	16	11	27	52
26	16	34	143	e19	144	55	576	52	17	10	26	45
27	15	33	118	e18	100	50	241	45	22	9.5	27	400
28	16	32	103	22	92	46	141	41	15	12	28	145
29	31	32	90	26	---	61	109	39	13	11	30	81
30	45	32	233	23	---	61	87	35	12	14	58	58
31	35	---	515	22	---	55	---	33	---	18	45	---
TOTAL	859	2,683	5,603	2,941	4,923	1,995	4,499	4,312	998	443.1	997	2,560
MEAN	27.7	89.4	181	94.9	176	64.4	150	139	33.3	14.3	32.2	85.3
MAX	103	547	1,370	974	1,140	135	586	798	102	47	58	483
MIN	13	24	27	18	24	36	40	33	12	8.1	20	25
CFSM	0.75	2.41	4.87	2.56	4.74	1.73	4.04	3.75	0.90	4.39	0.87	2.30
IN.	0.86	2.69	5.62	2.95	4.94	2.00	4.51	4.32	1.00	0.44	1.00	2.57

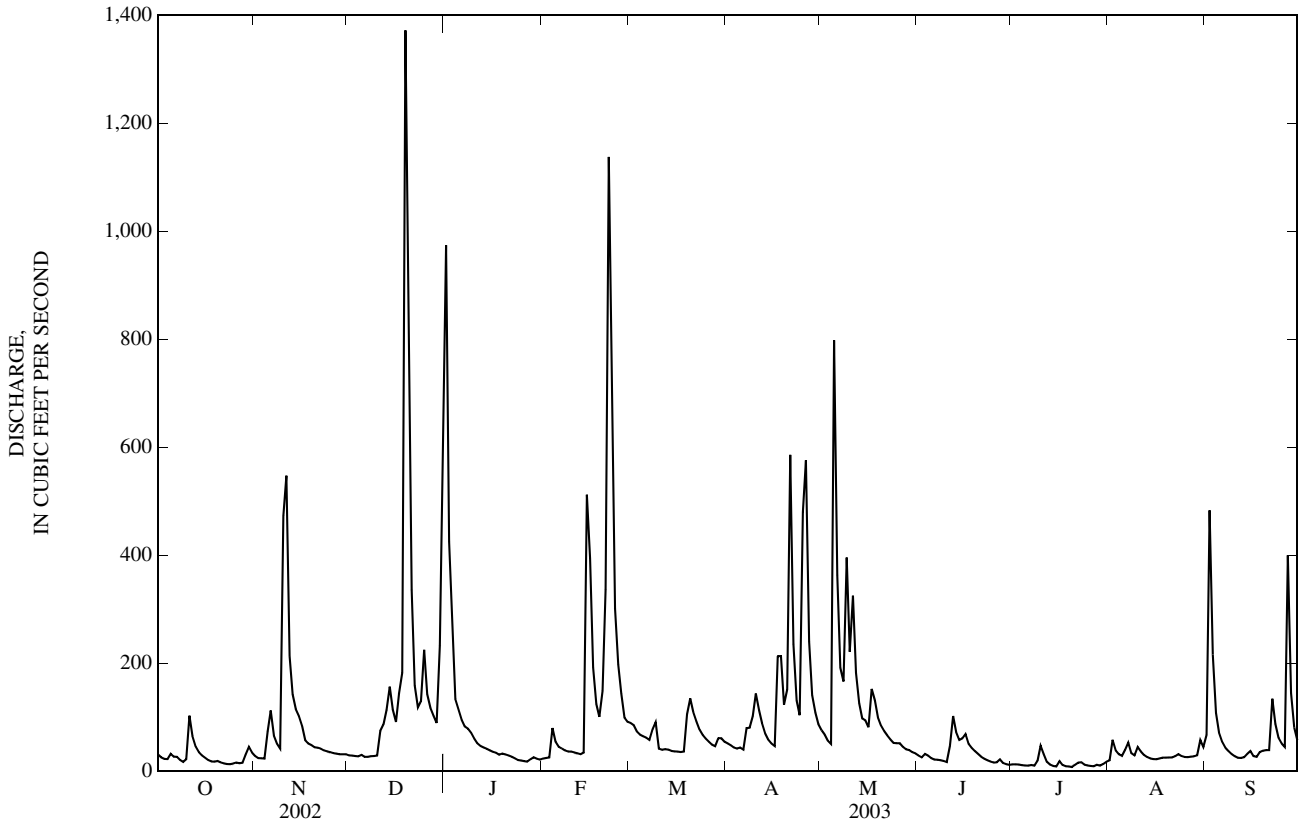
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2003, BY WATER YEAR (WY)

MEAN	17.6	52.8	100	109	134	157	138	107	59.5	27.6	16.1	19.2
MAX	71.8	228	262	280	368	708	412	558	311	219	67.2	217
(WY)	(1971)	(1980)	(1991)	(1999)	(1989)	(1997)	(1970)	(1983)	(1997)	(1979)	(1992)	(1979)
MIN	0.76	3.16	6.01	2.64	24.8	40.4	21.9	16.3	1.56	4.59	1.45	0.72
(WY)	(1988)	(1988)	(1977)	(1977)	(1992)	(1983)	(2001)	(1976)	(1988)	(1975)	(1999)	(1987)

03302220 BUCK CREEK NEAR NEW MIDDLETOWN, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1970 - 2003	
ANNUAL TOTAL	40,507.58		32,813.1		77.8	
ANNUAL MEAN	111		89.9		150	
HIGHEST ANNUAL MEAN					32.8	
LOWEST ANNUAL MEAN					1981	
HIGHEST DAILY MEAN	2,000	May 13	1,370	Dec 19	5,610	Mar 2, 1997
LOWEST DAILY MEAN	0.52	Sep 13	8.1	Jul 20	0.52	Jul 10, 1988
ANNUAL SEVEN-DAY MINIMUM	0.59	Sep 7	11	Jul 14	0.57	Jul 4, 1988
MAXIMUM PEAK FLOW			3,750	Dec 19	20,500	Mar 2, 1997
MAXIMUM PEAK STAGE			8.59	Dec 19	17.26	Mar 2, 1997
ANNUAL RUNOFF (CFSM)	2.99		2.42		2.10	
ANNUAL RUNOFF (INCHES)	40.62		32.90		28.50	
10 PERCENT EXCEEDS	259		187		174	
50 PERCENT EXCEEDS	39		42		27	
90 PERCENT EXCEEDS	1.6		17		3.3	

e Estimated



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, (GEORGETOWN, IN. quadrangle), on right bank approximately 500 ft upstream of county road bridge, on abandoned county road embankment, 2.0 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 October 2003 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 703.00 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.9	5.4	3.7	457	5.7	36	16	17	7.3	2.6	1.2	22
2	2.2	4.5	3.7	98	5.6	38	14	15	6.2	2.3	13	94
3	1.8	5.2	4.3	55	9.5	29	12	12	16	2.1	3.8	30
4	10	5.1	3.2	34	62	25	12	11	10	1.8	6.0	17
5	12	29	3.9	28	21	26	21	495	7.8	1.7	7.7	9.3
6	4.4	27	3.9	21	14	33	15	102	6.2	1.5	6.8	6.5
7	2.9	14	3.7	17	12	26	32	99	6.0	1.3	4.8	5.1
8	2.2	9.9	4.6	15	9.7	22	25	58	6.3	1.2	3.1	4.4
9	1.9	8.1	5.4	13	9.0	19	24	63	5.5	1.3	3.1	3.7
10	2.8	241	5.2	11	9.2	19	21	181	4.7	32	3.6	3.2
11	24	114	29	e8.2	8.4	15	17	158	16	6.1	2.7	2.8
12	9.1	38	32	e7.0	7.6	15	15	51	21	3.6	2.2	2.5
13	5.4	22	43	e6.2	6.8	15	13	30	13	2.7	1.9	2.2
14	3.9	16	51	e5.4	14	14	12	21	9.4	2.3	1.7	2.9
15	3.0	15	29	e4.7	169	13	10	26	7.6	2.1	1.6	3.1
16	2.6	13	21	e4.0	78	12	8.9	21	205	2.4	1.6	2.4
17	2.2	11	42	e3.5	38	12	240	132	155	1.8	3.4	2.1
18	2.0	9.0	47	e3.1	24	12	94	121	26	1.5	4.6	2.0
19	1.9	8.3	639	e2.8	22	83	43	47	15	1.4	2.2	1.9
20	2.1	7.5	186	e2.6	40	61	35	43	12	1.3	1.8	1.8
21	1.9	7.6	63	e2.4	120	62	47	43	8.6	3.0	1.5	1.7
22	1.8	8.0	39	e2.3	578	40	28	29	6.7	2.5	2.9	28
23	1.5	6.8	26	e2.2	144	29	21	21	5.6	2.2	2.3	11
24	1.4	6.2	28	e2.1	68	23	17	16	4.8	1.7	1.4	5.9
25	3.8	5.9	39	e2.0	42	19	247	23	4.2	1.4	1.1	4.4
26	5.7	5.4	24	e1.9	32	20	240	24	4.0	1.2	1.1	3.6
27	3.3	5.3	19	e1.8	28	16	68	17	5.2	1.1	1.1	61
28	4.7	4.9	16	e1.8	29	15	37	14	3.8	1.7	4.3	14
29	13	4.8	14	e2.9	---	29	28	12	3.2	3.3	2.2	8.5
30	11	4.1	54	e6.6	---	22	20	10	2.8	2.0	18	6.3
31	7.3	---	224	5.3	---	18	---	8.6	---	1.5	6.8	---
TOTAL	154.7	662.0	1,706.6	827.8	1,606.5	818	1,432.9	1,920.6	604.9	94.6	119.5	363.3
MEAN	4.99	22.1	55.1	26.7	57.4	26.4	47.8	62.0	20.2	3.05	3.85	12.1
MAX	24	241	639	457	578	83	247	495	205	32	18	94
MIN	1.4	4.1	3.2	1.8	5.6	12	8.9	8.6	2.8	1.1	1.1	1.7
CFSM	0.31	1.37	3.42	1.66	3.56	1.64	2.97	3.85	1.25	0.19	0.24	0.75
IN.	0.36	1.53	3.94	1.91	3.71	1.89	3.31	4.44	1.40	0.22	0.28	0.84

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 2003, BY WATER YEAR (WY)

MEAN	4.84	14.1	31.0	32.9	40.9	46.7	42.3	28.9	16.2	7.35	5.08	4.74
MAX	42.2	70.6	103	88.6	111	185	120	116	93.6	50.7	30.5	62.1
(WY)	(1978)	(1980)	(1991)	(1999)	(1990)	(1997)	(1970)	(1983)	(1997)	(1979)	(1978)	(1979)
MIN	0.000	0.25	1.80	0.46	2.91	10.9	6.41	1.48	0.002	0.088	0.027	0.000
(WY)	(1988)	(1992)	(1981)	(1977)	(1992)	(1976)	(2001)	(1988)	(1988)	(1991)	(1999)	(1987)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

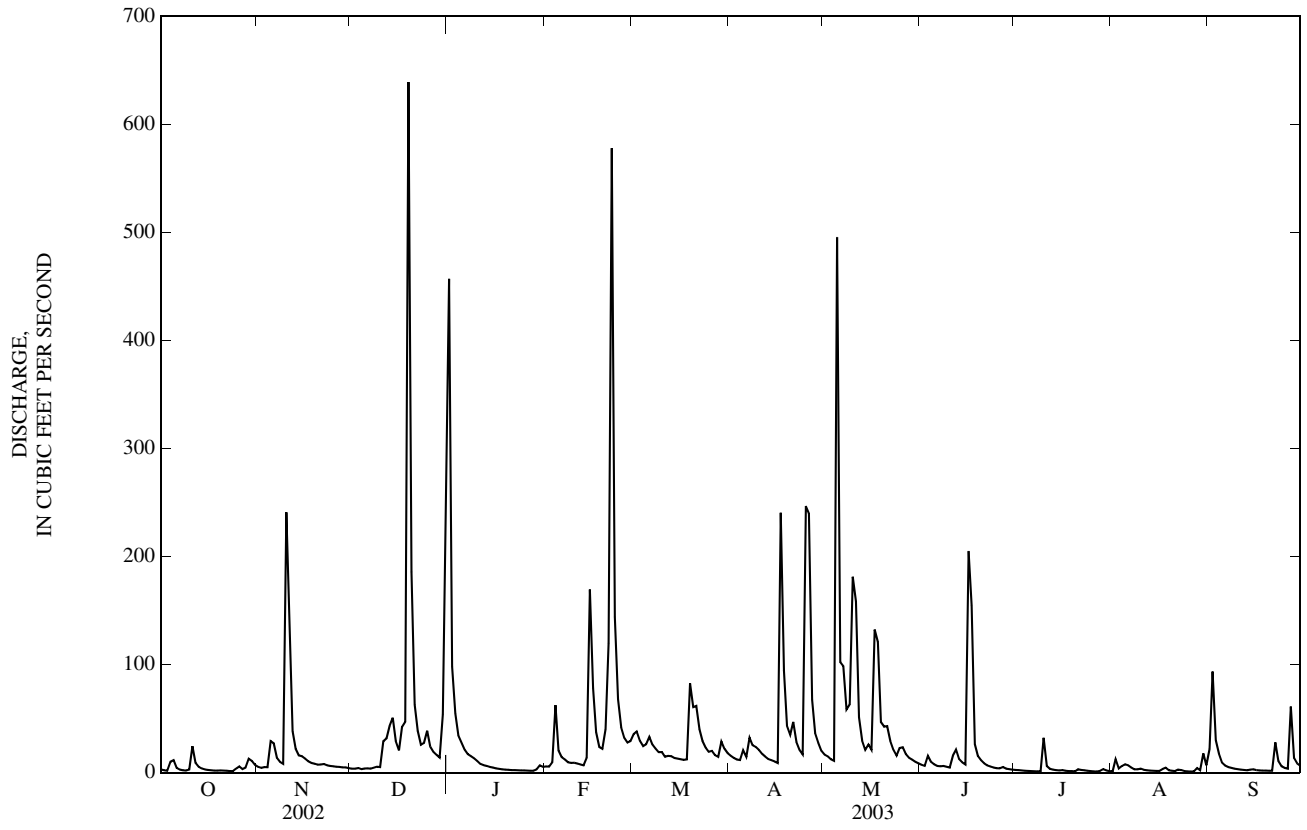
FOR 2003 WATER YEAR

WATER YEARS 1969 - 2003

ANNUAL TOTAL	11,682.64	10,311.4	
ANNUAL MEAN	32.0	28.3	22.8
HIGHEST ANNUAL MEAN			45.0
LOWEST ANNUAL MEAN			8.23
HIGHEST DAILY MEAN	681	May 13	639
LOWEST DAILY MEAN	0.00	Aug 8	1.1
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 25	1.6
MAXIMUM PEAK FLOW			2,970
MAXIMUM PEAK STAGE			7.14
ANNUAL RUNOFF (CFSM)	1.99		1.75
ANNUAL RUNOFF (INCHES)	26.99		23.83
10 PERCENT EXCEEDS	68		56
50 PERCENT EXCEEDS	6.0		9.2
90 PERCENT EXCEEDS	0.08		1.9
			2,530
		Dec 19	0.00
		Jul 27	0.00
		Jul 3	0.00
		Jun 16	6,110
		Jun 16	9.79
		Mar 1, 1997	1.42
		Oct 4, 1968	19.25
		Sep 24, 1969	46
		Mar 1, 1997	6.0
			0.25

e Estimated

03302300 LITTLE INDIAN CREEK NEAR GALENA, IN—Continued



03302680 WEST FORK BLUE RIVER AT SALEM, IN

LOCATION.--Lat 38°36'19", long 86°05'40", in SW¹/₄SE¹/₄ sec.17, T.2 N., R.4 E., Washington County, Hydrologic Unit 05140104, (SALEM, IN. quadrangle), 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.

REVISED RECORDS.--WDR IN-96-1: 1983(P), 1988(P), 1990(P), 1995(P).

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

REMARKS.--Records fair except for estimated daily discharges and those below 1.00 ft³/s, which are poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.88	6.1	2.5	396	e3.3	40	9.3	20	3.1	1.4	3.3	3.6
2	0.71	4.9	2.3	180	e3.7	80	7.8	14	2.8	1.4	3.2	4.9
3	0.59	4.9	2.1	119	6.3	e60	6.8	10	6.0	1.2	3.2	1.8
4	0.79	4.9	1.9	82	12	e45	6.1	8.9	4.2	1.1	4.1	1.2
5	0.83	13	2.1	60	7.6	34	5.7	463	3.2	0.93	3.4	1.1
6	0.70	31	2.0	39	6.4	25	4.5	180	2.8	0.89	18	0.87
7	0.54	13	1.8	30	6.0	18	6.8	141	2.6	0.85	4.4	0.80
8	0.51	9.1	2.1	28	5.1	15	5.6	86	2.4	1.2	1.8	0.77
9	0.46	6.3	1.9	23	e4.7	13	5.0	80	2.2	1.4	1.4	0.77
10	0.51	174	2.0	18	e4.5	10	4.6	182	2.3	89	1.4	0.71
11	0.94	170	3.8	e13	e4.5	9.2	4.3	163	4.8	16	4.1	0.63
12	0.86	72	6.6	e11	e4.3	11	3.9	80	18	9.3	1.8	0.67
13	0.70	34	43	e9.3	e4.1	24	3.5	34	13	6.9	1.2	0.77
14	0.55	21	98	e8.5	11	27	3.2	20	13	5.6	1.2	0.85
15	0.51	15	54	e7.7	139	22	2.9	18	8.5	10	1.0	0.63
16	0.50	11	31	e7.2	68	17	2.8	12	6.5	20	1.0	0.61
17	0.47	8.6	25	e6.6	35	14	14	97	5.0	8.0	0.98	0.53
18	0.52	6.9	31	e6.3	22	13	12	189	4.0	6.5	0.89	0.46
19	0.92	6.4	237	e6.0	20	52	7.1	74	3.7	5.8	0.77	0.44
20	0.99	5.2	213	e5.5	46	59	7.5	75	3.2	4.9	0.77	0.47
21	0.97	5.1	117	e4.7	140	44	12	74	2.6	12	0.69	0.47
22	0.86	5.2	74	e4.1	580	28	8.0	37	2.2	22	0.63	3.2
23	0.81	4.1	44	e3.5	213	20	6.1	21	1.9	9.2	0.60	2.4
24	0.82	3.6	37	e3.2	111	15	5.1	14	1.7	7.0	0.57	1.2
25	33	3.3	35	e3.1	57	13	186	11	1.6	5.6	0.54	0.95
26	16	3.0	25	e2.9	38	17	244	8.6	1.6	4.8	0.54	0.79
27	4.8	2.8	21	e2.8	27	12	96	6.7	1.8	4.3	0.62	1.7
28	3.1	2.6	21	e2.7	22	11	42	5.3	1.4	5.8	0.61	1.3
29	42	2.6	20	e3.7	---	15	71	5.0	1.3	4.9	0.75	1.1
30	21	2.7	32	e3.2	---	12	31	4.1	1.2	3.9	0.96	0.90
31	8.8	---	131	e2.9	---	10	---	3.6	---	3.5	0.97	---
TOTAL	145.64	652.3	1,320.1	1,092.9	1,601.5	785.2	824.6	2,137.2	128.6	275.37	65.39	36.59
MEAN	4.70	21.7	42.6	35.3	57.2	25.3	27.5	68.9	4.29	8.88	2.11	1.22
MAX	42	174	237	396	580	80	244	463	18	89	18	4.9
MIN	0.46	2.6	1.8	2.7	3.3	9.2	2.8	3.6	1.2	0.85	0.54	0.44
CFSM	0.25	1.14	2.24	1.86	3.01	1.33	1.45	3.63	0.23	0.47	0.11	0.06
IN.	0.29	1.28	2.58	2.14	3.14	1.54	1.61	4.18	0.25	0.54	0.13	0.07

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2003, BY WATER YEAR (WY)

MEAN	6.98	21.9	34.2	33.0	41.9	44.2	44.0	34.1	15.0	12.0	6.88	6.21
MAX	45.7	89.9	108	103	106	104	164	140	80.3	65.7	30.5	40.0
(WY)	(1984)	(1986)	(2002)	(1982)	(1989)	(1989)	(1996)	(1983)	(1997)	(1988)	(1985)	(1982)
MIN	0.14	0.29	2.33	0.97	5.41	9.65	2.83	1.91	0.088	0.29	0.13	0.024
(WY)	(1988)	(2000)	(1977)	(1977)	(1992)	(1976)	(2001)	(1988)	(1988)	(1991)	(1987)	(1999)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

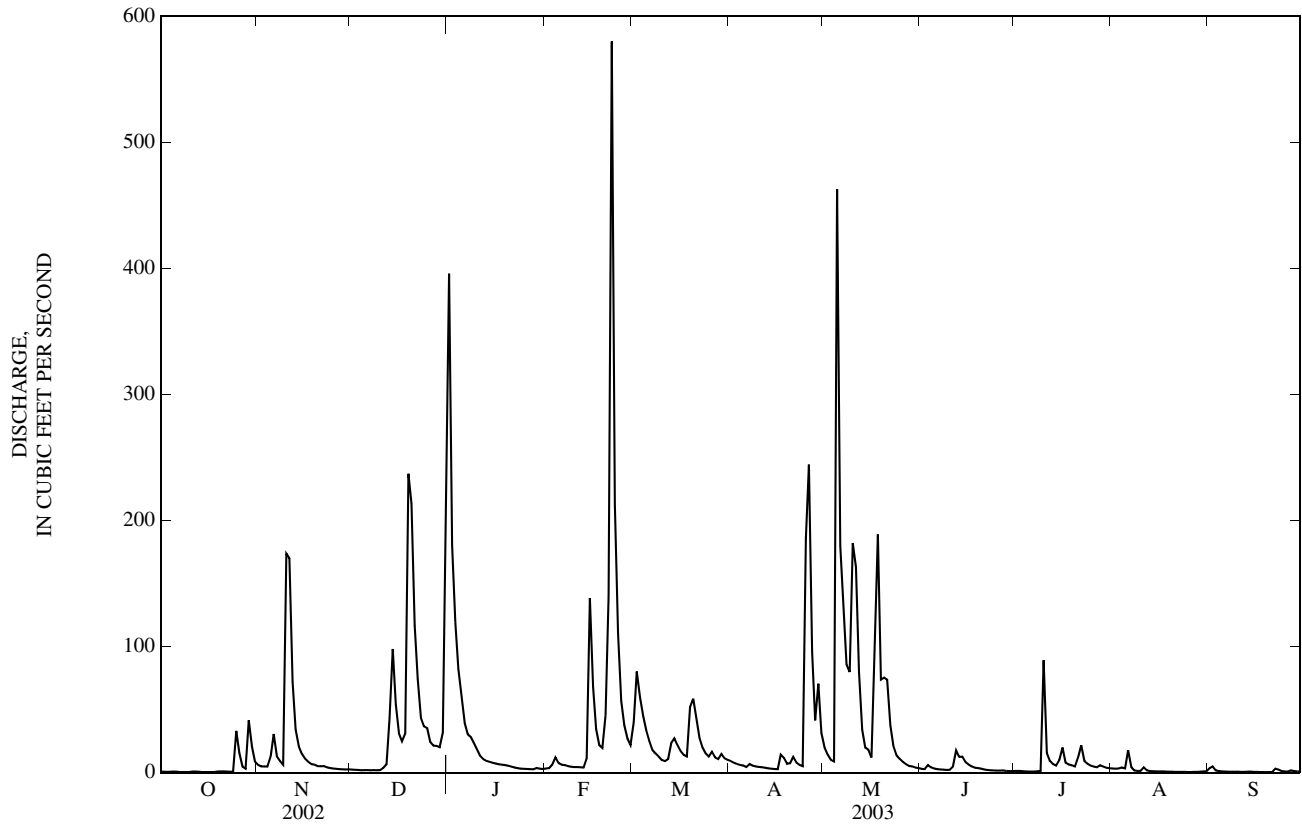
WATER YEARS 1970 - 2003

ANNUAL TOTAL	12,656.77	9,065.39	
ANNUAL MEAN	34.7	24.8	25.0
HIGHEST ANNUAL MEAN			43.4
LOWEST ANNUAL MEAN			10.7
HIGHEST DAILY MEAN	913	580	2,130
LOWEST DAILY MEAN	0.00	0.44	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	0.52	0.00
MAXIMUM PEAK FLOW		2,130	6,930
MAXIMUM PEAK STAGE		9.38	15.58
ANNUAL RUNOFF (CFSM)	1.83	1.31	1.32
ANNUAL RUNOFF (INCHES)	24.78	17.75	17.88
10 PERCENT EXCEEDS	108	71	55
50 PERCENT EXCEEDS	7.0	5.3	7.2
90 PERCENT EXCEEDS	0.20	0.77	0.43

e Estimated

BLUE RIVER BASIN

03302680 WEST FORK BLUE RIVER AT SALEM, IN—Continued



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, (FREDERICKSBURG, IN quadrangle), 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 fair except for estimated daily discharges, which are poor.

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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	70	154	61	4,830	e50	614	347	549	174	66	32	15
2	53	111	56	2,290	e52	896	300	460	154	86	31	185
3	34	88	53	1,180	e56	814	259	368	258	59	28	576
4	32	81	50	851	165	699	233	301	347	51	28	131
5	32	92	51	697	181	672	281	3,680	231	38	33	64
6	37	346	50	567	120	633	259	2,360	177	33	29	40
7	30	285	49	450	112	516	309	2,380	155	30	30	30
8	26	194	48	407	89	443	416	1,330	140	29	34	23
9	24	150	48	353	e83	386	320	1,140	126	39	25	19
10	24	1,000	47	291	e75	320	278	1,930	113	408	24	16
11	25	2,330	67	231	e71	292	252	1,470	129	350	27	14
12	31	842	164	177	e67	289	224	1,020	263	155	59	13
13	31	564	205	e155	e64	325	193	745	494	102	49	12
14	26	398	737	e142	85	496	168	600	363	77	32	12
15	24	308	596	e128	1,090	440	152	638	537	59	28	11
16	23	261	436	e114	1,060	392	140	600	331	98	23	13
17	e22	208	337	e108	655	351	370	506	256	109	19	15
18	21	174	553	e97	457	320	1,180	2,150	202	64	15	11
19	19	151	1,290	e96	346	481	543	969	168	52	14	10
20	19	140	2,800	e91	384	1,020	381	877	146	45	13	9.2
21	19	129	1,130	e80	933	815	617	1,370	121	43	13	8.9
22	e18	126	759	e68	4,010	713	469	900	101	89	13	19
23	e18	116	562	e60	4,940	578	335	681	87	124	13	93
24	17	101	449	e55	1,460	476	270	533	76	92	12	55
25	33	92	506	e51	939	397	755	438	66	62	11	34
26	377	84	399	e47	760	416	4,870	433	61	48	10	23
27	174	78	331	e44	653	392	1,510	340	58	39	9.6	39
28	100	72	308	e45	569	349	890	278	55	39	11	74
29	124	69	285	e53	---	412	788	257	48	56	10	45
30	465	67	292	e48	---	471	678	229	43	47	12	32
31	239	---	850	e47	---	393	---	202	---	36	14	---
TOTAL	2,187	8,811	13,569	13,853	19,526	15,811	17,787	29,734	5,480	2,625	701.6	1,642.1
MEAN	70.5	294	438	447	697	510	593	959	183	84.7	22.6	54.7
MAX	465	2,330	2,800	4,830	4,940	1,020	4,870	3,680	537	408	59	576
MIN	17	67	47	44	50	289	140	202	43	29	9.6	8.9
CFSM	0.25	1.04	1.55	1.58	2.46	1.80	2.10	3.39	0.65	0.30	0.08	0.19
IN.	0.29	1.16	1.78	1.82	2.57	2.08	2.34	3.91	0.72	0.35	0.09	0.22

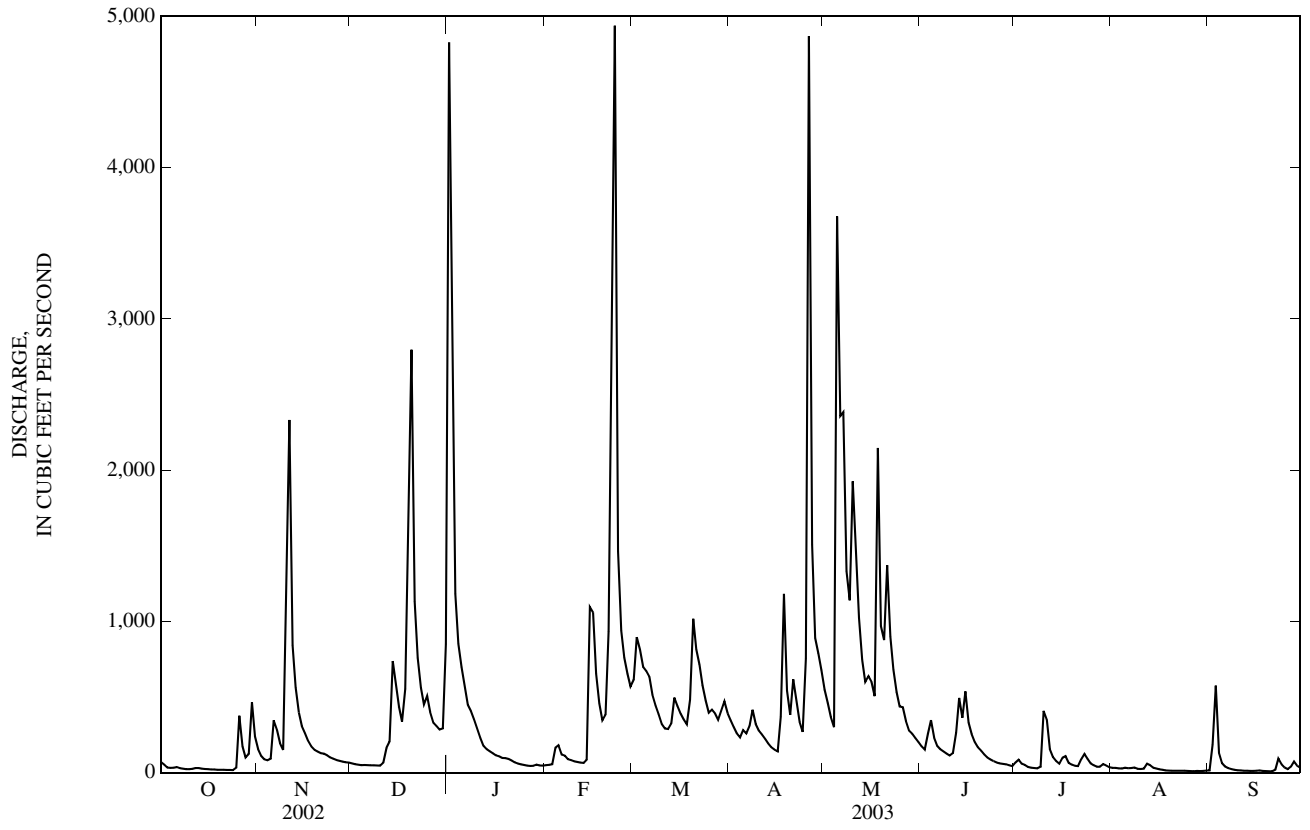
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 2003, BY WATER YEAR (WY)

MEAN	70.0	239	423	465	554	617	592	464	251	136	86.4	68.7
MAX	463	1,135	1,303	1,341	1,236	1,372	1,957	1,808	1,188	588	463	299
(WY)	(2002)	(1980)	(2002)	(1982)	(1990)	(1997)	(1996)	(1983)	(1997)	(1973)	(1977)	(1996)
MIN	3.45	6.74	29.4	11.6	56.1	142	83.9	35.2	8.36	13.1	9.55	4.25
(WY)	(1998)	(2000)	(1977)	(1977)	(1992)	(1969)	(2001)	(1988)	(1988)	(1991)	(1999)	(1999)

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1969 - 2003	
ANNUAL TOTAL	153,776.2		131,726.7			
ANNUAL MEAN	421		361		329	
HIGHEST ANNUAL MEAN					551	
LOWEST ANNUAL MEAN					129	
HIGHEST DAILY MEAN	8,310	May 13	4,940	Feb 23	22,000	Apr 29, 1996
LOWEST DAILY MEAN	5.6	Sep 12	8.9	Sep 21	1.8	Nov 15, 1999
ANNUAL SEVEN-DAY MINIMUM	6.0	Sep 7	11	Aug 24	1.8	Nov 12, 1999
MAXIMUM PEAK FLOW			9,010	Feb 23	39,000	Apr 29, 1996
MAXIMUM PEAK STAGE			19.23	Feb 23	27.15	Apr 29, 1996
ANNUAL RUNOFF (CFSM)	1.49		1.28		1.16	
ANNUAL RUNOFF (INCHES)	20.21		17.32		15.81	
10 PERCENT EXCEEDS	1,010		845		749	
50 PERCENT EXCEEDS	161		140		113	
90 PERCENT EXCEEDS	13		20		14	

e Estimated



03303000 BLUE RIVER NEAR WHITE CLOUD, IN

LOCATION.--Lat 38°14'15", long 86°13'42", in NW¹/₄SE¹/₄ sec.19, T.3 S., R.3 E., Harrison County, Hydrologic Unit 05140104, (CORYDON WEST, IN quadrangle), on left bank 400 ft downstream from Spring Creek, 600 ft upstream from bridge on Interstate 64, 0.2 mi upstream from bridge on State Highway 62, 0.8 mi north of White Cloud, and at mile 14.7.

DRAINAGE AREA.--476 mi², of which 192 mi² does not contribute directly to surface runoff. Also, part of flow from Indian Creek, downstream from Corydon, IN, enters Blue River via solution channel in Karst area through Harrison Spring.

PERIOD OF RECORD.--April 1931 to current year. Monthly figures only for some periods, published in WSP 1305.

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

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

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

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	305	470	200	6,720	e170	1,130	758	1,080	478	161	95	132
2	248	364	187	6,180	e160	1,440	695	909	435	161	125	170
3	221	299	174	2,690	e155	1,590	627	790	443	206	143	358
4	192	269	165	1,800	405	1,340	576	684	560	165	122	678
5	230	294	170	1,390	457	1,220	591	3,360	548	147	114	294
6	197	512	160	1,140	418	1,170	605	6,090	457	131	94	201
7	174	654	155	944	343	1,020	663	3,840	405	117	105	154
8	163	533	155	840	318	893	771	3,060	376	110	99	113
9	139	431	156	784	289	810	753	2,760	353	124	89	93
10	127	1,650	162	694	e275	722	694	3,540	329	202	101	78
11	201	4,160	235	597	e265	652	639	3,610	493	673	89	68
12	187	2,120	322	520	e260	628	590	2,540	738	518	116	60
13	167	1,170	432	459	e250	630	536	1,700	1,030	321	99	54
14	158	858	783	445	e249	693	486	1,300	847	223	114	49
15	e142	696	1,130	418	928	789	453	1,260	801	183	92	53
16	e130	593	837	384	2,440	724	430	1,440	790	175	75	52
17	e121	519	722	368	1,420	676	641	1,140	607	149	67	46
18	116	451	897	339	995	639	1,820	3,160	526	197	56	47
19	102	405	2,000	313	788	810	1,290	2,470	462	152	50	43
20	99	367	4,980	e310	787	1,510	907	1,590	415	127	45	44
21	90	349	2,750	304	1,400	1,490	836	2,170	377	126	42	36
22	83	332	1,590	287	5,220	1,360	1,040	1,890	339	140	41	103
23	78	314	1,150	253	9,780	1,130	777	1,380	309	132	44	144
24	72	300	926	203	3,760	957	658	1,090	283	188	38	157
25	87	278	967	e188	2,230	837	1,430	930	255	171	36	183
26	259	261	914	e172	1,650	774	7,190	898	231	135	35	126
27	559	248	761	e142	1,360	790	4,180	797	230	113	33	142
28	364	234	695	e158	1,170	726	2,110	686	212	103	31	158
29	364	223	652	e180	---	777	1,470	617	193	97	29	175
30	645	213	668	e162	---	921	1,340	572	172	92	87	176
31	684	---	1,380	e180	---	840	---	527	---	102	120	---
TOTAL	6,704	19,567	26,475	29,564	37,942	29,688	35,556	57,880	13,694	5,641	2,426	4,187
MEAN	216	652	854	954	1,355	958	1,185	1,867	456	182	78.3	140
MAX	684	4,160	4,980	6,720	9,780	1,590	7,190	6,090	1,030	673	143	678
MIN	72	213	155	142	155	628	430	527	172	92	29	36
CFSM	0.45	1.37	1.79	2.00	2.85	2.01	2.49	3.92	0.96	0.38	0.16	0.29
IN.	0.52	1.53	2.07	2.31	2.97	2.32	2.78	4.52	1.07	0.44	0.19	0.33

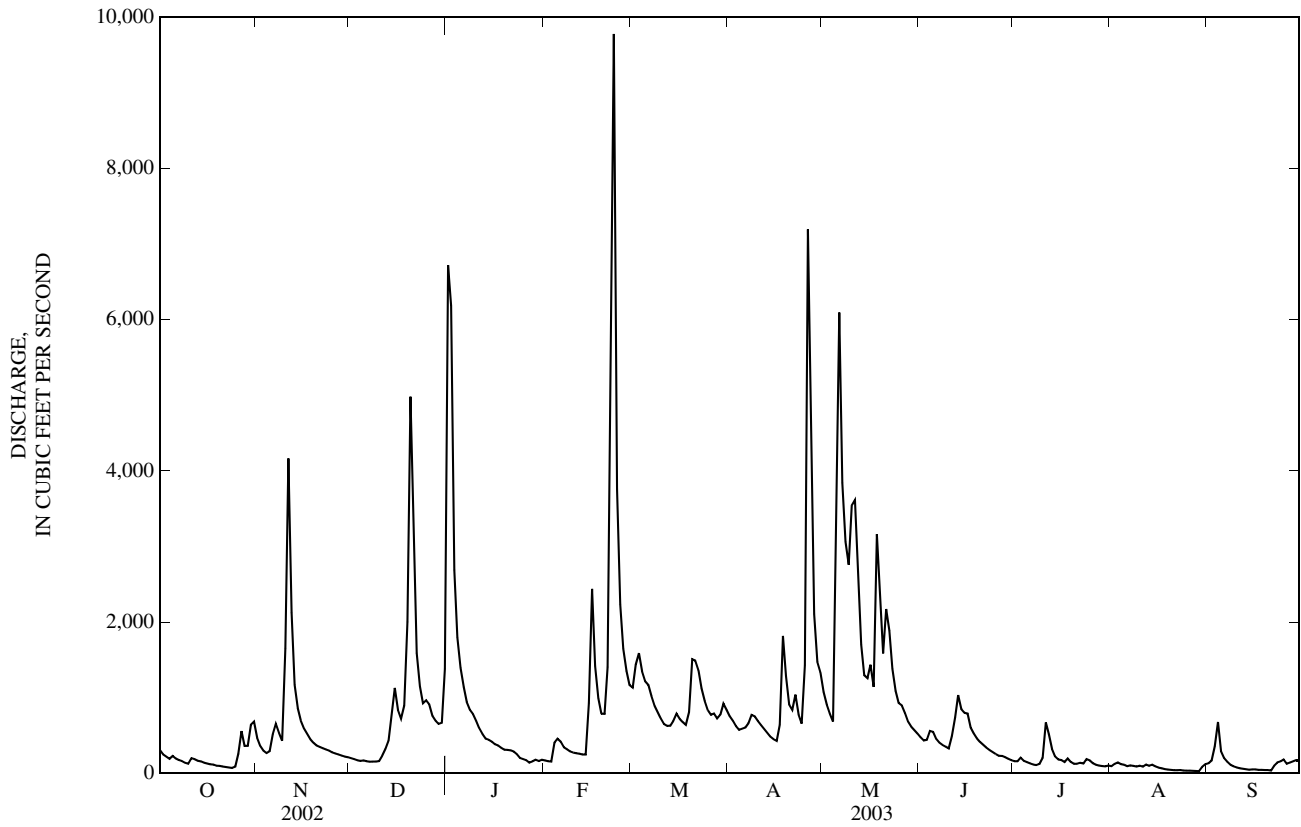
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 2003, BY WATER YEAR (WY)

MEAN	137	374	686	1,051	1,142	1,380	1,165	892	505	281	175	141
MAX	934	2,057	2,502	6,290	3,404	4,299	3,243	4,020	2,785	1,655	801	551
(WY)	(2002)	(1980)	(2002)	(1937)	(1950)	(1945)	(1996)	(1983)	(1997)	(1979)	(1977)	(1996)
MIN	14.3	20.0	17.6	40.3	78.0	70.8	263	91.2	41.0	44.8	29.8	18.8
(WY)	(1965)	(1964)	(1964)	(1977)	(1934)	(1941)	(1934)	(1934)	(1936)	(1954)	(1964)	(1953)

03303000 BLUE RIVER NEAR WHITE CLOUD, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1932 - 2003	
ANNUAL TOTAL	313,630		269,324			
ANNUAL MEAN	859		738		659	
HIGHEST ANNUAL MEAN					1,199	1950
LOWEST ANNUAL MEAN					140	1941
HIGHEST DAILY MEAN	12,400	May 14	9,780	Feb 23	27,300	Apr 30, 1996
LOWEST DAILY MEAN	14	Sep 12	29	Aug 29	9.6	Oct 17, 1964
ANNUAL SEVEN-DAY MINIMUM	15	Sep 8	35	Aug 23	11	Oct 12, 1964
MAXIMUM PEAK FLOW			11,100	Feb 23	29,400	Apr 30, 1996
MAXIMUM PEAK STAGE			13.22	Feb 23	23.30	Apr 30, 1996
ANNUAL RUNOFF (CFSM)	1.81		1.55		1.38	
ANNUAL RUNOFF (INCHES)	24.51		21.05		18.80	
10 PERCENT EXCEEDS	1,980		1,540		1,480	
50 PERCENT EXCEEDS	446		377		258	
90 PERCENT EXCEEDS	39		93		37	

e Estimated



ANDERSON RIVER BASIN

03303300 MIDDLE FORK ANDERSON RIVER AT BRISTOW, IN

LOCATION.--Lat 38°08'19", long 86°43'16", in NW¼SE¼ sec.27, T.4 S., R.3 W., Perry County, Hydrologic Unit 05140201, (BRISTOW, IN. quadrangle), on left bank at downstream side of bridge on State Highway 145 at Bristow, 2.0 mi downstream from Coon Branch, 6.0 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 good except for estimated daily discharges, and those below 1 ft³/s, which are poor. Flow regulated by U.S. 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.9	11	6.0	506	8.9	100	72	72	26	4.6	0.95	1.3
2	2.4	9.2	6.0	356	10	91	62	58	23	4.4	1.3	2.5
3	2.2	8.0	5.8	274	13	e80	55	49	27	4.0	1.6	2.5
4	2.9	8.3	5.8	180	41	e72	49	42	25	3.6	6.2	1.7
5	3.5	13	5.7	124	34	65	51	301	21	3.0	11	1.3
6	2.3	25	5.5	92	28	58	48	284	19	2.7	4.5	1.2
7	1.9	23	5.5	71	26	52	55	256	17	2.4	3.2	1.2
8	1.7	16	5.5	59	22	47	56	238	16	2.5	2.5	1.2
9	1.6	13	5.7	50	21	42	63	273	14	6.9	2.2	1.2
10	1.9	185	5.7	42	21	37	70	194	13	11	2.1	1.1
11	2.1	182	12	35	21	34	64	202	45	10	2.4	1.0
12	2.1	109	18	30	21	34	58	134	215	5.3	2.1	0.95
13	2.2	76	29	27	19	37	53	95	110	3.8	1.5	0.95
14	2.5	57	55	24	22	37	48	72	80	3.1	1.4	0.95
15	2.7	47	47	20	104	36	44	165	127	2.8	1.3	0.95
16	3.1	39	40	18	113	34	40	190	201	3.1	1.4	0.89
17	3.4	32	35	17	93	33	68	283	59	2.4	1.4	0.83
18	3.4	26	34	14	77	31	82	380	37	2.8	1.4	0.72
19	3.5	22	182	14	78	58	74	320	30	3.6	1.5	0.68
20	3.6	19	259	12	110	75	66	249	25	3.6	1.6	0.60
21	3.5	16	181	12	193	87	65	170	20	6.4	1.6	0.56
22	3.5	14	127	11	598	84	59	119	16	4.7	1.5	1.5
23	3.4	12	91	9.5	498	75	53	88	14	4.5	1.5	1.3
24	3.8	10	77	8.2	426	66	49	67	12	4.2	1.5	1.2
25	5.7	9.6	86	7.9	382	59	131	67	9.5	2.6	1.7	0.96
26	7.5	e9.0	70	7.4	296	59	296	70	9.1	1.3	1.6	0.87
27	8.4	e8.1	59	6.5	178	55	237	54	9.7	1.2	1.6	e1.2
28	9.3	e7.5	51	6.3	118	51	176	45	7.6	1.4	1.8	e2.0
29	17	e6.9	45	7.4	---	109	118	39	6.3	1.3	1.9	e6.0
30	20	6.4	57	7.8	---	96	84	33	5.2	1.0	1.7	15
31	15	---	182	7.9	---	83	---	29	---	0.95	1.6	---
TOTAL	150.0	1,020.0	1,794.2	2,056.9	3,571.9	1,877	2,446	4,638	1,239.4	115.15	69.55	54.31
MEAN	4.84	34.0	57.9	66.4	128	60.5	81.5	150	41.3	3.71	2.24	1.81
MAX	20	185	259	506	598	109	296	380	215	11	11	15
MIN	1.6	6.4	5.5	6.3	8.9	31	40	29	5.2	0.95	0.95	0.56
CFSM	0.12	0.85	1.45	1.67	3.21	1.52	2.05	3.76	1.04	0.09	0.06	0.05
IN.	0.14	0.95	1.68	1.92	3.34	1.75	2.29	4.34	1.16	0.11	0.07	0.05

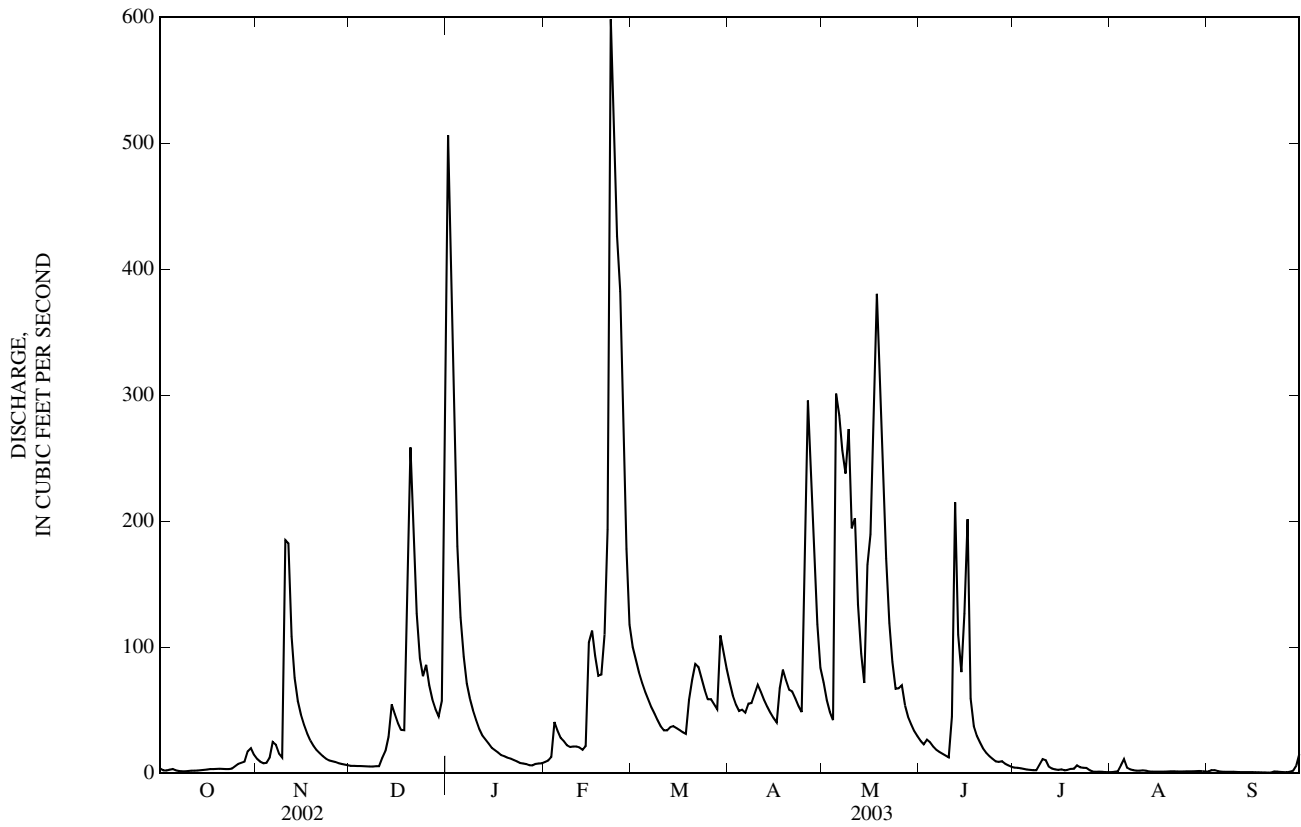
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2003, BY WATER YEAR (WY)

MEAN	9.66	37.3	74.8	79.7	98.3	123	110	78.9	32.0	16.5	11.2	10.3
MAX	63.7	194	224	223	245	393	312	405	190	141	162	78.8
(WY)	(1978)	(1980)	(2002)	(1982)	(1989)	(1964)	(1972)	(1983)	(1979)	(1979)	(1979)	(1982)
MIN	0.000	0.000	0.000	2.78	5.66	33.4	15.7	2.37	0.82	0.38	0.013	0.000
(WY)	(1965)	(1964)	(1964)	(1964)	(1992)	(1990)	(2001)	(2001)	(1988)	(1968)	(1965)	(1964)

03303300 MIDDLE FORK ANDERSON RIVER AT BRISTOW, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1962 - 2003	
ANNUAL TOTAL	23,414.51		19,032.41		56.5	
ANNUAL MEAN	64.1		52.1		122	
HIGHEST ANNUAL MEAN					15.2	1979
LOWEST ANNUAL MEAN					4,870	Mar 9, 1964
HIGHEST DAILY MEAN	936	May 13	598	Feb 22	0.00	Oct 2, 1961
LOWEST DAILY MEAN	0.00	Sep 5	0.56	Sep 21	0.00	Oct 9, 1961
ANNUAL SEVEN-DAY MINIMUM	0.00	Sep 5	0.75	Sep 15	0.00	Oct 9, 1961
MAXIMUM PEAK FLOW			875	Feb 22	6,360	Mar 9, 1964
MAXIMUM PEAK STAGE			13.38	Feb 22	19.33	Mar 4, 1964
ANNUAL RUNOFF (CFSM)	1.61		1.31		1.42	
ANNUAL RUNOFF (INCHES)	21.88		17.79		19.30	
10 PERCENT EXCEEDS	206		146		148	
50 PERCENT EXCEEDS	19		18		15	
90 PERCENT EXCEEDS	0.14		1.5		0.20	

e Estimated



CROOKED CREEK BASIN

03303400 CROOKED CREEK NEAR SANTA CLAUS, IN

LOCATION.--Lat 38°07'05", long 86°53'24", in SE¼SE¼ sec.31, T.4 S., R.4 W., Spencer County, Hydrologic Unit 05140201, (SANTA CLAUS, IN, quadrangle), on right bank at upstream side of bridge on county road, 1.1 mi east of State Highway 162, 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 October 2003 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 403.00 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 30, 1995 datum of gage was 404.34 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except those for June 5 - Sept. 30, estimated daily discharges, and those below 2 ft³/s, which are poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.25	1.2	e0.32	189	e1.0	25	6.4	4.6	1.6	0.09	0.27	e0.03
2	0.07	1.00	e0.32	34	e1.3	19	4.9	4.4	1.4	0.06	1.1	0.38
3	0.03	1.2	e0.30	19	e3.2	11	4.2	3.5	4.8	e0.05	1.1	0.11
4	0.44	2.4	e0.33	11	7.5	8.5	3.8	3.8	2.5	e0.04	0.20	e0.04
5	0.25	9.6	e0.50	8.0	3.1	7.1	15	164	1.8	e0.04	0.16	e0.04
6	0.03	3.7	e0.40	5.8	e2.7	5.6	6.4	36	1.6	e0.04	0.09	e0.04
7	0.02	1.6	e0.49	5.1	e2.5	4.8	14	38	1.5	e0.03	0.07	e0.03
8	e0.05	1.2	e0.69	4.8	e2.3	4.4	7.6	223	1.3	e0.03	0.04	e0.03
9	e0.04	0.99	e0.75	e4.0	e2.1	3.8	49	100	1.0	0.05	e0.04	e0.03
10	0.10	139	e0.80	e3.2	e2.0	3.5	28	24	1.1	0.10	e0.04	e0.03
11	0.26	33	19	e2.7	e2.7	3.4	13	15	26	0.07	1.9	e0.03
12	0.07	6.4	4.6	e2.4	e2.3	4.6	7.5	7.4	90	e0.06	0.21	e0.02
13	0.02	2.9	23	e2.3	e2.0	14	5.1	5.1	17	e0.06	e0.06	e0.02
14	e0.02	2.1	24	e2.0	8.6	8.2	4.3	4.5	7.7	e0.05	e0.05	e0.02
15	e0.01	1.9	8.0	e1.8	79	5.7	3.8	7.2	5.0	30	e0.04	1.3
16	e0.01	1.5	3.9	e1.6	36	4.7	3.4	4.6	3.5	5.4	e0.03	1.8
17	e0.01	1.2	3.1	e1.5	19	4.7	21	171	2.9	0.64	e0.03	1.5
18	e0.01	0.93	3.0	e1.4	10	4.4	9.8	67	2.6	0.30	e0.03	1.1
19	e0.01	0.88	137	e1.5	32	32	5.4	19	2.3	0.14	e0.03	0.10
20	e0.05	0.77	50	e1.5	73	17	4.7	22	2.0	0.06	e0.02	e0.06
21	e0.03	0.77	15	e1.4	110	18	4.4	16	1.8	40	e0.02	e0.03
22	e0.02	0.68	7.7	e1.2	366	9.6	3.6	8.4	1.7	7.2	e0.03	2.0
23	e0.02	0.60	4.2	e0.98	83	6.4	3.1	5.1	1.6	3.3	e0.04	0.79
24	e0.02	0.55	16	e0.79	43	5.2	2.8	3.7	1.4	2.3	e0.03	0.16
25	2.6	0.49	18	e0.90	26	5.0	25	16	1.0	1.7	e0.02	e0.06
26	1.0	0.46	5.7	e0.75	e16	7.3	17	10	1.6	1.4	e0.02	e0.05
27	0.62	e0.43	3.9	e0.65	e12	5.0	6.2	5.1	1.8	1.0	e0.02	2.2
28	1.1	e0.40	3.6	e0.86	e17	13	5.0	3.6	0.67	0.78	e0.02	0.60
29	8.1	e0.35	3.0	e1.3	---	72	10	3.1	0.13	0.43	e0.02	0.12
30	1.8	e0.34	14	e1.0	---	17	4.7	2.5	0.06	0.18	e0.03	e0.10
31	1.1	---	79	e0.80	---	9.2	---	2.1	---	0.39	e0.03	---
TOTAL	18.16	218.54	450.60	313.23	965.3	359.1	299.1	999.7	189.36	95.99	5.79	12.82
MEAN	0.59	7.28	14.5	10.1	34.5	11.6	9.97	32.2	6.31	3.10	0.19	0.43
MAX	8.1	139	137	189	366	72	49	223	90	40	1.9	2.2
MIN	0.01	0.34	0.30	0.65	1.0	3.4	2.8	2.1	0.06	0.03	0.02	0.02
CFSM	0.07	0.93	1.85	1.29	4.39	1.47	1.27	4.10	0.80	0.39	0.02	0.05
IN.	0.09	1.03	2.13	1.48	4.57	1.70	1.42	4.73	0.90	0.45	0.03	0.06

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2003, BY WATER YEAR (WY)

MEAN	3.16	9.42	15.7	15.3	21.5	21.6	20.3	13.1	6.62	4.55	2.57	2.29
MAX	34.1	33.5	49.1	43.7	65.0	63.1	65.7	62.0	37.5	47.5	19.4	16.7
(WY)	(2002)	(1994)	(1991)	(1982)	(2000)	(1997)	(1996)	(1995)	(1997)	(1979)	(1977)	(1996)
MIN	0.000	0.067	0.51	0.058	1.12	5.35	2.27	0.17	0.000	0.001	0.000	0.000
(WY)	(1988)	(2000)	(1977)	(1977)	(1992)	(1990)	(1976)	(1988)	(1988)	(1974)	(1983)	(1970)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

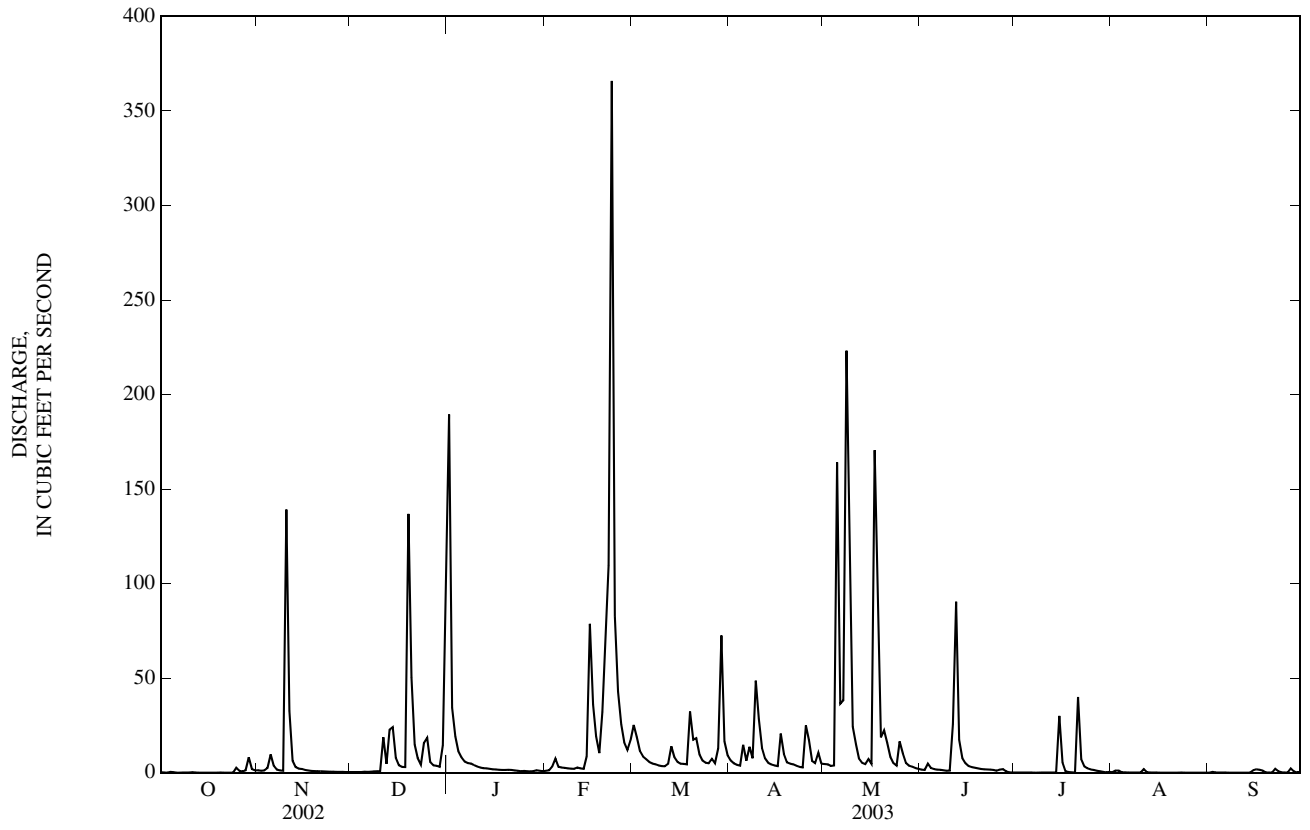
FOR 2003 WATER YEAR

WATER YEARS 1970 - 2003

ANNUAL TOTAL	5,166.83	3,927.69	
ANNUAL MEAN	14.2	10.8	11.3
HIGHEST ANNUAL MEAN			20.9
LOWEST ANNUAL MEAN			3.97
HIGHEST DAILY MEAN	919	May 13	366
LOWEST DAILY MEAN	0.00	Jun 26	0.01
ANNUAL SEVEN-DAY MINIMUM	0.00	Jun 26	0.01
MAXIMUM PEAK FLOW			1,930
MAXIMUM PEAK STAGE			10.75
ANNUAL RUNOFF (CFSM)	1.80	1.37	1.43
ANNUAL RUNOFF (INCHES)	24.45	18.59	19.50
10 PERCENT EXCEEDS	34	22	22
50 PERCENT EXCEEDS	1.8	2.0	1.7
90 PERCENT EXCEEDS	0.00	0.03	0.00

e Estimated

03303400 CROOKED CREEK NEAR SANTA CLAUS, IN—Continued



WABASH RIVER BASIN

03322900 WABASH RIVER AT LINN GROVE, IN

LOCATION.--Lat 40°39'22", long 85°01'58", in SE¹/₄SE¹/₄ sec.34, T.26 N., R.13 E., Adams County, Hydrologic Unit 05120101, (LINN GROVE, IN quadrangle), 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 by Grand Lake, diversion from or into St. Marys River Basin, and into Miami and Erie Canal.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	16	28	2,030	e30	e140	332	316	157	118	365	688
2	18	13	24	2,230	e36	e120	285	850	137	227	2,840	2,550
3	15	9.4	e22	1,600	e60	e100	245	536	145	164	3,470	4,180
4	14	10	20	598	e700	e90	305	287	278	195	5,120	4,160
5	14	18	18	274	e1,200	e230	791	1,730	244	4,410	4,990	2,930
6	12	20	17	191	e540	e1,220	660	2,100	181	5,830	4,460	1,590
7	12	25	17	158	e300	e1,500	718	1,700	157	10,100	3,290	747
8	10	31	16	154	e180	e1,000	1,180	813	146	13,900	2,070	398
9	8.9	22	14	709	e120	e1,800	837	1,910	132	12,100	1,470	258
10	8.3	125	14	1,130	e88	e2,800	571	2,920	116	11,000	1,150	226
11	10	564	14	519	e70	e2,900	424	3,760	114	7,490	634	201
12	9.9	386	14	e220	e56	e2,500	319	4,550	555	5,760	634	191
13	8.0	145	14	e160	e47	e2,800	260	4,130	1,200	4,920	827	174
14	6.7	76	16	e120	e40	e3,200	230	2,820	1,430	4,000	792	155
15	8.0	54	18	e100	e35	3,780	209	1,980	1,310	2,990	375	148
16	11	44	18	e80	e37	3,140	191	1,630	581	2,090	255	142
17	11	40	16	e70	e36	2,450	186	1,110	410	1,300	215	133
18	10	37	66	e60	e36	1,970	199	645	1,290	726	208	129
19	9.6	33	853	e50	e35	1,450	160	487	1,610	466	178	129
20	9.8	29	1,530	e46	e35	1,100	149	388	801	349	159	107
21	11	28	1,260	e43	e38	1,190	144	301	302	568	144	99
22	14	29	504	e41	e60	1,480	134	307	209	976	133	275
23	12	35	209	e38	e280	1,240	118	247	171	1,100	124	570
24	11	52	117	e36	e1,100	735	112	204	147	949	116	359
25	12	54	67	e34	e880	494	119	177	134	604	110	1,030
26	16	55	e70	e33	e500	412	132	169	140	403	98	898
27	21	50	e66	e31	e330	458	121	157	142	316	91	2,500
28	23	40	e58	e30	e250	414	102	146	139	274	89	2,920
29	16	33	50	e29	---	649	95	142	117	257	89	2,800
30	19	33	201	e28	---	605	106	134	109	233	139	1,540
31	17	---	1,610	e27	---	420	---	144	---	211	195	---
TOTAL	401.2	2,106.4	6,961	10,869	7,119	42,387	9,434	36,790	12,604	94,026	34,830	32,227
MEAN	12.9	70.2	225	351	254	1,367	314	1,187	420	3,033	1,124	1,074
MAX	23	564	1,610	2,230	1,200	3,780	1,180	4,550	1,610	13,900	5,120	4,180
MIN	6.7	9.4	14	27	30	90	95	134	109	118	89	99
CFSM	0.03	0.15	0.50	0.77	0.56	3.02	0.69	2.62	0.93	6.70	2.48	2.37
IN.	0.03	0.17	0.57	0.89	0.58	3.48	0.77	3.02	1.04	7.72	2.86	2.65

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2003, BY WATER YEAR (WY)

MEAN	108	267	482	489	663	784	658	397	364	351	192	119
MAX	1,002	1,853	1,514	1,563	1,717	2,397	2,085	1,584	1,914	3,033	1,513	1,074
(WY)	(2002)	(1973)	(1991)	(1974)	(1976)	(1978)	(1972)	(1996)	(1981)	(2003)	(1995)	(2003)
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 2002 CALENDAR YEAR

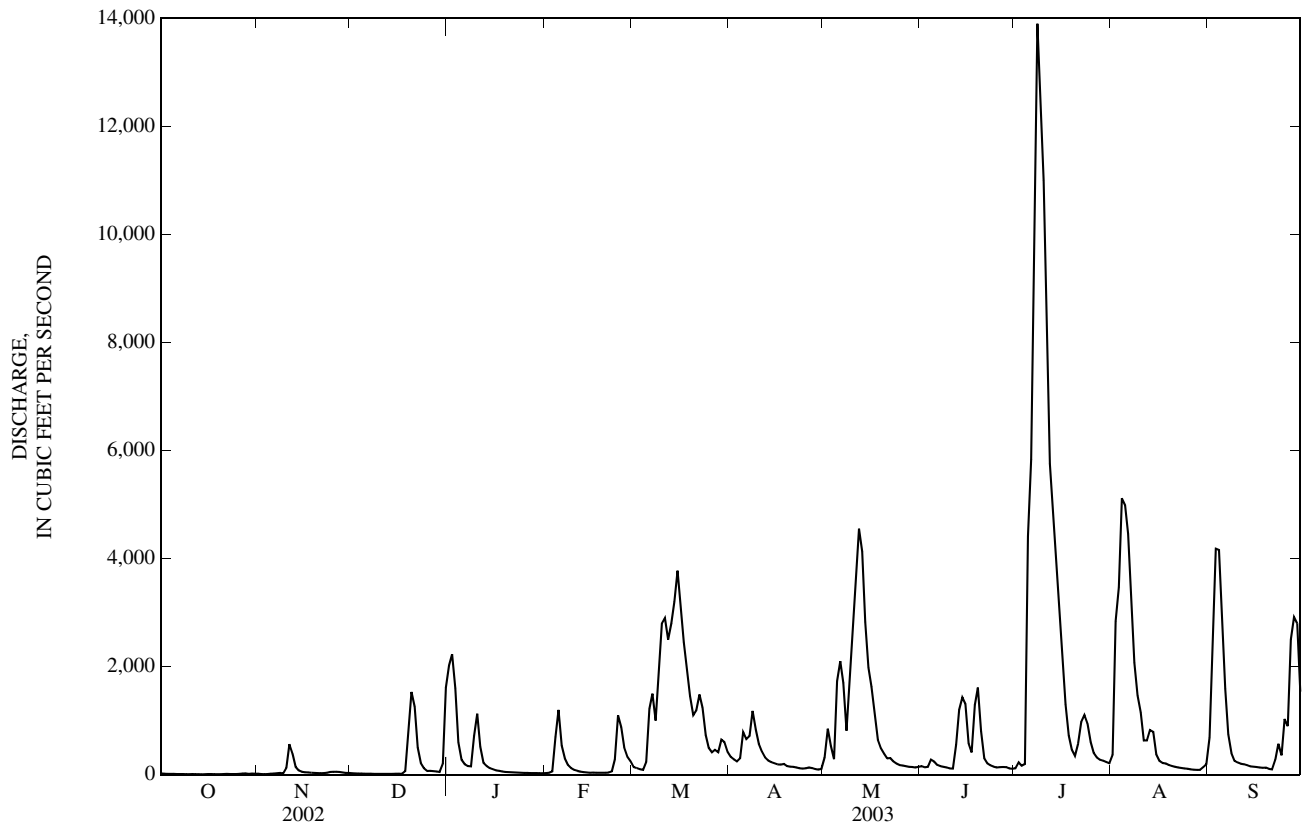
FOR 2003 WATER YEAR

WATER YEARS 1965 - 2003

ANNUAL TOTAL	135,971.3	289,754.6	
ANNUAL MEAN	373	794	405
HIGHEST ANNUAL MEAN			794
LOWEST ANNUAL MEAN			76.8
HIGHEST DAILY MEAN	4,580	Mar 31	13,900
LOWEST DAILY MEAN	4.1	Sep 16	6.7
ANNUAL SEVEN-DAY MINIMUM	6.0	Sep 11	8.5
MAXIMUM PEAK FLOW			14,500
MAXIMUM PEAK STAGE			14.76
ANNUAL RUNOFF (CFSM)	0.82		1.75
ANNUAL RUNOFF (INCHES)	11.17		23.79
10 PERCENT EXCEEDS	1,180		2,470
50 PERCENT EXCEEDS	96		178
90 PERCENT EXCEEDS	10		16

03322900 WABASH RIVER AT LINN GROVE, IN—Continued

e Estimated



WABASH RIVER BASIN

03322985 WABASH RIVER NEAR BLUFFTON, IN

LOCATION.--Lat 40°43'41", long 85°08'12", in NE¼NE¼ sec.11, T.26 N., R.12 E., Wells County, Hydrologic Unit 05120101, (BLUFFTON, IN quadrangle), on left bank 300 ft downstream of bridge on County Road 450 East (State Highway 201), 0.95 mi south of State Highway 124, 2.5 mi southeast of Bluffton, and at mile 436.6.

DRAINAGE AREA.--508 mi².

PERIOD OF RECORD.--September 2001 to current year.

GAGE.--Water-stage recorder. Datum of gage is 795.42 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Occasional regulation by Grand Lake Reservoir, diversion from or into St. Mary's River Basin, and into Miami and Erie Canal.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	19	29	2,130	e33	e170	480	219	182	423	361	527
2	24	18	28	2,070	e40	e140	402	978	168	247	3,690	2,550
3	19	14	24	1,820	e64	e120	337	752	165	251	3,360	3,140
4	18	12	23	874	e790	e110	453	424	298	460	4,110	3,920
5	18	14	19	427	e1,300	e250	1,480	2,220	327	5,880	4,830	3,330
6	17	25	18	261	e800	e1,250	1,020	2,340	235	6,390	4,320	2,000
7	15	25	17	206	e320	e1,560	1,000	2,060	190	9,780	3,530	994
8	15	33	17	187	e200	e1,200	1,380	2,020	175	e13,600	2,340	566
9	14	32	16	686	e140	e2,000	1,110	3,090	157	e14,600	1,580	340
10	13	104	15	1,290	e100	e2,900	786	3,440	136	e11,400	1,290	275
11	12	696	14	e790	e78	3,000	611	3,910	128	e7,740	833	238
12	14	579	15	e360	e62	2,850	465	3,950	654	e5,740	698	215
13	14	238	15	e250	e52	3,000	364	4,040	1,490	e4,870	861	200
14	13	101	16	e180	e43	3,170	314	3,210	2,110	e3,980	968	177
15	11	62	18	e150	e36	3,590	279	2,260	1,560	e3,010	527	165
16	11	48	18	e120	e38	3,490	253	1,740	868	e2,160	323	155
17	14	42	17	e98	e37	2,800	231	1,320	469	e1,390	255	145
18	15	39	28	e82	e37	2,220	252	838	1,130	e875	237	134
19	15	35	804	e70	36	1,720	211	640	1,530	e585	210	134
20	14	31	1,630	61	38	1,350	186	521	1,070	e465	179	119
21	13	28	1,440	59	43	1,310	178	400	428	e687	160	98
22	14	29	762	e58	80	1,550	167	375	270	e1,050	144	176
23	15	34	335	e50	283	1,430	147	329	209	e1,180	133	716
24	13	47	166	e45	1,190	959	135	262	176	e1,030	126	475
25	13	57	90	e41	e960	685	141	223	153	721	118	1,170
26	16	54	e84	e38	e600	544	155	202	162	484	108	1,190
27	19	53	e82	e36	e400	584	154	189	151	361	96	3,240
28	26	45	e70	e34	e300	551	126	174	163	301	93	2,940
29	22	39	60	e32	---	902	115	167	134	268	93	2,830
30	21	35	155	e31	---	864	112	160	121	241	111	1,980
31	21	---	1,640	e30	---	620	---	176	---	210	227	---
TOTAL	509	2,588	7,665	12,566	8,100	46,889	13,044	42,629	15,009	100,379	35,911	34,139
MEAN	16.4	86.3	247	405	289	1,513	435	1,375	500	3,238	1,158	1,138
MAX	30	696	1,640	2,130	1,300	3,590	1,480	4,040	2,110	14,600	4,830	3,920
MIN	11	12	14	30	33	110	112	160	121	210	93	98
CFSM	0.03	0.17	0.49	0.80	0.57	2.98	0.86	2.71	0.98	6.37	2.28	2.24
IN.	0.04	0.19	0.56	0.92	0.59	3.43	0.96	3.12	1.10	7.35	2.63	2.50

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2003, BY WATER YEAR (WY)

MEAN	591	126	604	301	642	1,153	988	1,210	323	1,640	590	578
MAX	1,165	165	960	405	995	1,513	1,542	1,375	500	3,238	1,158	1,138
(WY)	(2002)	(2002)	(2002)	(2003)	(2002)	(2003)	(2002)	(2003)	(2003)	(2003)	(2003)	(2003)
MIN	16.4	86.3	247	197	289	794	435	1,044	146	42.2	22.0	17.7
(WY)	(2003)	(2003)	(2003)	(2002)	(2003)	(2002)	(2003)	(2002)	(2002)	(2002)	(2002)	(2002)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

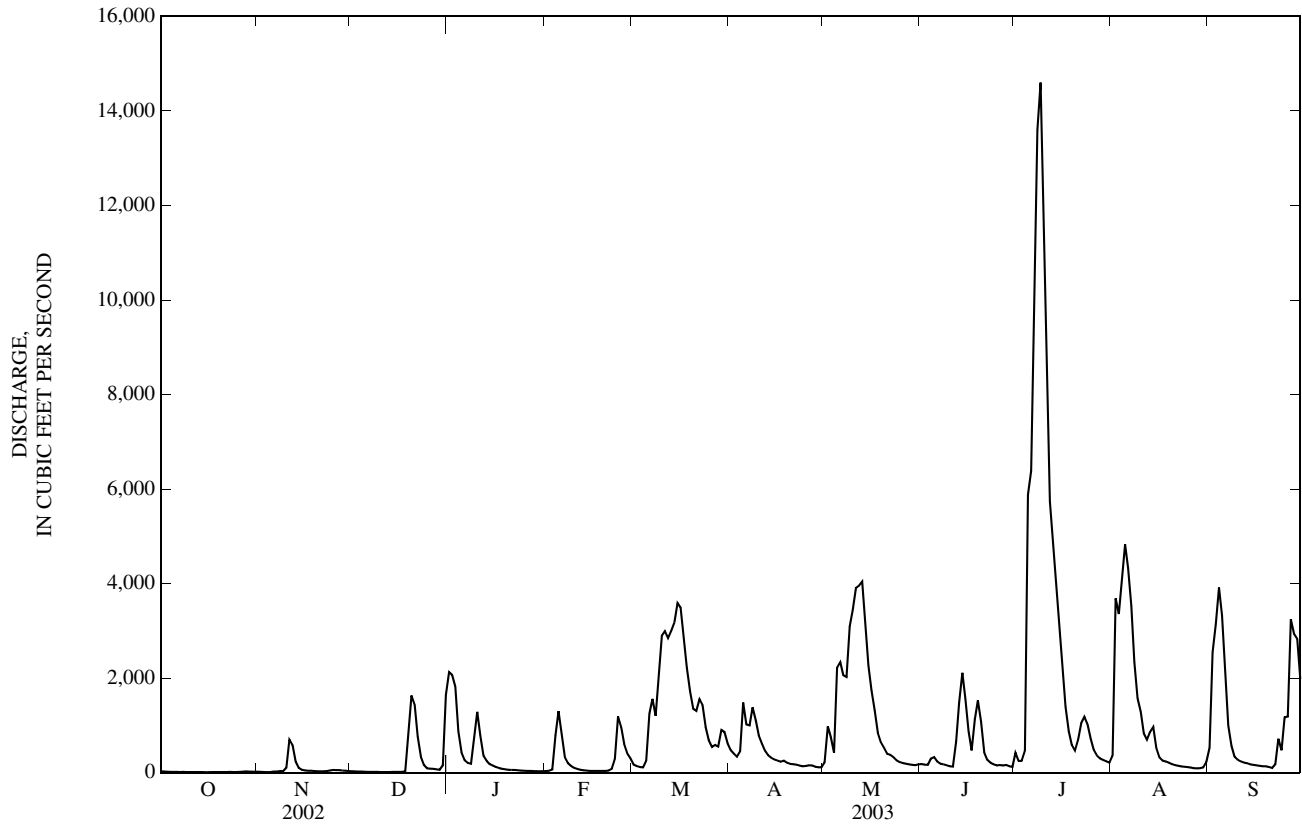
WATER YEARS 1994 - 2003

ANNUAL TOTAL	154,871.8		319,428		732	
ANNUAL MEAN	424		875		875	
HIGHEST ANNUAL MEAN					875	
LOWEST ANNUAL MEAN					589	
HIGHEST DAILY MEAN	4,410	Apr 1	14,600	Jul 9	14,600	Jul 9, 2003
LOWEST DAILY MEAN	8.9	Sep 18	11	Oct 15	2.9	Sep 6, 2001
ANNUAL SEVEN-DAY MINIMUM	11	Sep 12	13	Oct 10	3.4	Sep 5, 2001
MAXIMUM PEAK FLOW			15,300	Jul 9	15,300	Jul 9, 2003
MAXIMUM PEAK STAGE			18.43	Jul 9	18.43	Jul 9, 2003
ANNUAL RUNOFF (CFSM)	0.84		1.72		1.44	
ANNUAL RUNOFF (INCHES)	11.34		23.39		19.58	
10 PERCENT EXCEEDS	1,370		2,810		2,130	
50 PERCENT EXCEEDS	97		215		210	
90 PERCENT EXCEEDS	14		18		18	

e Estimated

WABASH RIVER BASIN

03322985 WABASH RIVER NEAR BLUFFTON, IN—Continued



03323500 WABASH RIVER AT HUNTINGTON, IN—Continued

WATER-QUALITY RECORDS

INSTRUMENTATION.--Temperature recorder.

PERIOD OF RECORD.--

WATER TEMPERATURE.--October 1987 to September 1988. October 1989 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 29.2°C, July 31, 1999; minimum, -0.3°C, Feb. 5, 2003.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 26.9°C, Aug. 28, minimum, -0.1°C, Feb. 5, Mar. 10.

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	---	---	---	10.8	9.2	10.0	6.1	4.9	5.4	4.5	3.8	4.3
2	---	---	---	10.6	8.5	9.4	5.9	4.3	5.0	4.2	3.2	3.8
3	---	---	---	10.0	8.4	9.3	5.6	0.6	4.4	3.2	2.0	2.5
4	---	---	---	10.0	9.3	9.6	5.1	4.5	4.8	2.1	1.6	1.8
5	---	---	---	9.4	8.8	9.2	5.5	4.5	4.9	2.5	1.7	2.2
6	---	---	---	9.4	8.8	9.2	5.7	4.4	4.9	3.9	2.4	3.0
7	---	---	---	10.6	8.5	9.4	5.6	4.3	5.0	4.0	2.9	3.2
8	---	---	---	10.8	8.9	9.8	6.5	4.7	5.5	5.1	3.2	4.1
9	18.4	16.2	17.3	11.1	9.6	10.3	6.3	4.7	5.4	5.0	1.5	4.2
10	18.0	16.1	17.1	13.8	10.9	11.7	6.1	5.1	5.6	5.0	2.0	3.3
11	19.1	15.7	17.3	11.5	9.3	10.5	7.1	5.7	6.4	2.5	1.6	1.9
12	17.8	16.7	17.2	10.2	9.3	10.0	6.6	5.5	6.0	3.1	1.0	2.0
13	17.6	15.3	16.7	10.8	9.7	10.2	6.5	5.7	6.2	4.9	2.2	3.7
14	16.9	14.0	15.3	11.3	10.1	10.7	7.2	6.1	6.5	4.2	2.8	3.7
15	16.7	13.8	15.2	10.8	9.6	10.3	7.0	5.9	6.4	3.5	2.6	3.0
16	15.9	14.0	14.8	9.6	9.1	9.3	6.8	5.4	6.0	3.9	2.8	3.3
17	14.2	13.0	13.7	9.4	8.5	8.9	5.6	4.6	5.0	4.5	2.7	3.6
18	14.1	13.2	13.7	9.4	8.0	8.6	8.3	5.6	6.7	3.6	2.4	3.0
19	15.4	13.5	14.4	10.3	8.6	9.4	8.4	5.9	7.8	3.1	2.5	2.9
20	14.8	12.1	13.3	9.8	8.7	9.3	8.0	2.6	4.5	4.6	3.1	3.6
21	14.4	11.7	13.0	9.3	8.2	8.7	3.4	3.1	3.2	4.1	3.3	3.8
22	14.6	11.9	13.2	8.5	7.5	8.0	4.4	3.3	3.7	4.6	3.1	3.8
23	13.0	12.0	12.6	8.6	7.1	7.7	3.8	2.7	3.1	4.4	3.8	4.1
24	12.6	11.8	12.2	8.5	6.9	7.6	3.6	2.6	3.1	4.0	3.5	3.7
25	11.9	11.3	11.4	7.9	6.9	7.4	4.6	2.6	3.8	4.6	3.3	3.9
26	12.1	11.4	11.8	7.5	6.1	6.9	4.3	3.6	3.9	4.4	3.9	4.2
27	12.8	11.4	12.0	7.2	5.4	6.4	4.6	3.4	3.9	4.3	4.1	4.2
28	13.1	11.1	12.0	7.1	5.4	5.9	4.8	3.7	4.2	4.6	3.9	4.3
29	11.6	10.3	10.7	7.4	5.2	6.2	5.3	4.0	4.4	4.4	4.0	4.2
30	11.5	10.1	10.7	7.4	5.8	6.4	6.6	4.0	5.2	4.4	3.8	4.1
31	11.7	10.0	10.8	---	---	---	6.6	1.5	4.2	4.5	3.8	4.2
MONTH	---	---	---	13.8	5.2	8.9	8.4	0.6	5.0	5.1	1.0	3.5

WABASH RIVER BASIN

03323500 WABASH RIVER AT HUNTINGTON, IN—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	FEBRUARY			MARCH			APRIL			MAY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	4.6	4.2	4.4	3.6	2.5	3.0	10.2	8.0	9.3	17.4	15.5	16.4
2	5.8	4.5	4.9	4.5	3.1	3.5	14.0	10.1	12.1	16.0	14.5	15.3
3	5.3	4.7	5.0	3.9	1.8	3.4	15.8	12.2	14.0	17.0	15.6	16.2
4	5.2	0.3	3.2	5.2	3.3	4.2	14.4	9.5	13.3	16.9	15.8	16.3
5	2.5	-0.1	1.9	5.0	1.4	3.9	11.0	8.3	9.9	17.6	13.4	15.7
6	2.0	0.2	1.7	5.0	3.0	3.7	8.3	6.6	7.5	16.2	14.3	15.2
7	3.3	1.0	2.2	3.1	0.1	1.3	6.6	5.9	6.2	17.1	15.3	16.2
8	4.2	2.1	3.1	2.3	1.3	1.7	6.0	5.2	5.8	16.1	15.5	15.9
9	3.9	2.4	3.1	1.6	0.0	1.2	6.2	5.2	5.7	16.7	14.6	15.8
10	4.0	3.1	3.4	1.3	-0.1	0.7	8.5	5.7	7.0	16.0	15.3	15.5
11	3.8	2.8	3.2	0.9	0.0	0.6	9.3	7.0	8.0	15.8	15.1	15.3
12	4.5	2.3	3.4	0.7	0.2	0.5	11.4	7.8	9.4	16.0	15.3	15.5
13	4.7	1.8	3.0	0.6	0.4	0.5	12.4	9.3	10.7	16.2	15.6	15.9
14	4.2	1.7	3.7	0.8	0.0	0.5	13.9	10.8	12.1	16.4	16.0	16.3
15	4.1	3.3	3.7	1.6	0.8	1.1	15.5	11.9	13.4	16.3	15.9	16.1
16	4.4	2.7	3.5	3.1	1.6	2.3	15.9	13.0	14.1	16.0	15.8	15.9
17	4.4	3.3	4.0	5.7	3.1	4.3	14.0	12.5	13.1	16.3	15.9	16.1
18	4.5	3.9	4.2	7.5	5.7	6.6	14.8	12.5	13.4	16.4	16.1	16.2
19	6.1	4.4	5.0	7.7	6.6	7.1	16.2	12.4	14.0	16.4	16.1	16.2
20	6.7	3.9	5.3	9.0	7.3	7.9	16.1	13.8	14.7	16.1	15.7	15.9
21	5.7	4.3	5.0	9.2	8.4	8.7	14.4	13.3	13.9	16.7	15.7	16.1
22	6.1	0.0	4.5	8.6	7.5	7.9	14.5	12.5	13.4	16.9	15.8	16.3
23	5.6	0.2	3.0	9.5	7.1	8.1	16.8	11.4	13.7	16.7	16.0	16.3
24	5.0	2.1	3.3	10.9	7.6	9.0	13.5	11.4	12.6	16.8	16.0	16.4
25	3.0	1.9	2.2	11.2	10.0	10.5	13.0	11.9	12.3	17.2	16.5	16.8
26	2.4	0.0	1.6	12.0	10.1	10.8	15.8	11.3	13.5	17.4	16.5	16.8
27	4.3	1.3	2.7	13.0	10.9	11.7	16.8	12.8	14.7	17.8	16.2	17.0
28	3.8	0.0	2.8	12.8	11.3	12.1	17.0	13.9	15.5	17.6	16.1	16.8
29	---	---	---	11.7	8.3	10.4	17.8	14.7	16.2	19.2	16.2	17.3
30	---	---	---	8.3	7.0	7.5	17.2	15.0	16.1	18.2	16.2	17.1
31	---	---	---	8.1	7.4	7.8	---	---	---	18.0	16.7	17.3
MONTH	6.7	-0.1	3.5	13.0	-0.1	5.2	17.8	5.2	11.9	19.2	13.4	16.2
	JUNE			JULY			AUGUST			SEPTEMBER		
1	19.8	16.3	17.7	25.3	21.3	22.9	24.4	22.5	23.5	21.6	18.4	20.6
2	19.3	16.4	17.7	24.6	21.7	23.1	24.3	23.0	23.6	21.1	19.6	20.6
3	17.7	17.0	17.4	24.7	22.7	23.5	23.3	22.0	22.8	21.0	19.3	19.9
4	17.7	16.8	17.3	24.7	20.6	23.3	23.4	21.9	22.3	21.1	19.5	20.1
5	19.1	16.4	17.5	21.7	19.5	20.3	22.8	22.2	22.5	21.1	20.2	20.7
6	18.9	16.8	17.6	23.0	19.1	20.8	23.6	22.4	22.6	21.2	20.5	20.9
7	19.3	17.1	17.9	22.2	20.6	21.5	22.9	22.6	22.7	21.1	20.6	20.9
8	18.1	16.8	17.3	23.3	21.8	22.4	23.0	22.7	22.8	21.0	20.6	20.8
9	19.3	16.6	17.8	23.0	22.7	22.8	23.2	22.7	23.0	21.7	20.6	21.3
10	18.8	17.2	17.9	23.9	22.9	23.3	23.3	22.9	23.1	21.5	20.2	21.0
11	20.1	17.9	18.8	24.4	23.4	24.1	23.4	23.1	23.3	21.6	20.2	20.7
12	19.2	16.8	18.3	24.7	24.4	24.6	23.9	23.3	23.5	22.3	20.2	21.0
13	21.3	18.9	19.7	24.8	24.6	24.7	24.0	23.2	23.6	22.4	20.0	20.9
14	19.6	18.8	19.2	24.9	24.0	24.4	23.9	23.4	23.7	21.6	20.1	20.6
15	20.5	18.5	19.7	24.0	23.9	24.0	24.0	23.6	23.8	21.7	19.9	20.6
16	21.2	20.1	20.7	24.1	23.8	23.9	24.1	23.8	24.0	23.0	19.6	20.9
17	21.4	20.7	21.0	24.1	23.8	24.0	25.2	24.1	24.8	22.9	19.5	20.8
18	21.3	20.5	20.9	24.1	24.0	24.0	25.2	24.2	24.6	23.2	19.9	21.1
19	22.3	20.5	21.4	24.3	24.0	24.2	24.8	23.8	24.3	20.7	19.5	20.2
20	22.3	21.0	21.6	24.3	24.0	24.2	25.1	23.5	24.2	22.3	18.9	20.3
21	22.0	20.3	21.2	24.3	24.1	24.2	25.4	23.5	24.2	22.0	18.6	19.9
22	22.5	19.8	20.9	24.4	24.0	24.1	25.7	22.4	24.3	20.0	18.1	19.2
23	23.3	19.5	21.0	24.3	23.9	24.1	25.8	22.9	24.2	20.8	18.5	19.6
24	23.2	19.2	20.8	24.1	23.7	23.9	25.8	22.8	23.9	20.2	18.4	19.5
25	23.4	19.4	21.0	24.0	23.5	23.7	26.2	23.3	24.4	19.6	18.4	19.0
26	21.5	19.9	20.6	23.8	23.4	23.6	25.5	23.6	24.2	18.4	16.7	18.1
27	23.1	19.5	21.0	23.7	23.4	23.5	26.7	23.2	24.5	18.0	16.9	17.3
28	21.8	20.0	20.8	23.6	23.2	23.4	26.9	22.8	24.5	17.0	16.3	16.6
29	23.0	20.3	21.5	23.8	22.9	23.3	24.2	21.9	23.4	16.6	15.8	16.3
30	23.5	20.9	21.9	24.1	23.1	23.5	25.4	22.7	23.6	15.9	15.4	15.7
31	---	---	---	24.1	23.3	23.6	23.1	21.6	22.7	---	---	---
MONTH	23.5	16.3	19.6	25.3	19.1	23.4	26.9	21.6	23.6	23.2	15.4	19.8

03324000 LITTLE RIVER NEAR HUNTINGTON, IN

LOCATION.--Lat 40°54'14", long 85°24'22", in NE¼NW¼ sec.9, T.28 N., R.10 E., Huntington County, Hydrologic Unit 05120101, (HUNTINGTON, IN. quadrangle), on right bank on upstream side of former highway bridge, 0.5 mi upstream of County Road 200 East 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 except for estimated daily discharges, which are poor. During periods of extreme high water in the St. Marys River, some water leaves the St. Marys River Basin through Junk Ditch and flows into Little River Basin via Graham McCulloch Ditch.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	25	20	573	e33	e34	292	55	81	38	86	686
2	21	23	21	220	e38	e33	227	135	61	53	1,250	1,670
3	20	23	22	110	68	e32	162	117	65	55	1,250	989
4	20	24	22	72	651	e32	399	80	87	57	738	450
5	29	25	19	57	494	e45	2,630	1,930	74	1,430	779	253
6	28	32	21	51	311	e72	1,860	2,010	61	1,240	310	163
7	22	33	21	42	188	e70	1,130	940	57	3,390	182	119
8	19	30	21	46	e110	e80	1,050	2,090	57	3,740	127	93
9	19	27	21	110	e80	e560	597	3,150	60	3,500	130	76
10	20	56	21	258	e68	e430	416	3,730	53	2,610	101	67
11	18	401	20	e130	e58	e340	308	3,040	52	1,610	80	59
12	18	134	20	e90	e50	e290	225	2,220	193	740	74	52
13	19	55	20	e70	e42	1,190	172	1,130	547	449	69	50
14	19	35	18	e58	e37	857	139	578	1,730	310	66	49
15	18	28	18	e50	e33	694	125	1,220	744	241	63	112
16	18	24	17	e45	e31	725	115	736	318	203	57	94
17	18	25	18	e40	e32	645	100	444	202	166	56	64
18	18	22	17	e38	e33	514	89	320	184	142	54	53
19	21	21	29	e38	e35	381	81	238	123	122	50	47
20	29	22	161	e39	e35	386	76	242	91	103	47	44
21	22	21	136	e38	e38	834	73	233	74	657	45	41
22	21	25	62	e35	e70	515	69	161	66	1,250	45	296
23	20	35	e36	e33	e180	309	63	132	59	964	47	503
24	19	33	e35	e31	e130	216	58	114	52	499	43	250
25	21	27	e37	e29	e90	169	59	102	48	274	38	868
26	37	24	e32	e30	e70	135	67	88	47	173	57	524
27	43	23	e30	e28	e52	111	61	79	47	129	203	2,240
28	29	21	e26	e29	e41	117	53	73	45	243	82	1,450
29	23	20	e23	e31	---	1,420	50	76	45	165	68	625
30	23	21	26	e32	---	757	48	71	44	112	128	366
31	24	---	510	e31	---	403	---	82	---	99	79	---
TOTAL	697	1,315	1,500	2,484	3,098	12,396	10,794	25,616	5,367	24,764	6,404	12,353
MEAN	22.5	43.8	48.4	80.1	111	400	360	826	179	799	207	412
MAX	43	401	510	573	651	1,420	2,630	3,730	1,730	3,740	1,250	2,240
MIN	18	20	17	28	31	32	48	55	44	38	38	41
CFSM	0.09	0.17	0.18	0.30	0.42	1.52	1.37	3.14	0.68	3.04	0.79	1.57
IN.	0.10	0.19	0.21	0.35	0.44	1.75	1.53	3.62	0.76	3.50	0.91	1.75

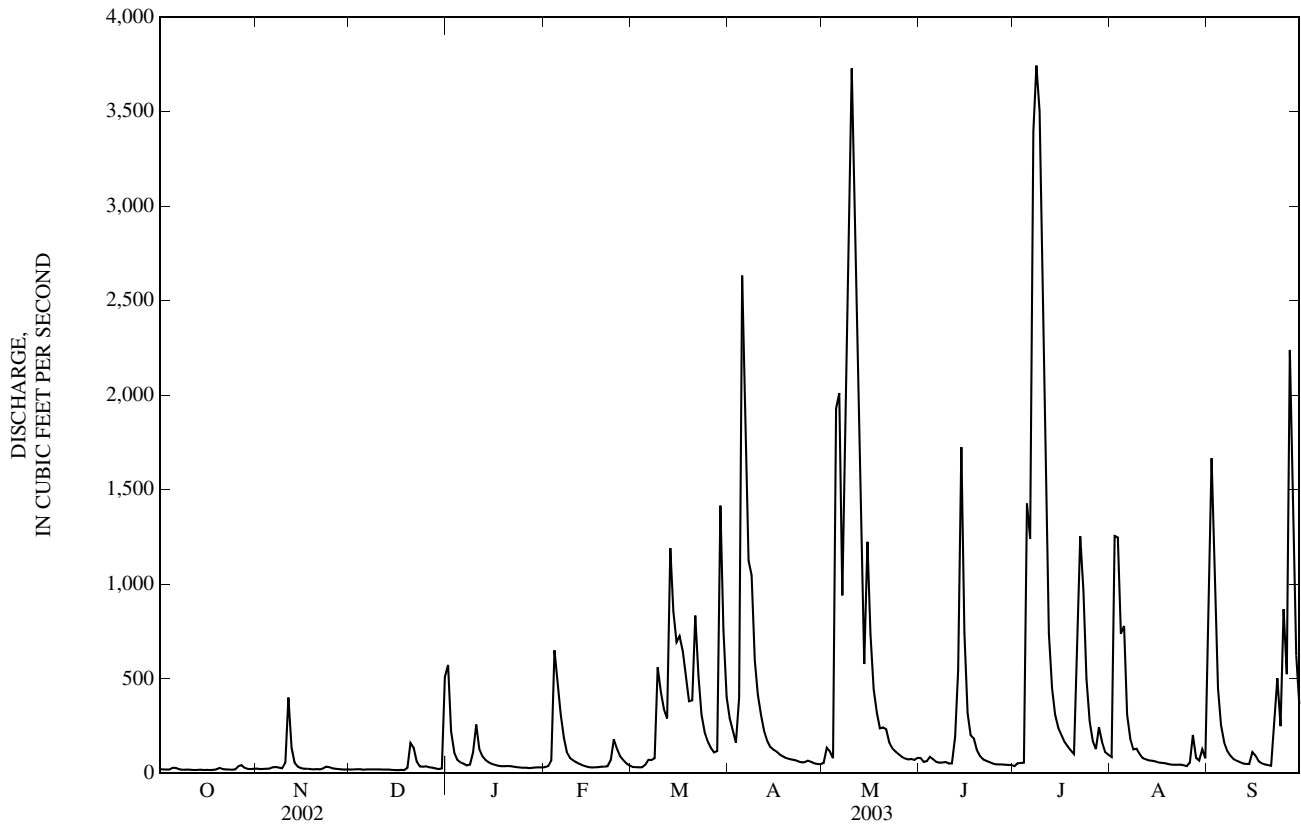
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 2003, BY WATER YEAR (WY)

MEAN	95.3	157	271	319	395	474	419	254	241	129	67.1	64.5
MAX	906	1,137	1,010	1,693	1,164	1,765	1,396	826	968	799	501	414
(WY)	(2002)	(1993)	(1967)	(1950)	(1959)	(1982)	(1957)	(2003)	(2000)	(2003)	(1958)	(1992)
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)

03324000 LITTLE RIVER NEAR HUNTINGTON, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1945 - 2003	
ANNUAL TOTAL	80,158		106,788			
ANNUAL MEAN	220		293		240	
HIGHEST ANNUAL MEAN					450	1950
LOWEST ANNUAL MEAN					67.0	1954
HIGHEST DAILY MEAN	3,230	Feb 1	3,740	Jul 8	5,610	Mar 14, 1982
LOWEST DAILY MEAN	17	Dec 16	17	Dec 16	1.1	Oct 8, 1946
ANNUAL SEVEN-DAY MINIMUM	18	Oct 11	18	Oct 11	1.8	Oct 7, 1946
MAXIMUM PEAK FLOW			3,860	May 10	5,990	Jan 4, 1950
MAXIMUM PEAK STAGE			15.93	May 10	19.50	Feb 25, 1985
ANNUAL RUNOFF (CF5M)	0.84		1.11		0.91	
ANNUAL RUNOFF (INCHES)	11.34		15.10		12.37	
10 PERCENT EXCEEDS	570		766		600	
50 PERCENT EXCEEDS	62		68		69	
90 PERCENT EXCEEDS	20		21		15	

e Estimated



03324300 SALAMONIE RIVER NEAR WARREN, IN

LOCATION.--Lat 40°42'45", long 85°27'13", in SE¹/₄SE¹/₄ sec.12, T.26 N., R.9 E., Huntington County, Hydrologic Unit 05120102, (WARREN, IN quadrangle), 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. 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 fair except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	64	49	3,450	e30	e125	377	119	113	71	266	787
2	16	37	44	2,120	41	e110	293	1,110	96	88	3,000	4,340
3	15	27	38	747	67	e100	233	676	104	95	3,650	4,560
4	15	29	36	343	e1,200	e95	397	341	161	248	2,580	3,420
5	15	33	e34	240	e2,250	e124	1,690	4,580	162	7,230	2,010	672
6	14	45	e32	196	e650	e1,020	701	4,050	128	6,810	870	267
7	15	54	e31	170	e275	e920	661	1,260	109	9,140	374	152
8	21	89	e30	175	e190	e560	1,120	1,340	102	9,780	211	105
9	20	69	30	809	e165	e2,250	625	4,270	94	9,800	259	79
10	18	180	30	1,380	e125	e3,500	422	4,610	86	8,530	1,010	65
11	17	1,630	30	480	e100	e1,880	325	6,140	86	7,350	398	54
12	17	728	30	157	e89	e2,380	267	5,290	480	4,840	325	45
13	16	234	32	e124	e75	e3,750	214	3,660	973	1,440	287	41
14	18	128	32	e100	e63	e3,850	181	950	1,450	710	282	41
15	20	89	33	e89	e55	3,510	165	1,450	883	382	112	53
16	17	73	33	e78	e50	2,290	157	1,150	350	287	79	49
17	15	69	30	e70	e45	1,820	151	574	219	219	62	42
18	15	65	36	e62	45	1,320	141	393	169	170	51	37
19	18	58	971	e57	45	915	131	313	171	140	44	34
20	18	51	2,290	e52	49	1,010	126	266	123	117	38	34
21	19	50	1,340	e47	65	1,220	127	221	97	166	36	34
22	20	59	394	e45	124	1,560	129	183	84	217	38	403
23	23	93	208	e41	383	676	121	162	75	191	37	612
24	23	141	133	e38	1,410	443	109	146	70	222	36	355
25	28	138	90	e36	825	337	112	134	65	125	38	1,950
26	31	97	e74	e35	393	279	127	124	65	90	38	1,240
27	44	74	e65	e33	266	297	122	112	69	80	42	4,970
28	45	62	e62	e33	185	340	111	102	85	72	44	3,850
29	28	55	60	e32	---	1,910	106	103	77	66	65	1,210
30	29	55	225	e31	---	1,200	104	97	70	63	75	521
31	38	---	2,960	e31	---	546	---	122	---	55	127	---
TOTAL	666	4,576	9,482	11,301	9,260	40,337	9,545	44,048	6,816	68,794	16,484	30,022
MEAN	21.5	153	306	365	331	1,301	318	1,421	227	2,219	532	1,001
MAX	45	1,630	2,960	3,450	2,250	3,850	1,690	6,140	1,450	9,800	3,650	4,970
MIN	14	27	30	31	30	95	104	97	65	55	36	34
CFSM	0.05	0.36	0.72	0.86	0.78	3.06	0.75	3.34	0.53	5.22	1.25	2.35
IN.	0.06	0.40	0.83	0.99	0.81	3.53	0.84	3.86	0.60	6.02	1.44	2.63

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 2003, BY WATER YEAR (WY)

	112	297	472	484	631	846	701	405	363	279	149	112
MEAN	112	297	472	484	631	846	701	405	363	279	149	112
MAX	1,486	1,794	1,685	1,724	1,906	2,616	2,214	1,421	2,312	2,219	1,363	1,001
(WY)	(2002)	(1993)	(1991)	(1974)	(1976)	(1978)	(1964)	(2003)	(1958)	(2003)	(1998)	(2003)
MIN	8.13	13.1	11.4	6.12	19.2	103	74.5	32.8	16.7	23.8	11.8	9.22
(WY)	(1964)	(2000)	(1977)	(1977)	(1964)	(1981)	(1976)	(1988)	(1988)	(1967)	(1965)	(1963)

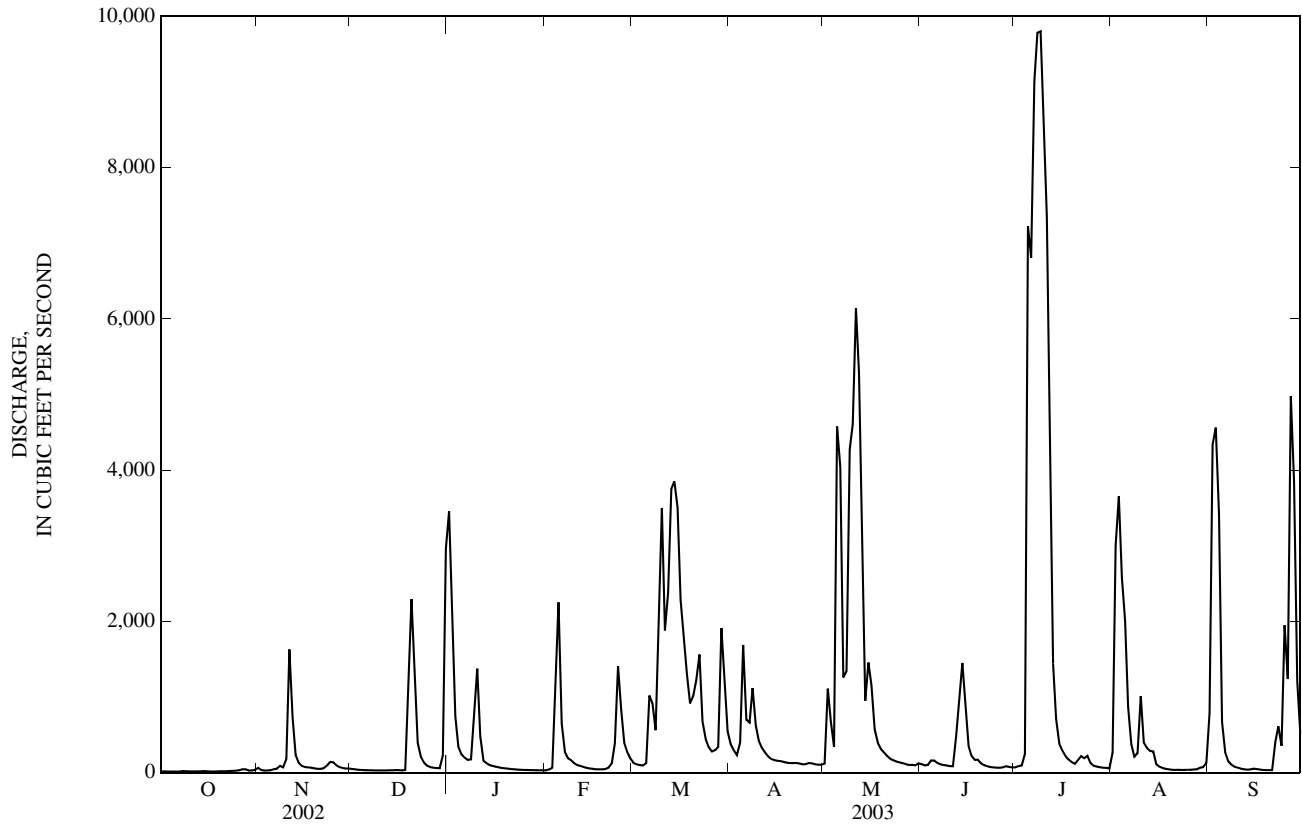
SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1958 - 2003

ANNUAL TOTAL	138,525	251,331	
ANNUAL MEAN	380	689	403
HIGHEST ANNUAL MEAN			689
LOWEST ANNUAL MEAN			109
HIGHEST DAILY MEAN	6,290	Mar 31	9,800
LOWEST DAILY MEAN	14	Oct 6	14
ANNUAL SEVEN-DAY MINIMUM	15	Oct 1	15
MAXIMUM PEAK FLOW			10,400
MAXIMUM PEAK STAGE			14.96
ANNUAL RUNOFF (CFSM)	0.89		1.62
ANNUAL RUNOFF (INCHES)	12.13		22.00
10 PERCENT EXCEEDS	947		1,970
50 PERCENT EXCEEDS	73		122
90 PERCENT EXCEEDS	19		31



WATER-QUALITY RECORDS

INSTRUMENTATION.--Temperature recorder.

PERIOD OF RECORD.--

WATER TEMPERATURE.--October 1987 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 28.2°C, Aug. 4, 1997; minimum, -0.3°C, Jan. 7-8, 10, 1990; Jan. 4, 24-26, Dec. 11-13, 19-20, 1995; Jan. 24-28, 1996; Jan. 12-13, 19, 25-31, Feb. 1-10, 12, 1997; and Jan. 21-27, 29, 1999.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 23.8°C, Sept. 1, minimum, 0.3°C, Mar. 13 - 14.

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	20.8	20.5	20.7	11.4	10.9	11.1	4.4	4.0	4.2	2.7	1.8	2.1
2	21.0	20.7	20.8	10.9	10.5	10.7	4.1	3.7	4.0	3.0	2.7	2.8
3	21.1	20.7	20.9	10.5	10.3	10.4	3.7	3.2	3.4	3.1	2.8	3.0
4	21.3	20.9	21.1	10.3	9.9	10.1	3.2	2.8	3.1	2.8	2.4	2.6
5	21.1	20.9	21.0	9.9	9.6	9.8	3.1	2.5	2.8	2.4	2.1	2.2
6	20.9	20.7	20.8	9.6	9.4	9.5	2.7	2.2	2.4	2.3	2.1	2.2
7	20.7	20.1	20.4	9.4	9.3	9.4	2.7	2.3	2.4	2.1	1.7	1.9
8	20.1	19.8	19.9	9.4	9.3	9.3	2.6	2.0	2.3	1.8	1.7	1.7
9	19.8	19.4	19.6	9.7	9.3	9.4	2.4	1.9	2.1	1.8	1.7	1.8
10	19.4	19.2	19.3	9.9	9.7	9.8	2.5	2.0	2.2	1.8	1.4	1.6
11	19.2	19.0	19.1	9.8	9.4	9.5	2.6	2.3	2.4	1.4	1.1	1.2
12	19.1	18.9	19.0	9.4	9.0	9.2	2.6	2.2	2.4	1.3	1.0	1.2
13	18.9	18.5	18.7	9.0	8.9	8.9	2.6	2.4	2.5	1.3	1.1	1.2
14	18.5	18.1	18.3	9.0	8.9	8.9	2.7	2.4	2.5	1.3	1.1	1.2
15	18.1	17.5	17.8	8.9	8.7	8.8	2.9	2.3	2.5	1.2	1.0	1.1
16	17.5	17.0	17.3	8.7	8.4	8.5	2.7	2.3	2.5	1.3	1.0	1.1
17	17.0	16.6	16.8	8.4	8.0	8.2	2.5	2.4	2.5	1.3	1.1	1.2
18	16.6	16.3	16.4	8.0	7.9	7.9	2.9	2.5	2.7	1.3	1.1	1.2
19	16.3	15.7	16.0	7.9	7.7	7.8	3.1	2.7	2.8	1.3	1.1	1.2
20	15.7	15.3	15.5	7.8	7.6	7.7	3.1	2.8	3.0	1.4	1.1	1.2
21	15.4	15.1	15.2	7.7	7.6	7.7	2.8	2.7	2.7	1.4	1.1	1.2
22	15.1	14.7	14.9	7.6	7.2	7.4	2.9	2.7	2.8	1.3	1.1	1.2
23	14.7	14.4	14.6	7.2	6.9	7.1	2.8	2.7	2.8	1.2	0.9	1.1
24	14.4	14.1	14.3	6.9	6.6	6.8	2.7	2.2	2.5	1.3	0.9	1.0
25	14.1	13.5	13.8	6.6	6.4	6.5	2.6	2.2	2.4	1.5	1.0	1.2
26	13.5	13.1	13.3	6.4	6.0	6.2	2.3	1.9	2.1	1.4	0.9	1.2
27	13.1	12.6	12.9	6.0	5.7	5.8	1.9	1.3	1.6	1.4	0.8	1.0
28	13.3	12.6	12.7	5.7	5.2	5.5	1.5	1.3	1.4	1.6	1.0	1.2
29	12.6	12.2	12.4	5.2	5.0	5.1	1.6	1.4	1.4	1.4	1.1	1.2
30	12.2	11.7	12.0	5.0	4.4	4.8	1.8	1.4	1.5	1.5	1.0	1.2
31	11.7	11.4	11.6	---	---	---	2.0	1.7	1.9	1.5	1.1	1.3
MONTH	21.3	11.4	17.0	11.4	4.4	8.3	4.4	1.3	2.5	3.1	0.8	1.5

03325000 WABASH RIVER AT WABASH, IN

LOCATION.--Lat 40°47'25", long 85°49'13", in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.14, T.27 N., R.6 E., Wabash County, Hydrologic Unit 05120101, (WABASH, IN. quadrangle), on right bank on upstream side of Wabash Street bridge in Wabash, 0.3 mi upstream of Huntington Road bridge, 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 fair except for estimated daily discharges, which are poor. Flow regulated by Salamonie Lake beginning April 1967 and by Huntington Lake beginning October 1976.

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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	537	e510	252	5,310	275	664	1,840	238	2,760	419	e5,000	4,450
2	561	e500	240	5,250	250	565	1,330	256	1,260	403	e5,100	5,510
3	593	e490	237	4,560	275	400	1,090	1,050	1,110	810	e4,700	3,600
4	e620	e460	192	4,230	1,110	362	1,350	1,180	726	926	4,490	4,050
5	e660	e470	e182	2,560	2,980	405	5,890	4,540	716	7,280	5,120	4,830
6	e680	e500	e160	1,290	2,430	559	5,950	4,470	815	4,390	4,620	4,800
7	e660	e540	e158	855	1,540	1,340	5,210	4,450	728	13,500	5,130	4,750
8	e650	519	e160	780	702	2,510	4,220	7,340	477	9,490	5,050	4,500
9	644	506	e154	870	506	4,350	3,290	11,000	478	9,780	5,060	4,410
10	625	565	e156	2,140	498	5,400	2,530	7,820	542	8,080	4,960	4,450
11	610	981	158	2,670	483	5,430	1,690	6,890	476	11,300	4,920	4,320
12	604	1,950	146	1,750	430	5,000	1,390	6,260	1,030	13,000	4,970	4,840
13	606	2,140	146	858	329	6,450	1,090	6,580	3,540	12,000	5,020	4,720
14	597	1,770	140	448	285	7,430	923	6,780	5,910	11,100	5,010	3,300
15	584	1,370	132	543	248	7,770	737	7,830	4,270	7,670	4,950	622
16	594	1,010	129	583	327	8,050	622	7,000	4,730	7,830	4,860	673
17	605	553	124	635	320	7,790	588	7,420	4,990	8,110	4,890	526
18	623	582	137	625	264	7,250	538	7,550	4,540	8,040	4,910	534
19	627	551	293	518	251	5,280	487	7,610	2,900	8,040	3,860	523
20	552	500	1,690	465	244	3,870	480	7,780	2,350	7,890	3,160	507
21	520	528	3,800	405	236	4,070	438	6,390	1,650	7,340	2,740	456
22	579	608	3,110	400	287	4,650	409	5,260	1,090	7,340	3,550	938
23	572	622	1,680	344	509	4,170	351	5,130	744	7,300	2,790	1,900
24	556	639	982	323	912	2,740	288	5,020	505	6,930	2,400	2,630
25	571	718	579	320	1,270	1,850	246	5,020	453	7,280	2,410	4,300
26	579	718	278	288	1,310	1,370	231	4,970	428	7,500	2,310	4,620
27	576	603	315	245	1,180	895	219	4,810	398	7,810	2,200	7,070
28	479	594	328	231	565	1,050	209	4,790	386	7,070	2,140	4,450
29	537	586	376	236	---	3,760	201	4,920	409	5,550	2,360	3,700
30	532	475	355	273	---	5,390	192	5,010	451	5,390	2,290	4,520
31	526	---	1,980	282	---	3,550	---	4,770	---	5,260	2,160	---
TOTAL	18,259	22,558	18,769	40,287	20,016	114,370	44,029	170,134	50,862	224,828	123,130	100,499
MEAN	589	752	605	1,300	715	3,689	1,468	5,488	1,695	7,253	3,972	3,350
MAX	680	2,140	3,800	5,310	2,980	8,050	5,950	11,000	5,910	13,500	5,130	7,070
MIN	479	460	124	231	236	362	192	238	386	403	2,140	456
CFSM	0.33	0.43	0.34	0.74	0.40	2.09	0.83	3.10	0.96	4.10	2.25	1.89
IN.	0.38	0.47	0.39	0.85	0.42	2.41	0.93	3.58	1.07	4.73	2.59	2.11

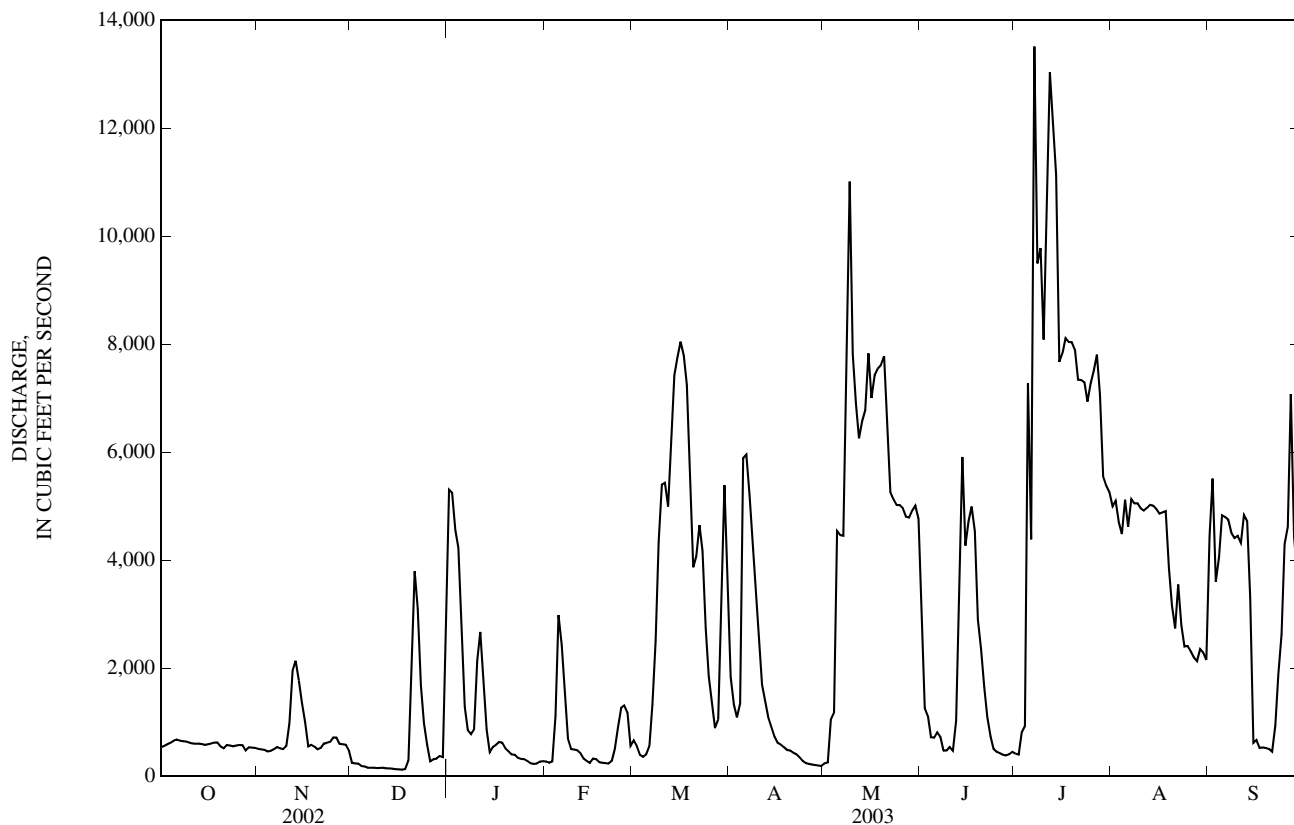
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 2003, BY WATER YEAR (WY)

MEAN	632	978	1,723	2,175	2,430	3,052	2,657	1,669	1,413	916	562	537
MAX	3,667	5,044	5,829	13,260	7,764	8,144	11,060	10,410	8,260	7,253	4,887	5,676
(WY)	(2002)	(1993)	(1968)	(1950)	(1959)	(1982)	(1957)	(1943)	(1958)	(2003)	(1998)	(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)

03325000 WABASH RIVER AT WABASH, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1924 - 2003	
ANNUAL TOTAL	533,735		947,741		1,559	
ANNUAL MEAN	1,462		2,597		2,994	
HIGHEST ANNUAL MEAN					276	
LOWEST ANNUAL MEAN					1931	
HIGHEST DAILY MEAN	7,400	Feb 1	13,500	Jul 7	47,800	May 18, 1943
LOWEST DAILY MEAN	84	Aug 10	124	Dec 17	17	Aug 3, 1934
ANNUAL SEVEN-DAY MINIMUM	88	Aug 7	136	Dec 12	18	Aug 3, 1934
MAXIMUM PEAK FLOW			14,800		49,600	
MAXIMUM PEAK STAGE			16.58		24.44	
ANNUAL RUNOFF (CFSM)	0.83		1.47		0.88	
ANNUAL RUNOFF (INCHES)	11.23		19.94		11.98	
10 PERCENT EXCEEDS	4,570		7,030		4,650	
50 PERCENT EXCEEDS	582		1,050		539	
90 PERCENT EXCEEDS	142		274		89	

e Estimated



03325500 MISSISSINAWA RIVER NEAR RIDGEVILLE, IN

LOCATION.--Lat 40°16'48", long 84°59'33", in NW¼NW¼ sec.17, T.21 N., R.14 E., Randolph County, Hydrologic Unit 05120103, (DEERFIELD, IN. quadrangle), on left bank 800 ft upstream from county road bridge, 0.6 mi downstream from Mud Creek, 2 mi east of Ridgeville, and at mile 99.7.

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 site 800 ft downstream, at same datum. Oct. 5, 1950 to Oct. 15, 1994, water-stage recorder, at site 800 ft downstream, at same datum.

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

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	11	8.1	1,110	e23	e53	96	26	26	26	18	1,770
2	1.7	9.7	6.8	538	e28	e45	76	31	20	22	135	3,970
3	2.2	8.8	e6.6	226	e70	e40	67	26	51	19	190	1,720
4	3.0	8.4	6.4	134	587	e60	64	23	71	18	120	351
5	6.3	10	6.4	102	e100	e160	323	437	47	2,730	291	173
6	6.0	14	5.9	85	e70	e520	147	205	33	1,490	80	105
7	4.8	19	5.6	78	e56	164	324	164	31	2,900	45	69
8	3.8	14	6.1	102	e46	566	273	114	28	2,010	30	51
9	3.9	11	5.7	574	e39	1,400	171	160	25	4,120	48	41
10	3.8	70	5.6	286	e34	402	127	700	20	2,890	119	32
11	4.0	200	6.3	e110	e30	328	102	1,640	25	637	74	27
12	4.5	43	6.6	e80	e27	489	82	473	295	263	90	23
13	4.4	18	6.7	e60	e25	1,810	65	212	348	159	58	22
14	3.9	12	7.7	e50	e23	859	58	128	539	111	28	21
15	3.8	10	8.1	e43	e22	598	54	426	205	86	21	22
16	4.5	9.7	7.9	e38	e21	586	51	161	110	72	19	20
17	4.7	9.0	8.4	e34	e20	476	45	104	250	56	17	18
18	5.1	8.9	41	e31	e20	329	41	121	332	47	14	16
19	7.5	8.5	838	e29	e20	238	35	96	123	38	13	16
20	9.2	7.8	861	e27	e21	341	35	79	72	32	12	16
21	10	7.5	222	e26	e21	705	38	63	54	48	12	15
22	7.9	8.7	104	e25	e120	402	34	53	43	65	11	73
23	7.4	10	62	e24	e380	209	28	46	35	126	10	110
24	7.3	15	41	e24	e340	144	27	40	30	67	9.1	58
25	8.9	15	e33	e23	e210	127	30	36	26	41	8.7	134
26	16	12	e27	e23	e140	339	32	31	27	30	8.8	91
27	8.2	10	e23	e22	e100	169	24	28	37	26	9.0	1,670
28	5.4	8.7	e20	e22	e78	119	22	27	27	26	8.6	476
29	8.8	8.3	19	e21	---	262	23	28	62	23	9.4	248
30	15	8.6	539	e21	---	159	22	24	38	20	21	148
31	15	---	1,830	e21	---	113	---	34	---	18	15	---
TOTAL	198.9	606.6	4,774.9	3,989	2,671	12,212	2,516	5,736	3,030	18,216	1,544.6	11,506
MEAN	6.42	20.2	154	129	95.4	394	83.9	185	101	588	49.8	384
MAX	16	200	1,830	1,110	587	1,810	324	1,640	539	4,120	291	3,970
MIN	1.7	7.5	5.6	21	20	40	22	23	20	18	8.6	15
CFSM	0.05	0.15	1.16	0.97	0.72	2.96	0.63	1.39	0.76	4.42	0.37	2.88
IN.	0.06	0.17	1.34	1.12	0.75	3.42	0.70	1.60	0.85	5.10	0.43	3.22

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 2003, BY WATER YEAR (WY)

	MEAN	34.2	90.6	147	178	204	248	222	129	144	103	37.4	35.9
MAX	314	729	872	865	548	714	810	371	1,417	709	454	384	
(WY)	(2002)	(1994)	(1991)	(1950)	(1950)	(1978)	(1964)	(2002)	(1958)	(1979)	(1979)	(2003)	
MIN	1.25	1.82	2.62	3.25	5.00	46.1	25.8	15.3	6.52	2.37	2.13	0.99	
(WY)	(1947)	(1954)	(1964)	(1977)	(1964)	(1957)	(1976)	(1988)	(1988)	(1952)	(1983)	(1954)	

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

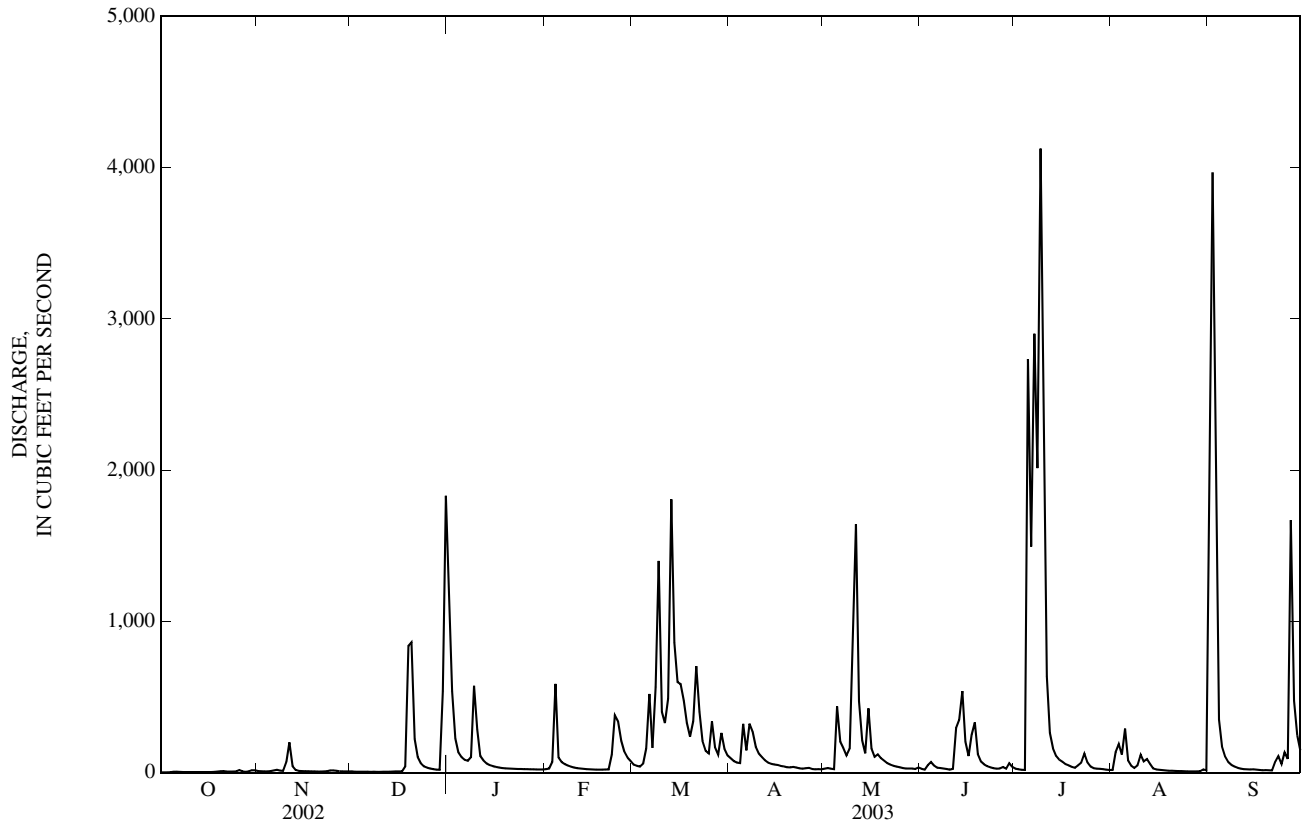
FOR 2003 WATER YEAR

WATER YEARS 1947 - 2003

ANNUAL TOTAL	48,973.5	67,001.0	
ANNUAL MEAN	134	184	131
HIGHEST ANNUAL MEAN			223
LOWEST ANNUAL MEAN			29.8
HIGHEST DAILY MEAN	3,750	May 13	11,300
LOWEST DAILY MEAN	1.3	Sep 8	0.10
ANNUAL SEVEN-DAY MINIMUM	1.3	Sep 12	0.23
MAXIMUM PEAK FLOW			13,900
MAXIMUM PEAK STAGE			16.25
ANNUAL RUNOFF (CFSM)	1.01		0.98
ANNUAL RUNOFF (INCHES)	13.70		13.33
10 PERCENT EXCEEDS	231		277
50 PERCENT EXCEEDS	19		29
90 PERCENT EXCEEDS	3.1		3.9

e Estimated

03325500 MISSISSINEWA RIVER NEAR RIDGEVILLE, IN—Continued



03326070 BIG LICK CREEK NEAR HARTFORD CITY, IN

LOCATION.--Lat 40°25'20", long 85°21'04", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.23, T.23 N., R.10 E., Blackford County, Hydrologic Unit 05120103, (HARTFORD CITY EAST, IN quadrangle), on right bank 6 ft downstream from bridge on County Road 100 East, 0.10 mi north of intersection of County Road 100 South and County Road 100 East, 1.0 mi east of intersection of State Road 3 and County Road 200 South, and 2.0 mi southeast of Hartford City.

DRAINAGE AREA.--29.2 mi².

PERIOD OF RECORD.--July 1971 to October 2003 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 865.00 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	3.3	4.3	182	e4.0	e7.4	19	17	2.7	0.99	23	780
2	1.5	2.4	3.9	89	e5.4	e6.6	14	100	1.8	0.73	697	510
3	1.4	2.2	3.1	39	e50	e5.9	11	29	11	0.62	540	98
4	1.5	2.2	2.7	29	220	e7.0	18	15	11	1.7	102	52
5	3.2	2.4	2.9	25	e35	e29	48	439	5.7	593	63	33
6	1.6	8.7	2.7	22	e16	e37	18	92	3.5	147	36	24
7	1.3	6.4	2.6	22	e9.7	e25	65	76	3.1	837	26	19
8	1.4	3.8	2.5	27	e7.0	e80	42	44	2.4	335	19	16
9	1.4	3.1	2.1	143	e5.8	262	24	179	1.9	1,100	35	13
10	1.5	191	2.2	67	e5.0	123	17	310	1.4	260	69	11
11	1.2	166	2.3	e22	e4.4	86	13	352	2.3	69	23	9.6
12	1.2	29	2.3	e14	e4.0	214	9.9	85	9.9	44	21	9.2
13	1.2	15	2.3	e11	e3.7	495	7.4	48	29	30	12	8.5
14	1.3	10	2.7	e8.4	e3.5	211	6.2	31	52	21	8.4	8.5
15	1.3	7.7	2.8	e6.4	e3.3	179	5.7	82	17	17	6.7	9.3
16	1.2	9.1	2.8	e5.7	e3.2	148	5.3	36	8.6	15	5.9	8.6
17	1.2	8.6	2.7	e5.2	e3.2	113	4.6	25	5.0	12	5.5	7.8
18	1.2	6.3	102	e4.8	e3.1	80	4.0	21	3.4	9.7	4.6	7.6
19	2.4	5.3	309	e4.5	e3.1	66	3.7	18	2.3	7.7	3.8	7.7
20	3.5	4.8	193	e4.1	e3.2	73	3.7	15	1.5	5.9	3.2	7.6
21	1.9	4.6	56	e3.9	e3.3	124	4.5	12	1.2	12	3.1	7.3
22	1.7	9.5	32	e3.7	e30	58	3.3	9.0	1.0	12	3.4	22
23	1.7	23	21	e3.6	e60	34	2.7	7.3	0.90	9.7	3.0	20
24	1.5	24	17	e3.5	e40	24	2.5	5.6	0.77	6.1	2.9	21
25	2.4	14	16	e3.4	e21	19	3.1	4.7	0.67	4.3	2.8	53
26	10	9.4	11	e3.4	e14	25	4.4	3.8	0.76	3.7	3.0	31
27	4.8	7.4	10	e3.3	e11	18	2.7	3.2	1.2	3.3	3.3	238
28	2.5	6.5	10	e3.3	e9.8	17	2.3	2.9	0.64	3.2	3.6	50
29	2.2	6.4	9.7	e3.2	---	176	2.4	3.2	1.1	2.9	11	28
30	13	5.9	212	e3.2	---	45	2.2	2.2	2.4	2.6	25	21
31	5.8	---	401	e3.2	---	26	---	5.8	---	2.3	11	---
TOTAL	79.5	598.0	1,446.6	768.8	581.7	2,813.9	369.6	2,073.7	186.14	3,569.44	1,776.2	2,131.7
MEAN	2.56	19.9	46.7	24.8	20.8	90.8	12.3	66.9	6.20	115	57.3	71.1
MAX	13	191	401	182	220	495	65	439	52	1,100	697	780
MIN	1.2	2.2	2.1	3.2	3.1	5.9	2.2	2.2	0.64	0.62	2.8	7.3
CFSM	0.09	0.68	1.60	0.85	0.71	3.11	0.42	2.29	0.21	3.94	1.96	2.43
IN.	0.10	0.76	1.84	0.98	0.74	3.58	0.47	2.64	0.24	4.55	2.26	2.72

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2003, BY WATER YEAR (WY)

MEAN	9.56	24.8	36.3	33.5	43.9	55.9	42.0	29.3	27.7	23.0	11.4	9.06
MAX	97.6	135	157	114	124	152	112	114	148	115	84.3	71.1
(WY)	(2002)	(1986)	(1991)	(1999)	(1990)	(1978)	(1972)	(1981)	(1981)	(2003)	(1998)	(2003)
MIN	0.50	0.82	1.13	0.76	3.41	9.25	4.85	2.37	1.21	1.11	0.95	0.61
(WY)	(1998)	(1998)	(1996)	(1977)	(1978)	(2001)	(1976)	(1988)	(1988)	(1977)	(1988)	(1983)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

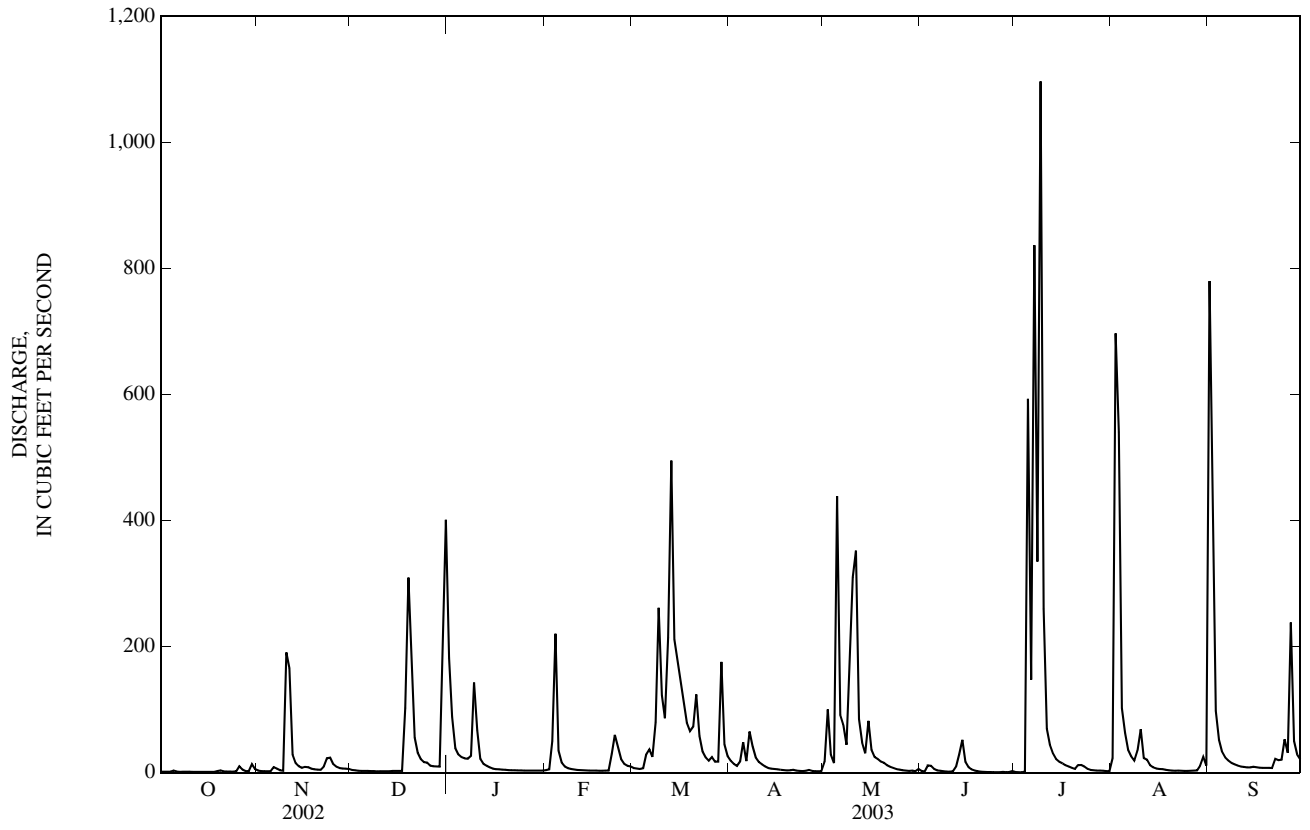
FOR 2003 WATER YEAR

WATER YEARS 1972 - 2003

ANNUAL TOTAL	9,733.58	16,395.28		
ANNUAL MEAN	26.7	44.9	28.8	
HIGHEST ANNUAL MEAN			44.9	2003
LOWEST ANNUAL MEAN			9.21	1977
HIGHEST DAILY MEAN	789	May 13	1,100	Jul 9
LOWEST DAILY MEAN	0.51	Sep 8	0.62	Jul 3
ANNUAL SEVEN-DAY MINIMUM	0.53	Sep 7	0.85	Jun 22
MAXIMUM PEAK FLOW			1,400	Jul 9
MAXIMUM PEAK STAGE			13.49	Jul 9
ANNUAL RUNOFF (CFSM)	0.91	1.54		16.14
ANNUAL RUNOFF (INCHES)	12.40	20.89		13.39
10 PERCENT EXCEEDS	53	101		66
50 PERCENT EXCEEDS	6.0	7.8		5.7
90 PERCENT EXCEEDS	1.2	1.9		1.2

e Estimated

03326070 BIG LICK CREEK NEAR HARTFORD CITY, IN—Continued



03326500 MISSISSINEWA RIVER AT MARION, IN

LOCATION.--Lat 40°34'34", long 85°39'34", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.31, T.25 N., R.8 E., Grant County, Hydrologic Unit 05120103, (MARION, IN. quadrangle), on left bank 12 ft downstream from Highland Avenue bridge in Marion, 0.1 mi downstream from old mill dam, 1.0 mi upstream from Hummel Creek, 4.6 mi downstream from Lugar Creek, and at mile 35.8.

DRAINAGE AREA.--682 mi².

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

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

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

REMARKS.--Records fair except for estimated daily discharges, which are poor. Flow periodically regulated by dam 0.1 mile above station. 1930 water year not used in summary statistics.

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

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	70	139	126	5,280	e160	e320	830	362	320	243	249	3,690
2	72	100	111	3,990	e170	e290	663	1,290	318	219	2,890	10,200
3	66	81	102	2,070	e200	e260	559	847	318	196	3,550	8,650
4	80	79	79	1,010	1,170	e300	555	550	318	250	1,930	6,110
5	68	91	91	739	1,270	384	1,180	5,200	318	6,020	2,170	1,930
6	64	92	81	613	799	1,460	872	3,770	318	7,650	1,170	898
7	59	101	81	535	562	1,670	873	1,880	291	12,600	700	647
8	54	119	84	518	e370	1,050	1,300	1,360	272	13,400	509	511
9	50	106	69	971	e300	3,870	1,070	2,520	251	16,100	412	428
10	50	315	78	1,950	e250	4,100	776	3,730	244	17,300	510	363
11	49	1,860	79	1,140	e210	1,960	641	10,700	231	13,100	580	315
12	49	976	77	e560	e190	2,240	555	6,740	271	5,040	440	284
13	51	531	77	e400	e180	5,220	485	3,130	369	1,670	586	255
14	50	325	83	e340	e175	6,230	430	1,360	1,070	1,090	510	245
15	47	236	90	e290	e170	4,580	389	1,930	1,020	829	374	275
16	49	194	95	e260	e160	3,010	367	1,960	630	679	280	266
17	47	174	99	e240	e154	2,550	348	1,090	451	579	249	228
18	52	158	122	e220	e155	1,940	328	805	361	514	219	206
19	70	142	903	e205	e160	1,530	310	699	543	460	194	197
20	59	127	2,920	e195	e165	1,590	299	630	419	408	181	188
21	60	125	2,410	e185	e180	2,280	296	549	309	545	174	179
22	53	137	1,060	e180	e230	2,750	286	486	252	555	170	618
23	53	167	623	e175	e410	1,600	270	443	219	537	156	945
24	54	217	472	e170	e900	1,000	254	407	202	462	147	930
25	88	230	393	e164	e800	774	266	377	188	444	142	2,220
26	84	193	343	e160	e560	679	285	358	188	353	139	1,560
27	88	168	276	e158	e460	868	267	348	189	310	135	5,760
28	97	152	262	e156	e400	851	250	338	187	277	130	4,260
29	101	140	239	e154	---	3,010	249	328	200	255	221	2,450
30	98	133	363	e152	---	2,220	248	321	206	237	339	1,100
31	119	---	3,830	e150	---	1,170	---	323	---	228	258	---
TOTAL	2,051	7,608	15,718	23,330	10,910	61,756	15,501	54,831	10,473	102,550	19,714	55,908
MEAN	66.2	254	507	753	390	1,992	517	1,769	349	3,308	636	1,864
MAX	119	1,860	3,830	5,280	1,270	6,230	1,300	10,700	1,070	17,300	3,550	10,200
MIN	47	79	69	150	154	260	248	321	187	196	130	179
CFSM	0.10	0.37	0.74	1.10	0.57	2.92	0.76	2.59	0.51	4.85	0.93	2.73
IN.	0.11	0.41	0.86	1.27	0.60	3.37	0.85	2.99	0.57	5.59	1.08	3.05

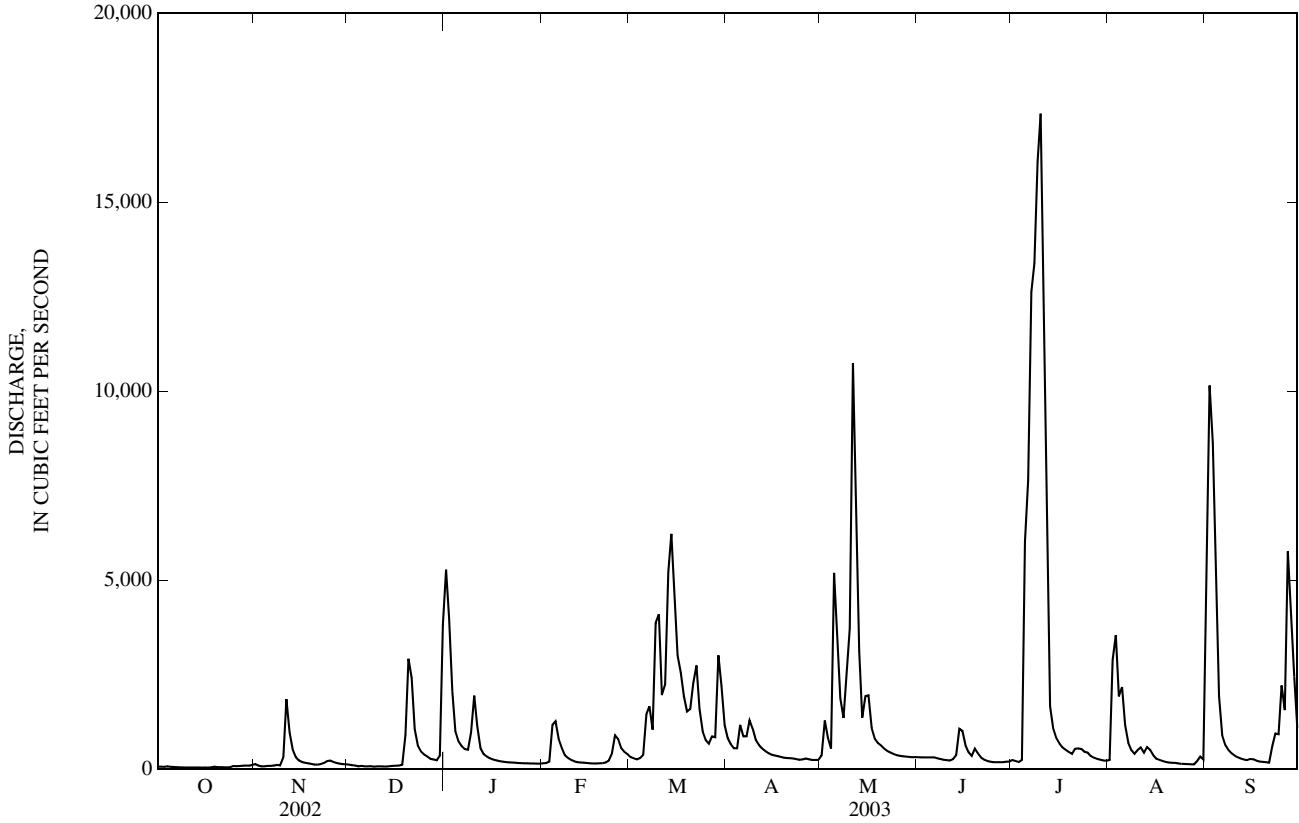
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 2003, BY WATER YEAR (WY)

MEAN	196	401	688	891	946	1,245	1,133	741	633	434	209	245
MAX	2,259	2,626	2,947	5,129	2,707	3,181	3,699	3,776	4,765	3,308	1,522	4,223
(WY)	(2002)	(1993)	(1991)	(1930)	(1990)	(1982)	(1964)	(1933)	(1958)	(2003)	(1998)	(1926)
MIN	22.8	28.0	36.9	36.1	52.5	65.3	123	40.5	49.3	32.6	25.4	24.1
(WY)	(1929)	(1929)	(1964)	(1945)	(1964)	(1941)	(1941)	(1941)	(1988)	(1936)	(1940)	(1940)

03326500 MISSISSINEWA RIVER AT MARION, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1924 - 2003	
ANNUAL TOTAL	240,540		380,350			
ANNUAL MEAN	659		1,042		638	
HIGHEST ANNUAL MEAN					1,167	1927
LOWEST ANNUAL MEAN					106	1941
HIGHEST DAILY MEAN	12,200	May 14	17,300	Jul 10	23,400	Jun 11, 1958
LOWEST DAILY MEAN	33	Sep 5	47	Oct 15	3.4	Oct 25, 1968
ANNUAL SEVEN-DAY MINIMUM	36	Sep 13	49	Oct 11	8.4	Oct 17, 1940
MAXIMUM PEAK FLOW			17,700	Jul 10	25,000	Mar 21, 1927
MAXIMUM PEAK STAGE			14.25	Jul 10	17.40	Mar 21, 1927
ANNUAL RUNOFF (CFSM)	0.97		1.53		0.94	
ANNUAL RUNOFF (INCHES)	13.12		20.75		12.70	
10 PERCENT EXCEEDS	1,560		2,480		1,500	
50 PERCENT EXCEEDS	188		318		202	
90 PERCENT EXCEEDS	54		84		48	

e Estimated



03327000 MISSISSINEWA RIVER AT PEORIA, IN

LOCATION.--Lat 40°43'24", long 85°57'27", in SW¹/₄SW¹/₄ sec.3, T.26 N., R.5 E., Miami County, Hydrologic Unit 05120103, (PEORIA, IN. quadrangle), 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 September 1976 (discharge). October 1976 to September 2001 (discharge provided by U.S. Army Corps of Engineers). October 2001 to current year (stage only).

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

GAGE.--Water-stage recorder. Datum of gage is 660.00 ft above National Geodetic Vertical Datum of 1929. Oct. 1, 1962, to Sept. 30, 1974, water-stage recorder 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.

REMARKS.--Flow regulated by Mississinewa Lake since April 1968.

COOPERATION.--Records of daily discharge provided by U.S. Army Corps of Engineers October 1976 to September 2001.

EXTREMES FOR PERIOD OF RECORD.--(October 2001 to current year) maximum gage height, 9.23 ft, July 10, 2003; minimum gage height, -0.53 ft, Nov. 21, 2002. (October 1952 to September 1976) maximum discharge, 28,000 ft³/s, June 11, 1958; maximum gage height, 19.26 ft, June 11, 1958 site then in use; minimum discharge, zero flow, Sept. 11 to Oct. 2, 1985, Oct. 21 to Nov. 22, 1992.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 9.23 ft, July 10; minimum gage height, -0.53 ft, Nov. 21.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.10	1.20	1.29	6.75	1.61	2.21	2.95	1.61	1.85	1.51	1.49	1.75
2	0.83	1.20	1.29	7.07	1.61	2.21	2.39	3.59	1.85	1.51	5.38	7.06
3	1.10	1.20	1.39	6.40	1.62	1.71	2.17	3.34	1.89	1.51	6.07	8.11
4	1.10	0.99	1.39	3.74	3.23	1.71	2.19	2.74	1.89	1.79	4.66	8.15
5	0.83	1.00	1.22	3.72	3.25	1.71	2.22	7.03	1.89	1.61	2.78	8.07
6	0.84	1.00	1.22	2.47	3.26	3.92	3.75	7.61	1.89	8.27	4.69	7.96
7	0.84	1.25	1.10	2.47	3.25	4.68	3.98	6.96	1.89	8.37	4.66	7.76
8	0.84	1.24	1.23	2.10	2.09	3.70	3.98	4.99	1.89	8.60	4.61	7.01
9	0.84	1.24	1.21	2.10	2.09	6.95	3.97	3.37	1.89	9.18	2.44	4.23
10	0.84	1.25	1.22	4.93	2.09	7.02	3.28	3.42	1.61	8.70	2.22	2.41
11	0.70	4.42	1.21	3.79	1.71	5.81	2.74	8.05	1.62	8.95	2.41	2.22
12	0.70	---	1.21	2.53	1.70	4.14	1.57	8.43	2.03	9.03	2.41	1.98
13	0.70	2.62	1.22	2.15	1.29	7.87	1.57	8.37	2.79	9.11	2.41	1.66
14	0.70	1.99	1.22	2.15	1.53	8.01	1.57	8.32	3.82	9.15	2.71	1.68
15	0.85	1.63	1.22	1.85	1.53	8.02	1.57	7.61	3.82	9.05	2.29	1.68
16	0.85	1.62	1.21	1.85	1.53	7.90	1.57	7.53	3.27	9.05	2.02	1.68
17	0.85	1.02	1.29	1.85	1.53	5.86	1.99	7.39	2.61	8.98	1.61	1.94
18	0.86	1.34	1.29	1.84	1.53	4.33	1.99	5.73	1.54	8.96	1.61	1.94
19	0.86	1.33	2.83	1.58	1.53	4.51	1.99	2.77	1.54	8.92	1.61	1.51
20	0.86	1.32	6.21	1.58	1.53	4.50	1.99	3.01	2.31	8.85	1.61	1.51
21	0.85	1.31	4.79	1.57	1.53	4.51	1.77	2.43	2.31	7.45	1.39	1.51
22	0.85	1.31	3.55	1.58	1.53	5.85	1.77	2.43	2.04	6.76	1.68	1.69
23	0.86	1.54	2.45	1.57	1.53	4.51	1.77	1.98	1.73	6.34	1.68	3.77
24	0.86	1.86	2.45	1.57	3.69	3.69	1.77	1.98	1.51	5.20	1.51	3.79
25	0.86	1.66	1.74	1.39	3.69	3.22	1.77	2.21	1.51	5.15	1.39	5.72
26	0.86	1.66	1.74	1.39	2.73	2.47	1.47	2.21	1.50	5.09	1.39	4.31
27	1.18	1.66	1.74	1.39	2.21	3.24	1.47	2.20	1.50	4.51	1.39	5.88
28	1.18	1.54	1.74	1.39	2.21	2.71	1.48	1.84	1.50	2.87	1.39	7.21
29	1.24	1.27	1.74	1.39	---	5.87	1.59	1.85	1.50	1.94	1.69	7.15
30	1.22	1.29	1.74	1.39	---	5.85	1.60	1.85	1.50	1.94	1.69	7.02
31	1.21	---	6.61	1.39	---	4.12	---	1.85	---	1.93	1.73	---
MEAN	0.91	---	1.99	2.55	2.09	4.61	2.20	4.35	2.02	6.14	2.47	4.28
MAX	1.24	---	6.61	7.07	3.69	8.02	3.98	8.43	3.82	9.18	6.07	8.15
MIN	0.70	---	1.10	1.39	1.29	1.71	1.47	1.61	1.50	1.51	1.39	1.51

03327000 MISSISSINEWA RIVER AT PEORIA, IN—Continued

WATER-QUALITY RECORDS

INSTRUMENTATION.--Temperature recorder.

PERIOD OF RECORD.--

WATER TEMPERATURE.--October 1987 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 29.1°C, Aug. 4, 2002; minimum, -0.3°C, Jan. 27-31, 1996.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 26.7°C, Aug.26, minimum, 0.9°C, Mar. 11.

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	22.1	20.8	21.3	11.2	10.4	10.8	5.3	4.3	4.7	2.8	2.4	2.6
2	21.6	19.5	21.0	10.8	9.9	10.3	5.5	4.0	4.6	3.9	2.5	3.3
3	21.8	19.3	21.1	10.1	9.6	9.8	4.4	3.5	3.8	4.1	3.9	4.0
4	21.7	21.1	21.6	10.7	9.6	9.9	3.5	3.0	3.2	3.9	3.2	3.5
5	21.2	19.2	20.6	9.6	9.3	9.4	4.5	2.9	3.5	3.3	3.0	3.1
6	20.4	20.0	20.2	9.3	8.9	9.1	4.3	2.9	3.4	3.9	2.8	3.2
7	20.2	19.3	19.7	9.6	8.6	9.0	5.0	2.7	3.3	3.0	2.6	2.8
8	19.4	18.8	19.1	9.6	8.7	9.1	4.0	2.8	3.3	3.3	2.5	2.8
9	19.4	18.6	19.0	9.7	9.1	9.3	3.9	2.5	3.1	3.8	2.6	2.9
10	19.3	18.4	18.8	10.2	9.7	9.9	3.6	2.9	3.3	2.7	2.2	2.5
11	18.9	18.0	18.5	9.8	8.9	9.3	3.9	3.2	3.5	2.4	1.7	2.0
12	18.7	18.3	18.5	9.1	8.7	9.0	3.9	3.0	3.4	2.3	1.6	1.7
13	18.5	17.2	17.9	8.9	8.6	8.7	3.6	3.2	3.3	3.0	1.6	1.8
14	17.8	16.6	17.1	8.9	8.6	8.7	4.1	3.2	3.5	2.1	1.6	1.8
15	17.4	16.2	16.8	8.8	8.5	8.7	4.6	3.0	3.6	2.4	1.6	1.8
16	16.9	15.9	16.4	8.5	8.0	8.3	3.9	2.8	3.4	2.1	1.6	1.8
17	15.9	15.5	15.7	8.6	7.6	8.1	2.9	2.6	2.7	2.3	1.6	1.8
18	15.5	15.1	15.3	8.6	7.3	7.8	4.5	2.6	3.6	2.0	1.6	1.7
19	15.7	14.8	15.2	---	---	---	4.4	3.6	4.0	3.2	1.6	1.9
20	15.3	14.3	14.7	---	---	---	3.6	3.3	3.5	2.4	1.8	2.0
21	15.1	13.9	14.4	---	---	---	3.4	3.2	3.3	2.5	1.6	2.0
22	14.9	13.9	14.3	8.3	7.5	7.8	3.9	3.3	3.4	2.2	1.6	1.7
23	13.9	13.4	13.6	8.3	7.3	7.6	3.7	3.2	3.3	2.0	1.4	1.6
24	13.6	13.0	13.3	8.3	7.1	7.5	3.2	2.6	3.0	2.0	1.4	1.6
25	13.0	12.6	12.8	8.1	7.0	7.3	4.5	2.5	2.9	2.8	1.5	1.8
26	12.7	12.5	12.6	7.0	6.6	6.8	2.9	2.5	2.7	2.0	1.4	1.6
27	12.8	12.1	12.5	7.2	6.0	6.5	2.9	2.2	2.5	2.0	1.4	1.6
28	12.9	12.1	12.4	6.8	5.8	6.2	2.7	2.3	2.4	2.2	1.5	1.8
29	12.4	11.5	11.9	7.4	5.7	6.2	3.1	2.2	2.5	2.1	1.6	1.8
30	11.6	11.2	11.4	5.8	4.7	5.4	3.2	2.3	2.7	2.5	1.5	1.8
31	11.6	11.0	11.3	---	---	---	3.3	2.7	2.9	2.1	1.7	1.8
MONTH	22.1	11.0	16.4	---	---	---	5.5	2.2	3.3	4.1	1.4	2.2

WABASH RIVER BASIN

03327000 MISSISSINEWA RIVER AT PEORIA, IN—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	2.2	1.8	1.9	2.0	1.6	1.9	10.4	9.6	9.9	14.8	13.7	14.2
2	2.5	1.8	2.0	1.9	1.4	1.7	10.9	10.1	10.4	14.4	13.6	14.0
3	2.2	1.8	2.0	3.1	1.4	1.7	11.4	10.4	10.9	14.9	14.2	14.6
4	2.0	1.6	1.8	2.6	1.6	1.9	12.1	10.8	11.5	15.4	14.0	14.8
5	2.2	1.7	1.9	2.7	1.7	2.0	11.4	10.0	10.6	16.7	15.1	16.1
6	2.2	1.9	2.0	2.3	1.6	1.8	10.7	10.4	10.6	16.4	15.9	16.1
7	2.3	1.8	2.0	1.9	1.4	1.7	10.4	9.7	9.9	17.4	15.9	16.8
8	3.2	1.8	2.0	1.8	1.3	1.4	9.7	9.5	9.6	17.4	15.8	16.5
9	2.4	1.6	1.9	1.4	1.1	1.3	9.8	9.3	9.5	17.3	15.2	15.8
10	2.2	1.7	1.9	1.1	1.0	1.0	9.5	8.4	9.0	16.1	15.3	15.8
11	3.2	1.7	2.0	1.3	0.9	1.0	8.8	7.5	8.1	17.4	15.4	16.6
12	3.0	1.6	2.0	1.7	1.0	1.1	9.8	7.3	8.2	17.2	16.7	16.9
13	3.5	1.8	2.2	1.2	1.0	1.0	11.2	7.2	8.9	16.9	16.6	16.7
14	2.6	1.8	2.2	2.0	1.2	1.7	11.6	8.9	9.9	16.8	16.5	16.7
15	2.4	1.8	2.0	2.2	1.9	2.0	11.1	10.0	10.5	16.6	15.9	16.2
16	2.3	1.8	2.0	2.9	2.2	2.4	11.6	10.2	10.9	16.1	15.7	15.9
17	2.7	1.9	2.2	4.1	2.9	3.5	13.0	11.6	12.4	16.2	15.8	16.0
18	2.5	2.0	2.2	5.3	4.1	4.7	12.6	11.5	11.9	16.4	15.5	16.1
19	3.3	2.0	2.4	5.9	5.0	5.4	13.1	11.5	12.3	16.2	15.3	15.9
20	3.5	1.8	2.3	8.4	5.8	7.2	13.9	12.5	12.9	15.9	15.4	15.6
21	2.5	1.8	2.1	8.6	6.7	8.0	12.7	11.6	12.1	16.7	15.5	16.0
22	2.3	1.4	1.9	8.7	8.1	8.4	13.1	11.8	12.2	16.7	15.6	16.0
23	2.9	1.5	2.0	9.8	8.7	9.2	13.7	11.9	12.6	16.3	15.4	15.8
24	2.1	1.7	1.9	9.8	9.1	9.4	13.6	12.2	12.9	16.7	15.7	16.0
25	2.2	1.8	1.9	10.5	9.5	10.0	13.1	12.8	13.0	16.8	16.0	16.4
26	2.2	1.6	1.9	10.3	9.1	9.7	14.2	12.4	13.0	17.1	16.2	16.5
27	2.7	1.6	1.9	12.0	9.5	10.7	14.6	12.2	13.1	17.1	16.2	16.6
28	2.8	1.7	2.1	11.4	10.8	11.1	14.1	12.8	13.3	17.1	15.2	16.5
29	---	---	---	11.0	10.8	10.9	15.4	12.8	13.8	17.0	16.4	16.7
30	---	---	---	10.8	10.5	10.7	15.1	13.6	14.2	17.2	16.4	16.9
31	---	---	---	10.6	9.4	9.9	---	---	---	17.4	16.5	17.1
MONTH	3.5	1.4	2.0	12.0	0.9	5.0	15.4	7.2	11.3	17.4	13.6	16.1
	JUNE			JULY			AUGUST			SEPTEMBER		
1	18.0	16.5	17.1	23.7	21.4	22.3	25.1	21.3	24.1	24.6	23.8	24.5
2	18.2	16.7	17.4	23.6	18.4	22.0	25.7	23.8	24.8	24.8	22.8	23.9
3	17.8	17.4	17.6	23.7	21.6	22.4	25.9	25.0	25.6	22.8	21.8	22.2
4	17.8	16.9	17.3	23.9	22.0	22.6	25.0	23.4	24.5	21.9	21.4	21.7
5	18.2	16.9	17.4	23.8	20.9	22.6	24.0	22.2	23.5	22.1	21.4	21.8
6	18.1	17.1	17.5	24.1	22.4	23.2	25.5	21.6	23.7	22.1	21.5	21.9
7	18.6	17.5	17.9	24.1	22.4	23.2	24.4	23.9	24.1	22.1	21.6	21.9
8	18.0	17.1	17.5	23.6	22.8	23.2	24.4	23.9	24.1	22.0	21.0	21.8
9	18.3	17.1	17.6	23.9	22.4	23.4	24.1	21.8	23.2	22.0	21.1	21.7
10	18.6	15.7	17.9	24.0	22.2	23.5	24.0	22.4	23.1	22.0	20.8	21.3
11	19.0	18.2	18.5	24.0	22.5	23.5	24.5	23.6	23.9	22.5	20.8	21.6
12	19.1	18.3	18.6	24.1	22.9	23.8	24.7	23.6	24.1	22.4	21.5	21.8
13	18.6	16.6	17.6	23.9	22.9	23.7	24.6	23.9	24.1	22.6	21.0	21.8
14	19.6	17.4	18.3	24.1	22.9	23.8	24.7	24.0	24.3	22.7	21.3	21.8
15	19.7	18.5	19.1	24.0	23.0	23.8	24.8	21.9	24.2	22.3	21.3	21.6
16	20.0	18.6	19.6	23.9	22.6	23.6	25.1	22.4	24.3	22.9	21.3	21.9
17	20.1	18.0	19.3	24.1	22.9	23.7	25.7	21.5	24.5	23.2	21.4	22.1
18	19.6	18.1	18.8	24.0	23.1	23.8	25.5	23.9	24.5	23.1	21.9	22.3
19	20.4	18.9	19.4	24.2	23.6	23.9	25.5	24.0	24.6	22.3	21.5	21.8
20	20.9	18.8	19.9	24.2	23.7	23.9	25.6	24.1	24.6	23.0	21.4	21.8
21	21.4	19.9	20.6	24.2	23.4	23.8	25.5	22.9	24.6	23.1	21.3	21.9
22	21.6	19.5	20.6	23.8	23.2	23.6	25.9	24.0	24.9	22.2	21.2	21.6
23	22.0	19.3	20.9	24.1	23.3	23.7	25.9	24.3	24.9	22.0	20.9	21.2
24	22.1	19.6	21.0	24.0	23.2	23.7	25.7	23.4	24.8	21.3	20.7	20.9
25	22.5	20.3	21.1	23.9	23.2	23.6	25.8	24.4	24.9	21.0	20.4	20.7
26	21.5	20.5	21.0	24.1	23.3	23.8	26.7	21.3	24.9	20.4	19.2	20.0
27	22.8	20.7	21.5	24.1	23.3	23.8	26.1	24.6	25.1	19.6	18.4	19.0
28	22.3	21.0	21.6	25.0	23.5	24.3	26.1	24.5	25.1	18.4	17.4	17.7
29	22.7	21.3	21.9	24.7	23.5	24.1	25.3	24.0	24.8	17.5	16.9	17.2
30	23.4	21.5	22.1	24.9	23.8	24.3	26.0	24.9	25.2	17.0	16.3	16.5
31	---	---	---	25.1	23.9	24.3	25.2	24.5	25.0	---	---	---
MONTH	23.4	15.7	19.2	25.1	18.4	23.5	26.7	21.3	24.5	24.8	16.3	21.3

03327500 WABASH RIVER AT PERU, IN

LOCATION.--Lat 40°44'35", long 86°05'45", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.32, T.27 N., R.4 E., Miami County, Hydrologic Unit 05120101, (BUNKER HILL, IN quadrangle), on right bank at upstream side of bridge on U.S. Highway 31, 0.5 mi southwest of Peru, 4.4 mi downstream from Mississinewa River, and at mile 370.5.

DRAINAGE AREA.--2,686 mi².

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 fair except for estimated daily discharges, which are poor. Flow regulated by reservoirs on Wabash River (station 03323500), Salamonie River (station 03324500) and Mississinewa River (station 03327000).

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.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	594	522	414	8,490	e520	1,120	3,360	475	3,680	661	5,030	5,020
2	660	530	332	9,190	e510	1,080	2,110	825	1,710	557	5,680	8,460
3	605	546	341	8,280	e500	928	1,710	1,920	1,660	849	7,470	8,400
4	744	537	310	6,660	e760	645	1,630	2,100	1,210	e1,700	7,070	9,010
5	761	483	328	4,440	e3,200	693	5,670	5,840	1,120	e11,000	6,360	9,800
6	692	500	e280	2,460	3,530	1,050	6,560	8,720	1,180	e8,400	4,880	9,650
7	704	556	e270	1,620	2,950	2,590	6,560	8,460	1,170	e19,500	6,820	9,420
8	695	599	e275	1,460	1,860	4,240	5,640	10,600	953	e17,500	6,760	8,860
9	683	581	e255	1,160	1,090	6,250	4,680	13,900	862	e18,000	6,200	7,120
10	677	664	e260	2,940	918	9,190	3,950	10,900	891	e15,000	5,440	5,560
11	659	1,470	e265	4,770	e880	8,930	2,610	10,100	785	16,500	5,270	4,610
12	632	3,310	270	3,190	e820	6,820	1,970	11,700	1,130	19,100	5,390	5,080
13	621	3,070	265	1,800	e640	8,680	1,410	12,100	2,900	18,600	5,400	4,890
14	613	2,500	262	1,110	e500	12,200	1,160	12,100	7,500	18,000	5,460	4,170
15	610	1,820	258	903	e560	12,500	1,020	13,000	5,480	14,700	5,390	1,260
16	616	1,530	248	893	e640	12,800	926	11,600	5,590	14,000	5,150	1,030
17	615	808	249	998	e620	12,200	937	11,900	5,540	14,300	4,990	927
18	607	685	273	902	e510	9,780	992	11,300	5,190	14,200	5,010	956
19	661	751	417	e800	494	7,010	942	9,660	3,380	14,200	4,290	891
20	572	696	2,610	e740	454	5,510	920	8,570	2,790	14,000	3,560	774
21	564	648	6,380	e660	468	5,370	856	7,570	2,400	13,500	3,070	740
22	538	682	5,270	e640	513	6,480	751	5,640	1,720	11,500	3,840	1,050
23	576	726	3,000	e580	619	6,680	694	5,440	1,200	11,100	3,220	2,210
24	584	836	1,820	e540	980	4,470	638	5,170	866	9,710	2,840	3,970
25	596	910	1,280	e520	2,200	3,200	605	5,170	706	9,600	2,710	6,250
26	601	966	704	e490	2,450	2,370	563	5,220	686	9,760	2,660	7,170
27	602	811	580	e450	1,960	1,650	458	4,970	634	9,920	2,490	10,900
28	573	783	639	e470	1,180	1,910	444	4,950	619	8,980	2,510	8,640
29	507	733	675	e490	---	4,120	434	4,930	622	6,070	2,790	7,910
30	556	654	692	e520	---	8,040	462	5,070	674	5,510	2,970	8,400
31	533	---	2,380	e540	---	6,200	---	4,990	---	5,380	2,660	---
TOTAL	19,251	29,907	31,602	68,706	32,326	174,706	60,662	234,890	64,848	351,797	143,380	163,128
MEAN	621	997	1,019	2,216	1,154	5,636	2,022	7,577	2,162	11,350	4,625	5,438
MAX	761	3,310	6,380	9,190	3,530	12,800	6,560	13,900	7,500	19,500	7,470	10,900
MIN	507	483	248	450	454	645	434	475	619	557	2,490	740
CFSM	0.23	0.37	0.38	0.83	0.43	2.10	0.75	2.82	0.80	4.22	1.72	2.02
IN.	0.27	0.41	0.44	0.95	0.45	2.42	0.84	3.25	0.90	4.87	1.99	2.26

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 2003, BY WATER YEAR (WY)

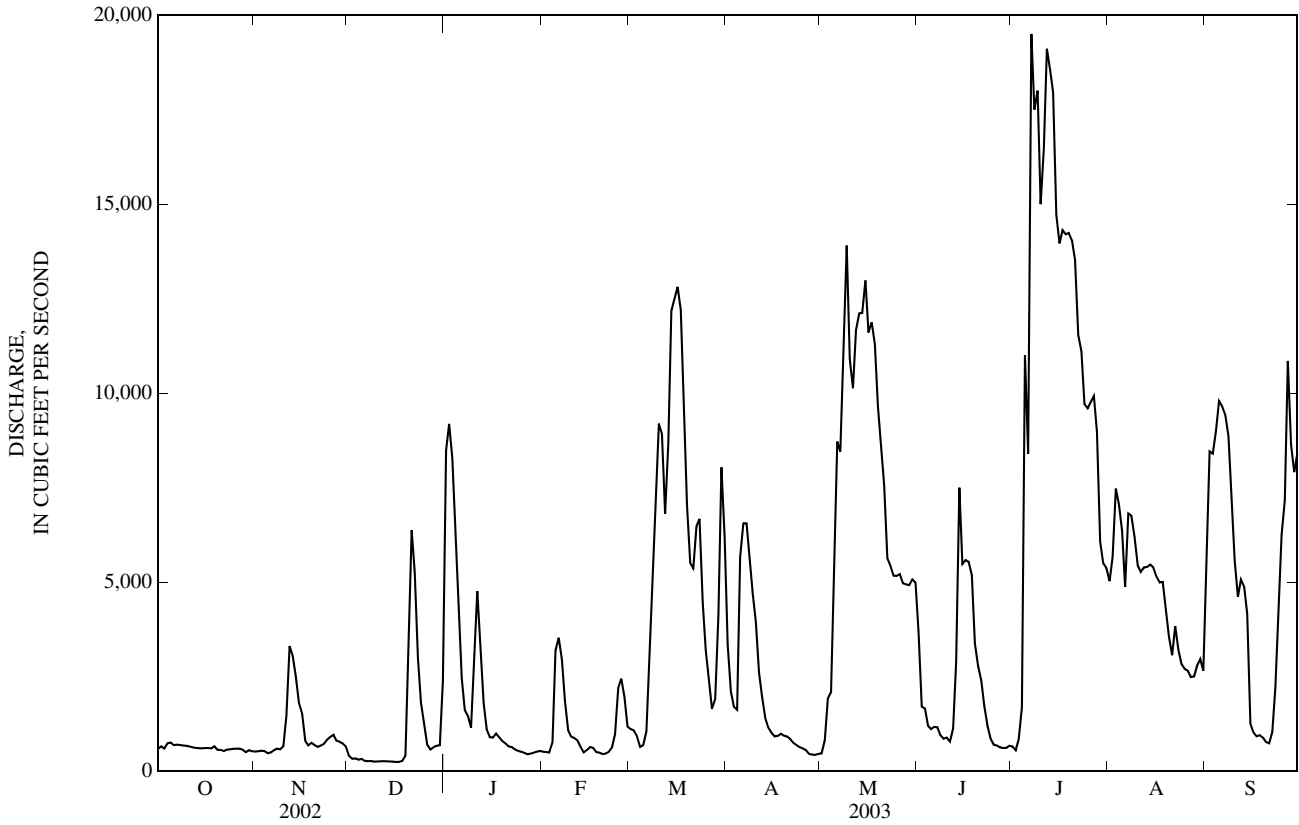
MEAN	1,156	1,714	2,687	3,290	3,705	4,624	4,075	2,541	2,429	1,724	930	892
MAX	6,340	7,653	8,314	18,500	10,740	10,890	14,840	7,577	14,260	11,350	7,049	5,438
(WY)	(2002)	(1973)	(1958)	(1950)	(1959)	(1982)	(1957)	(2003)	(1958)	(2003)	(1998)	(2003)
MIN	110	150	142	141	247	830	412	345	194	175	163	119
(WY)	(1954)	(1954)	(1964)	(1945)	(1964)	(1983)	(1971)	(1976)	(1988)	(1944)	(1966)	(1963)

WABASH RIVER BASIN

03327500 WABASH RIVER AT PERU, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1944 - 2003	
ANNUAL TOTAL	829,393		1,375,203			
ANNUAL MEAN	2,272		3,768		2,473	
HIGHEST ANNUAL MEAN					4,425 1950	
LOWEST ANNUAL MEAN					691 1954	
HIGHEST DAILY MEAN	13,500	Feb 1	19,500	Jul 7	50,900	Jun 12, 1958
LOWEST DAILY MEAN	116	Aug 8	248	Dec 16	72	Oct 5, 1946
ANNUAL SEVEN-DAY MINIMUM	130	Aug 7	260	Dec 11	85	Oct 29, 1944
MAXIMUM PEAK FLOW			unknown Jul 7		68,000	May 18, 1943
MAXIMUM PEAK STAGE			unknown Jul 7		24.46	May 18, 1943
ANNUAL RUNOFF (CFSM)	0.85		1.40		0.92	
ANNUAL RUNOFF (INCHES)	11.49		19.05		12.51	
10 PERCENT EXCEEDS	6,520		9,790		7,010	
50 PERCENT EXCEEDS	776		1,710		1,020	
90 PERCENT EXCEEDS	237		509		223	

e Estimated



03327520 PIPE CREEK NEAR BUNKER HILL, IN

LOCATION.--Lat 40°40'06", long 86°05'44", in NE¼SE¼ sec.29, T.26 N., R.4 E., Miami County, Hydrologic Unit 05120101, (BUNKER HILL, IN. quadrangle), 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.--May 1968 to October 2003 (discontinued). Occasional low-flow measurements, water years 1960-67.

GAGE.--Water-stage recorder. Datum of gage is 736.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.3	18	14	283	e17	e25	176	43	74	37	e95	683
2	6.4	17	13	180	e17	e25	138	48	66	43	e120	e1,450
3	6.1	23	e11	109	e28	e23	110	66	63	48	e115	e1,200
4	6.7	26	e10	74	e110	e23	120	52	63	49	e100	e540
5	7.0	31	e9.7	61	e100	e23	659	881	62	4,050	e96	e330
6	8.2	33	e9.6	53	e80	e24	455	1,160	56	3,940	98	e250
7	7.8	37	e9.3	45	e57	e40	310	623	52	3,990	80	e180
8	7.1	35	e9.4	44	e40	e120	329	433	51	3,720	67	e140
9	6.5	39	9.4	72	e32	e450	250	1,270	51	3,430	60	e120
10	6.1	43	9.4	158	e27	e300	197	1,450	49	3,640	54	e99
11	6.0	72	9.5	109	e25	e190	163	1,550	48	2,850	50	e80
12	5.5	62	9.7	91	e23	e160	133	1,190	111	1,350	47	e74
13	5.7	40	10	e70	e22	501	108	566	301	590	44	e65
14	6.7	30	12	e57	e21	495	92	355	643	405	41	e60
15	6.9	24	13	e48	e20	350	86	788	258	301	40	e56
16	6.7	22	11	e40	e19	371	83	822	160	232	39	e52
17	7.0	20	10	e33	e18	359	77	427	117	184	37	e49
18	8.0	19	11	e30	e18	298	69	291	97	158	34	e48
19	12	18	16	e27	e18	230	62	225	85	136	32	e47
20	15	17	33	e25	e23	325	60	193	72	119	31	e50
21	14	17	60	e23	e33	365	63	166	65	e125	30	e50
22	13	17	45	e22	e51	405	59	141	59	e138	66	e180
23	13	18	32	e21	e80	252	52	126	56	e125	46	e350
24	13	16	26	e20	e55	184	49	113	51	e110	33	e640
25	14	19	23	e20	e38	146	49	104	48	e100	30	e900
26	19	18	e20	e19	e32	116	51	94	47	e94	29	e1,300
27	18	16	e18	e18	e29	100	46	87	47	e88	27	e1,200
28	17	15	e16	e18	e28	92	42	81	43	e84	26	e800
29	18	14	16	e18	---	329	42	80	43	e80	78	e600
30	20	14	17	e17	---	397	41	77	40	e77	113	e500
31	24	---	90	e17	---	233	---	76	---	e75	63	---
TOTAL	330.7	790	603.0	1,822	1,061	6,951	4,171	13,578	2,978	30,368	1,821	12,093
MEAN	10.7	26.3	19.5	58.8	37.9	224	139	438	99.3	980	58.7	403
MAX	24	72	90	283	110	501	659	1,550	643	4,050	120	1,450
MIN	5.5	14	9.3	17	17	23	41	43	40	37	26	47
CFSM	0.07	0.17	0.12	0.37	0.24	1.41	0.87	2.75	0.62	6.16	0.37	2.54
IN.	0.08	0.18	0.14	0.43	0.25	1.63	0.98	3.18	0.70	7.10	0.43	2.83

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2003, BY WATER YEAR (WY)

MEAN	60.4	126	164	166	221	284	241	182	152	128	52.4	50.2
MAX	486	797	563	731	648	902	637	525	429	980	321	403
(WY)	(2002)	(1993)	(1991)	(1974)	(1990)	(1982)	(1972)	(1996)	(1980)	(2003)	(1998)	(2003)
MIN	6.66	6.67	6.57	3.70	25.1	49.7	44.1	28.5	12.4	8.17	7.63	5.16
(WY)	(1989)	(2000)	(1977)	(1977)	(1978)	(1981)	(2000)	(1976)	(1988)	(1988)	(1971)	(1991)

SUMMARY STATISTICS

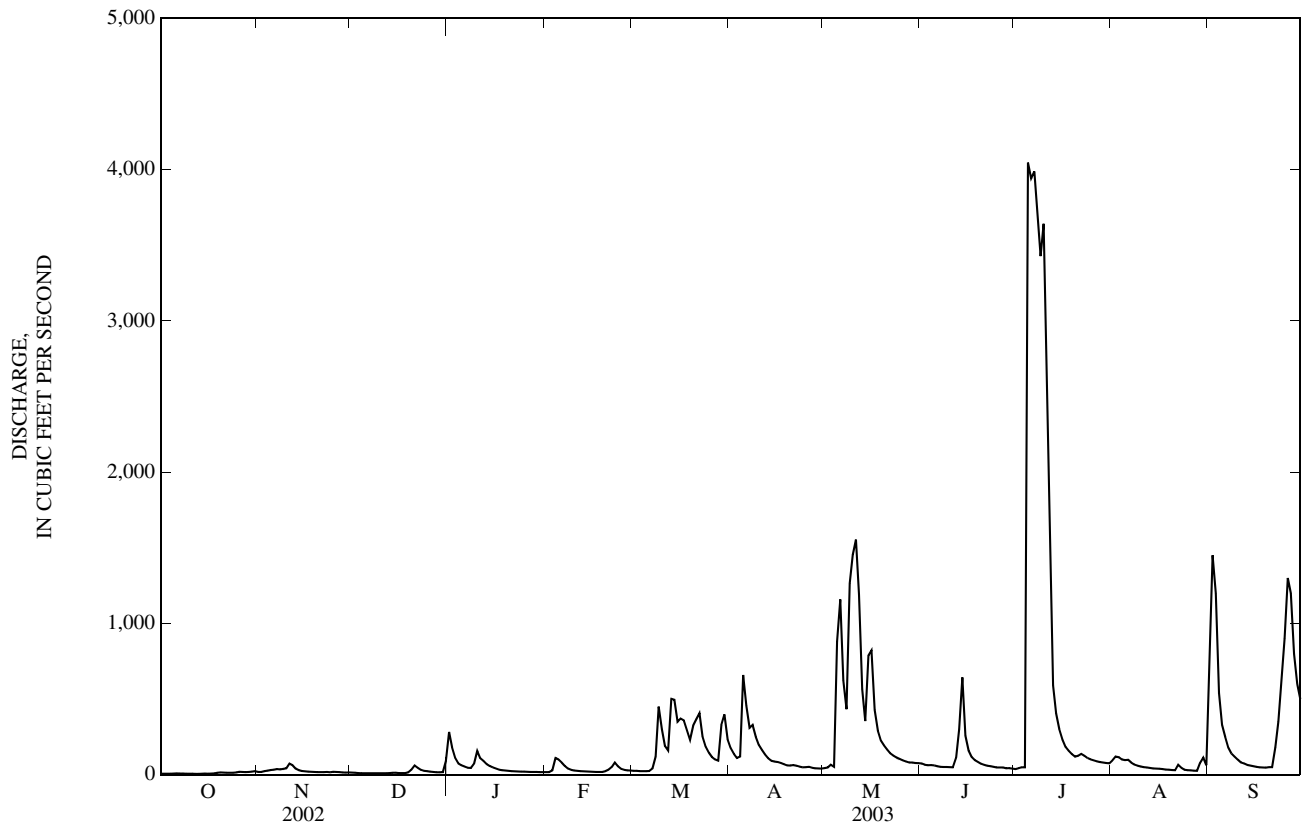
FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1968 - 2003

ANNUAL TOTAL	45,003.2	76,566.7	
ANNUAL MEAN	123	210	152
HIGHEST ANNUAL MEAN			266
LOWEST ANNUAL MEAN			67.6
HIGHEST DAILY MEAN	1,760	Feb 1	4,780
LOWEST DAILY MEAN	5.5	Oct 12	2.9
ANNUAL SEVEN-DAY MINIMUM	6.2	Oct 9	3.4
MAXIMUM PEAK FLOW			4,700
MAXIMUM PEAK STAGE			16.91
ANNUAL RUNOFF (CFSM)	0.78		1.32
ANNUAL RUNOFF (INCHES)	10.53		17.91
10 PERCENT EXCEEDS	297		367
50 PERCENT EXCEEDS	34		55
90 PERCENT EXCEEDS	8.7		10

e Estimated



03328000 EEL RIVER AT NORTH MANCHESTER, IN

LOCATION.--Lat 40°59'38", long 85°46'53", in NE¼SE¼ sec.6, T.29 N., R.7 E., Wabash County, Hydrologic Unit 05120104, (NORTH MANCHESTER SOUTH, IN. quadrangle), on right bank 300 ft upstream from New Wabash bridge in North Manchester, 400 ft downstream of New York Central railroad bridge, 0.4 mi downstream from Pony Creek, and at mile 51.0.

DRAINAGE AREA.--417 mi².

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 732.65 ft above National Geodetic Vertical Datum of 1929. Prior to Jan. 15, 2002 at site 1.75 mi upstream at Water Works property at datum 738.00 ft. From October 1929 to July 23, 1953, nonrecording gage on downstream side of Second Street bridge, 1.9 mi upstream at datum 5.35 ft higher, at same drainage area. From July 24, 1953 to Jan. 14, 2002, at site 1.75 mi upstream at Water Works property at datum 5.35 ft higher, at same drainage area.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum instantaneous gage height occurred Dec. 30, 1990 during period of no gage height record, at datum 738.00 ft.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

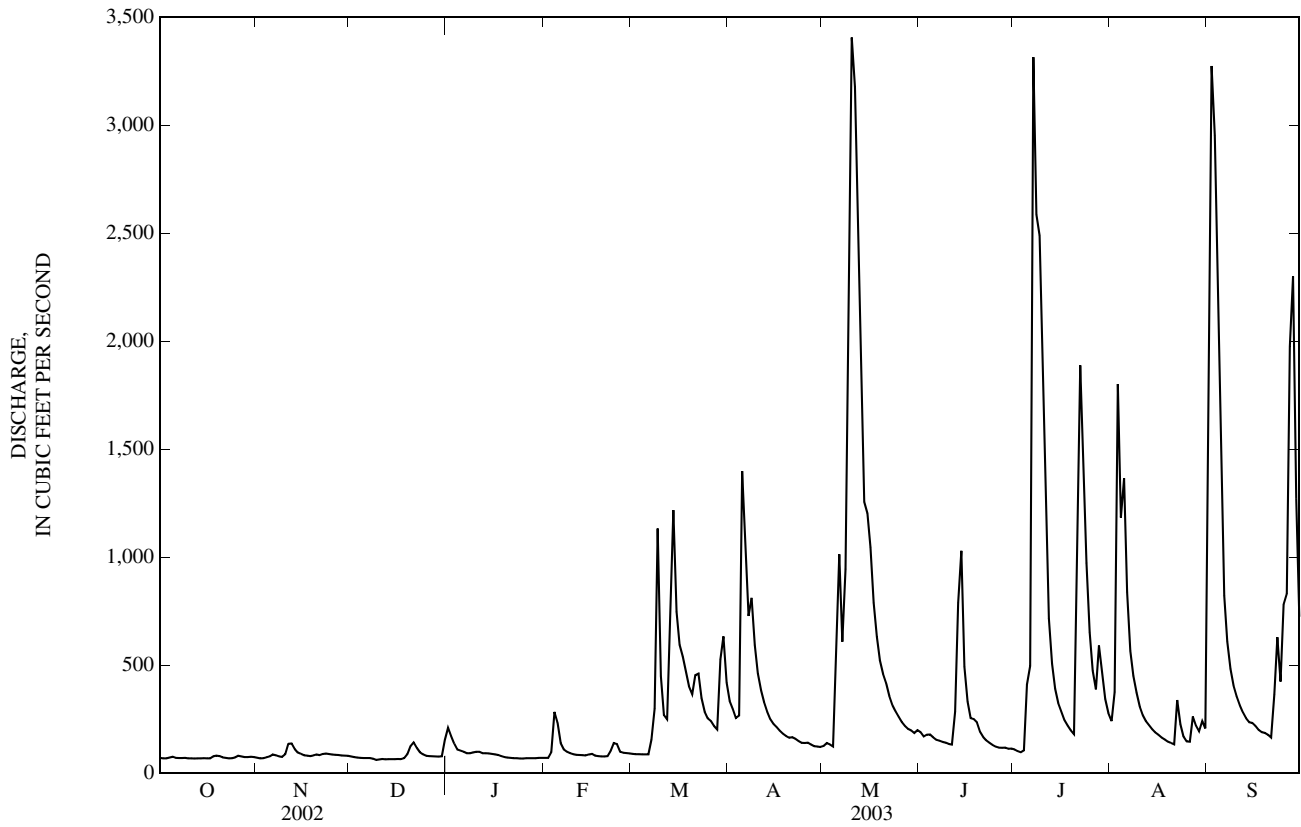
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72	73	e78	212	e72	e90	335	127	191	111	242	1,400
2	69	70	e75	173	e72	e89	297	139	171	103	376	3,270
3	70	70	e73	137	97	e89	256	134	179	98	1,800	2,950
4	73	74	e72	e110	284	e88	267	125	180	107	1,180	2,050
5	77	78	e71	e105	235	e88	1,400	610	167	411	1,370	1,260
6	72	87	71	e100	e140	e88	1,100	1,010	155	497	839	822
7	71	83	71	e93	e110	156	728	609	151	3,310	566	609
8	71	78	68	e93	e100	300	812	945	145	2,590	451	484
9	72	76	62	e97	e93	1,130	594	2,560	142	2,490	373	407
10	70	89	64	e100	e89	e450	462	3,410	136	1,710	310	356
11	69	136	67	e100	e86	e270	385	3,180	133	1,200	269	314
12	68	139	65	e93	e85	e250	330	2,410	286	717	241	282
13	70	113	66	e93	e84	721	285	1,810	789	507	223	254
14	69	96	66	e92	e83	1,220	251	1,260	1,030	392	204	237
15	70	90	66	e90	e87	748	229	1,200	494	324	190	233
16	70	84	66	e88	e90	595	214	1,050	331	283	178	220
17	69	82	65	e85	e82	541	197	789	256	246	166	201
18	79	80	70	e80	e80	471	183	631	251	220	156	191
19	82	83	88	e75	e78	403	173	523	237	199	147	187
20	80	87	125	e73	e78	367	165	460	192	181	141	178
21	74	84	142	e72	e80	454	167	417	168	996	134	165
22	72	90	118	e70	e105	461	159	358	152	1,890	339	365
23	70	92	98	e70	e140	348	149	316	141	1,490	227	e630
24	70	89	88	e69	e135	285	141	286	132	973	171	e425
25	74	87	81	e69	e100	255	140	262	124	653	148	e780
26	81	e86	e80	e70	e95	242	142	238	119	475	147	e830
27	78	e85	e79	e70	e94	220	133	219	118	388	262	e1,980
28	76	e83	78	e70	e92	203	126	205	119	591	220	e2,300
29	75	e82	78	e70	---	527	124	198	114	457	194	e1,270
30	77	e81	79	e72	---	634	122	186	115	345	242	e725
31	75	---	155	e72	---	420	---	200	---	279	208	---
TOTAL	2,265	2,627	2,525	2,863	2,966	12,203	10,066	25,867	6,918	24,233	11,714	25,375
MEAN	73.1	87.6	81.5	92.4	106	394	336	834	231	782	378	846
MAX	82	139	155	212	284	1,220	1,400	3,410	1,030	3,310	1,800	3,270
MIN	68	70	62	69	72	88	122	125	114	98	134	165
CFSM	0.18	0.21	0.20	0.22	0.25	0.94	0.80	2.00	0.55	1.87	0.91	2.03
IN.	0.20	0.23	0.23	0.26	0.26	1.09	0.90	2.31	0.62	2.16	1.04	2.26

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2003, BY WATER YEAR (WY)

MEAN	180	270	395	474	577	707	675	437	345	225	160	141
MAX	1,309	1,416	1,717	2,258	1,772	2,425	1,768	2,021	1,376	782	1,031	846
(WY)	(2002)	(1993)	(1967)	(1950)	(1959)	(1982)	(1957)	(1943)	(1981)	(2003)	(1990)	(2003)
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 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1930 - 2003	
ANNUAL TOTAL	134,077		129,622		382	
ANNUAL MEAN	367		355		103	
HIGHEST ANNUAL MEAN					783	
LOWEST ANNUAL MEAN					1931	
HIGHEST DAILY MEAN	3,820	Feb 1	3,410	May 10	7,770	Dec 31, 1990
LOWEST DAILY MEAN	61	Sep 14	62	Dec 9	16	Oct 19, 1956
ANNUAL SEVEN-DAY MINIMUM	63	Sep 9	65	Dec 9	23	Sep 13, 1941
MAXIMUM PEAK FLOW			4,290	Jul 7	8,740	Dec 30, 1990
MAXIMUM PEAK STAGE			10.20	Jul 7	14.81	Dec 30, 1990
ANNUAL RUNOFF (CFSM)	0.88		0.85		0.92	
ANNUAL RUNOFF (INCHES)	11.96		11.56		12.45	
10 PERCENT EXCEEDS	876		834		900	
50 PERCENT EXCEEDS	165		147		176	
90 PERCENT EXCEEDS	70		71		66	

e Estimated



03328500 EEL RIVER NEAR LOGANSFORT, IN

LOCATION.--Lat 40°46'55", long 86°15'50", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.14, T.27 N., R.2 E., Cass County, Hydrologic Unit 05120104, (LOGANSFORT, IN quadrangle), 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	158	158	166	e250	e187	e195	532	223	346	214	467	479
2	153	154	e150	350	e190	e190	448	230	326	207	477	3,110
3	153	153	e145	302	e190	e190	406	236	321	195	988	3,830
4	157	153	e140	257	e190	e190	389	232	329	192	2,030	3,250
5	158	159	e140	231	e444	e193	1,320	511	319	2,600	1,510	2,160
6	158	169	e140	e210	e430	e195	2,100	1,590	299	3,950	1,470	1,380
7	155	171	e138	e200	e365	e260	1,410	1,300	286	7,010	975	988
8	153	173	e137	e190	e280	e360	1,330	1,490	280	7,930	722	773
9	152	168	e139	e200	e250	e1,300	1,200	3,970	274	7,410	603	636
10	152	174	e141	e205	e240	e1,100	906	5,700	268	5,610	518	545
11	150	183	e146	e210	e235	e620	717	4,900	267	3,340	451	483
12	148	221	e150	e275	e230	e480	600	4,060	303	2,300	406	432
13	150	239	155	e270	e225	e450	513	2,990	677	1,620	373	395
14	147	217	156	e210	e220	1,210	449	2,170	2,430	1,240	355	369
15	145	194	155	e200	e215	1,290	403	1,670	1,620	1,030	337	346
16	145	181	153	e190	e255	931	371	1,680	905	871	319	334
17	147	175	153	e185	e230	838	346	1,330	620	732	315	318
18	148	169	160	e184	e200	769	326	1,070	487	635	281	296
19	163	170	174	e185	e190	674	309	887	440	564	263	281
20	168	169	192	e185	e180	594	299	762	397	503	249	274
21	163	173	221	e184	e190	570	287	680	339	674	241	266
22	156	180	247	e182	e200	661	284	605	307	2,060	234	291
23	153	180	e210	e180	e250	608	272	535	282	2,220	449	725
24	150	182	e185	e177	e310	491	260	485	262	1,660	329	785
25	153	181	e170	e175	e300	426	259	447	248	1,180	268	822
26	159	179	e170	e174	e250	391	249	414	236	880	240	1,090
27	162	176	e165	e175	e225	372	246	382	221	706	225	2,640
28	163	171	e160	e180	e210	352	236	358	217	660	317	3,030
29	163	169	e159	e183	---	343	225	347	219	831	336	1,730
30	163	167	e157	e183	---	714	220	337	223	666	306	1,140
31	160	---	e155	e185	---	717	---	348	---	542	329	---
TOTAL	4,805	5,308	5,029	6,467	6,881	17,674	16,912	41,939	13,748	60,232	16,383	33,198
MEAN	155	177	162	209	246	570	564	1,353	458	1,943	528	1,107
MAX	168	239	247	350	444	1,300	2,100	5,700	2,430	7,930	2,030	3,830
MIN	145	153	137	174	180	190	220	223	217	192	225	266
CFSM	0.20	0.22	0.21	0.26	0.31	0.72	0.71	1.71	0.58	2.46	0.67	1.40
IN.	0.23	0.25	0.24	0.30	0.32	0.83	0.80	1.98	0.65	2.84	0.77	1.57

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 2003, BY WATER YEAR (WY)

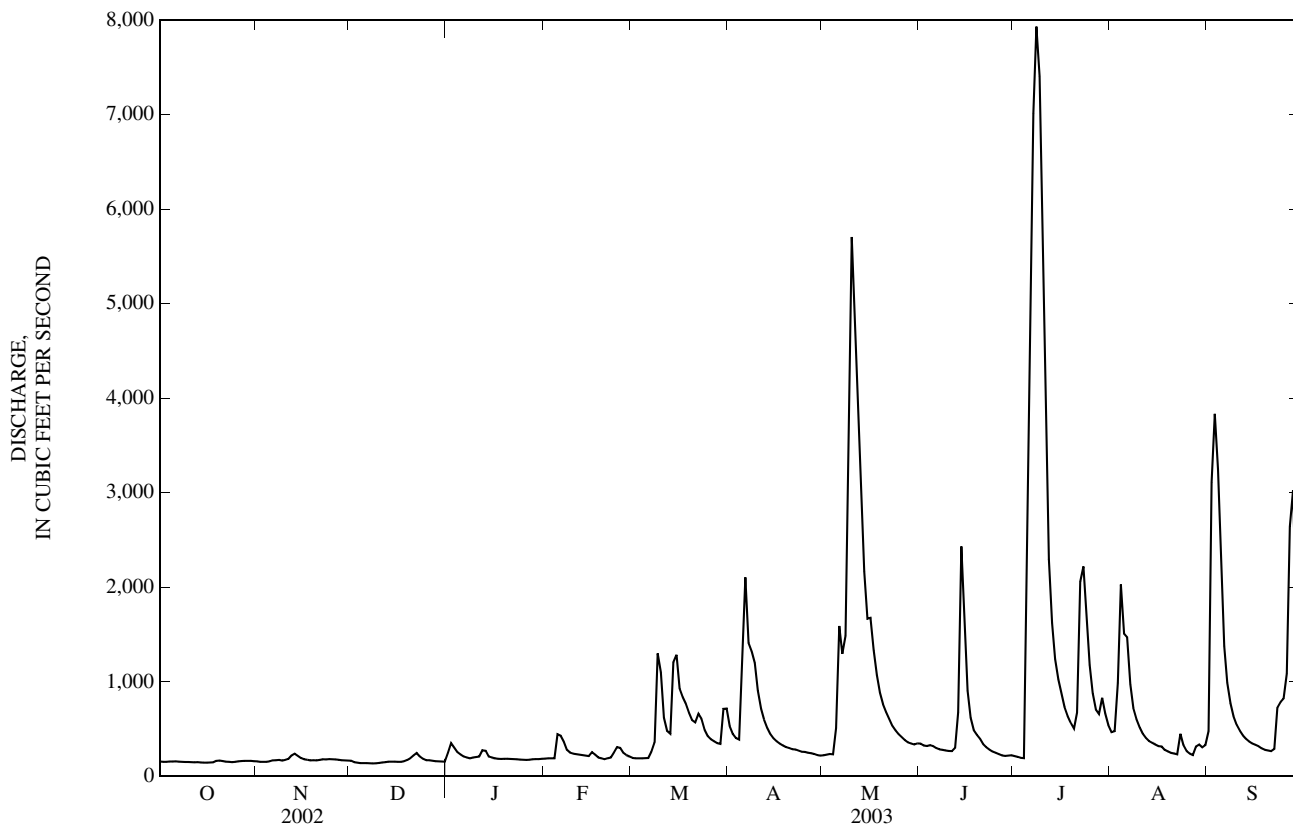
MEAN	381	515	813	943	1,125	1,342	1,304	888	785	527	368	318
MAX	2,522	2,384	2,898	4,507	3,090	4,612	3,285	1,827	2,208	2,072	2,115	1,107
(WY)	(2002)	(1993)	(1967)	(1950)	(1959)	(1982)	(1950)	(1983)	(1975)	(1998)	(1990)	(2003)
MIN	95.1	110	98.2	101	184	353	366	245	176	140	128	101
(WY)	(1964)	(1964)	(1964)	(1977)	(1964)	(1966)	(1966)	(1958)	(1988)	(1988)	(1966)	(1963)

WABASH RIVER BASIN

03328500 EEL RIVER NEAR LOGANSPORT, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1944 - 2003	
ANNUAL TOTAL	259,147		228,576		774	
ANNUAL MEAN	710		626		324	
HIGHEST ANNUAL MEAN					1,573	1950
LOWEST ANNUAL MEAN					324	1954
HIGHEST DAILY MEAN	7,060	May 13	7,930	Jul 8	16,600	Feb 24, 1985
LOWEST DAILY MEAN	137	Dec 8	137	Dec 8	70	Mar 15, 1960
ANNUAL SEVEN-DAY MINIMUM	139	Sep 11	139	Dec 4	76	Dec 17, 1963
MAXIMUM PEAK FLOW			8,150	Jul 8	17,700	Feb 24, 1985
MAXIMUM PEAK STAGE			9.22	Jul 8	12.68	Feb 24, 1985
ANNUAL RUNOFF (CFSM)	0.90		0.79		0.98	
ANNUAL RUNOFF (INCHES)	12.22		10.78		13.32	
10 PERCENT EXCEEDS	1,740		1,390		1,750	
50 PERCENT EXCEEDS	323		274		402	
90 PERCENT EXCEEDS	152		156		156	

e Estimated



03329000 WABASH RIVER AT LOGANSPOUT, IN

LOCATION.--Lat 40°44'47", long 86°22'39", in SW¹/₄NE¹/₄ sec.35, T.27 N., R.1 E., Cass County, Hydrologic Unit 05120105, (CLYMERS, IN quadrangle), on left bank, 150 ft downstream from Cicott Street bridge in Logansport, 1,000 ft downstream from Eel River, 0.85 mi upstream of U.S. Highway 35, 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 fair except for estimated daily discharges, which are poor. 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.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	826	772	790	8,960	e800	e1,300	4,760	799	4,860	991	5,970	6,640
2	803	761	587	10,200	e780	e1,250	3,010	835	2,360	926	6,140	14,100
3	798	781	552	9,390	e760	e1,200	2,420	1,990	2,130	955	8,900	14,000
4	830	788	e470	7,860	e1,200	e960	2,220	2,520	1,790	1,360	9,870	13,400
5	995	766	e500	5,380	e3,500	e1,000	7,280	6,270	1,560	20,400	8,570	13,000
6	940	761	e450	3,270	e4,600	e1,100	9,700	12,600	1,540	16,600	6,810	11,900
7	927	798	e430	2,090	e4,000	2,540	9,300	11,500	1,570	33,000	8,000	11,200
8	927	859	e440	1,790	e3,100	4,970	8,210	13,300	1,430	30,700	7,990	10,500
9	926	855	e395	1,550	e2,200	7,800	6,900	20,100	1,250	29,400	7,390	8,690
10	924	900	e410	2,580	e1,300	11,000	5,830	20,100	1,260	25,800	6,230	6,690
11	895	1,200	e430	5,740	e1,140	10,900	4,050	17,000	1,250	22,800	5,960	5,380
12	876	3,630	446	4,130	e1,100	8,490	3,100	17,800	1,370	23,600	6,040	5,770
13	859	3,690	424	2,410	e1,000	9,320	2,220	16,600	3,300	21,500	6,060	5,650
14	837	3,090	421	1,600	e760	14,400	1,880	15,500	11,000	20,300	6,140	5,060
15	833	2,310	420	1,140	e850	14,900	1,660	16,100	8,210	17,200	6,120	2,380
16	846	1,900	406	1,070	e950	14,900	1,470	15,100	7,260	15,800	5,830	1,430
17	850	1,290	404	e1,260	e900	14,600	1,380	14,500	6,800	15,900	5,680	1,370
18	856	943	449	e1,170	e820	12,300	1,430	13,700	6,360	15,700	5,570	1,310
19	896	982	518	e1,070	e750	9,170	1,370	11,900	4,490	15,600	5,010	1,300
20	841	974	1,630	e1,000	e700	7,230	1,330	10,100	3,340	15,400	4,060	1,150
21	774	936	6,930	e940	e720	6,800	1,300	9,520	3,050	16,600	3,490	1,110
22	743	908	6,200	e880	e750	8,030	1,180	7,000	2,310	14,900	4,060	1,240
23	778	976	3,830	e820	e900	8,690	1,110	6,590	1,690	14,600	3,840	2,850
24	783	1,040	2,280	e780	e1,300	5,990	1,030	6,180	1,340	12,500	3,310	5,140
25	802	1,180	1,690	e740	e2,400	4,270	1,000	6,040	1,090	11,600	2,960	7,970
26	825	1,220	1,190	e720	e3,000	3,260	962	6,120	1,050	11,300	2,900	9,890
27	814	1,130	945	e700	e2,600	2,310	874	5,770	984	11,400	2,650	17,000
28	840	1,060	929	e720	e1,800	2,430	799	5,760	947	10,700	2,760	14,800
29	776	1,020	917	e740	---	3,740	775	5,670	944	7,700	3,530	11,500
30	816	949	948	e780	---	9,940	775	5,820	985	6,670	3,650	10,700
31	791	---	1,350	e820	---	8,520	---	5,830	---	6,370	3,050	---
TOTAL	26,227	38,469	37,781	82,300	44,680	213,310	89,325	308,614	87,520	468,272	168,540	223,120
MEAN	846	1,282	1,219	2,655	1,596	6,881	2,978	9,955	2,917	15,110	5,437	7,437
MAX	995	3,690	6,930	10,200	4,600	14,900	9,700	20,100	11,000	33,000	9,870	17,000
MIN	743	761	395	700	700	960	775	799	944	926	2,650	1,110
CFSM	0.22	0.34	0.32	0.70	0.42	1.82	0.79	2.63	0.77	4.00	1.44	1.97
IN.	0.26	0.38	0.37	0.81	0.44	2.10	0.88	3.04	0.86	4.61	1.66	2.20

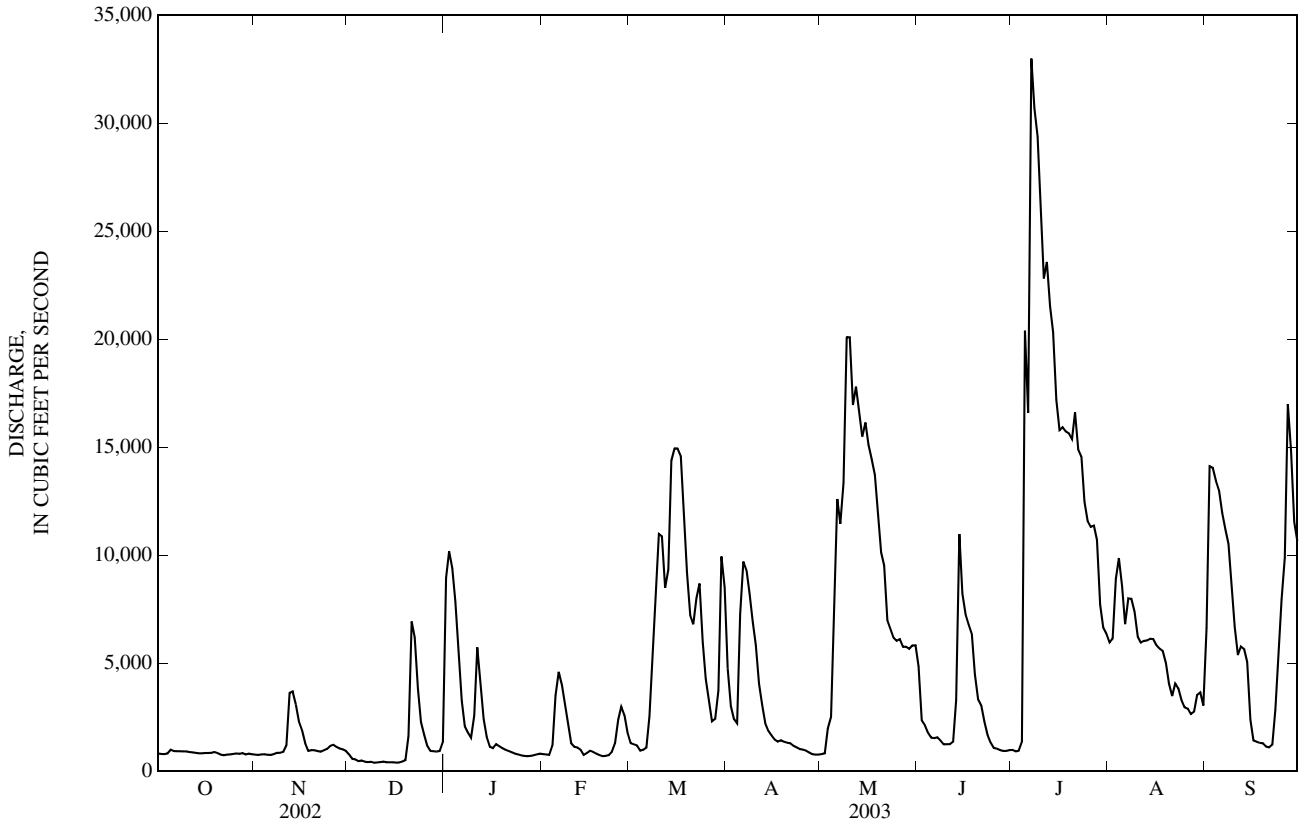
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 2003, BY WATER YEAR (WY)

MEAN	1,505	2,212	3,660	4,583	5,203	6,422	5,844	3,912	3,246	2,220	1,381	1,300
MAX	9,526	10,940	12,340	25,590	15,880	18,180	17,520	21,310	16,440	15,110	9,044	10,710
(WY)	(2002)	(1973)	(1968)	(1950)	(1959)	(1982)	(1957)	(1943)	(1958)	(2003)	(1998)	(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)

03329000 WABASH RIVER AT LOGANSPORT, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1924 - 2003	
ANNUAL TOTAL	1,212,461		1,788,158			
ANNUAL MEAN	3,322		4,899		3,448	
HIGHEST ANNUAL MEAN					6,614	1950
LOWEST ANNUAL MEAN					796	1941
HIGHEST DAILY MEAN	23,300	Feb 1	33,000	Jul 7	84,700	May 19, 1943
LOWEST DAILY MEAN	302	Sep 15	395	Dec 9	135	Sep 26, 1941
ANNUAL SEVEN-DAY MINIMUM	316	Sep 11	421	Dec 9	142	Sep 24, 1941
MAXIMUM PEAK FLOW			37,100	Jul 7	89,800	May 18, 1943
MAXIMUM PEAK STAGE			13.60	Jul 7	21.32	May 18, 1943
ANNUAL RUNOFF (CFSM)	0.88		1.30		0.91	
ANNUAL RUNOFF (INCHES)	11.94		17.60		12.40	
10 PERCENT EXCEEDS	10,500		13,800		9,370	
50 PERCENT EXCEEDS	1,210		2,220		1,470	
90 PERCENT EXCEEDS	449		775		426	

e Estimated



03329700 DEER CREEK NEAR DELPHI, IN

LOCATION.--Lat 40°35'25", long 86°37'17", in NE¹/₄NE¹/₄ sec.27, T.25 N., R.2 W., Carroll County, Hydrologic Unit 05120105, (FLORA, IN quadrangle), on downstream side of left wingwall of county road bridge,0.85 mi south of Sharp Point Cemetery, 3.0 mi northeast of Delphi Post Office, and 4.5 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 except for estimated daily discharges, which are poor.

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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	35	38	129	e34	e57	96	66	97	61	139	687
2	24	34	37	155	e40	e56	91	67	87	56	162	1,500
3	23	34	38	107	e55	e56	85	64	88	54	193	802
4	25	37	e36	81	e125	e54	97	60	89	51	156	441
5	26	39	e35	e74	e118	97	208	1,190	85	10,100	135	272
6	25	43	e35	e60	e105	132	339	1,130	77	13,400	124	198
7	25	40	e34	e50	e87	114	239	611	74	7,780	114	162
8	25	40	e34	e46	e72	186	261	468	70	5,360	108	137
9	25	38	e33	e49	e68	644	239	1,320	69	6,410	103	124
10	25	49	e33	126	e64	365	198	1,620	67	6,780	97	114
11	25	92	e33	132	e61	247	173	1,360	70	3,470	93	104
12	25	130	33	e104	e59	186	154	1,050	106	1,880	89	97
13	26	83	33	e83	e56	189	132	594	289	1,260	85	93
14	25	62	33	e67	e53	300	114	414	1,020	848	82	90
15	26	53	33	e58	e51	228	106	456	865	1,230	98	87
16	26	47	33	e53	e49	225	101	468	477	1,150	91	83
17	26	43	33	e49	e48	239	100	332	309	651	120	79
18	26	40	e34	e47	e47	221	95	261	228	495	153	75
19	32	39	e35	e46	e46	189	88	218	185	409	100	73
20	29	39	e37	e45	e46	179	85	196	153	335	85	72
21	29	39	e44	e44	e47	204	84	185	130	741	78	70
22	29	42	e52	e44	e77	200	83	165	115	1,150	73	83
23	29	41	e45	e44	203	172	77	152	104	572	69	127
24	29	38	e41	e42	e124	142	71	140	94	380	65	182
25	32	39	e39	e42	e84	128	73	130	84	281	62	450
26	35	38	e36	e41	e72	116	76	120	79	230	61	626
27	33	38	e34	e40	e65	101	71	111	77	206	58	2,940
28	33	38	e34	e40	e59	96	68	104	71	197	55	2,190
29	38	38	35	e38	---	103	69	105	69	181	67	1,100
30	39	37	38	e38	---	106	65	103	65	165	83	635
31	36	---	49	e36	---	105	---	103	---	151	88	---
TOTAL	877	1,405	1,137	2,010	2,015	5,437	3,738	13,363	5,393	66,034	3,086	13,693
MEAN	28.3	46.8	36.7	64.8	72.0	175	125	431	180	2,130	99.5	456
MAX	39	130	52	155	203	644	339	1,620	1,020	13,400	193	2,940
MIN	23	34	33	36	34	54	65	60	65	51	55	70
CFSM	0.10	0.17	0.13	0.24	0.26	0.64	0.45	1.57	0.66	7.77	0.36	1.67
IN.	0.12	0.19	0.15	0.27	0.27	0.74	0.51	1.81	0.73	8.97	0.42	1.86

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 2003, BY WATER YEAR (WY)

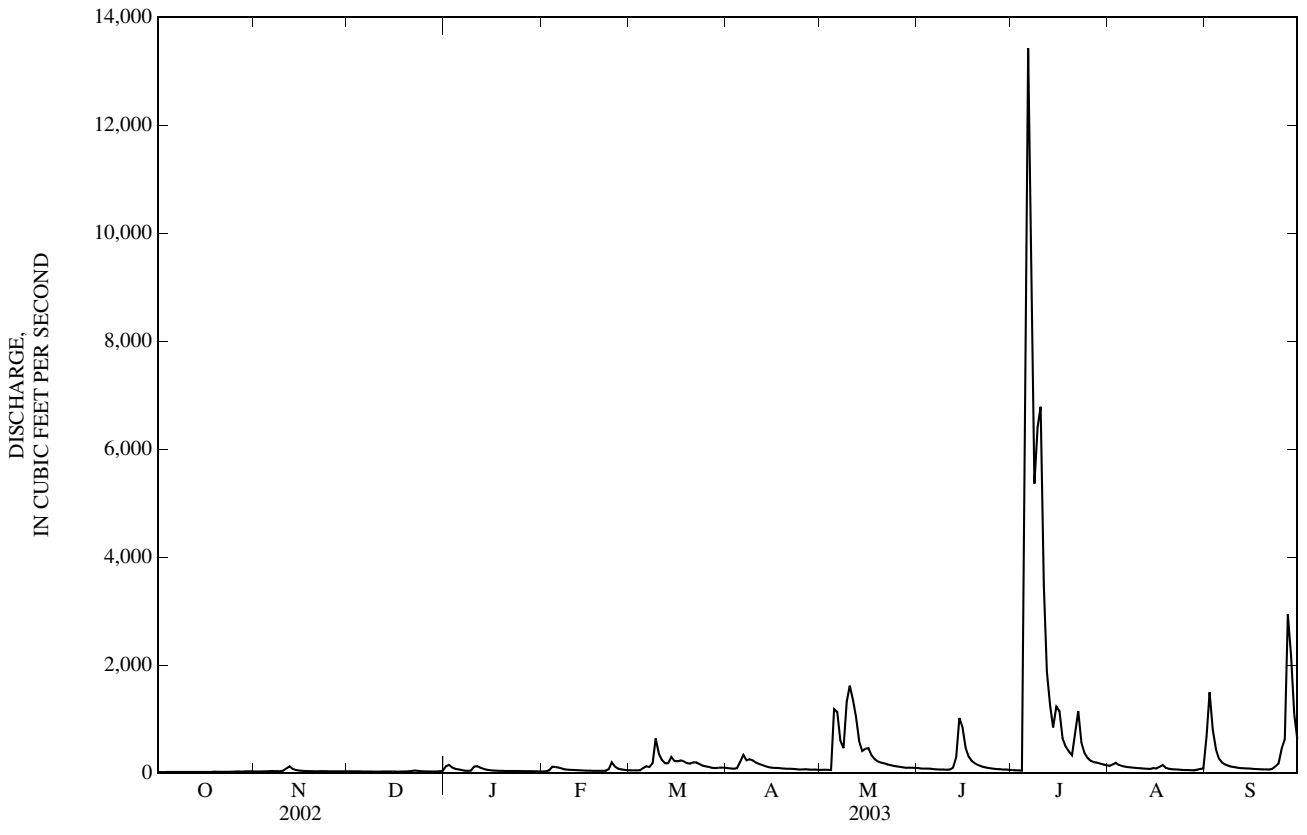
MEAN	101	158	243	307	366	435	417	303	275	213	98.3	84.8
MAX	673	1,249	983	1,882	1,039	1,311	1,109	793	1,799	2,130	537	568
(WY)	(2002)	(1993)	(1991)	(1950)	(1959)	(1982)	(1959)	(1983)	(1958)	(2003)	(1958)	(1989)
MIN	15.0	22.7	22.2	17.6	36.1	46.8	44.3	62.2	30.7	22.5	12.5	10.5
(WY)	(1965)	(1954)	(1945)	(1977)	(1954)	(1954)	(2000)	(1976)	(1977)	(1944)	(1966)	(1954)

WABASH RIVER BASIN

03329700 DEER CREEK NEAR DELPHI, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1944 - 2003	
ANNUAL TOTAL	87,252		118,188			
ANNUAL MEAN	239		324		249	
HIGHEST ANNUAL MEAN					510	1950
LOWEST ANNUAL MEAN					62.7	1966
HIGHEST DAILY MEAN	2,620	Feb 1	13,400	Jul 6	13,400	Jul 6, 2003
LOWEST DAILY MEAN	22	Sep 13	23	Oct 3	6.2	Sep 25, 1954
ANNUAL SEVEN-DAY MINIMUM	23	Sep 13	25	Oct 2	6.3	Sep 22, 1954
MAXIMUM PEAK FLOW			18,700	Jul 5	18,700	Jul 5, 2003
MAXIMUM PEAK STAGE			18.64	Jul 5	18.64	Jul 5, 2003
ANNUAL RUNOFF (CFSM)	0.87		1.18		0.91	
ANNUAL RUNOFF (INCHES)	11.85		16.05		12.36	
10 PERCENT EXCEEDS	589		484		556	
50 PERCENT EXCEEDS	92		83		104	
90 PERCENT EXCEEDS	29		34		27	

e Estimated



03330241 TIPPECANOE RIVER AT NORTH WEBSTER, IN

LOCATION.--Lat 41°18'58", long 85°41'32", in SE¼NE¼ sec.15, T.33 N., R.7 E., Kosciusko County, Hydrologic Unit 05120106, (NORTH WEBSTER, IN. quadrangle), on right upstream corner of State Road 13 bridge, at the intersection of State Road 13 and County Road 550 North, 0.4 mi southeast of North Webster. and 0.5 mi north of intersection of State Road 13 and 500 North.

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.

REMARKS.--Records fair except estimated daily discharges, which are poor. Flow regulated by dams at Webster Lake, 0.25 mi upstream.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	27	48	44	15	13	31	20	19	4.8	38	111
2	9.3	29	48	44	13	14	31	24	17	7.4	59	143
3	9.9	31	48	43	12	14	32	32	19	7.1	58	170
4	10	32	47	43	12	13	58	27	20	12	56	224
5	10	33	47	42	10	15	117	29	19	66	51	281
6	8.0	38	46	41	9.3	16	29	35	19	59	28	270
7	8.0	37	42	41	7.5	16	37	45	19	65	47	252
8	9.2	39	32	33	6.8	18	53	51	19	268	80	237
9	9.4	40	32	22	4.6	20	53	118	19	231	84	187
10	10	36	32	21	5.4	22	53	218	18	121	40	133
11	3.8	32	33	20	7.9	22	54	210	11	82	22	138
12	2.2	28	33	20	7.6	25	53	184	3.3	50	8.3	90
13	2.5	25	34	20	7.9	33	51	143	5.5	53	25	44
14	2.2	22	37	20	9.8	33	50	142	9.6	61	34	6.0
15	3.6	22	37	19	e10	35	35	143	11	69	33	17
16	11	21	37	19	e9.6	50	22	137	13	65	26	23
17	12	21	38	19	e9.4	81	22	132	14	49	4.8	25
18	12	21	39	19	e9.2	103	21	117	17	23	4.9	26
19	15	19	41	19	e9.0	100	20	47	22	15	6.2	27
20	15	1.8	36	20	10	97	20	47	20	8.3	7.2	30
21	15	e1.6	41	20	11	94	21	47	19	88	8.8	34
22	17	e1.4	49	20	12	75	20	46	18	188	45	52
23	19	e1.1	48	20	11	41	19	34	16	153	60	70
24	20	e1.2	47	20	12	41	19	9.1	13	108	56	22
25	19	e2.6	47	19	12	33	19	9.8	2.8	68	43	24
26	19	13	46	19	12	27	18	11	3.4	47	5.6	28
27	19	22	50	19	13	27	17	15	3.3	103	10	84
28	23	29	59	19	13	27	18	19	3.7	165	12	109
29	30	36	57	17	---	27	17	19	3.4	98	136	105
30	28	43	55	16	---	26	18	17	3.8	42	204	100
31	25	---	50	16	---	29	---	21	---	9.2	96	---
TOTAL	402.9	705.7	1,336	774	282.0	1,187	1,028	2,148.9	400.8	2,385.8	1,388.8	3,062.0
MEAN	13.0	23.5	43.1	25.0	10.1	38.3	34.3	69.3	13.4	77.0	44.8	102
MAX	30	43	59	44	15	103	117	218	22	268	204	281
MIN	2.2	1.1	32	16	4.6	13	17	9.1	2.8	4.8	4.8	6.0
CFSM	0.26	0.48	0.87	0.51	0.20	0.78	0.70	1.41	0.27	1.56	0.91	2.07
IN.	0.30	0.53	1.01	0.58	0.21	0.90	0.78	1.62	0.30	1.80	1.05	2.31

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2003, BY WATER YEAR (WY)

MEAN	37.7	40.2	49.6	68.4	60.8	64.1	80.1	53.8	47.5	27.0	25.0	21.8
MAX	147	133	102	209	153	137	139	119	138	77.0	80.1	102
(WY)	(2002)	(1993)	(2002)	(1993)	(2001)	(1997)	(2002)	(2002)	(1996)	(2003)	(1990)	(2003)
MIN	2.68	6.61	12.3	13.6	6.05	15.0	29.6	15.4	3.08	4.36	2.00	1.67
(WY)	(1995)	(1995)	(1996)	(2000)	(2000)	(2000)	(2000)	(1988)	(1988)	(1988)	(1988)	(1999)

SUMMARY STATISTICS

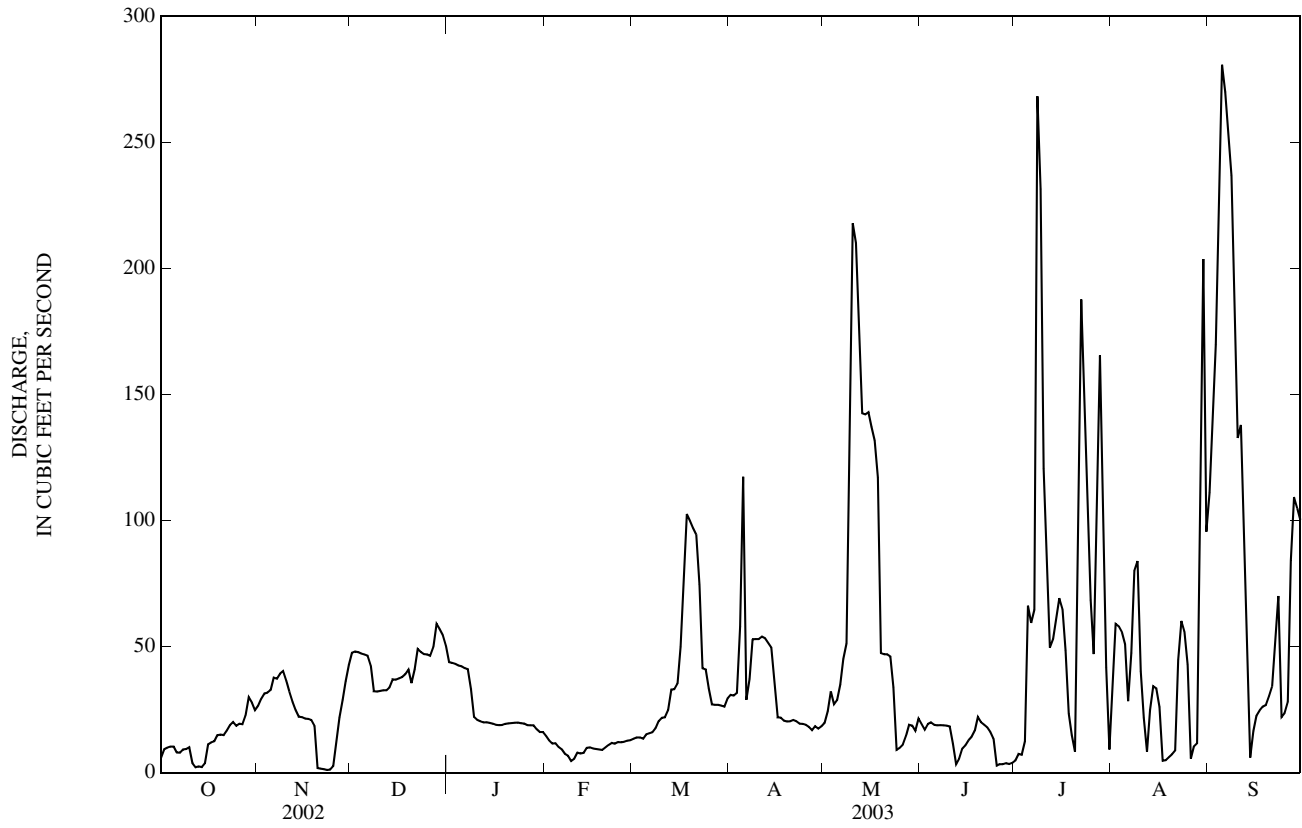
FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1987 - 2003

ANNUAL TOTAL	17,191.9	15,101.9	
ANNUAL MEAN	47.1	41.4	47.9
HIGHEST ANNUAL MEAN			70.5
LOWEST ANNUAL MEAN			23.0
HIGHEST DAILY MEAN	326	May 15	281
LOWEST DAILY MEAN	1.1	Nov 23	1.1
ANNUAL SEVEN-DAY MINIMUM	2.2	Sep 9	3.2
MAXIMUM PEAK FLOW			286
MAXIMUM PEAK STAGE			5.62
ANNUAL RUNOFF (CFSM)	0.96		0.84
ANNUAL RUNOFF (INCHES)	12.97		11.40
10 PERCENT EXCEEDS	134		100
50 PERCENT EXCEEDS	28		25
90 PERCENT EXCEEDS	4.2		8.0
			5.4

e Estimated



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, (LEESBURG, IN. quadrangle), on left bank 50 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. Regulation by gates at lake outlet.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	13	40	45	31	30	50	115	58	15	148	225
2	14	35	39	45	30	30	52	128	57	14	112	247
3	15	48	39	45	31	29	52	62	58	13	114	259
4	15	45	39	45	33	28	58	18	55	17	115	276
5	17	44	39	45	33	30	116	103	53	98	116	302
6	16	42	39	45	33	30	192	138	54	144	113	325
7	15	41	36	45	32	30	193	134	25	150	80	339
8	14	40	34	45	32	26	184	132	16	212	69	345
9	13	40	35	43	32	20	168	193	21	255	93	343
10	13	40	34	41	32	20	146	243	37	259	124	327
11	12	39	34	41	32	21	119	269	60	252	119	309
12	12	39	34	41	32	22	104	311	57	239	97	289
13	12	38	34	41	32	25	105	330	55	226	62	261
14	11	37	33	40	32	28	106	342	55	216	62	231
15	10	38	32	40	32	29	104	354	53	206	61	201
16	10	37	33	40	32	32	100	353	52	182	38	177
17	9.5	48	32	40	32	37	87	350	22	132	18	114
18	9.4	55	33	40	32	46	50	340	12	112	18	53
19	11	53	36	40	31	133	36	322	13	65	17	36
20	11	50	37	40	28	186	29	299	14	20	17	36
21	11	48	36	40	28	191	53	279	16	95	18	36
22	11	47	36	40	29	188	51	256	17	210	24	38
23	11	61	36	39	30	176	51	236	18	227	55	41
24	11	64	37	39	30	160	51	213	19	229	67	42
25	11	56	40	39	30	142	51	174	18	225	67	42
26	11	51	40	32	30	98	50	86	16	211	65	41
27	12	47	40	30	30	44	29	58	15	206	64	78
28	13	44	40	30	30	36	15	58	15	221	60	109
29	14	40	42	30	---	46	20	57	15	221	91	115
30	13	40	43	30	---	50	45	58	15	211	186	129
31	13	---	44	31	---	50	---	58	---	189	201	---
TOTAL	383.9	1,320	1,146	1,227	871	2,013	2,467	6,069	991	5,072	2,491	5,366
MEAN	12.4	44.0	37.0	39.6	31.1	64.9	82.2	196	33.0	164	80.4	179
MAX	17	64	44	45	33	191	193	354	60	259	201	345
MIN	9.4	13	32	30	28	20	15	18	12	13	17	36
CFSM	0.11	0.39	0.33	0.35	0.28	0.57	0.73	1.73	0.29	1.45	0.71	1.58
IN.	0.13	0.43	0.38	0.40	0.29	0.66	0.81	2.00	0.33	1.67	0.82	1.77

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 2003, BY WATER YEAR (WY)

MEAN	61.0	76.3	109	128	142	181	193	134	102	65.8	47.3	46.3
MAX	369	230	298	443	373	498	493	340	363	198	188	237
(WY)	(1955)	(1993)	(1967)	(1950)	(1950)	(1982)	(1950)	(1956)	(1981)	(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	0.40
(WY)	(1954)	(1954)	(1963)	(1963)	(1963)	(1964)	(1966)	(1958)	(1988)	(1988)	(1967)	(1967)

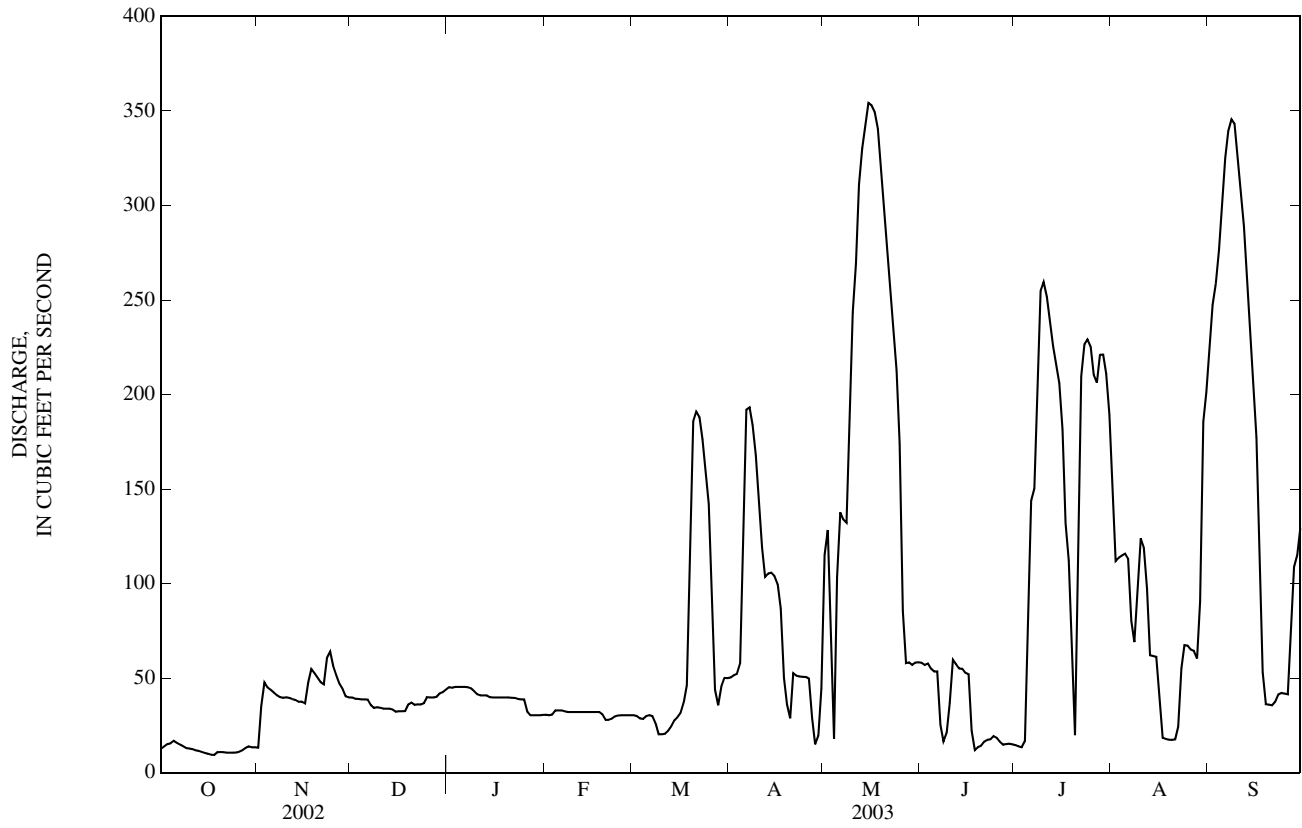
SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1950 - 2003

ANNUAL TOTAL	40,811.1	29,416.9	
ANNUAL MEAN	112	80.6	107
HIGHEST ANNUAL MEAN			196
LOWEST ANNUAL MEAN			30.8
HIGHEST DAILY MEAN	445	354	944
LOWEST DAILY MEAN	8.7	9.4	0.08
ANNUAL SEVEN-DAY MINIMUM	9.2	10	0.28
MAXIMUM PEAK FLOW		356	950
MAXIMUM PEAK STAGE		7.43	9.25
ANNUAL RUNOFF (CFSM)	0.99	0.71	0.95
ANNUAL RUNOFF (INCHES)	13.44	9.68	12.86
10 PERCENT EXCEEDS	300	223	243
50 PERCENT EXCEEDS	48	41	76
90 PERCENT EXCEEDS	12	15	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, (WARSAW, IN quadrangle), on left bank 10 ft upstream from bridge on County Road 200 South, 0.3 mi downstream from small right-bank tributary, 1.1 mi west of intersection of County Road 200 South and Country Farm Road, and 2.5 mi south of court house in Warsaw.

DRAINAGE AREA.--19.6 mi².

PERIOD OF RECORD.--October 1969 to October 2003 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 823.00 ft above National Geodetic Vertical Datum of 1929.

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

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	1.7	e2.4	e4.0	e4.0	e2.0	9.4	3.8	4.9	3.1	7.0	21
2	1.2	1.6	e2.2	e3.9	e5.0	e3.0	9.9	5.5	3.4	2.8	7.6	48
3	1.2	1.8	e2.0	e3.9	e6.0	e2.4	8.3	6.3	5.1	2.9	9.6	59
4	1.4	1.7	e2.0	e3.8	e7.0	e2.0	10	6.0	4.1	3.6	13	48
5	1.5	1.9	e2.4	e3.7	e4.0	e3.5	28	14	3.7	5.9	12	34
6	1.4	2.1	e2.2	e3.5	e3.0	5.3	26	25	3.5	7.8	11	22
7	1.2	2.1	e2.2	e3.4	e3.0	6.2	23	15	4.7	16	9.0	15
8	1.2	2.1	e2.4	3.8	e2.8	7.6	23	16	4.7	23	7.6	10
9	1.1	2.2	e2.0	3.8	e3.0	20	20	49	4.0	23	6.4	8.0
10	1.1	2.4	e2.0	4.2	e3.0	e14	16	88	3.8	27	4.8	5.7
11	1.0	2.6	e2.2	e3.4	e2.2	e9.0	13	99	3.7	19	3.6	4.6
12	1.0	2.7	3.7	e3.2	e2.0	9.3	11	85	5.4	16	3.3	3.8
13	1.1	2.8	2.6	e3.0	e1.8	15	10	61	5.7	12	3.5	3.2
14	1.1	2.8	2.8	e3.0	e2.0	19	7.9	43	6.2	9.4	3.4	3.2
15	1.1	3.2	2.7	e2.6	e2.2	15	6.9	37	6.2	6.8	3.3	3.8
16	1.1	3.0	2.7	e2.6	e2.2	12	6.7	32	5.2	4.8	3.7	3.8
17	1.2	2.8	4.0	e2.6	e2.2	13	7.3	26	4.3	3.8	3.8	3.4
18	1.4	2.6	2.9	e2.4	e2.4	13	7.2	22	4.1	3.9	3.2	2.9
19	1.6	2.6	3.5	e2.2	e2.5	13	6.9	19	3.9	4.2	2.8	2.6
20	1.4	2.5	4.0	e2.0	e2.6	15	11	17	3.1	3.8	2.5	2.9
21	1.3	2.8	5.0	e2.4	e2.8	17	26	15	2.9	25	2.7	3.7
22	1.3	3.0	4.2	e2.2	e3.0	16	12	13	2.7	24	3.0	3.5
23	1.2	2.9	e4.1	e2.0	e4.0	14	8.7	11	2.3	20	2.9	4.9
24	1.2	3.5	e4.0	e1.8	e4.0	11	6.3	8.6	2.4	16	2.7	5.2
25	1.4	3.4	e3.9	e1.8	e3.0	10	4.6	7.2	2.5	13	2.5	8.1
26	1.4	3.0	e3.8	e2.2	e2.2	8.7	3.3	5.1	2.7	9.9	2.8	8.5
27	1.3	e2.4	e3.7	e1.6	e2.2	7.7	3.1	4.3	2.7	9.2	2.7	16
28	1.2	e2.2	3.6	e1.4	e2.0	8.0	3.5	4.3	2.4	11	2.6	19
29	1.5	2.8	3.1	e2.6	---	11	3.3	5.2	2.4	11	4.1	16
30	1.8	3.0	3.3	e2.2	---	11	3.7	16	2.7	9.5	3.7	12
31	1.8	---	e3.8	e2.0	---	11	---	8.3	---	8.1	4.2	---
TOTAL	39.8	76.2	95.4	87.2	86.1	324.7	336.0	767.6	115.4	355.5	155.0	401.8
MEAN	1.28	2.54	3.08	2.81	3.08	10.5	11.2	24.8	3.85	11.5	5.00	13.4
MAX	1.8	3.5	5.0	4.2	7.0	20	28	99	6.2	27	13	59
MIN	1.0	1.6	2.0	1.4	1.8	2.0	3.1	3.8	2.3	2.8	2.5	2.6
CFSM	0.07	0.13	0.16	0.14	0.16	0.53	0.57	1.26	0.20	0.59	0.26	0.68
IN.	0.08	0.14	0.18	0.17	0.16	0.62	0.64	1.46	0.22	0.67	0.29	0.76

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2003, BY WATER YEAR (WY)

MEAN	8.52	13.9	19.4	18.8	23.8	32.5	33.9	21.7	18.9	10.4	6.67	6.76
MAX	54.6	44.9	48.3	77.7	60.6	110	66.5	60.8	80.3	49.3	53.7	27.0
(WY)	(1991)	(1993)	(1991)	(1993)	(1985)	(1982)	(1981)	(1981)	(1981)	(1997)	(1990)	(1980)
MIN	1.04	2.18	1.43	0.91	2.87	7.99	11.2	6.35	2.34	1.73	1.07	0.80
(WY)	(1977)	(1979)	(1977)	(1977)	(1979)	(2000)	(2003)	(1988)	(1988)	(1988)	(1971)	(1976)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

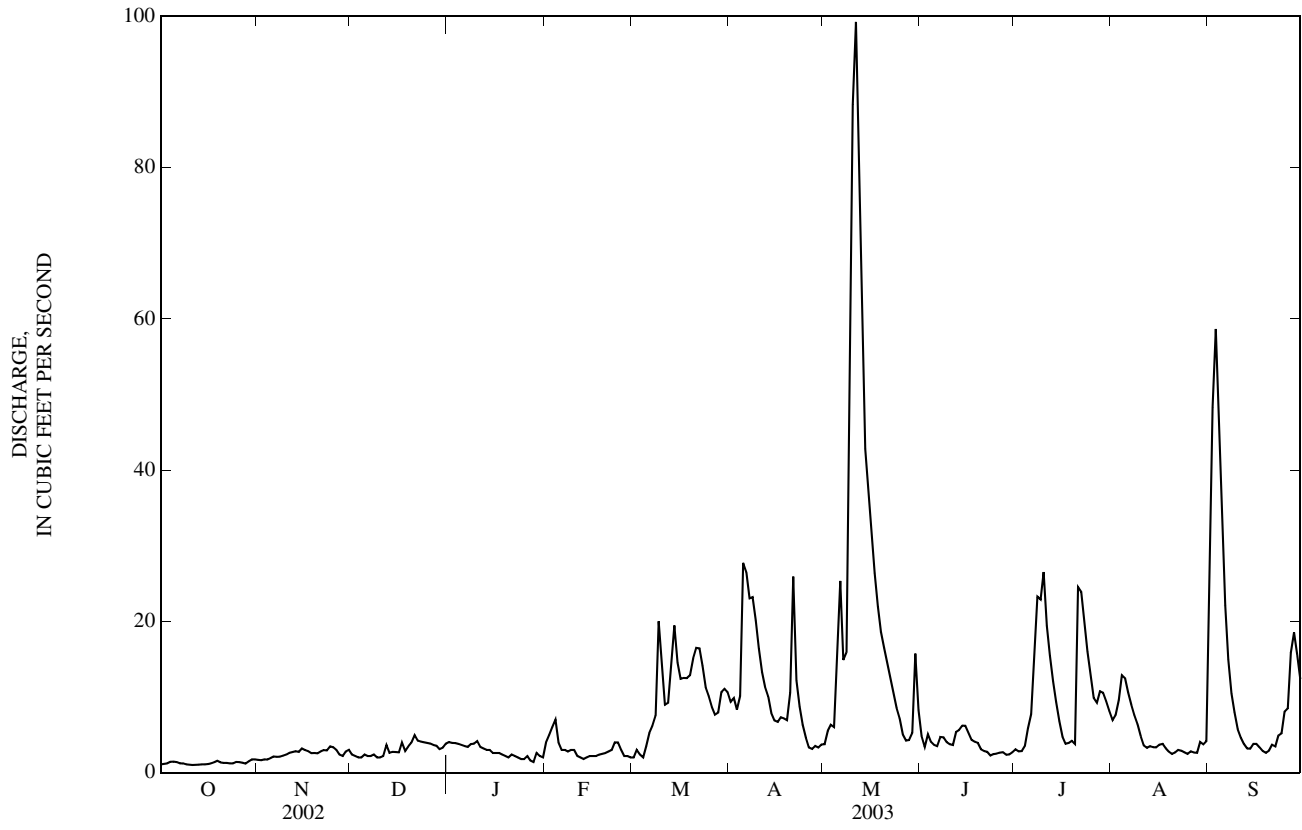
WATER YEARS 1970 - 2003

ANNUAL TOTAL	5,715.23	2,840.7	
ANNUAL MEAN	15.7	7.78	17.9
HIGHEST ANNUAL MEAN			31.9
LOWEST ANNUAL MEAN			7.78
HIGHEST DAILY MEAN	120	99	389
LOWEST DAILY MEAN	0.91	1.0	0.40
ANNUAL SEVEN-DAY MINIMUM	0.99	1.1	0.46
MAXIMUM PEAK FLOW		104	561
MAXIMUM PEAK STAGE		2.88	5.38
ANNUAL RUNOFF (CFSM)	0.80	0.40	0.91
ANNUAL RUNOFF (INCHES)	10.85	5.39	12.39
10 PERCENT EXCEEDS	41	16	42
50 PERCENT EXCEEDS	8.1	3.7	10
90 PERCENT EXCEEDS	1.3	1.8	1.9

e Estimated

WABASH RIVER BASIN

03331110 WALNUT CREEK NEAR WARSAW, IN—Continued



03331500 TIPPECANOE RIVER NEAR ORA, IN

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, (BASS LAKE, IN. quadrangle), 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.

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

REVISED RECORDS.--WSP 1335: 1944(M). WSP 1505: 1949-50(P). WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 692.91 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to July 30, 1956, nonrecording gage on upstream side of old highway bridge, 120 ft downstream. July 30, 1956, to Dec. 20, 1964, water-stage recorder on right bank at downstream side of old highway bridge, and Dec. 21, 1964, to Aug. 19, 1965, nonrecording gage on right bank 500 ft downstream. All gages at same datum.

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

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	158	182	274	324	e250	e260	432	573	572	250	660	370
2	155	182	269	334	e270	e254	416	604	540	237	623	647
3	154	179	270	336	e320	e251	399	583	541	228	607	857
4	172	178	252	328	e400	e250	412	559	541	227	600	830
5	189	186	e270	315	e520	e255	591	686	515	331	558	789
6	177	267	e263	318	e460	e265	840	937	494	627	531	783
7	173	308	e260	309	e400	e275	837	926	471	1,070	508	815
8	171	303	e257	303	e360	e285	884	891	451	1,900	488	804
9	166	288	e253	304	e340	422	884	1,200	432	2,500	465	760
10	165	282	e250	305	e330	491	844	2,030	408	2,830	440	684
11	160	278	e248	291	e325	448	793	2,430	384	2,810	411	616
12	157	273	e246	e294	e320	404	735	2,370	401	2,480	392	576
13	158	271	e244	e292	e315	449	668	2,110	440	2,030	387	551
14	157	268	e243	e290	e310	658	625	1,920	656	1,660	378	534
15	158	265	243	e288	e305	781	563	1,880	701	1,380	366	528
16	158	260	240	e284	e304	745	514	1,850	581	1,170	344	502
17	157	258	237	e280	e305	708	479	1,770	506	968	334	476
18	159	255	252	e278	e304	647	456	1,660	456	837	321	451
19	178	258	278	e274	e310	592	435	1,530	424	745	305	423
20	179	257	311	e271	e320	560	431	1,430	383	668	280	393
21	181	264	336	e270	e325	541	427	1,320	343	954	265	354
22	182	282	341	e270	e330	538	408	1,200	322	1,770	257	344
23	179	289	324	e269	e345	559	377	1,110	307	1,660	248	367
24	174	291	303	e268	e320	555	379	1,030	295	1,230	237	374
25	175	293	307	e262	e295	550	369	958	283	1,030	233	395
26	180	287	e300	e255	e275	561	358	890	273	927	231	397
27	178	287	e292	e250	e270	536	340	819	267	858	247	438
28	178	285	e286	e245	e265	525	327	751	262	847	249	580
29	182	281	e282	e243	---	509	318	694	261	833	260	596
30	186	276	e280	e241	---	461	344	611	254	766	287	573
31	183	---	297	e240	---	437	---	584	---	710	294	---
TOTAL	5,279	7,833	8,508	8,831	9,193	14,772	15,885	37,906	12,764	36,533	11,806	16,807
MEAN	170	261	274	285	328	477	530	1,223	425	1,178	381	560
MAX	189	308	341	336	520	781	884	2,430	701	2,830	660	857
MIN	154	178	237	240	250	250	318	559	254	227	231	344
CFSM	0.20	0.31	0.32	0.33	0.38	0.56	0.62	1.43	0.50	1.38	0.44	0.65
IN.	0.23	0.34	0.37	0.38	0.40	0.64	0.69	1.65	0.55	1.59	0.51	0.73

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 2003, BY WATER YEAR (WY)

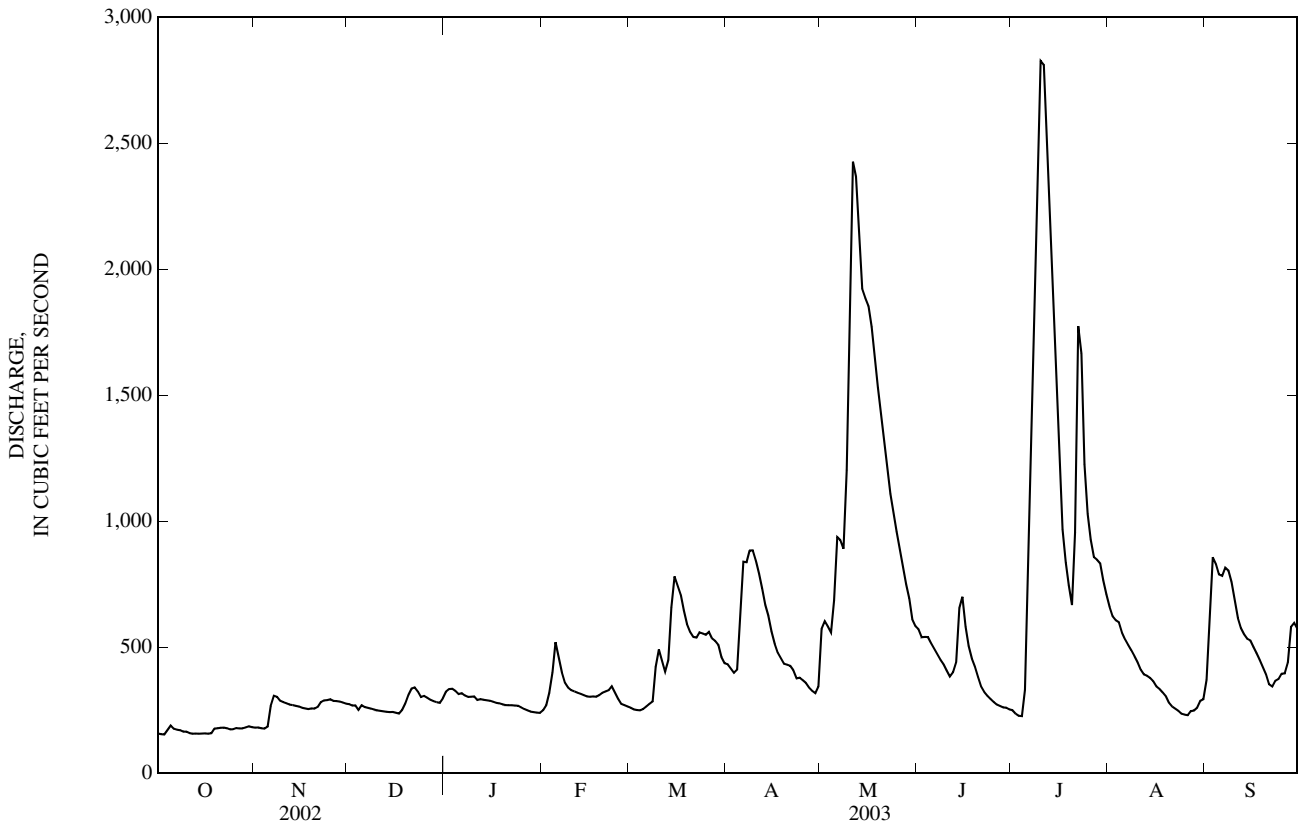
MEAN	476	601	799	987	1,176	1,446	1,550	1,151	916	630	437	367
MAX	2,112	1,933	2,478	3,552	3,020	4,239	4,116	2,869	3,468	1,943	2,699	1,224
(WY)	(1991)	(1973)	(1967)	(1950)	(1959)	(1982)	(1950)	(1981)	(1981)	(1996)	(1990)	(1958)
MIN	134	155	177	183	192	451	525	337	243	180	155	107
(WY)	(1954)	(1954)	(1964)	(1963)	(1963)	(1957)	(1958)	(1958)	(1988)	(1988)	(1988)	(1966)

WABASH RIVER BASIN

03331500 TIPPECANOE RIVER NEAR ORA, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1944 - 2003	
ANNUAL TOTAL	319,245		186,117			
ANNUAL MEAN	875		510		876	
HIGHEST ANNUAL MEAN					1,580	1950
LOWEST ANNUAL MEAN					354	1964
HIGHEST DAILY MEAN	4,120	May 15	2,830	Jul 10	8,450	Jun 15, 1981
LOWEST DAILY MEAN	154	Oct 3	154	Oct 3	87	Sep 13, 1966
ANNUAL SEVEN-DAY MINIMUM	158	Oct 12	158	Oct 12	93	Sep 8, 1966
MAXIMUM PEAK FLOW			2,880	Jul 10	8,660	Jun 15, 1981
MAXIMUM PEAK STAGE			11.85	Jul 10	15.22	Aug 20, 1990
ANNUAL RUNOFF (CFSM)	1.02		0.60		1.02	
ANNUAL RUNOFF (INCHES)	13.87		8.09		13.90	
10 PERCENT EXCEEDS	2,150		905		1,860	
50 PERCENT EXCEEDS	477		340		609	
90 PERCENT EXCEEDS	178		212		218	

e Estimated



03331753 TIPPECANOE RIVER AT WINAMAC, IN

LOCATION.--Lat 41°02'59", long 86°35'58", in SW¼NW¼ sec.13, T.30 N., R.R W., Pulaski County, Hydrologic Unit 05120106, (WINAMAC, IN quadrangle), on the northeast corner of the Washington Street bridge in Winamac, 0.3 mi downstream of the city park, 2 mi north of U.S. Highway 35 bridge, and at mile 70.3.

DRAINAGE AREA.--942 mi².

PERIOD OF RECORD.--August 2001 to current year.

GAGE.--Water-stage recorder. Datum of gage is 674.19 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except those for May 11-23, July 10-16, and 23, and estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	187	216	282	339	e290	e312	490	650	693	284	788	426
2	184	215	280	358	e320	e308	477	743	656	274	e740	611
3	184	215	e278	365	e380	e302	461	718	655	257	e720	874
4	189	213	e270	359	e460	e290	475	706	654	258	e710	929
5	220	216	e282	345	e570	e300	591	789	627	467	666	886
6	214	239	e280	342	e540	e306	856	994	600	763	628	865
7	205	307	e278	334	e480	e308	935	1,110	575	1,230	610	877
8	203	314	e274	326	e430	e310	954	1,100	547	1,970	589	890
9	194	307	e276	325	e400	378	974	1,310	524	2,390	557	865
10	192	307	e272	325	e380	550	948	1,810	500	2,760	527	811
11	189	292	e268	e320	e375	512	910	2,300	475	2,950	487	731
12	185	285	e265	e324	e370	471	865	2,510	471	2,850	450	674
13	188	278	e262	e320	e368	471	807	2,420	527	2,450	441	638
14	185	277	e260	e319	e364	607	748	2,160	624	2,000	434	621
15	184	278	258	e318	e360	841	693	2,070	854	1,660	419	605
16	185	270	247	e317	e360	843	631	1,990	742	1,410	396	584
17	184	264	245	e316	e362	822	579	1,950	640	1,190	388	551
18	187	259	258	e315	e365	772	533	1,820	569	1,030	370	520
19	209	262	287	e314	e368	707	507	1,680	531	924	348	492
20	213	266	315	e313	e370	659	495	1,630	483	e830	321	458
21	210	267	346	e312	e380	632	504	1,490	430	e1,100	296	418
22	211	286	361	e311	e390	612	486	1,360	396	e1,900	283	407
23	212	299	354	e310	e420	620	453	1,250	374	1,820	270	406
24	208	303	331	e305	e370	632	440	1,170	354	1,510	259	420
25	208	306	308	e300	e350	626	439	1,110	336	1,210	254	435
26	211	303	e310	e295	e340	628	425	1,050	323	1,080	251	452
27	213	296	e305	e290	e330	618	410	956	311	1,000	260	475
28	211	296	e298	e287	e320	591	394	895	304	967	267	607
29	218	291	e292	e283	---	582	384	834	301	963	279	667
30	221	287	e290	e281	---	542	383	756	296	910	308	636
31	222	---	311	e280	---	495	---	719	---	846	325	---
TOTAL	6,226	8,214	8,943	9,848	10,812	16,647	18,247	42,050	15,372	41,253	13,641	18,831
MEAN	201	274	288	318	386	537	608	1,356	512	1,331	440	628
MAX	222	314	361	365	570	843	974	2,510	854	2,950	788	929
MIN	184	213	245	280	290	290	383	650	296	257	251	406
CFSM	0.21	0.29	0.31	0.34	0.41	0.57	0.65	1.44	0.54	1.41	0.47	0.67
IN.	0.25	0.32	0.35	0.39	0.43	0.66	0.72	1.66	0.61	1.63	0.54	0.74

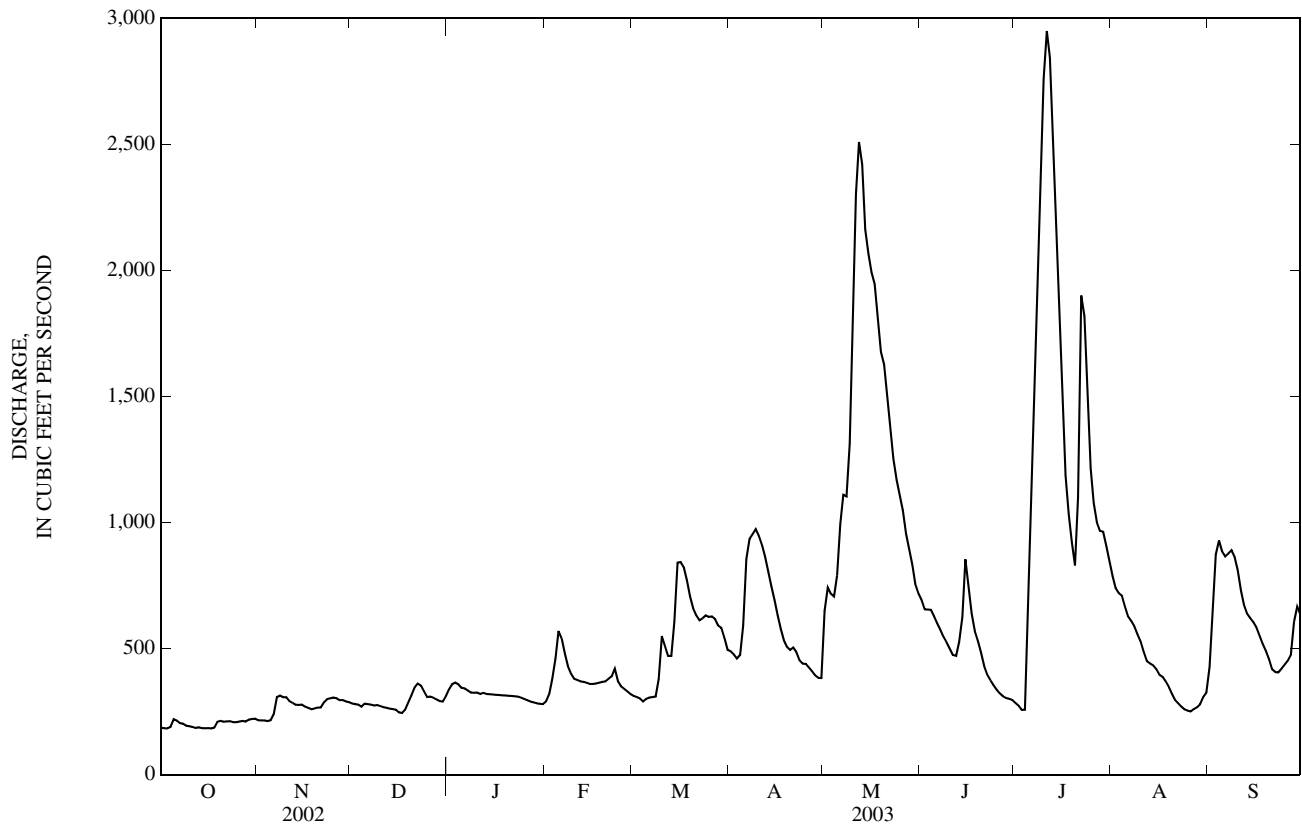
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2003, BY WATER YEAR (WY)

	2001	2002	2003	2001	2002	2003	2001	2002	2003	2001	2002	2003
MEAN	1,027	762	842	552	1,038	1,081	1,441	1,845	733	852	375	418
MAX	1,853	1,250	1,396	786	1,689	1,625	2,273	2,334	953	1,331	440	628
(WY)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2003)	(2003)	(2003)
MIN	201	274	288	318	386	537	608	1,356	512	373	311	208
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2002)	(2002)	(2002)

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 2001 - 2003	
ANNUAL TOTAL	341,984		210,084			
ANNUAL MEAN	937		576		914	
HIGHEST ANNUAL MEAN					1,252	
LOWEST ANNUAL MEAN					576	
HIGHEST DAILY MEAN	4,280	May 16	2,950	Jul 11	4,280	May 16, 2002
LOWEST DAILY MEAN	184	Oct 2	184	Oct 2	4.8	Sep 3, 2001
ANNUAL SEVEN-DAY MINIMUM	185	Oct 12	185	Oct 12	5.1	Aug 28, 2001
MAXIMUM PEAK FLOW			3,110	Jul 11	4,600	May 16, 2002
MAXIMUM PEAK STAGE			9.53	Jul 11	11.48	May 16, 2002
ANNUAL RUNOFF (CFSM)	0.99		0.61		0.97	
ANNUAL RUNOFF (INCHES)	13.51		8.30		13.18	
10 PERCENT EXCEEDS	2,280		1,060		2,060	
50 PERCENT EXCEEDS	548		394		622	
90 PERCENT EXCEEDS	209		232		250	

e Estimated



03333050 TIPPECANOE RIVER NEAR DELPHI, IN

LOCATION.--Lat 40°35'38", long 86°46'12", in SW¹/₄SW¹/₄ sec.21, T.25 N., R.3 W., Carroll County, Hydrologic Unit 05120106, (BROOKSTON, IN quadrangle), on left bank 20 ft upstream from bridge on State Highway 18, 1,400 ft east of Springboro, 5 mi west of Delphi, 8.1 mi downstream from Big Creek, 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. WDR IN-92-1: 1988-1991 (above 5900 ft³/s). WDR-IN-94-1: 1991 (maximum discharge).

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 except for estimated daily discharges, which are poor. Flow regulated by upstream reservoirs.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	385	267	492	601	e523	565	855	1,130	1,270	603	1,970	2,300
2	393	300	530	844	419	565	818	1,510	1,200	687	1,750	4,340
3	456	403	476	745	534	582	758	1,440	1,330	596	1,630	2,840
4	396	407	248	410	953	417	1,080	1,130	1,300	444	1,690	2,310
5	390	687	250	687	1,050	586	1,390	2,380	1,230	10,000	1,570	1,780
6	324	497	397	831	1,060	864	1,630	2,540	1,170	15,800	1,490	1,530
7	249	336	351	437	674	666	1,730	2,040	1,170	14,400	1,260	1,630
8	473	247	616	521	643	871	2,020	2,810	1,020	14,000	1,460	1,160
9	414	500	470	818	762	1,320	1,910	8,330	1,110	16,000	1,220	1,780
10	404	921	293	523	566	979	1,440	8,960	912	17,300	1,030	1,350
11	428	395	369	e592	570	1,100	1,700	6,850	823	12,800	1,230	1,330
12	407	491	492	e430	601	799	1,340	5,250	1,190	10,100	967	967
13	404	549	451	e402	555	1,010	1,250	4,560	1,440	8,130	916	1,040
14	276	401	424	e400	356	797	1,190	3,820	3,640	6,510	1,160	1,050
15	251	394	532	e618	678	1,120	1,120	3,470	2,610	6,360	920	1,130
16	243	435	491	e503	431	1,270	1,110	3,510	1,860	6,650	818	837
17	354	564	353	e418	566	1,290	975	3,220	1,800	4,650	857	1,170
18	490	402	600	e464	354	1,250	946	2,950	1,360	3,800	1,010	759
19	299	376	604	e430	501	1,110	868	2,610	1,130	3,460	691	903
20	456	507	600	e410	565	1,050	894	2,700	1,100	2,810	767	947
21	491	462	595	e526	565	1,130	1,030	2,430	915	4,990	804	729
22	264	645	593	e411	572	1,010	1,040	2,070	1,020	6,970	705	1,060
23	421	246	593	e420	571	1,050	597	2,090	835	5,710	574	725
24	322	538	597	e398	572	988	796	1,920	865	4,870	576	919
25	405	575	584	e285	591	1,030	767	1,830	636	3,670	580	1,220
26	398	575	392	e569	565	1,090	897	1,730	684	2,880	468	1,290
27	398	432	551	e354	568	859	633	1,550	602	2,760	743	2,370
28	398	407	468	e392	565	870	745	1,490	604	2,530	404	2,220
29	439	407	581	e396	---	1,080	667	1,690	771	2,430	1,640	1,610
30	546	489	590	e400	---	954	686	1,490	751	2,310	1,590	1,590
31	401	---	600	e416	---	631	---	1,280	---	1,900	851	---
TOTAL	11,975	13,855	15,183	15,651	16,930	28,903	32,882	90,780	36,348	196,120	33,341	44,886
MEAN	386	462	490	505	605	932	1,096	2,928	1,212	6,326	1,076	1,496
MAX	546	921	616	844	1,060	1,320	2,020	8,960	3,640	17,300	1,970	4,340
MIN	243	246	248	285	354	417	597	1,130	602	444	404	725
CFSM	0.21	0.25	0.26	0.27	0.32	0.50	0.59	1.57	0.65	3.38	0.58	0.80
IN.	0.24	0.28	0.30	0.31	0.34	0.58	0.65	1.81	0.72	3.90	0.66	0.89

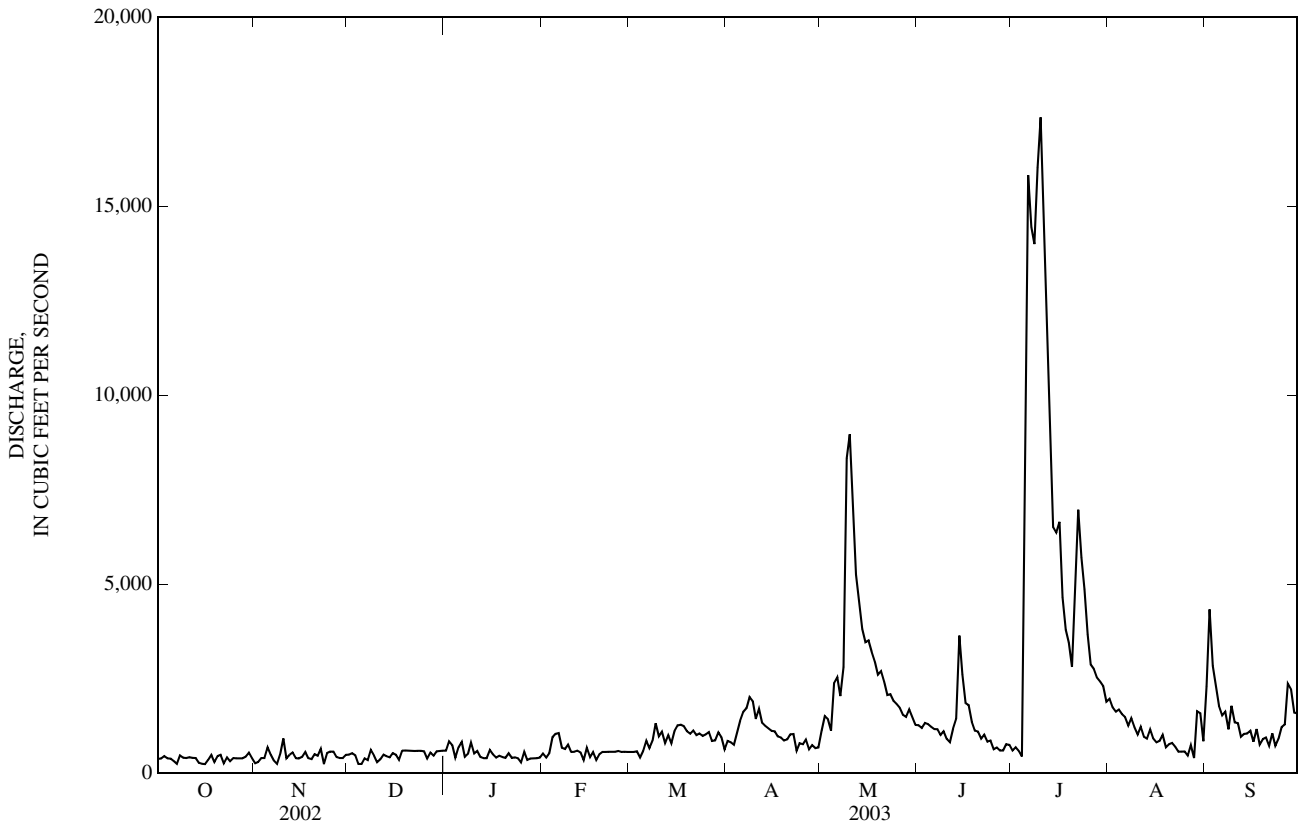
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2003, BY WATER YEAR (WY)

MEAN	1,284	1,499	1,813	2,423	2,476	2,906	3,024	2,507	2,220	1,968	1,153	1,030
MAX	4,215	4,120	3,819	6,854	4,774	5,184	4,958	4,610	4,324	6,326	4,849	3,092
(WY)	(2002)	(1993)	(1991)	(1993)	(1997)	(1998)	(1994)	(2002)	(1997)	(2003)	(1990)	(1993)
MIN	369	453	490	505	605	811	1,096	983	493	360	308	325
(WY)	(1996)	(2000)	(2003)	(2003)	(2003)	(1996)	(2003)	(1988)	(1988)	(1988)	(1988)	(1999)

03333050 TIPPECANOE RIVER NEAR DELPHI, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1988 - 2003	
ANNUAL TOTAL	697,387		536,854			
ANNUAL MEAN	1,911		1,471		2,023	
HIGHEST ANNUAL MEAN					3,046	
LOWEST ANNUAL MEAN					954	
HIGHEST DAILY MEAN	10,800	May 13	17,300	Jul 10	18,400	Dec 30, 1990
LOWEST DAILY MEAN	243	Oct 16	243	Oct 16	131	Aug 5, 1988
ANNUAL SEVEN-DAY MINIMUM	318	Sep 11	331	Oct 13	255	Aug 2, 1988
MAXIMUM PEAK FLOW			18,500		20,600	
MAXIMUM PEAK STAGE			12.80		13.72	
ANNUAL RUNOFF (CFSM)	1.02		0.79		1.08	
ANNUAL RUNOFF (INCHES)	13.88		10.69		14.70	
10 PERCENT EXCEEDS	4,790		2,780		4,280	
50 PERCENT EXCEEDS	1,080		799		1,440	
90 PERCENT EXCEEDS	364		398		458	

e Estimated



03333450 WILDCAT CREEK NEAR JEROME, IN

LOCATION.--Lat 40°26'29", long 85°55'08", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.14, T.23 N., R.5 E., Howard County, Hydrologic Unit 05120107, (GREENTOWN, IN, quadrangle), 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 fair except for estimated daily discharges, 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.7	e8.2	11	630	e16	e26	253	35	43	14	37	1,180
2	4.4	e6.8	9.8	317	e17	e25	179	121	32	12	58	3,010
3	4.4	e6.0	9.0	182	e23	e24	138	93	36	11	49	1,460
4	6.0	e6.4	8.4	120	e180	e24	123	62	36	11	37	789
5	7.8	e6.9	7.8	99	e110	e30	156	1,090	30	4,540	91	465
6	7.6	e8.2	7.6	78	e76	e40	118	1,060	25	6,120	57	294
7	6.9	e18	7.6	63	e52	e54	120	627	25	4,550	41	191
8	6.3	e14	7.7	72	e38	e160	147	476	26	2,800	32	131
9	6.3	e11	6.9	156	e30	882	134	571	25	5,050	26	99
10	6.0	e23	6.8	298	e25	625	118	1,130	21	3,950	23	77
11	5.5	182	7.1	e150	e20	389	107	3,100	22	1,930	21	63
12	6.0	104	7.7	e100	e18	548	95	1,970	24	1,160	20	50
13	6.5	51	7.8	e76	e15	1,090	78	896	25	760	18	42
14	e5.3	31	8.2	e60	e13	1,100	68	540	74	513	16	36
15	e6.1	24	8.4	e47	e12	703	68	885	77	400	15	32
16	e5.0	20	8.5	e38	e12	603	67	605	44	540	14	27
17	e5.3	17	7.3	e31	e11	498	64	381	33	342	13	24
18	e5.6	16	8.2	e27	e11	378	57	273	29	239	13	21
19	e6.5	15	32	e23	e12	311	50	208	26	181	13	20
20	e7.9	13	138	e21	e14	440	49	166	22	141	12	20
21	e9.2	13	111	e19	e20	730	50	128	19	241	10	18
22	e7.1	14	63	e18	e50	652	46	110	17	262	10	125
23	e6.8	15	38	e17	e90	384	39	96	16	178	9.2	360
24	e7.3	16	29	e16	e64	270	36	84	15	132	8.4	237
25	e8.0	15	e24	e16	e50	202	41	74	13	101	7.9	842
26	e9.7	14	e19	e16	e40	158	43	63	14	82	7.4	636
27	e13	12	e16	e16	e33	134	35	54	15	72	7.0	1,770
28	e9.2	11	e15	e15	e29	129	31	50	12	68	7.0	1,190
29	e8.4	11	e14	e15	---	859	33	53	12	58	26	610
30	e9.0	13	36	e15	---	559	32	46	14	47	378	365
31	e12	---	496	e15	---	337	---	53	---	40	209	---
TOTAL	219.8	715.5	1,176.8	2,766	1,081	12,364	2,575	15,100	822	34,545	1,285.9	14,184
MEAN	7.09	23.9	38.0	89.2	38.6	399	85.8	487	27.4	1,114	41.5	473
MAX	13	182	496	630	180	1,100	253	3,100	77	6,120	378	3,010
MIN	4.4	6.0	6.8	15	11	24	31	35	12	11	7.0	18
CFSM	0.05	0.16	0.26	0.61	0.26	2.73	0.59	3.34	0.19	7.63	0.28	3.24
IN.	0.06	0.18	0.30	0.70	0.28	3.15	0.66	3.85	0.21	8.80	0.33	3.61

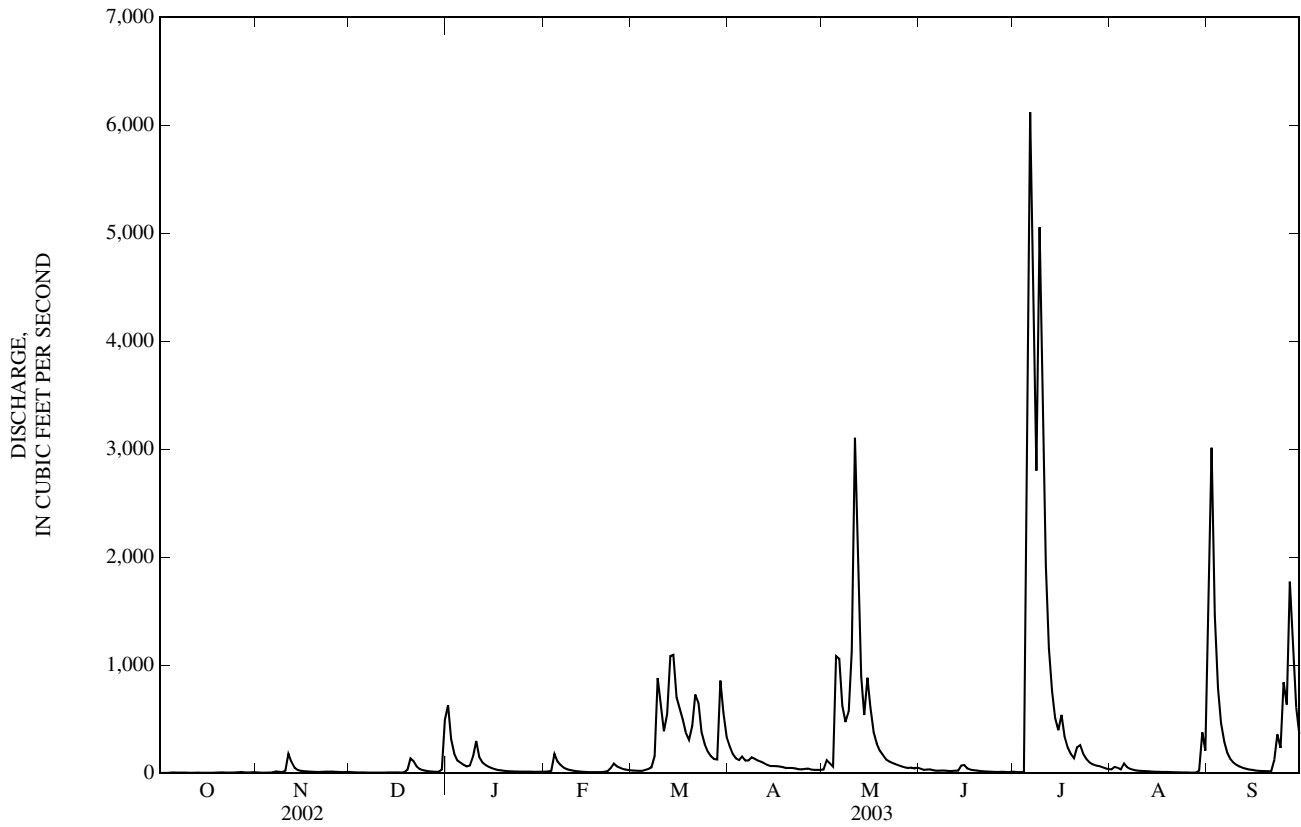
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1962 - 2003, BY WATER YEAR (WY)

MEAN	50.4	108	155	155	204	277	223	169	136	122	41.8	53.4
MAX	481	834	622	687	649	793	689	487	720	1,114	401	589
(WY)	(2002)	(1993)	(1991)	(1974)	(1976)	(1982)	(1964)	(2003)	(1998)	(2003)	(1998)	(1989)
MIN	1.72	1.53	2.32	1.02	11.2	31.5	16.5	17.9	8.20	7.00	2.86	0.88
(WY)	(1967)	(2000)	(2000)	(1977)	(1963)	(2000)	(2000)	(1976)	(1988)	(1994)	(1999)	(1999)

03333450 WILDCAT CREEK NEAR JEROME, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1962 - 2003	
ANNUAL TOTAL	45,819.4		86,835.0			
ANNUAL MEAN	126		238		141	
HIGHEST ANNUAL MEAN					253	1993
LOWEST ANNUAL MEAN					37.7	2000
HIGHEST DAILY MEAN	3,560	May 13	6,120	Jul 6	6,300	Jun 12, 1998
LOWEST DAILY MEAN	2.5	Sep 11	4.4	Oct 2	0.47	Sep 27, 1999
ANNUAL SEVEN-DAY MINIMUM	2.7	Sep 8	5.7	Oct 11	0.52	Sep 22, 1999
MAXIMUM PEAK FLOW			7,160	Jul 6	7,160	Jul 6, 2003
MAXIMUM PEAK STAGE			14.35	Jul 6	14.35	Jul 6, 2003
ANNUAL RUNOFF (CF5M)	0.86		1.63		0.96	
ANNUAL RUNOFF (INCHES)	11.67		22.13		13.11	
10 PERCENT EXCEEDS	305		604		342	
50 PERCENT EXCEEDS	26		35		45	
90 PERCENT EXCEEDS	5.0		7.8		4.9	

e Estimated



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,(KOKOMO EAST, IN. quadrangle), on left bank at upstream side of bridge on County Road 200 East, 0.5 mi south of County Road 200 South, 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 fair except for estimated daily discharges and those below 1 ft³/s, which are poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.10	0.96	e0.60	25	e0.46	e1.6	e39	3.7	11	0.76	7.2	256
2	0.10	0.92	e0.54	17	e0.60	e1.5	e32	3.3	8.7	0.77	9.2	363
3	0.10	1.0	e0.50	11	e1.6	e1.4	e24	2.2	9.7	1.00	7.2	161
4	0.22	1.2	0.48	7.4	e11	e1.4	e19	2.0	9.1	1.5	12	114
5	0.47	1.7	0.48	6.3	6.9	e1.7	e23	121	7.3	1,890	8.7	72
6	0.21	2.1	0.46	5.2	4.5	e2.8	e18	92	6.2	1,040	6.8	43
7	0.20	1.6	0.46	3.9	2.9	e4.4	e18	108	5.7	488	5.8	28
8	0.25	1.5	0.47	4.7	2.0	e30	e29	68	5.0	357	5.1	20
9	0.23	1.5	0.43	12	1.9	e75	e25	77	4.9	837	4.6	15
10	0.21	8.9	0.44	23	1.8	e60	e21	144	3.5	554	4.1	12
11	0.20	4.7	0.50	e11	1.6	e37	18	233	3.8	209	3.8	9.1
12	0.18	1.5	0.55	e7.0	1.2	e41	16	141	5.6	164	3.5	7.5
13	0.23	1.3	0.55	e4.5	1.0	91	12	94	11	125	3.2	6.6
14	0.28	1.1	0.53	e3.1	1.1	71	10	68	25	98	3.0	6.2
15	0.30	1.0	0.49	e2.2	0.94	55	9.8	399	15	74	2.8	5.5
16	0.29	1.1	0.43	e1.7	0.61	57	9.6	169	9.6	59	2.7	4.8
17	0.28	0.90	0.44	e1.2	0.60	51	8.7	118	7.5	41	2.8	4.8
18	0.34	0.86	0.80	e1.0	0.62	39	7.2	84	6.2	34	2.4	4.2
19	0.82	0.89	2.0	e0.78	0.72	32	6.0	60	5.1	28	2.1	4.0
20	0.53	0.89	2.8	e0.66	0.99	43	7.2	46	3.8	22	2.0	3.7
21	0.41	0.96	2.2	e0.58	1.8	88	7.0	36	2.9	42	1.9	3.2
22	0.38	1.3	1.8	e0.50	5.0	67	5.6	31	2.5	40	1.9	2.8
23	0.36	1.0	1.1	e0.46	4.8	e46	4.2	27	2.1	30	1.6	4.7
24	0.40	0.84	1.0	e0.44	3.4	e34	4.1	24	1.8	21	1.5	5.4
25	0.89	0.79	0.96	e0.44	e2.6	e24	4.7	20	1.4	17	1.4	178
26	1.2	e0.76	0.81	e0.44	e2.1	e19	4.3	17	1.6	14	1.4	136
27	0.66	e0.74	0.83	e0.44	e1.9	e15	3.1	15	1.8	12	1.4	383
28	0.57	e0.72	0.72	e0.43	e1.8	e14	3.1	14	1.3	11	1.2	160
29	0.86	e0.72	0.75	e0.43	---	e100	3.1	14	1.2	10	6.6	112
30	1.4	e0.76	1.5	e0.43	---	e70	2.9	12	1.1	8.8	2.5	77
31	1.1	---	15	e0.43	---	e54	---	17	---	7.8	13	---
TOTAL	13.77	44.21	40.62	153.66	66.44	1,227.8	394.6	2,260.2	181.4	6,237.63	155.9	2,318.6
MEAN	0.44	1.47	1.31	4.96	2.37	39.6	13.2	72.9	6.05	201	5.03	77.3
MAX	1.4	8.9	15	25	11	100	39	399	25	1,890	25	383
MIN	0.10	0.72	0.43	0.43	0.46	1.4	2.9	2.0	1.1	0.76	1.2	3.2
CFSM	0.02	0.06	0.05	0.20	0.10	1.60	0.53	2.95	0.24	8.15	0.20	3.13
IN.	0.02	0.07	0.06	0.23	0.10	1.85	0.59	3.40	0.27	9.39	0.23	3.49

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2003, BY WATER YEAR (WY)

MEAN	10.7	18.6	24.6	24.4	34.3	47.1	40.4	28.0	19.4	18.9	7.15	7.71
MAX	98.6	144	102	114	129	150	117	87.2	99.7	201	58.5	77.3
(WY)	(2002)	(1993)	(1991)	(1974)	(1990)	(1982)	(1964)	(1996)	(1980)	(2003)	(1998)	(2003)
MIN	0.44	0.55	0.44	0.33	1.98	4.21	2.02	2.52	1.20	1.07	0.50	0.16
(WY)	(2003)	(2000)	(1977)	(1977)	(1964)	(2000)	(2000)	(1976)	(1988)	(1988)	(1988)	(1991)

SUMMARY STATISTICS

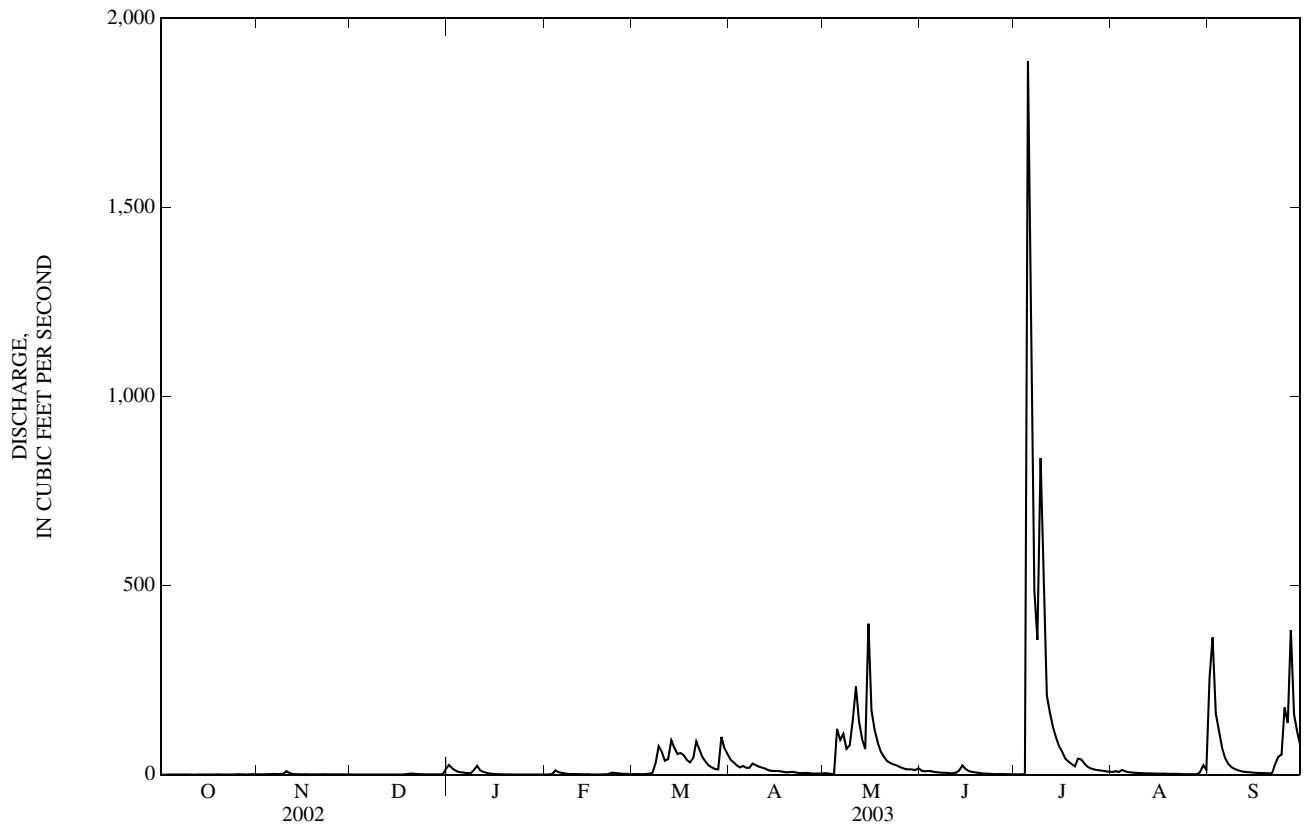
FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1960 - 2003

ANNUAL TOTAL	8,183.16	13,094.83	
ANNUAL MEAN	22.4	35.9	23.4
HIGHEST ANNUAL MEAN			45.2
LOWEST ANNUAL MEAN			6.51
HIGHEST DAILY MEAN	447	1,890	1,890
LOWEST DAILY MEAN	0.01	0.10	0.01
ANNUAL SEVEN-DAY MINIMUM	0.02	0.20	0.02
MAXIMUM PEAK FLOW		2,950	2,950
MAXIMUM PEAK STAGE		11.85	11.85
ANNUAL RUNOFF (CFSM)	0.91	1.45	0.95
ANNUAL RUNOFF (INCHES)	12.32	19.72	12.86
10 PERCENT EXCEEDS	55	74	54
50 PERCENT EXCEEDS	5.2	4.0	7.4
90 PERCENT EXCEEDS	0.18	0.46	0.82

e Estimated



03333700 WILDCAT CREEK AT KOKOMO, IN

LOCATION.--Lat 40°28'15", long 86°09'11", in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.2, T.23 N., R.3 E., Howard County, Hydrologic Unit 05120107, (KOKOMO WEST, IN quadrangle), 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 fair except for estimated daily discharges, which are poor. Some regulation by Kokomo Reservoirs Nos. 1 and 2, (combined capacity 4,170 acre-ft, used for municipal water supply) and by Kokomo Sewage Treatment Plant.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	16	22	683	46	66	360	82	108	39	111	1,440
2	17	16	24	478	48	68	286	99	94	40	166	3,260
3	17	15	27	279	71	58	222	152	112	37	121	2,410
4	23	17	22	183	123	64	292	118	85	64	124	1,200
5	21	29	19	146	189	84	399	977	76	7,950	111	699
6	16	22	20	123	140	105	295	1,570	71	8,980	123	454
7	17	18	18	105	103	111	259	967	55	6,560	100	309
8	17	18	18	108	78	210	264	719	67	4,650	82	218
9	16	19	18	132	69	863	255	877	66	6,800	72	167
10	15	149	18	272	69	883	224	1,490	61	6,420	62	133
11	15	62	18	275	64	578	196	2,690	82	3,390	55	115
12	14	33	17	e161	55	562	179	3,080	189	1,820	50	101
13	15	26	15	e120	48	983	155	1,380	325	1,190	49	88
14	15	24	17	e100	45	1,400	132	808	380	810	46	89
15	15	41	17	e91	47	957	122	1,580	342	664	43	75
16	15	50	22	88	42	781	124	1,060	193	653	39	65
17	15	38	19	83	35	676	136	663	141	541	65	59
18	16	34	29	73	32	552	97	476	114	403	40	62
19	31	34	61	66	35	435	99	367	98	306	37	63
20	17	32	68	64	38	512	114	320	81	242	35	58
21	17	34	146	59	41	723	107	258	69	458	33	57
22	15	38	119	55	94	939	98	205	62	455	34	256
23	16	30	82	48	114	599	86	188	57	326	32	370
24	15	29	68	42	118	413	79	165	51	237	31	577
25	34	31	60	36	91	327	94	155	47	188	32	1,240
26	20	31	54	37	77	261	84	138	54	154	32	1,250
27	15	31	46	38	69	193	78	122	46	175	31	2,550
28	16	25	40	39	65	83	73	113	43	150	31	2,000
29	34	24	36	43	---	370	75	113	45	125	167	1,030
30	20	24	55	43	---	821	69	111	42	107	137	656
31	16	---	256	41	---	487	---	174	---	92	348	---
TOTAL	564	990	1,451	4,111	2,046	15,164	5,053	21,217	3,256	54,026	2,439	21,051
MEAN	18.2	33.0	46.8	133	73.1	489	168	684	109	1,743	78.7	702
MAX	34	149	256	683	189	1,400	399	3,080	380	8,980	348	3,260
MIN	14	15	15	36	32	58	69	82	42	37	31	57
CFSM	0.08	0.14	0.19	0.55	0.30	2.02	0.70	2.83	0.45	7.20	0.33	2.90
IN.	0.09	0.15	0.22	0.63	0.31	2.33	0.78	3.26	0.50	8.30	0.37	3.24

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 2003, BY WATER YEAR (WY)

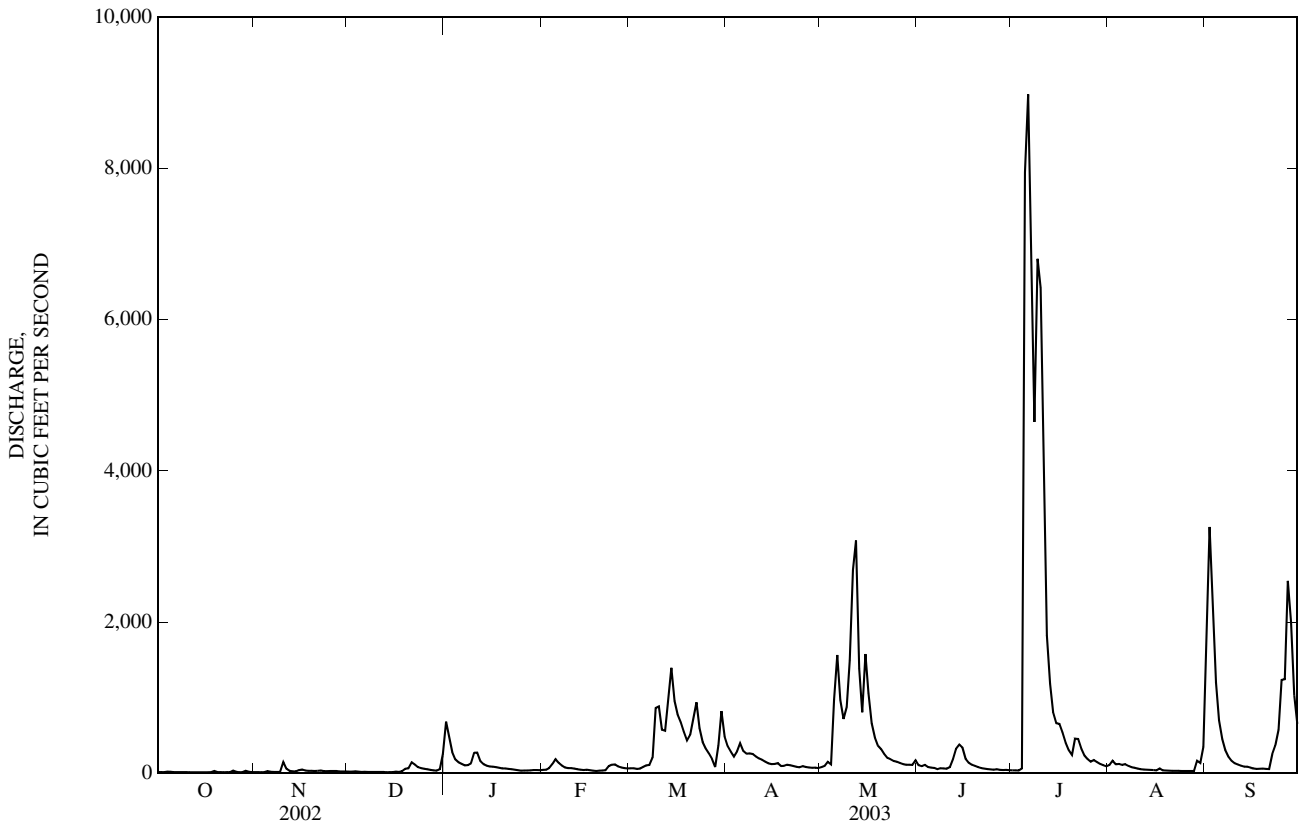
MEAN	95.1	186	252	254	342	436	414	287	253	213	92.9	95.4
MAX	752	1,387	968	1,375	1,097	1,376	1,117	835	1,432	1,743	602	879
(WY)	(2002)	(1993)	(1991)	(1974)	(1990)	(1982)	(1957)	(1996)	(1958)	(2003)	(1998)	(1989)
MIN	11.2	15.5	13.8	15.6	25.8	62.4	35.3	53.6	28.2	28.6	22.7	12.8
(WY)	(1957)	(1957)	(1964)	(2000)	(1964)	(2000)	(2000)	(1988)	(1988)	(1988)	(2000)	(1956)

WABASH RIVER BASIN

03333700 WILDCAT CREEK AT KOKOMO, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1956 - 2003	
ANNUAL TOTAL	77,067		131,368			
ANNUAL MEAN	211		360		243	
HIGHEST ANNUAL MEAN					444 1993	
LOWEST ANNUAL MEAN					84.8 2000	
HIGHEST DAILY MEAN	3,390	May 14	8,980	Jul 6	8,980	Jul 6, 2003
LOWEST DAILY MEAN	14	Oct 12	14	Oct 12	7.2	Sep 30, 1956
ANNUAL SEVEN-DAY MINIMUM	15	Oct 10	15	Oct 10	8.3	Dec 28, 1963
MAXIMUM PEAK FLOW			9,500	Jul 5	9,500	Jul 5, 2003
MAXIMUM PEAK STAGE			17.75	Jul 5	17.75	Jul 5, 2003
ANNUAL RUNOFF (CFSM)	0.87		1.49		1.00	
ANNUAL RUNOFF (INCHES)	11.85		20.19		13.63	
10 PERCENT EXCEEDS	534		809		576	
50 PERCENT EXCEEDS	64		83		88	
90 PERCENT EXCEEDS	18		18		24	

e Estimated



03334000 WILDCAT CREEK AT OWASCO, IN

LOCATION.--Lat 40°27'50", long 86°38'15", in SE¼SE¼ sec.4, T.23 N., R.2 W., Carroll County, Hydrologic Unit 05120107, (PYRMONT, IN quadrangle), on left bank 200 ft downstream from bridge on State Highway 39, 0.5 mi northwest of Owasco, 8.7 mi south of Delphi, and 15 mi upstream from South Fork Wildcat Creek.

DRAINAGE AREA.--396 mi².

PERIOD OF RECORD.--October 1943 to September 1973. Annual maximum, water years 1975-81. October 1988 to current year. Prior to March 1944 monthly discharge only, published in WSP 1305.

REVISED RECORDS.--WSP 1625: 1958. WSP 2109: Drainage area. WDR 94-1: 1988-1993 (Peak of record).

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

REMARKS.--Records fair except estimated daily discharges, which are poor. Some regulation at low stages for municipal water supply by Kokomo Water Company since 1955.

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

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46	53	50	444	e76	e100	541	120	261	102	207	897
2	43	47	50	705	e80	e98	439	132	186	95	194	2,870
3	43	44	47	486	e90	e96	367	136	175	91	224	3,640
4	42	45	44	337	e120	e96	316	187	192	86	212	3,260
5	42	46	e40	246	e250	141	510	828	163	3,170	197	1,400
6	49	48	e40	207	e300	207	536	1,660	145	16,300	187	843
7	43	69	e39	171	e200	197	433	1,750	138	12,100	180	636
8	39	58	e39	152	e140	249	423	1,290	121	9,440	171	515
9	38	52	e39	165	e120	884	413	1,150	122	8,430	160	424
10	39	63	e40	248	e110	1,120	384	1,660	123	10,400	149	362
11	37	299	43	367	e100	894	347	2,430	153	9,270	139	310
12	38	164	42	e280	e90	638	307	3,020	333	5,640	130	269
13	38	90	41	e220	e84	826	270	3,370	738	3,210	122	238
14	36	69	41	e180	e80	1,430	240	1,600	1,220	1,940	115	216
15	37	62	39	e140	e78	1,550	214	1,420	1,060	1,470	109	205
16	33	57	38	e120	e76	1,160	198	1,910	667	1,720	104	190
17	36	75	38	e110	e72	1,000	193	1,220	456	1,190	100	172
18	37	69	45	e100	e70	839	199	823	359	944	111	162
19	42	62	49	e95	70	681	161	635	289	718	111	155
20	46	62	83	e90	73	601	162	539	235	557	98	155
21	52	64	105	e86	81	730	182	481	196	499	82	148
22	45	63	146	e82	107	1,030	174	406	170	677	78	154
23	39	68	141	e80	233	1,010	156	352	148	645	74	387
24	42	62	107	e77	227	667	141	320	135	541	71	455
25	43	57	94	e76	e170	507	138	280	125	438	69	968
26	46	55	e85	e76	e130	426	146	256	119	364	66	1,420
27	71	57	e78	e72	e120	364	140	234	113	312	64	2,490
28	50	56	e69	e70	e110	290	128	214	115	288	62	3,510
29	46	55	67	e70	---	199	129	207	102	279	62	2,690
30	47	52	65	e70	---	659	127	200	98	255	224	1,330
31	68	---	94	e70	---	791	---	254	---	229	229	---
TOTAL	1,353	2,123	1,938	5,692	3,457	19,480	8,114	29,084	8,457	91,400	4,101	30,471
MEAN	43.6	70.8	62.5	184	123	628	270	938	282	2,948	132	1,016
MAX	71	299	146	705	300	1,550	541	3,370	1,220	16,300	229	3,640
MIN	33	44	38	70	70	96	127	120	98	86	62	148
CFSM	0.11	0.18	0.16	0.46	0.31	1.59	0.68	2.37	0.71	7.45	0.33	2.56
IN.	0.13	0.20	0.18	0.53	0.32	1.83	0.76	2.73	0.79	8.59	0.39	2.86

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 2003, BY WATER YEAR (WY)

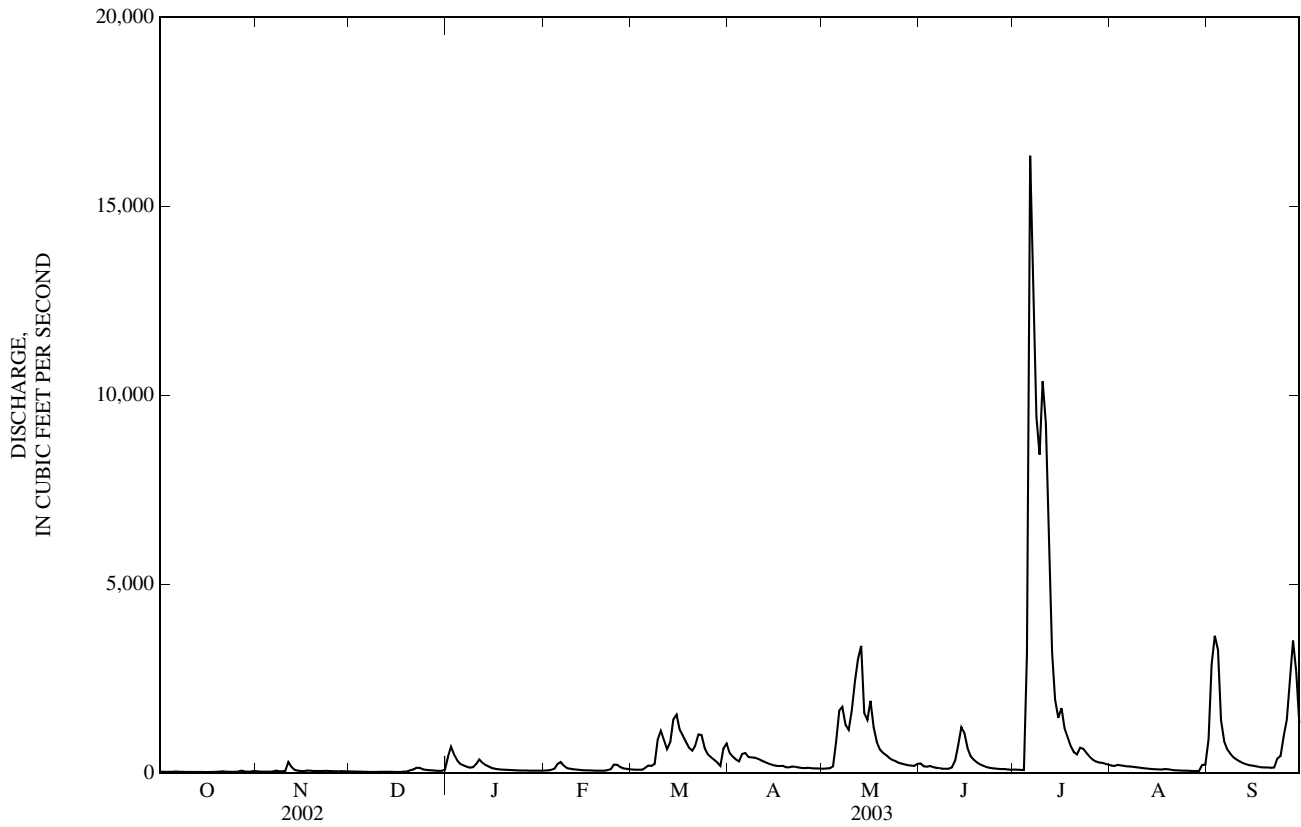
	MEAN	253	327	519	516	621	675	471	403	360	142	153
MAX	1,011	2,024	1,325	3,083	1,725	1,301	1,857	1,108	2,536	2,948	707	1,339
(WY)	(2002)	(1993)	(1958)	(1950)	(1959)	(1997)	(1957)	(1996)	(1958)	(2003)	(1958)	(1989)
MIN	20.0	30.3	25.9	24.6	50.0	95.4	67.6	120	84.8	41.5	37.1	20.6
(WY)	(1945)	(1945)	(1945)	(1945)	(1963)	(2000)	(2000)	(1954)	(1949)	(1954)	(1954)	(1954)

WABASH RIVER BASIN

03334000 WILDCAT CREEK AT OWASCO, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1945 - 2003	
ANNUAL TOTAL	126,657		205,670			
ANNUAL MEAN	347		563		383	
HIGHEST ANNUAL MEAN					733	
LOWEST ANNUAL MEAN					104	
HIGHEST DAILY MEAN	3,870	May 15	16,300	Jul 6	16,300	Jul 6, 2003
LOWEST DAILY MEAN	33	Oct 16	33	Oct 16	12	Oct 23, 1944
ANNUAL SEVEN-DAY MINIMUM	36	Oct 11	36	Oct 11	15	Sep 23, 1954
MAXIMUM PEAK FLOW			19,300	Jul 6	19,300	Jul 6, 2003
MAXIMUM PEAK STAGE			16.22	Jul 6	16.22	Jul 6, 2003
ANNUAL RUNOFF (CFSM)	0.88		1.42		0.97	
ANNUAL RUNOFF (INCHES)	11.90		19.32		13.13	
10 PERCENT EXCEEDS	844		1,170		900	
50 PERCENT EXCEEDS	132		152		164	
90 PERCENT EXCEEDS	42		45		41	

e Estimated



03334500 SOUTH FORK WILDCAT CREEK NEAR LAFAYETTE, IN

LOCATION.--Lat 40°25'04", long 86°46'05", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.21, T.23 N., R.3 W., Tippecanoe County, Hydrologic Unit 05120107, (LAFAYETTE EAST, IN. quadrangle), 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 fair except for estimated daily discharges, which are poor. At times peaks affected by backwater from Middle Fork.

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.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

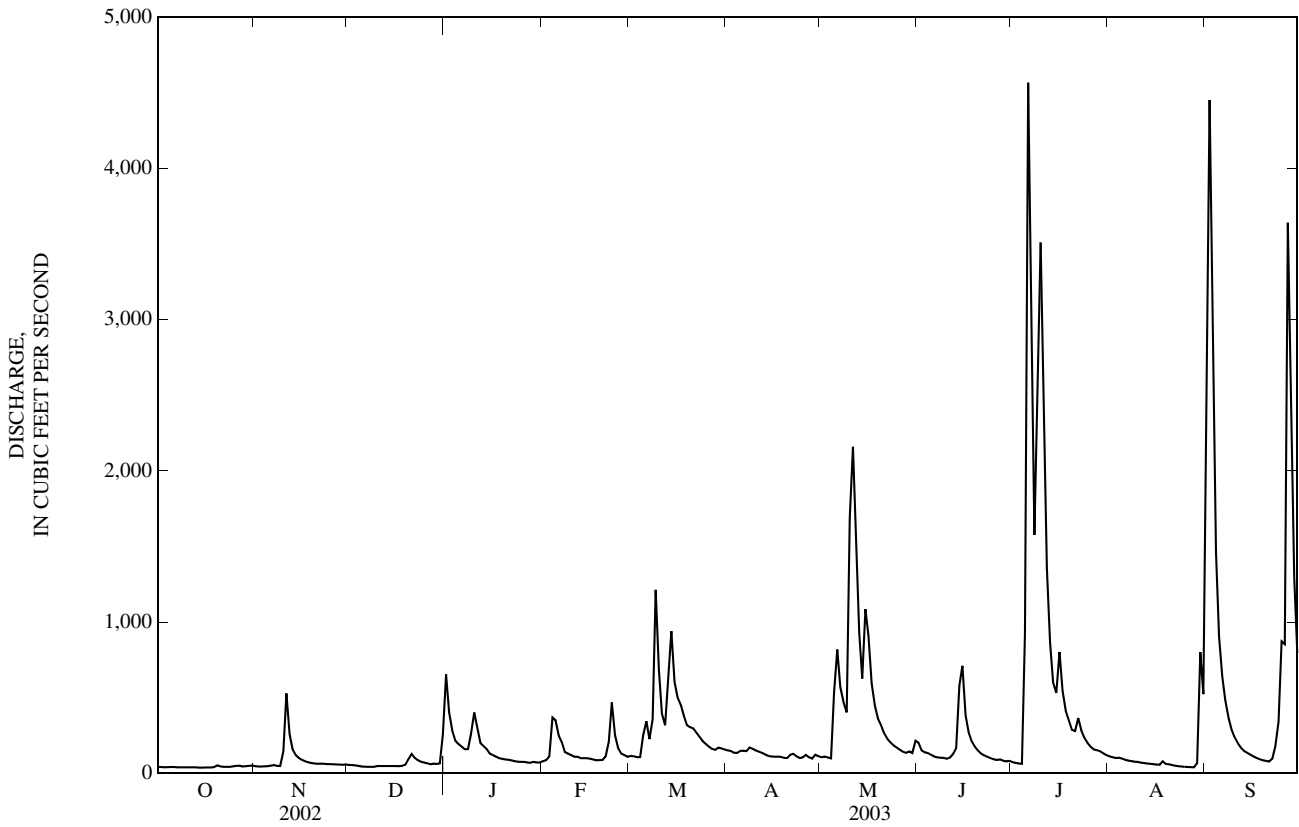
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	47	56	653	e80	115	152	107	203	74	112	2,220
2	42	46	55	403	e86	113	147	111	151	69	107	4,450
3	40	45	53	282	111	107	137	104	138	66	101	2,770
4	41	46	49	216	368	107	135	99	134	63	103	1,460
5	42	48	e45	194	350	253	148	537	122	925	97	905
6	42	51	e44	177	250	345	150	818	111	4,570	90	642
7	40	55	e43	159	204	226	147	570	106	3,700	84	484
8	40	50	e43	160	e140	356	170	471	103	1,580	82	369
9	40	49	e43	262	e130	1,210	161	403	102	2,630	77	291
10	40	145	48	401	e120	687	151	1,690	96	3,510	76	238
11	40	529	49	307	e110	395	142	2,160	103	2,310	71	199
12	40	258	48	e200	e110	318	135	1,490	128	1,360	68	169
13	40	158	48	e180	e100	627	125	933	166	864	66	148
14	38	120	48	e160	e100	940	115	627	580	601	63	136
15	38	101	49	e130	e100	604	112	1,090	711	531	61	123
16	39	88	48	e120	e97	502	110	909	383	803	58	112
17	39	79	47	e110	e92	453	110	593	271	545	56	102
18	39	73	50	e100	e86	382	109	448	211	414	79	93
19	42	69	56	e96	88	318	102	363	175	351	63	87
20	52	65	95	e92	89	304	101	318	150	287	60	82
21	45	63	127	e90	111	297	123	265	130	279	54	78
22	43	64	102	e85	209	268	129	228	118	366	51	98
23	43	64	87	e80	469	242	112	205	108	283	48	179
24	43	62	77	e77	251	212	102	185	101	234	46	342
25	46	61	e72	e76	165	194	106	171	93	200	43	872
26	49	60	e66	e76	e130	177	121	156	89	176	42	853
27	51	59	e60	e72	e120	162	105	142	92	157	41	3,640
28	45	58	64	e70	e110	156	97	135	84	153	40	2,250
29	48	57	63	e76	---	170	122	145	79	145	66	1,290
30	49	57	66	e72	---	165	113	134	82	133	802	796
31	52	---	258	e72	---	157	---	216	---	120	524	---
TOTAL	1,330	2,727	2,059	5,248	4,376	10,562	3,789	15,823	5,120	27,499	3,331	25,478
MEAN	42.9	90.9	66.4	169	156	341	126	510	171	887	107	849
MAX	52	529	258	653	469	1,210	170	2,160	711	4,570	802	4,450
MIN	38	45	43	70	80	107	97	99	79	63	40	78
CFSM	0.18	0.37	0.27	0.70	0.64	1.40	0.52	2.10	0.70	3.65	0.44	3.49
IN.	0.20	0.42	0.32	0.80	0.67	1.62	0.58	2.42	0.78	4.21	0.51	3.90

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 2003, BY WATER YEAR (WY)

MEAN	101	169	236	289	337	408	398	309	282	180	98.1	107
MAX	568	1,304	954	1,808	929	1,143	1,172	881	1,674	954	510	849
(WY)	(2002)	(1993)	(1991)	(1950)	(1985)	(1982)	(1964)	(1983)	(1958)	(1992)	(1958)	(1989)
MIN	22.9	27.2	23.5	19.5	37.5	62.6	45.9	67.6	40.6	26.2	18.3	18.0
(WY)	(1964)	(2000)	(1964)	(1977)	(1963)	(2000)	(2000)	(1976)	(1977)	(1977)	(1944)	(1944)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1944 - 2003	
ANNUAL TOTAL	87,941		107,342			
ANNUAL MEAN	241		294		242	
HIGHEST ANNUAL MEAN					473	1950
LOWEST ANNUAL MEAN					79.2	1954
HIGHEST DAILY MEAN	3,320	May 13	4,570	Jul 6	11,000	May 2, 1983
LOWEST DAILY MEAN	38	Sep 14	38	Oct 14	15	Sep 19, 1944
ANNUAL SEVEN-DAY MINIMUM	39	Sep 11	39	Oct 12	16	Sep 17, 1944
MAXIMUM PEAK FLOW			6,130	Jul 6	15,100	May 2, 1983
MAXIMUM PEAK STAGE			11.77	Jul 6	15.68	May 2, 1983
ANNUAL RUNOFF (CFSM)	0.99		1.21		1.00	
ANNUAL RUNOFF (INCHES)	13.46		16.43		13.54	
10 PERCENT EXCEEDS	526		627		527	
50 PERCENT EXCEEDS	104		112		109	
90 PERCENT EXCEEDS	43		46		34	

e Estimated



03335000 WILDCAT CREEK NEAR LAFAYETTE, IN

LOCATION.--Lat 40°26'26", long 86°49'45", in SW¹/₄NW¹/₄ sec.13, T.23 N., R.4 W., Tippecanoe County, Hydrologic Unit 05120107, (LAFAYETTE EAST, IN quadrangle), 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 except for estimated daily discharges, which are poor.

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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	120	141	159	1,050	e170	e220	751	284	591	234	438	3,890
2	112	122	155	1,210	e180	e220	633	285	437	225	420	8,400
3	108	116	152	922	e210	e220	553	287	400	212	516	7,210
4	113	116	138	651	617	e230	500	318	397	204	446	5,520
5	110	122	e130	525	700	540	588	1,500	370	3,610	409	2,950
6	110	127	e120	453	606	717	769	2,470	333	15,900	389	1,840
7	111	130	e120	396	516	549	649	2,500	312	19,100	382	1,310
8	103	146	e120	370	e320	760	667	2,070	296	13,100	355	1,010
9	103	130	e120	498	e280	2,240	635	1,680	288	13,500	331	833
10	102	140	e125	747	e260	1,920	599	3,480	288	14,300	312	705
11	102	863	e130	725	e250	1,490	545	5,230	337	13,400	285	609
12	100	685	131	573	e240	1,150	499	4,780	595	9,460	263	533
13	105	403	130	e450	e230	1,410	456	4,640	1,170	5,220	249	488
14	98	300	130	e400	e210	2,410	412	2,960	2,470	3,120	241	458
15	97	252	129	e300	e200	2,220	383	2,910	2,260	2,630	234	434
16	98	222	127	e280	e190	1,780	361	3,290	1,500	3,480	222	412
17	96	207	127	e260	e180	1,570	350	2,280	1,010	2,320	222	379
18	99	213	136	e240	e170	1,370	351	1,630	760	1,800	287	362
19	112	195	161	e220	e180	1,150	322	1,260	615	1,470	252	345
20	120	183	208	e210	e180	1,020	310	1,080	513	1,160	214	342
21	120	184	308	e200	219	1,070	336	947	435	1,100	193	329
22	117	185	297	e190	350	1,200	360	792	386	1,580	181	363
23	111	180	317	e180	802	1,310	319	684	346	1,300	171	587
24	106	184	e260	e170	609	993	289	615	317	1,010	161	870
25	119	174	e230	e170	e350	794	293	557	292	834	154	1,980
26	124	170	e220	e170	e260	675	308	509	279	719	145	2,700
27	131	169	e206	e160	e250	583	298	465	269	641	139	7,480
28	141	167	e200	e160	e230	525	268	438	263	627	133	6,600
29	131	165	192	e160	---	443	298	437	247	601	192	4,720
30	127	164	190	e160	---	587	299	418	242	536	1,050	2,700
31	127	---	410	e160	---	1,000	---	545	---	480	1,090	---
TOTAL	3,473	6,555	5,578	12,360	8,959	32,366	13,401	51,341	18,018	133,873	10,076	66,359
MEAN	112	218	180	399	320	1,044	447	1,656	601	4,318	325	2,212
MAX	141	863	410	1,210	802	2,410	769	5,230	2,470	19,100	1,090	8,400
MIN	96	116	120	160	170	220	268	284	242	204	133	329
CFSM	0.14	0.28	0.23	0.50	0.40	1.31	0.56	2.09	0.76	5.44	0.41	2.79
IN.	0.16	0.31	0.26	0.58	0.42	1.52	0.63	2.41	0.84	6.27	0.47	3.11

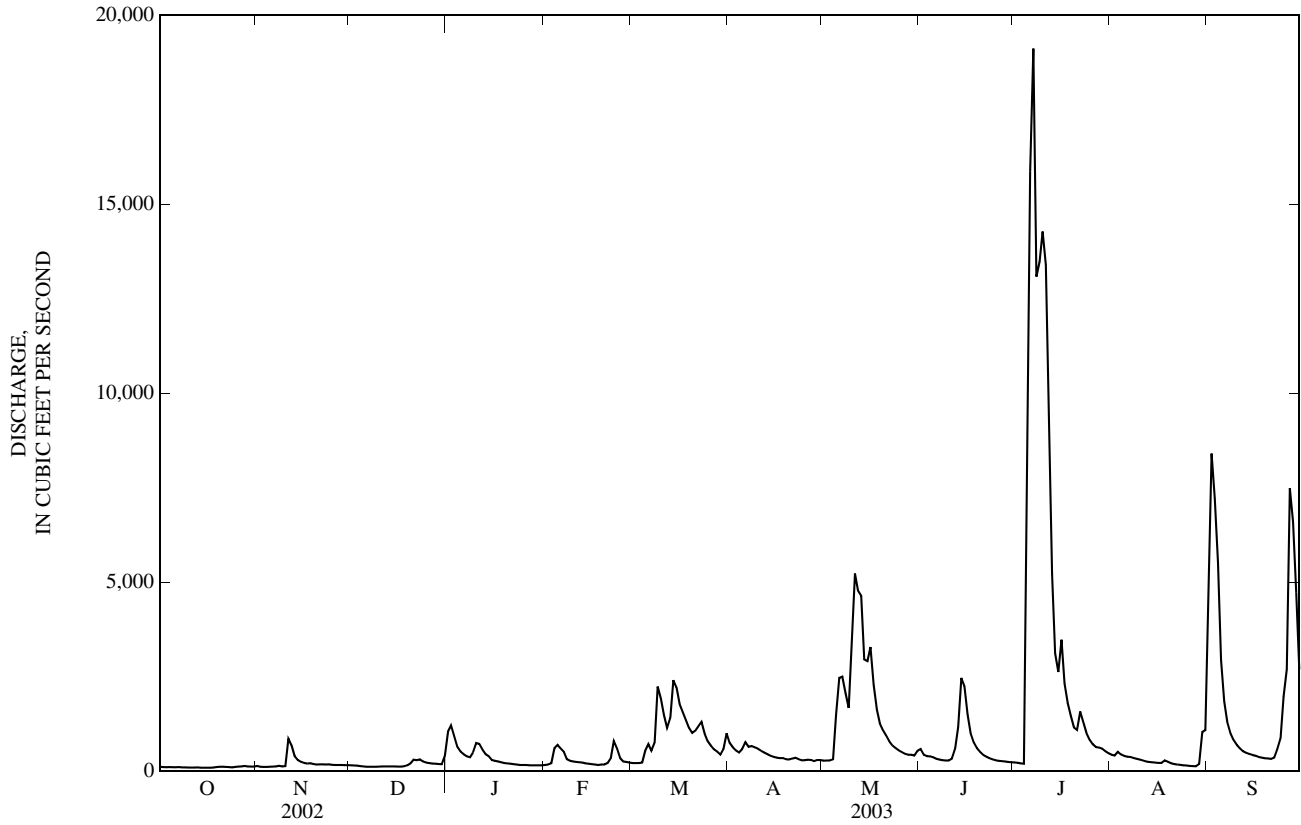
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 2003, BY WATER YEAR (WY)

MEAN	321	561	788	804	1,066	1,361	1,277	964	875	672	338	329
MAX	1,792	3,963	2,474	3,711	3,227	3,991	3,657	2,614	5,210	4,318	1,511	2,546
(WY)	(2002)	(1993)	(1991)	(1974)	(1976)	(1982)	(1964)	(1983)	(1958)	(2003)	(1958)	(1989)
MIN	67.9	85.6	67.0	61.6	104	196	146	231	130	84.4	79.8	68.8
(WY)	(1964)	(1964)	(1964)	(1977)	(1963)	(2000)	(2000)	(1976)	(1988)	(1977)	(1966)	(1999)

03335000 WILDCAT CREEK NEAR LAFAYETTE, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1955 - 2003	
ANNUAL TOTAL	266,726		362,359			
ANNUAL MEAN	731		993		778	
HIGHEST ANNUAL MEAN					1,460	1993
LOWEST ANNUAL MEAN					264	2000
HIGHEST DAILY MEAN	6,250	May 14	19,100	Jul 7	22,100	Jun 10, 1958
LOWEST DAILY MEAN	91	Sep 16	96	Oct 17	47	Sep 6, 1964
ANNUAL SEVEN-DAY MINIMUM	94	Sep 13	99	Oct 12	51	Dec 20, 1963
MAXIMUM PEAK FLOW			23,500	Jul 7	25,000	Jun 10, 1958
MAXIMUM PEAK STAGE			23.64	Jul 7	23.64	Jul 7, 2003
ANNUAL RUNOFF (CFSM)	0.92		1.25		0.98	
ANNUAL RUNOFF (INCHES)	12.50		16.98		13.31	
10 PERCENT EXCEEDS	1,690		2,250		1,760	
50 PERCENT EXCEEDS	314		337		358	
90 PERCENT EXCEEDS	120		127		112	

e Estimated



03335500 WABASH RIVER AT LAFAYETTE, IN

LOCATION.--Lat 40°25'19", long 86°53'49", in NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.20, T.23 N., R.4 W., Tippecanoe County, Hydrologic Unit 05120108, (LAFAYETTE WEST, IN. quadrangle), on right bank 20 ft downstream from Brown St. in Lafayette, 0.2 mi upstream from Main St. 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 height 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 fair 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,680	1,510	1,930	4,810	2,050	e2,400	8,170	2,130	7,320	2,170	9,470	10,400
2	1,580	1,380	1,590	10,600	2,040	e2,200	5,770	2,710	6,030	2,280	8,920	26,300
3	1,540	1,490	1,680	11,100	2,110	e2,100	4,270	2,950	4,400	2,130	10,000	29,500
4	1,620	1,540	1,190	9,270	2,820	e2,000	4,120	3,630	4,150	2,060	12,200	25,700
5	1,590	1,570	1,300	7,430	3,540	e2,300	5,020	6,820	3,870	15,200	11,600	21,000
6	1,730	1,910	1,420	5,800	5,410	3,030	11,200	16,600	3,500	58,600	10,400	17,500
7	1,540	1,560	1,770	3,930	5,540	3,030	11,600	17,500	3,460	76,000	9,240	15,500
8	1,580	1,460	1,850	3,100	4,440	4,980	11,000	16,600	3,300	78,200	10,200	14,200
9	1,670	1,590	1,800	3,130	3,580	8,470	10,200	22,200	3,210	77,200	9,740	13,000
10	1,720	2,040	1,290	3,280	2,840	12,500	8,460	35,800	2,800	79,000	8,770	10,200
11	1,650	2,460	1,330	4,750	e2,300	12,800	7,360	37,100	3,000	73,200	8,100	8,690
12	1,630	2,990	1,370	5,800	e2,200	11,500	5,670	33,300	3,370	60,600	7,830	7,690
13	1,610	4,640	1,430	4,560	e2,100	9,580	5,000	30,400	4,480	49,400	7,740	7,790
14	1,530	4,340	1,240	3,480	e2,000	14,400	4,090	26,600	12,100	40,000	7,830	7,470
15	1,410	3,730	1,290	2,490	e2,100	17,600	3,810	23,900	16,300	34,300	7,770	6,560
16	1,400	3,040	1,390	2,180	e2,050	17,600	3,540	24,400	11,800	32,700	7,640	4,200
17	1,410	2,850	1,160	2,160	e2,100	17,500	3,000	21,900	9,940	28,400	7,410	3,810
18	1,670	2,250	1,350	2,460	e2,200	15,900	3,220	19,900	8,740	25,500	7,460	3,500
19	1,580	1,860	1,570	2,200	e1,900	13,100	2,820	17,600	7,580	23,600	6,990	3,300
20	1,600	1,800	1,620	2,900	e1,700	10,100	3,050	15,100	5,830	22,000	6,200	3,190
21	1,640	2,050	3,870	2,990	e1,700	8,920	2,970	13,900	4,930	22,800	5,550	3,040
22	1,530	2,120	6,930	2,890	e1,770	9,060	2,910	11,500	4,610	27,800	5,130	3,360
23	1,420	1,670	5,920	2,530	e2,250	10,600	2,590	9,700	3,780	25,900	5,540	3,530
24	1,460	1,820	4,170	2,410	e2,350	9,380	2,450	9,150	3,090	22,800	5,120	5,920
25	1,540	2,080	3,210	2,370	e2,500	7,070	2,460	8,520	2,840	18,900	4,640	9,780
26	1,600	2,180	2,620	2,070	e3,300	5,760	2,430	8,440	2,570	16,800	4,390	13,800
27	1,580	2,190	2,120	2,150	e3,400	4,800	2,390	7,970	2,330	15,800	4,450	25,800
28	1,570	1,980	1,910	1,990	e3,000	4,030	2,110	7,780	2,240	15,500	4,010	31,500
29	1,640	1,910	1,860	2,050	---	4,090	2,210	7,720	2,210	13,700	5,460	25,700
30	1,720	1,870	1,920	1,960	---	7,400	2,010	7,640	2,420	11,000	7,800	18,500
31	1,650	---	2,120	1,940	---	10,800	---	7,790	---	9,990	6,800	---
TOTAL	49,090	65,880	66,220	120,780	75,290	265,000	145,900	477,250	156,200	983,530	234,400	380,430
MEAN	1,584	2,196	2,136	3,896	2,689	8,548	4,863	15,400	5,207	31,730	7,561	12,680
MAX	1,730	4,640	6,930	11,100	5,540	17,600	11,600	37,100	16,300	79,000	12,200	31,500
MIN	1,400	1,380	1,160	1,940	1,700	2,000	2,010	2,130	2,210	2,060	4,010	3,040
CFSM	0.22	0.30	0.29	0.54	0.37	1.18	0.67	2.12	0.72	4.37	1.04	1.75
IN.	0.25	0.34	0.34	0.62	0.39	1.36	0.75	2.44	0.80	5.03	1.20	1.95

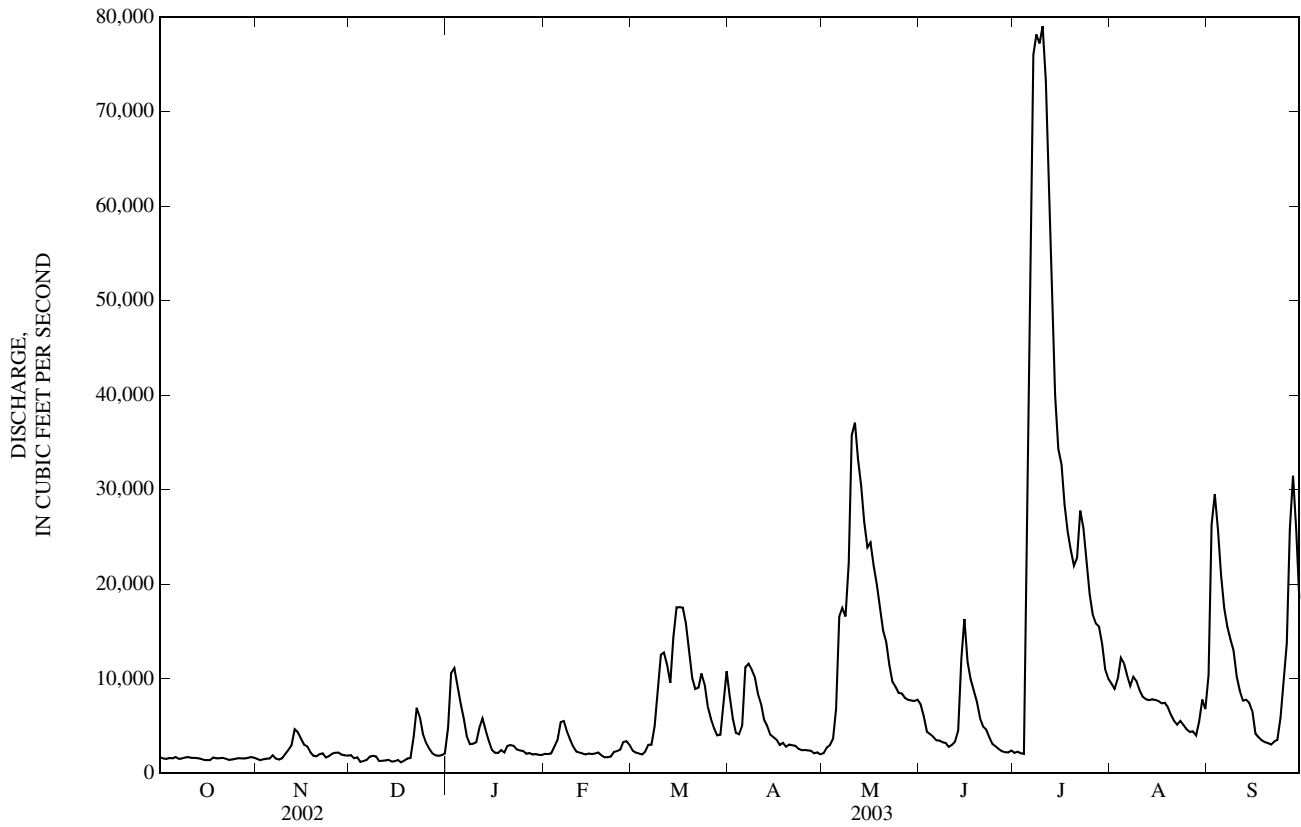
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 2003, BY WATER YEAR (WY)

MEAN	3,123	4,278	6,655	8,337	9,584	11,710	11,520	8,413	6,689	4,662	2,874	2,763
MAX	17,250	19,910	25,250	42,040	28,000	33,560	28,000	37,290	31,830	31,730	12,890	20,120
(WY)	(2002)	(1993)	(1928)	(1950)	(1959)	(1982)	(1957)	(1943)	(1958)	(2003)	(1998)	(1926)
MIN	652	828	747	735	1,232	1,663	3,135	1,460	1,029	655	484	435
(WY)	(1964)	(1965)	(1964)	(1977)	(1964)	(1941)	(1941)	(1934)	(1934)	(1936)	(1941)	(1941)

03335500 WABASH RIVER AT LAFAYETTE, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1924 - 2003	
ANNUAL TOTAL	2,490,652		3,019,970		6,700	
ANNUAL MEAN	6,824		8,274		12,340	
HIGHEST ANNUAL MEAN					1,631	
LOWEST ANNUAL MEAN					1941	
HIGHEST DAILY MEAN	39,600	Feb 2	79,000	Jul 10	129,000	May 19, 1943
LOWEST DAILY MEAN	921	Sep 13	1,160	Dec 17	399	Sep 26, 1941
ANNUAL SEVEN-DAY MINIMUM	962	Sep 12	1,320	Dec 11	404	Sep 21, 1941
MAXIMUM PEAK FLOW			80,000	Jul 10	131,000	May 19, 1943
MAXIMUM PEAK STAGE			25.05	Jul 10	28.47	May 19, 1943
ANNUAL RUNOFF (CFSM)	0.94		1.14		0.92	
ANNUAL RUNOFF (INCHES)	12.75		15.46		12.53	
10 PERCENT EXCEEDS	18,800		19,300		16,000	
50 PERCENT EXCEEDS	3,160		3,780		3,650	
90 PERCENT EXCEEDS	1,400		1,590		1,170	

e Estimated



03335690 MUD PINE CREEK NEAR OXFORD, IN

LOCATION.--Lat 40°31'24", long 87°20'30", in NE¹/₄SE¹/₄ sec.17, T.24 N., R.8 W., Benton County, Hydrologic Unit 05120108, (FOWLER, IN. quadrangle), on right bank 5 ft downstream from county road bridge, 0.3 mi north of Chase, 2.0 mi east of Boswell, and 5.0 mi west of Oxford.

DRAINAGE AREA.--39.4 mi².

PERIOD OF RECORD.--June 1971 to October 2003 (discontinued).

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 fair except those for Oct. 12 to Dec. 3, 2002 and estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	e4.5	2.9	25	e8.0	e4.7	8.8	18	41	14	14	266
2	2.2	e3.6	e2.4	18	e11	e4.7	7.2	29	33	14	12	266
3	2.2	e2.9	e2.1	14	33	e4.6	6.8	20	32	12	12	127
4	2.7	e4.3	e1.8	e11	82	e4.9	18	20	27	11	11	78
5	3.1	6.5	e1.9	e9.0	33	26	131	136	24	29	9.5	53
6	2.3	9.4	e1.9	e7.6	e16	e9.0	75	85	23	118	8.5	38
7	2.0	6.8	e2.1	e7.0	e12	14	110	126	22	272	7.5	29
8	1.8	e4.4	e1.6	e6.6	e11	54	101	300	21	112	6.7	23
9	2.0	e3.4	e1.3	46	e9.8	44	72	880	19	424	6.5	19
10	1.9	12	e1.7	44	e9.0	20	56	405	18	895	6.0	15
11	1.7	10	e1.9	35	e7.8	e11	46	274	19	277	5.2	12
12	e1.7	e3.5	2.2	e20	e7.1	14	38	161	19	243	4.5	11
13	e1.8	e4.8	2.4	e14	e6.5	18	32	113	420	145	4.1	9.0
14	e1.8	6.2	2.5	e13	e6.0	11	29	89	443	96	3.7	9.1
15	e1.9	6.9	2.1	e12	e5.4	11	28	84	168	111	3.3	8.2
16	e2.0	5.3	2.0	e12	e5.0	13	26	70	104	98	3.1	7.0
17	e2.1	e3.5	1.7	e11	7.6	16	24	62	77	65	3.3	6.2
18	3.5	e3.3	3.6	e11	8.1	14	21	54	61	219	3.3	5.8
19	5.8	e3.6	7.9	e10	6.8	15	19	48	50	113	2.4	5.8
20	4.7	4.5	8.5	e9.2	7.3	16	24	45	38	74	2.1	5.1
21	2.5	5.3	5.5	e8.8	9.7	26	22	36	33	75	2.0	5.0
22	e2.7	5.4	3.8	e8.4	29	19	18	33	30	57	1.7	12
23	e3.0	e3.4	e2.5	e8.2	36	15	16	30	26	45	1.5	11
24	e3.4	e2.7	e1.9	e7.8	15	13	17	29	24	38	1.8	9.7
25	e4.2	e2.3	e2.0	e7.8	9.5	13	19	26	21	30	1.5	9.8
26	5.4	e2.2	e1.8	e7.7	5.9	13	16	23	21	26	1.4	18
27	e3.9	e2.1	e1.6	e7.5	e5.2	12	14	21	18	23	1.2	110
28	e2.9	3.3	e1.6	e7.4	e5.0	12	14	32	17	22	1.1	61
29	7.3	4.4	e1.7	e7.4	---	9.2	14	62	16	20	56	41
30	11	4.6	36	e7.5	---	7.6	14	39	15	17	64	30
31	6.6	---	47	e7.6	---	7.8	---	73	---	15	32	---
TOTAL	102.4	145.1	159.9	421.5	407.7	472.5	1,036.8	3,423	1,880	3,710	292.9	1,300.7
MEAN	3.30	4.84	5.16	13.6	14.6	15.2	34.6	110	62.7	120	9.45	43.4
MAX	11	12	47	46	82	54	131	880	443	895	64	266
MIN	1.7	2.1	1.3	6.6	5.0	4.6	6.8	18	15	11	1.1	5.0
CFSM	0.08	0.12	0.13	0.35	0.37	0.39	0.88	2.80	1.59	3.04	0.24	1.10
IN.	0.10	0.14	0.15	0.40	0.38	0.45	0.98	3.23	1.78	3.50	0.28	1.23

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2003, BY WATER YEAR (WY)

	20.4	27.7	41.8	39.5	57.7	72.9	69.7	63.1	61.1	29.4	15.5	16.1
MEAN	20.4	27.7	41.8	39.5	57.7	72.9	69.7	63.1	61.1	29.4	15.5	16.1
MAX	207	169	154	164	158	237	267	159	240	147	122	134
(WY)	(2002)	(1986)	(1991)	(1993)	(1990)	(1979)	(1994)	(1981)	(1998)	(1993)	(1981)	(1993)
MIN	0.38	0.33	0.71	0.46	3.41	6.54	7.99	8.49	2.85	0.65	0.79	0.40
(WY)	(2000)	(2000)	(2000)	(2000)	(1977)	(1981)	(2000)	(1976)	(1988)	(1988)	(1988)	(1983)

SUMMARY STATISTICS

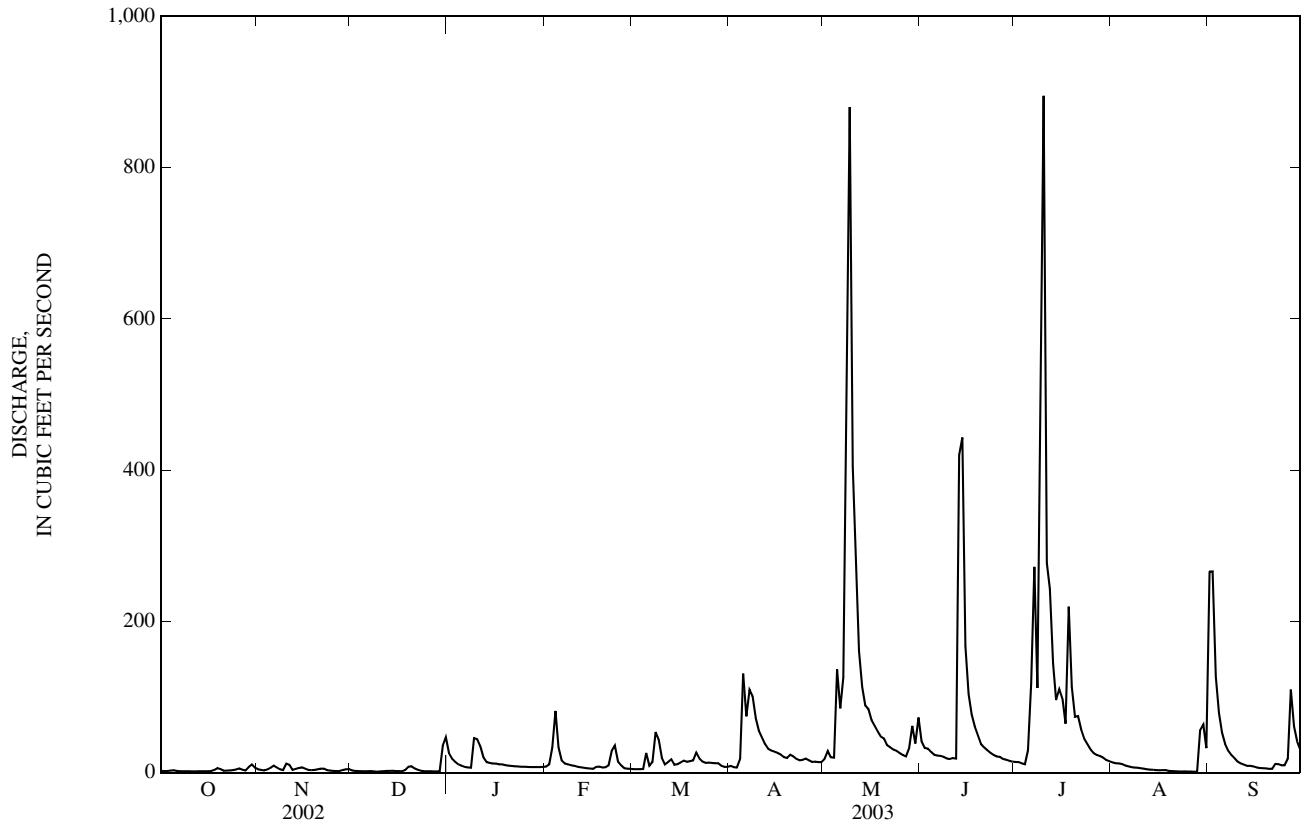
FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1972 - 2003

ANNUAL TOTAL	17,798.6		13,352.5		
ANNUAL MEAN	48.8		36.6		42.8
HIGHEST ANNUAL MEAN					93.0
LOWEST ANNUAL MEAN					16.2
HIGHEST DAILY MEAN	613	May 12	895	Jul 10	4,550
LOWEST DAILY MEAN	1.3	Dec 9	1.1	Aug 28	0.01
ANNUAL SEVEN-DAY MINIMUM	1.8	Dec 4	1.5	Aug 22	0.04
MAXIMUM PEAK FLOW			1,410	May 9	12,100
MAXIMUM PEAK STAGE			11.06	May 9	16.98
ANNUAL RUNOFF (CFSM)	1.24		0.93		1.09
ANNUAL RUNOFF (INCHES)	16.80		12.61		14.75
10 PERCENT EXCEEDS	118		80		98
50 PERCENT EXCEEDS	19		12		16
90 PERCENT EXCEEDS	2.3		2.1		0.91

e Estimated



03336000 WABASH RIVER AT COVINGTON, IN

LOCATION.--Lat 40°08'24", long 87°24'24", in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.35, T.20 N., R.9 W., Warren County, Hydrologic Unit 05120108, (COVINGTON, IN, quadrangle), 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 fair except for estimated daily discharges, which are poor. Flow partially regulated by upstream reservoirs.

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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,070	1,860	2,100	2,880	e2,550	e3,200	10,500	2,720	8,890	2,750	10,100	14,900
2	1,880	1,750	2,120	7,150	e2,600	e2,900	7,880	3,330	8,000	2,510	9,630	23,200
3	1,750	1,650	1,880	10,900	e2,700	e2,700	6,040	3,740	6,260	2,580	9,330	27,600
4	1,730	1,720	1,880	10,500	e3,100	e2,600	5,020	3,870	5,150	2,350	11,300	30,000
5	1,780	1,780	1,520	9,090	e4,000	e2,900	5,110	8,060	4,820	2,870	12,600	28,900
6	1,770	1,850	1,390	7,290	e4,800	e3,200	7,960	13,200	4,430	20,400	11,600	25,300
7	1,850	2,060	1,530	5,800	e5,150	e3,600	12,200	18,700	4,110	34,700	10,100	20,500
8	1,740	1,840	1,790	4,400	e5,200	e4,100	12,300	18,400	4,020	58,500	9,980	16,900
9	1,770	1,760	1,910	3,850	e4,400	7,180	11,600	19,200	3,820	72,400	10,500	14,700
10	1,840	1,900	1,920	4,060	e3,600	10,800	10,400	24,100	3,670	83,900	9,960	12,900
11	1,860	2,300	1,640	4,110	e2,900	13,100	8,890	30,300	3,430	86,700	8,710	10,400
12	1,820	2,760	1,700	5,670	e2,800	13,000	7,640	34,200	3,770	78,600	8,280	8,800
13	1,800	3,410	1,790	5,990	e2,700	11,500	6,290	33,900	4,510	63,100	8,010	8,140
14	1,790	4,450	1,840	4,950	e2,600	12,200	5,490	32,100	9,010	50,100	7,940	8,110
15	1,730	4,200	1,720	4,000	e2,700	16,600	4,810	30,600	16,500	42,100	8,050	7,640
16	1,630	3,680	1,730	3,220	e2,600	18,000	4,490	28,300	15,700	36,900	7,950	6,360
17	1,620	3,160	1,810	e3,000	e2,700	18,100	4,210	26,700	12,000	33,600	7,670	4,490
18	1,670	2,980	1,720	e3,200	e2,800	17,700	3,830	24,500	10,400	31,400	7,490	4,170
19	1,880	2,480	1,860	e3,100	e2,500	15,700	3,860	21,900	9,200	29,300	7,490	3,810
20	1,810	2,150	2,040	e3,700	e2,200	12,800	3,650	18,800	7,650	27,100	6,920	3,670
21	1,810	2,080	2,130	e3,800	e2,200	10,400	3,740	15,900	6,120	25,200	6,160	3,590
22	1,840	2,210	4,960	e3,600	e2,500	9,690	3,670	14,300	5,420	25,000	5,590	3,500
23	1,740	2,280	6,650	e3,300	e2,800	10,300	3,590	11,600	4,940	26,600	5,360	3,760
24	1,660	1,990	5,660	e3,100	e2,900	11,100	3,240	10,300	4,180	26,500	5,510	5,000
25	1,710	2,040	4,420	e2,900	e3,000	9,300	3,220	9,640	3,590	24,400	5,110	8,130
26	1,780	2,250	3,600	e2,700	e3,950	7,440	3,260	9,190	3,230	20,500	4,710	11,900
27	1,810	2,350	3,050	e2,800	e4,100	6,360	3,200	8,960	3,020	17,600	4,500	21,200
28	1,790	2,350	2,590	e2,600	e3,600	5,440	3,050	8,500	2,790	16,600	4,490	26,000
29	1,810	2,200	2,420	e2,700	---	4,870	2,890	8,500	2,690	15,800	4,330	29,100
30	1,880	2,120	2,410	e2,600	---	5,150	2,920	8,480	2,660	13,200	7,710	28,300
31	1,920	---	2,530	e2,500	---	9,600	---	8,910	---	11,100	8,340	---
TOTAL	55,540	71,610	76,310	139,460	89,650	281,530	174,950	510,900	183,980	984,360	245,420	420,970
MEAN	1,792	2,387	2,462	4,499	3,202	9,082	5,832	16,480	6,133	31,750	7,917	14,030
MAX	2,070	4,450	6,650	10,900	5,200	18,100	12,300	34,200	16,500	86,700	12,600	30,000
MIN	1,620	1,650	1,390	2,500	2,200	2,600	2,890	2,720	2,660	2,350	4,330	3,500
CFSM	0.22	0.29	0.30	0.55	0.39	1.11	0.71	2.01	0.75	3.86	0.96	1.71
IN.	0.25	0.32	0.35	0.63	0.41	1.27	0.79	2.31	0.83	4.46	1.11	1.91

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2003, BY WATER YEAR (WY)

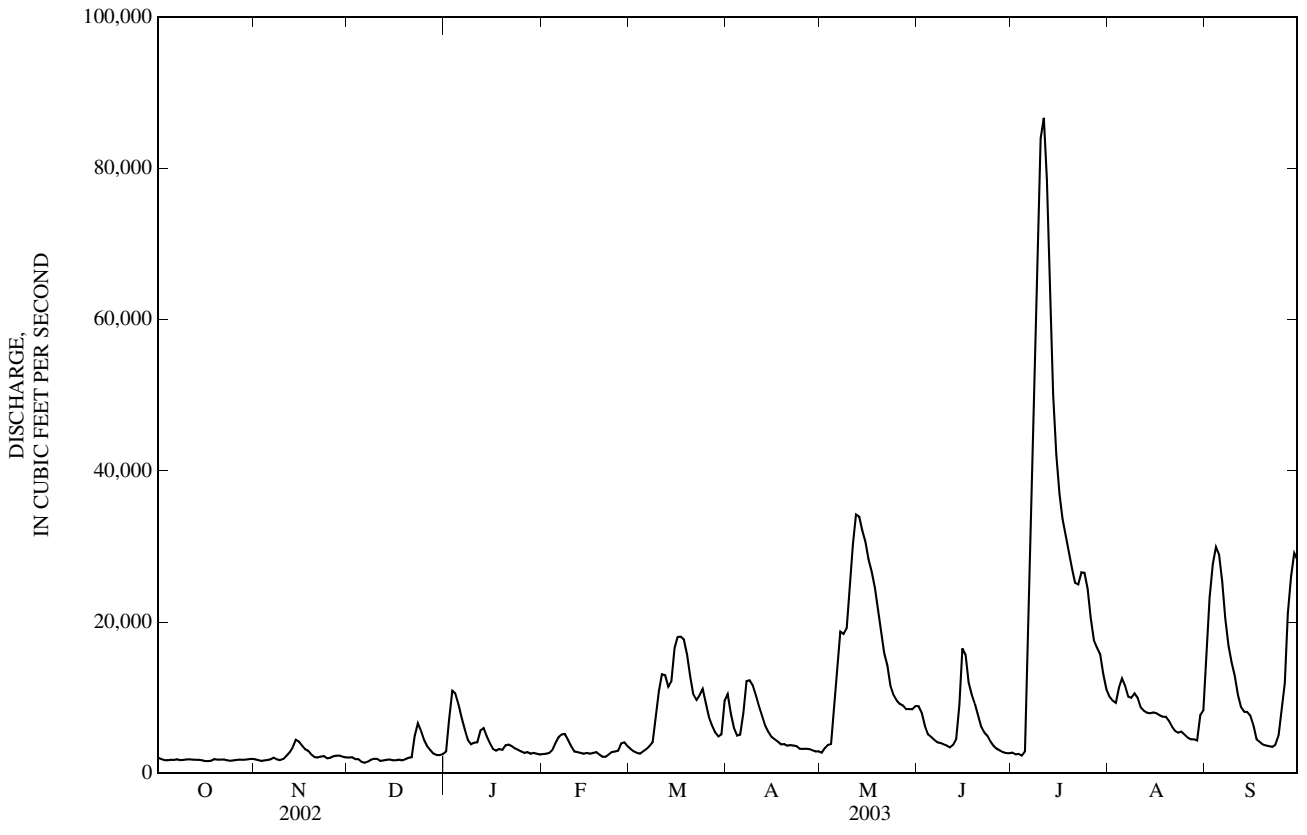
MEAN	3,557	4,836	7,159	8,909	10,840	13,090	13,020	10,080	8,382	5,829	3,573	3,085
MAX	18,360	23,930	22,080	49,700	34,450	34,840	28,470	43,540	36,010	31,750	13,470	14,030
(WY)	(2002)	(1993)	(1968)	(1950)	(1959)	(1982)	(1957)	(1943)	(1958)	(2003)	(1998)	(2003)
MIN	738	919	810	896	1,357	1,915	3,536	1,814	1,542	1,212	640	545
(WY)	(1965)	(1965)	(1964)	(1977)	(1963)	(1941)	(1941)	(1941)	(1988)	(1988)	(1941)	(1941)

WABASH RIVER BASIN

03336000 WABASH RIVER AT COVINGTON, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1940 - 2003	
ANNUAL TOTAL	2,858,180		3,234,680			
ANNUAL MEAN	7,831		8,862		7,677	
HIGHEST ANNUAL MEAN					14,980	1950
LOWEST ANNUAL MEAN					1,862	1941
HIGHEST DAILY MEAN	36,500	May 15	86,700	Jul 11	143,000	May 20, 1943
LOWEST DAILY MEAN	1,290	Sep 14	1,390	Dec 6	487	Sep 29, 1941
ANNUAL SEVEN-DAY MINIMUM	1,330	Sep 13	1,670	Dec 5	497	Sep 24, 1941
MAXIMUM PEAK FLOW			89,000	Jul 11	147,000	May 20, 1943
MAXIMUM PEAK STAGE			28.90	Jul 11	32.44	May 20, 1943
ANNUAL RUNOFF (CFSM)	0.95		1.08		0.93	
ANNUAL RUNOFF (INCHES)	12.94		14.64		12.69	
10 PERCENT EXCEEDS	21,800		22,400		18,600	
50 PERCENT EXCEEDS	3,900		4,330		4,440	
90 PERCENT EXCEEDS	1,730		1,810		1,490	

e Estimated



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, (HAZELRIGG, IN. quadrangle), 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 for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.9	11	e11	201	e20	e15	35	18	18	9.6	11	1,210
2	8.3	10	e10	97	e25	e15	29	17	16	7.6	10	598
3	8.1	10	e9.5	66	e33	e16	26	13	17	6.6	9.7	202
4	13	12	e9.3	52	e47	e19	25	13	16	7.3	11	109
5	11	16	e9.1	47	e34	83	30	323	14	997	9.0	65
6	8.8	20	e9.0	41	25	69	20	129	12	507	7.5	44
7	7.6	16	e8.7	39	21	46	26	106	12	1,030	7.5	32
8	7.3	14	e8.3	49	e18	151	24	69	14	312	6.1	25
9	6.8	13	e8.3	115	e17	241	21	56	13	756	28	20
10	6.6	124	e8.4	88	e16	99	21	1,010	12	603	28	15
11	5.8	121	8.9	52	e16	66	19	1,530	14	212	13	13
12	5.5	50	8.5	e40	e17	71	17	318	18	125	11	11
13	6.6	34	8.3	32	e17	181	16	150	31	78	9.5	11
14	6.4	26	8.5	27	e14	122	15	98	31	55	7.7	10
15	6.6	23	8.2	e26	e15	94	15	145	17	61	6.5	9.4
16	6.8	20	8.2	e24	e15	87	15	84	14	51	6.1	9.1
17	6.8	18	8.2	e22	e14	73	16	62	13	37	24	8.3
18	7.0	16	13	e21	e14	59	15	49	13	44	9.0	7.1
19	19	15	200	e20	e16	53	14	41	13	33	7.2	7.3
20	9.0	13	169	e22	e18	50	24	36	9.6	25	5.6	7.9
21	7.8	14	77	e21	e23	80	19	32	7.9	47	5.0	7.9
22	7.0	20	51	e19	86	62	16	28	7.6	40	4.5	67
23	6.5	17	35	e17	66	46	14	26	7.3	29	4.2	50
24	6.5	16	29	e16	38	39	13	23	6.8	23	4.8	25
25	16	14	27	e17	e26	35	25	21	6.5	17	4.1	43
26	15	15	19	e16	e21	35	25	19	8.5	16	4.0	70
27	11	13	18	e14	e19	32	18	17	8.3	19	9.1	291
28	10	12	18	e16	e17	33	16	19	7.1	22	9.0	105
29	14	12	18	e16	---	69	16	32	19	17	35	61
30	14	12	95	e16	---	48	14	21	17	13	39	42
31	12	---	308	e16	---	39	---	33	---	12	19	---
TOTAL	285.7	727	1,227.4	1,265	708	2,128	599	4,538	413.6	5,212.1	365.1	3,176.0
MEAN	9.22	24.2	39.6	40.8	25.3	68.6	20.0	146	13.8	168	11.8	106
MAX	19	124	308	201	86	241	35	1,530	31	1,030	39	1,210
MIN	5.5	10	8.2	14	14	15	13	13	6.5	6.6	4.0	7.1
CFSM	0.28	0.73	1.19	1.23	0.76	2.07	0.60	4.41	0.42	5.06	0.35	3.19
IN.	0.32	0.81	1.38	1.42	0.79	2.38	0.67	5.08	0.46	5.84	0.41	3.56

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2003, BY WATER YEAR (WY)

MEAN	15.2	34.9	30.5	40.6	47.2	55.6	53.2	72.0	41.0	36.4	10.5	24.6
MAX	94.3	205	158	129	139	109	96.7	248	158	168	34.8	139
(WY)	(2002)	(1993)	(1991)	(1993)	(1990)	(1990)	(1989)	(1996)	(1998)	(2003)	(1989)	(1989)
MIN	1.59	2.37	3.84	4.73	7.18	11.2	9.73	6.45	4.34	3.08	2.27	1.24
(WY)	(1998)	(1998)	(1998)	(2000)	(1998)	(2000)	(2000)	(1988)	(1988)	(1991)	(1999)	(1999)

SUMMARY STATISTICS

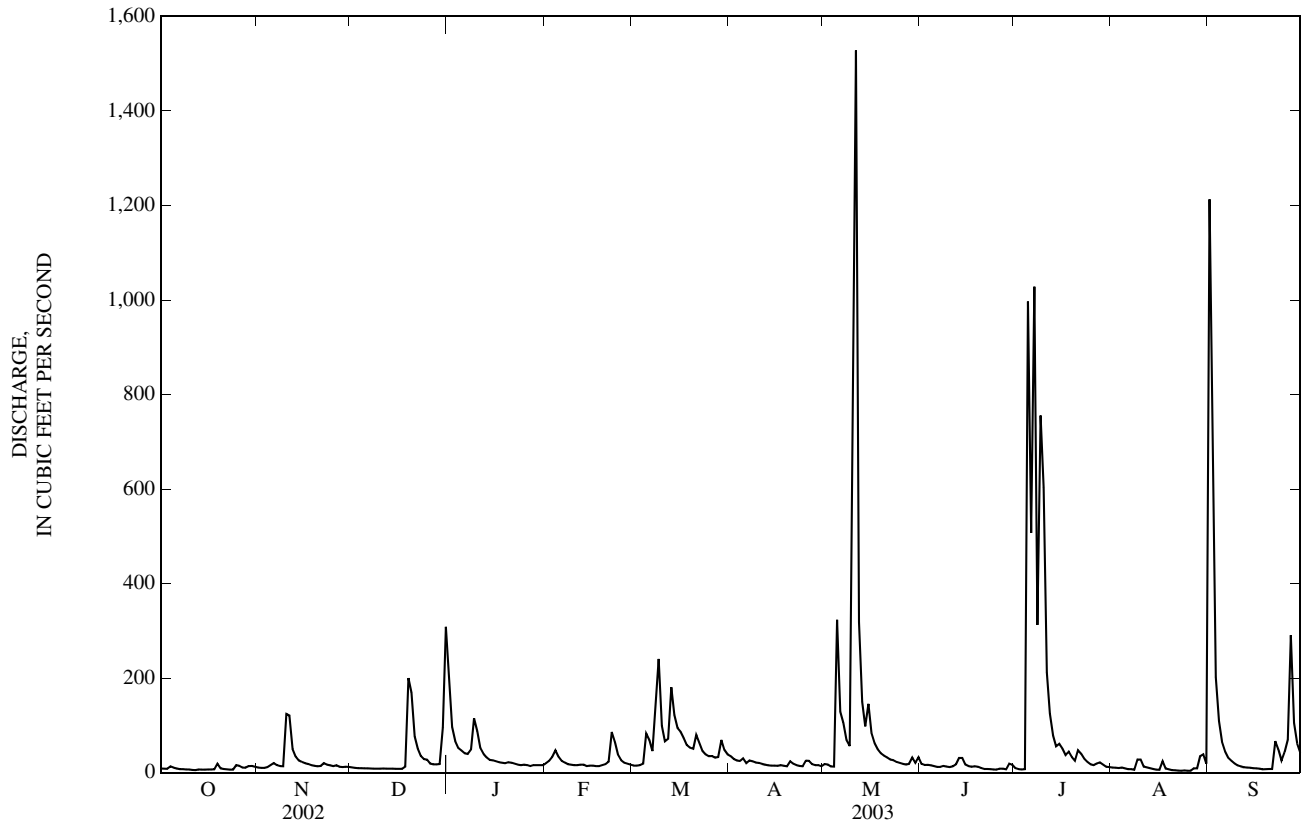
FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1988 - 2003

ANNUAL TOTAL	20,526.3	20,644.9	
ANNUAL MEAN	56.2	56.6	38.4
HIGHEST ANNUAL MEAN			66.4
LOWEST ANNUAL MEAN			10.0
HIGHEST DAILY MEAN	1,560	1,530	1,900
LOWEST DAILY MEAN	4.6	4.0	0.20
ANNUAL SEVEN-DAY MINIMUM	5.4	4.6	0.24
MAXIMUM PEAK FLOW		2,450	2,710
MAXIMUM PEAK STAGE		13.03	13.99
ANNUAL RUNOFF (CFSM)	1.69	1.70	1.16
ANNUAL RUNOFF (INCHES)	23.00	23.13	15.71
10 PERCENT EXCEEDS	122	96	76
50 PERCENT EXCEEDS	20	18	14
90 PERCENT EXCEEDS	7.3	7.6	2.9

e Estimated



03339500 SUGAR CREEK AT CRAWFORDSVILLE, IN

LOCATION.--Lat 40°02'56", long 86°53'58", in SW¹/₄NW¹/₄ sec.32, T.19 N., R.4 W., Montgomery County, Hydrologic Unit 05120110, (CRAWFORDSVILLE, IN. quadrangle), on left bank 327 ft upstream from Crawfordsville Electric Light and Power Co.'s dam at Crawfordsville, 700 ft 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. Datum of gage is 657.77 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 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

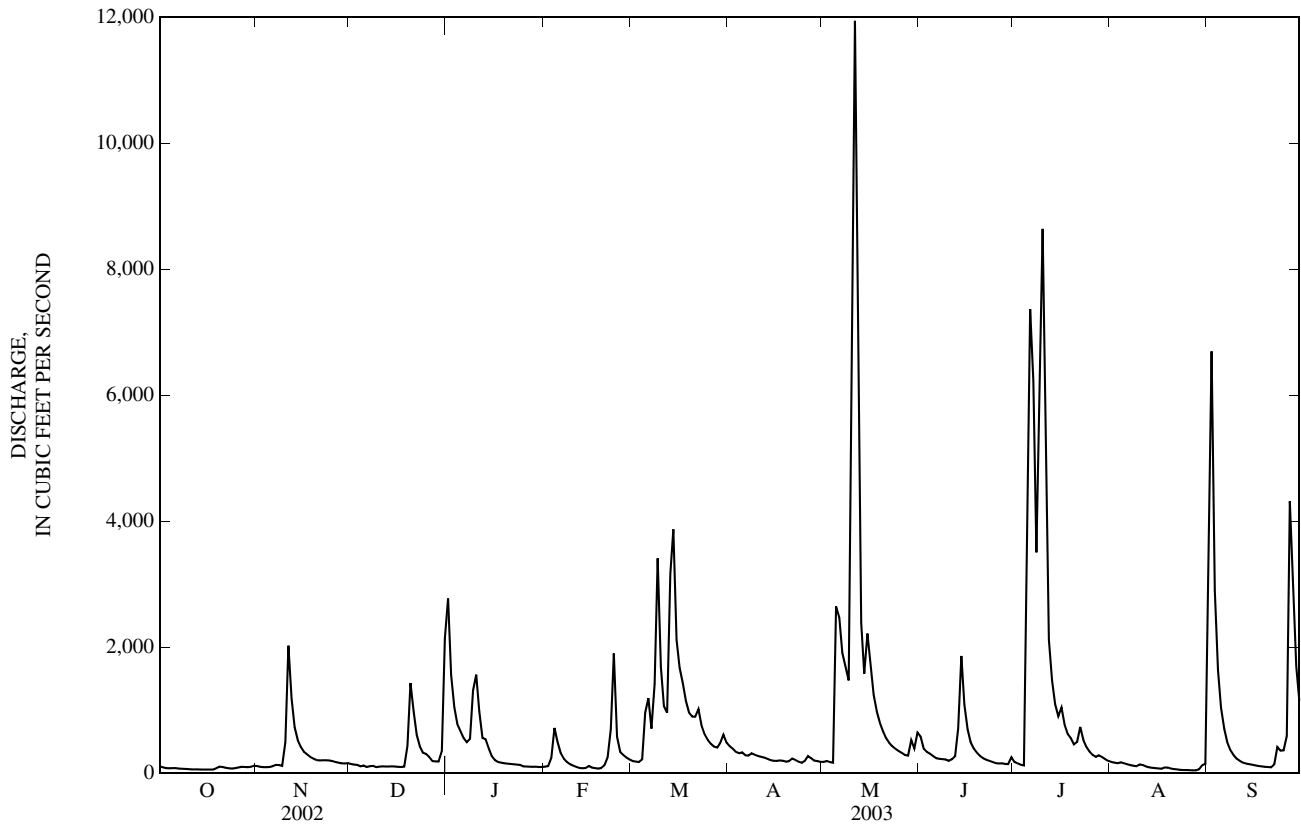
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	108	116	150	2,780	e105	e195	431	182	586	179	180	3,920
2	93	103	139	1,560	e115	e186	391	195	390	157	169	6,690
3	84	98	133	1,050	e240	e180	338	181	338	136	161	2,900
4	81	97	112	782	e720	e220	318	169	313	127	175	1,640
5	82	101	123	669	e500	964	333	2,650	274	2,870	159	1,040
6	82	114	101	559	e320	1,190	285	2,480	240	7,370	143	706
7	76	133	115	495	e230	710	282	1,910	229	6,220	131	494
8	73	132	119	548	e180	1,420	316	1,700	225	3,510	121	367
9	71	120	99	1,310	e145	3,410	295	1,480	220	6,500	114	290
10	67	491	107	1,570	e120	1,690	276	6,830	198	8,640	142	233
11	63	2,030	112	984	e100	1,070	264	11,900	222	4,490	132	197
12	62	1,180	109	e560	e85	962	250	8,070	273	2,120	108	171
13	62	733	108	e540	e80	3,160	230	2,390	710	1,470	97	155
14	61	525	110	e400	e86	3,870	210	1,580	1,860	1,100	89	147
15	60	418	108	e270	e115	2,120	200	2,220	1,090	907	84	137
16	59	341	104	e210	e90	1,680	198	1,780	700	1,040	78	126
17	60	300	101	e180	e82	1,430	204	1,240	494	775	73	117
18	59	260	106	e170	e75	1,150	200	976	392	625	94	110
19	81	233	435	e160	e85	965	184	802	330	560	91	104
20	107	211	1,430	e155	e130	901	194	667	276	458	75	100
21	101	206	976	e150	e250	898	232	558	237	496	68	96
22	88	208	611	e145	e700	1,020	213	482	216	735	63	144
23	79	207	426	e140	e1,900	761	184	428	197	527	56	418
24	75	204	326	e135	e580	617	168	387	180	418	54	361
25	83	195	306	e110	e340	530	199	354	163	342	52	366
26	92	180	260	e108	e290	468	274	324	156	291	50	592
27	103	170	195	e106	e250	423	242	291	159	262	48	4,320
28	100	158	189	e104	e220	409	204	282	150	285	47	3,260
29	99	158	187	e106	---	487	195	530	146	259	63	1,700
30	104	163	349	e102	---	614	183	395	253	226	130	1,160
31	118	---	2,140	e102	---	488	---	646	---	198	148	---
TOTAL	2,533	9,585	9,886	16,260	8,133	34,188	7,493	54,079	11,217	53,293	3,195	32,061
MEAN	81.7	320	319	525	290	1,103	250	1,744	374	1,719	103	1,069
MAX	118	2,030	2,140	2,780	1,900	3,870	431	11,900	1,860	8,640	180	6,690
MIN	59	97	99	102	75	180	168	169	146	127	47	96
CFSM	0.16	0.63	0.63	1.03	0.57	2.17	0.49	3.43	0.73	3.38	0.20	2.10
IN.	0.19	0.70	0.72	1.19	0.59	2.50	0.55	3.95	0.82	3.89	0.23	2.34

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2003, BY WATER YEAR (WY)

MEAN	158	338	477	609	715	880	844	705	577	330	167	169
MAX	1,098	3,060	2,084	4,163	2,229	2,390	2,592	3,297	2,648	1,719	1,801	1,991
(WY)	(1978)	(1993)	(1991)	(1950)	(1985)	(1978)	(1964)	(1943)	(1957)	(2003)	(1958)	(1989)
MIN	13.1	23.5	17.0	17.1	68.4	79.2	67.1	74.9	32.5	16.6	8.42	4.80
(WY)	(1964)	(1998)	(1964)	(1977)	(1964)	(1941)	(2000)	(1941)	(1988)	(1988)	(1941)	(1941)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1939 - 2003	
ANNUAL TOTAL	235,089		241,923			
ANNUAL MEAN	644		663		496	
HIGHEST ANNUAL MEAN					1,086	1950
LOWEST ANNUAL MEAN					65.0	1941
HIGHEST DAILY MEAN	16,800	May 13	11,900	May 11	20,100	Jun 29, 1957
LOWEST DAILY MEAN	22	Aug 12	47	Aug 28	2.4	Sep 24, 1941
ANNUAL SEVEN-DAY MINIMUM	28	Aug 8	53	Aug 22	2.7	Sep 21, 1941
MAXIMUM PEAK FLOW			13,000	May 11	26,300	Jun 28, 1957
MAXIMUM PEAK STAGE			9.90	May 11	14.48	Jun 28, 1957
ANNUAL RUNOFF (CFSM)	1.27		1.30		0.97	
ANNUAL RUNOFF (INCHES)	17.18		17.68		13.24	
10 PERCENT EXCEEDS	1,490		1,600		1,160	
50 PERCENT EXCEEDS	233		220		178	
90 PERCENT EXCEEDS	64		85		28	

e Estimated



03340500 WABASH RIVER AT MONTEZUMA, IN

LOCATION.--Lat 39°47'33", long 87°22'26", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.35, T.16 N., R.9 W., Parke County, Hydrologic Unit 05120108, (MONTEZUMA, IN quadrangle), 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 located 50 ft upstream of present 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 fair. 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,470	2,360	2,500	6,210	2,250	5,320	12,000	3,610	12,000	3,180	13,400	23,600
2	2,510	2,270	2,470	7,750	2,320	5,160	10,800	3,680	11,300	3,070	12,400	44,800
3	2,260	2,120	2,410	12,100	2,610	4,620	8,390	4,270	9,580	2,910	11,700	47,600
4	2,150	2,030	2,180	13,000	3,650	4,200	6,630	4,490	7,500	2,840	12,400	45,500
5	2,170	2,110	2,070	11,700	5,220	4,540	6,100	10,900	6,640	2,720	14,800	41,500
6	2,160	2,190	1,670	10,100	5,300	6,330	7,260	19,200	6,110	15,900	14,800	36,300
7	2,170	2,370	1,440	8,260	5,600	6,350	12,700	22,500	5,510	28,900	13,200	30,600
8	2,190	2,440	1,750	6,380	5,610	6,330	14,100	23,200	5,110	40,300	11,900	24,800
9	2,060	2,230	1,840	5,460	5,040	10,100	14,300	22,100	4,860	53,300	12,400	20,500
10	2,130	2,330	1,970	6,390	4,670	13,900	13,200	27,100	4,620	75,800	12,200	18,000
11	2,170	4,260	1,950	6,470	4,330	15,300	11,500	41,600	4,320	101,000	11,200	15,100
12	2,140	5,180	1,740	5,920	3,820	15,400	10,100	49,200	4,610	108,000	10,100	12,700
13	2,150	4,580	1,790	7,460	3,320	15,100	8,470	48,800	7,660	101,000	9,380	11,100
14	2,110	5,410	1,870	7,020	3,000	18,900	7,340	44,600	14,300	87,800	8,980	10,700
15	2,080	5,630	1,860	5,550	2,980	20,400	6,220	40,700	21,000	75,500	8,850	10,300
16	1,960	5,070	1,750	4,200	2,910	21,100	5,640	38,000	21,800	66,000	8,800	9,390
17	1,890	4,380	1,780	3,010	2,950	21,000	5,330	34,100	17,600	57,100	8,620	7,400
18	1,910	3,890	1,820	2,150	2,730	20,600	4,910	30,600	14,400	50,300	8,230	5,950
19	2,060	3,560	1,810	2,080	2,520	19,400	4,650	27,500	12,200	46,700	8,100	5,520
20	2,280	2,990	2,500	2,190	3,000	17,000	4,480	24,100	10,600	42,600	7,830	5,050
21	2,190	2,730	3,570	2,280	3,710	14,300	4,590	20,600	8,690	37,900	7,140	4,840
22	2,250	2,750	4,020	2,640	4,360	12,700	4,480	18,200	7,250	34,600	6,420	4,940
23	2,170	2,810	7,340	2,840	7,060	12,400	4,360	15,900	6,530	32,400	5,880	4,820
24	2,010	2,790	7,220	2,710	6,690	13,200	4,070	13,700	5,710	31,400	5,880	5,050
25	2,050	2,510	5,820	2,620	5,480	12,500	3,890	12,600	4,790	30,100	5,720	8,100
26	2,120	2,690	4,610	2,620	4,670	10,400	4,460	11,700	4,250	27,600	5,280	11,400
27	2,200	2,850	3,780	2,450	4,720	8,730	4,640	11,200	3,720	23,800	4,920	22,100
28	2,220	2,900	3,270	2,290	5,350	7,570	4,370	10,700	3,460	20,900	4,770	31,000
29	2,240	2,840	2,880	2,310	---	6,550	3,960	10,500	3,190	19,700	4,630	32,700
30	2,290	2,600	2,710	2,270	---	6,230	3,900	10,900	3,100	17,800	8,480	32,800
31	2,350	---	3,240	2,320	---	8,410	---	10,900	---	15,200	12,400	---
TOTAL	67,110	94,870	87,630	160,750	115,870	364,040	216,840	667,150	252,410	1,256,320	290,810	584,160
MEAN	2,165	3,162	2,827	5,185	4,138	11,740	7,228	21,520	8,414	40,530	9,381	19,470
MAX	2,510	5,630	7,340	13,000	7,060	21,100	14,300	49,200	21,800	108,000	14,800	47,600
MIN	1,890	2,030	1,440	2,080	2,250	4,200	3,890	3,610	3,100	2,720	4,630	4,820
CFSM	0.19	0.28	0.25	0.47	0.37	1.06	0.65	1.94	0.76	3.65	0.84	1.75
IN.	0.22	0.32	0.29	0.54	0.39	1.22	0.73	2.23	0.84	4.20	0.97	1.95

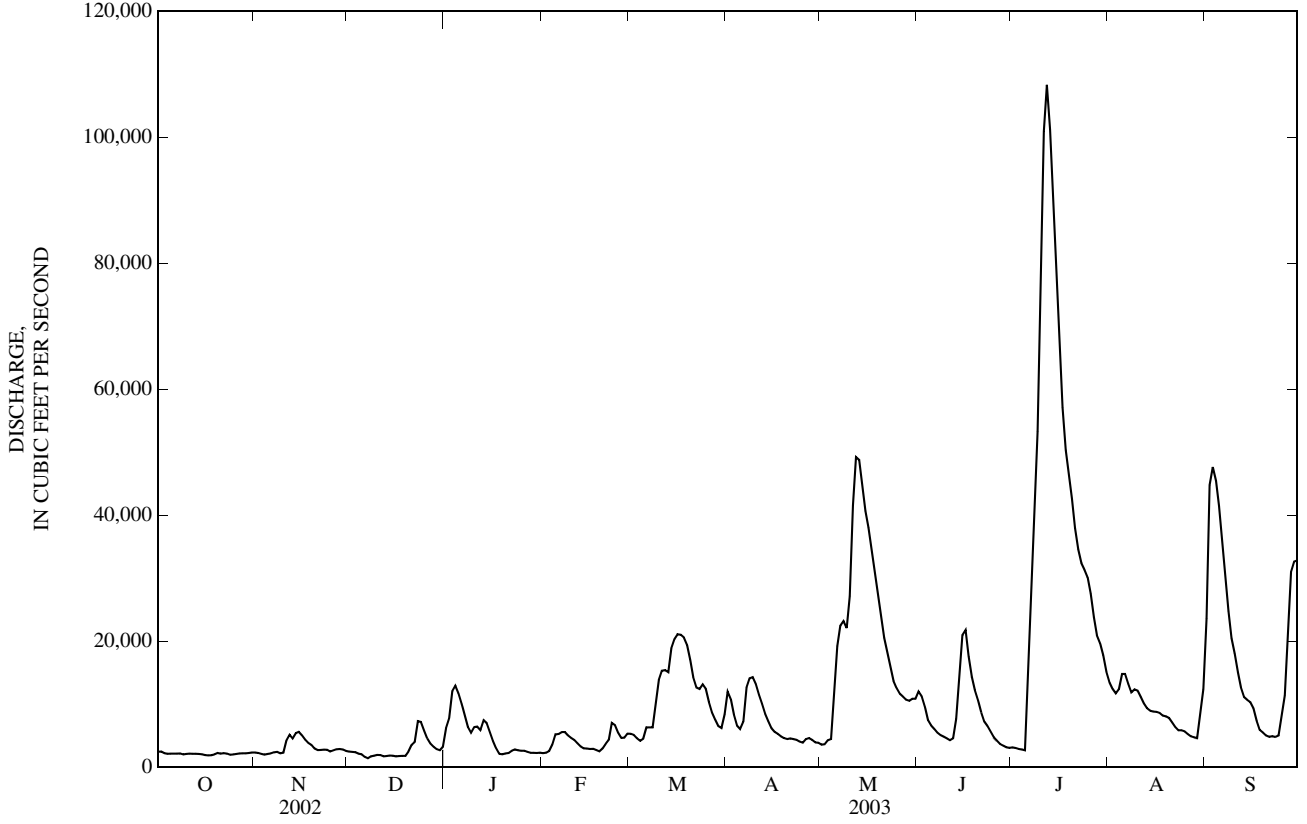
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2003, BY WATER YEAR (WY)

MEAN	4,362	6,147	9,306	12,330	14,230	17,130	17,340	14,120	10,820	7,736	4,535	3,788
MAX	23,630	36,840	40,350	66,690	40,610	49,690	37,650	58,400	42,730	40,530	18,840	19,470
(WY)	(2002)	(1993)	(1928)	(1950)	(1959)	(1982)	(1938)	(1943)	(1958)	(2003)	(1958)	(2003)
MIN	973	1,202	1,041	1,107	1,789	2,370	4,781	2,082	1,357	1,210	815	710
(WY)	(1964)	(1965)	(1964)	(1977)	(1931)	(1941)	(2000)	(1934)	(1934)	(1934)	(1941)	(1941)

WABASH RIVER BASIN

03340500 WABASH RIVER AT MONTEZUMA, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1928 - 2003	
ANNUAL TOTAL	4,341,750		4,157,960		10,130	
ANNUAL MEAN	11,900		11,390		20,290	
HIGHEST ANNUAL MEAN					1950	
LOWEST ANNUAL MEAN					2,506	
HIGHEST DAILY MEAN	76,500	May 14	108,000	Jul 12	182,000	May 20, 1943
LOWEST DAILY MEAN	1,440	Dec 7	1,440	Dec 7	571	Sep 24, 1941
ANNUAL SEVEN-DAY MINIMUM	1,770	Dec 6	1,770	Dec 6	600	Sep 23, 1941
MAXIMUM PEAK FLOW			109,000	Jul 12	184,000	May 20, 1943
MAXIMUM PEAK STAGE			30.43	Jul 12	32.83	May 20, 1943
ANNUAL RUNOFF (CFSM)	1.07		1.02		0.91	
ANNUAL RUNOFF (INCHES)	14.53		13.91		12.38	
10 PERCENT EXCEEDS	30,500		28,100		25,000	
50 PERCENT EXCEEDS	5,820		5,630		5,680	
90 PERCENT EXCEEDS	2,080		2,170		1,740	



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, (RUSSELLVILLE, IN quadrangle), 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 fair 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	25	29	928	e29	e54	95	56	80	25	42	5,540
2	13	21	26	394	e32	e52	85	56	62	45	39	5,570
3	12	20	24	227	e66	e50	74	50	60	39	40	855
4	11	21	21	155	231	e62	70	45	58	27	79	435
5	11	20	23	133	e135	528	74	1,010	53	155	44	266
6	10	20	23	109	e68	404	63	601	48	1,280	36	179
7	12	26	22	96	e68	191	62	508	45	970	32	127
8	11	32	22	112	e52	506	63	350	48	559	29	99
9	11	28	e21	364	e41	1,140	57	268	48	1,900	27	83
10	10	33	19	309	e33	350	55	2,270	43	2,340	25	71
11	9.3	307	19	e150	e28	211	54	7,120	42	811	24	61
12	8.9	179	19	e98	e24	193	52	1,950	68	386	23	55
13	9.3	97	20	e100	e22	311	47	584	225	238	24	51
14	8.5	69	20	e76	e24	442	43	377	919	158	21	49
15	7.9	55	20	e66	e33	287	42	477	293	131	19	46
16	8.0	48	19	e58	e26	256	42	322	163	106	19	44
17	8.0	41	19	e50	e23	222	45	231	108	84	18	41
18	8.5	37	20	e47	e21	176	44	184	82	77	16	40
19	11	34	172	e44	e24	147	40	148	70	71	14	38
20	11	33	535	e44	e80	135	43	126	60	60	14	37
21	11	31	286	e41	274	131	60	109	51	545	13	37
22	12	31	153	e40	549	134	55	92	47	1,170	13	44
23	12	33	101	e39	540	113	45	85	42	298	12	76
24	11	35	78	e38	189	100	40	78	39	157	11	65
25	12	33	74	e30	e94	91	62	73	35	104	11	56
26	14	31	59	e30	e80	92	117	68	32	82	11	66
27	21	29	45	e29	e70	90	94	63	32	70	10	401
28	20	27	43	e29	e62	86	73	58	31	71	10	307
29	19	27	44	e29	---	125	65	76	27	69	35	171
30	19	27	87	e28	---	133	59	74	25	56	189	116
31	27	---	799	e29	---	107	---	88	---	48	51	---
TOTAL	385.4	1,450	2,862	3,922	2,918	6,919	1,820	17,597	2,936	12,132	951	15,026
MEAN	12.4	48.3	92.3	127	104	223	60.7	568	97.9	391	30.7	501
MAX	27	307	799	928	549	1,140	117	7,120	919	2,340	189	5,570
MIN	7.9	20	19	28	21	50	40	45	25	25	10	37
CFSM	0.09	0.35	0.66	0.91	0.75	1.61	0.44	4.08	0.70	2.82	0.22	3.60
IN.	0.10	0.39	0.77	1.05	0.78	1.85	0.49	4.71	0.79	3.25	0.25	4.02

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 2003, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)	MEAN	MAX	(WY)	MIN	(WY)	MEAN	MAX	(WY)	MIN	(WY)	MEAN	MAX	(WY)	MIN	(WY)																																						
	55.5	406	(2002)	2.14	(1998)	124	844	(1993)	2.33	(2000)	179	913	(1991)	3.91	(1998)	164	616	(1974)	4.41	(2000)	202	694	(1985)	14.8	(1998)	254	683	(1978)	218	730	(1964)	40.7	(2000)	198	811	(1996)	19.5	(1976)	129	614	(1998)	11.1	(1988)	96.6	430	(1979)	4.83	(1991)	47.0	268	(1979)	2.75	(1991)	50.2	545	(1989)	1.62	(1999)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

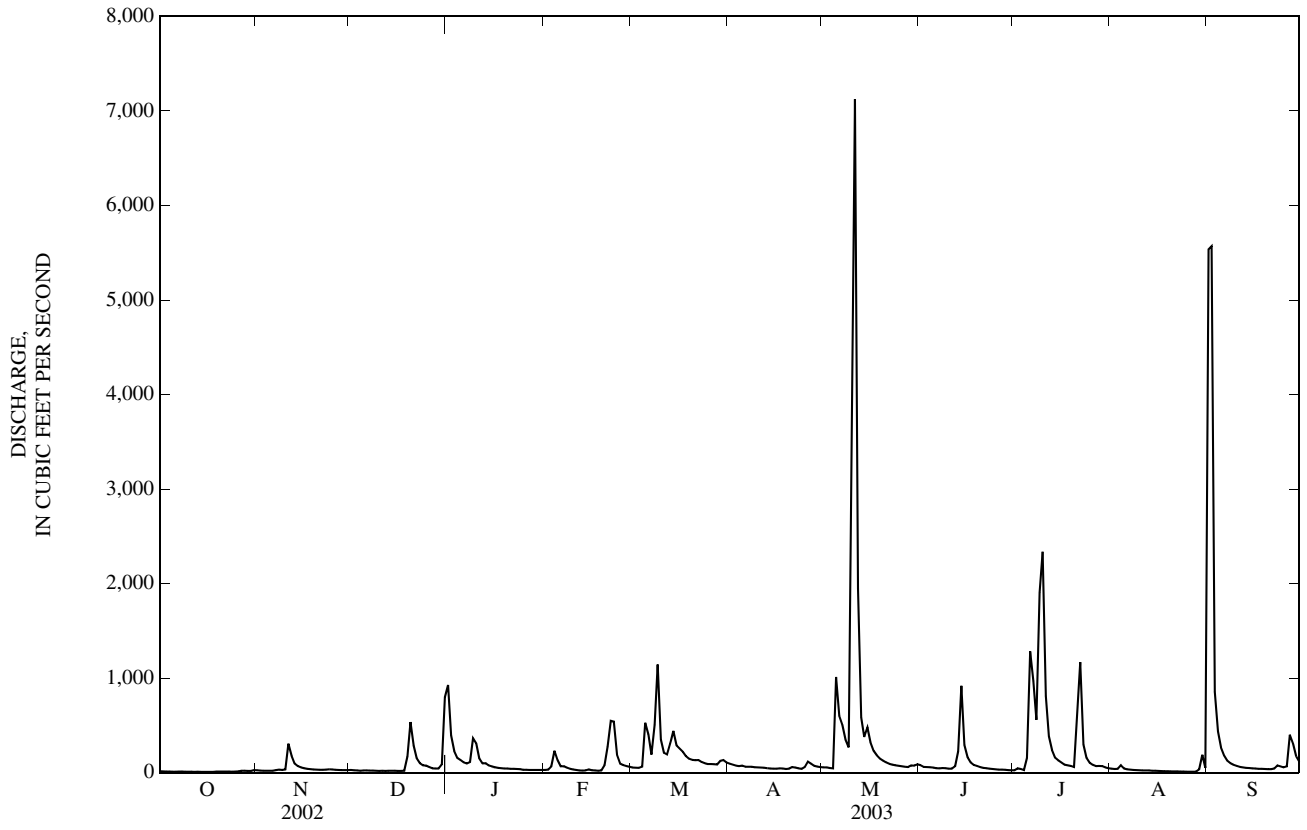
FOR 2003 WATER YEAR

WATER YEARS 1958 - 2003

ANNUAL TOTAL	72,841.0	68,918.4	
ANNUAL MEAN	200	189	143
HIGHEST ANNUAL MEAN			292
LOWEST ANNUAL MEAN			38.5
HIGHEST DAILY MEAN	5,680	May 13	7,120
LOWEST DAILY MEAN	5.6	Sep 13	7.9
ANNUAL SEVEN-DAY MINIMUM	6.2	Sep 13	8.4
MAXIMUM PEAK FLOW			11,300
MAXIMUM PEAK STAGE			16.35
ANNUAL RUNOFF (CFSM)	1.44		1.36
ANNUAL RUNOFF (INCHES)	19.49		18.44
10 PERCENT EXCEEDS	470		356
50 PERCENT EXCEEDS	55		54
90 PERCENT EXCEEDS	11		16

e Estimated

03340800 BIG RACCOON CREEK NEAR FINCASTLE, IN—Continued



WATER-QUALITY RECORDS

INSTRUMENTATION.--Temperature recorder.

PERIOD OF RECORD.--

WATER TEMPERATURE.--September 1987 to April 1993. September 1994 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 26.3°C, Aug. 22, 1998; minimum, -0.3°C, Jan. 30-31, 1996.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 25.1°C, Aug. 8-18, 19, minimum, 1.5°C, Feb. 16.

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	22.8	20.7	21.5	13.8	13.4	13.6	6.5	5.0	5.6	3.6	3.4	3.5
2	22.6	21.0	21.5	13.4	13.0	13.2	7.4	5.0	6.0	3.5	3.1	3.3
3	22.7	20.9	21.5	13.0	12.6	12.8	5.8	3.8	4.7	3.5	3.1	3.2
4	21.7	20.1	21.1	12.6	12.2	12.5	4.5	3.5	3.9	3.9	3.4	3.7
5	22.6	19.7	20.7	12.2	11.9	12.1	5.2	3.4	4.1	3.8	3.4	3.6
6	21.6	19.5	20.3	11.9	11.4	11.7	4.8	3.0	3.7	3.4	3.1	3.3
7	21.7	18.8	19.8	11.4	11.1	11.3	5.0	2.9	3.6	3.8	3.1	3.4
8	21.0	18.6	19.5	11.2	11.0	11.1	4.7	2.6	3.5	3.5	3.1	3.3
9	21.1	18.9	19.7	11.3	11.0	11.2	4.3	2.2	3.0	3.6	3.1	3.3
10	20.4	18.8	19.5	11.6	11.3	11.4	3.4	2.4	2.9	---	---	---
11	21.2	18.8	19.8	11.5	11.2	11.4	4.5	2.7	3.3	---	---	---
12	20.2	19.0	19.7	11.2	11.0	11.2	3.8	2.9	3.3	---	---	---
13	20.0	17.5	18.6	11.1	10.8	10.9	3.2	2.9	3.1	3.0	2.2	2.3
14	19.9	17.1	18.0	10.8	10.7	10.8	4.0	2.9	3.2	2.2	1.9	2.1
15	19.7	17.0	18.0	10.7	10.4	10.6	4.6	2.8	3.4	2.4	1.8	2.0
16	19.3	16.9	17.7	10.4	10.0	10.2	4.1	2.8	3.2	---	---	---
17	18.0	16.8	17.1	10.0	9.6	9.8	---	---	---	2.5	1.7	2.0
18	18.6	16.3	17.1	9.7	9.5	9.5	---	---	---	---	---	---
19	18.1	16.9	17.6	9.6	9.2	9.4	6.0	4.5	5.5	3.0	1.8	2.2
20	17.8	17.4	17.6	9.4	9.1	9.2	5.0	4.1	4.4	2.9	2.0	2.3
21	17.4	16.9	17.2	9.1	8.8	9.0	4.4	3.9	4.2	3.4	1.9	2.3
22	17.1	16.8	16.9	8.8	8.5	8.7	4.4	4.1	4.3	2.7	1.8	2.1
23	16.9	16.5	16.8	8.5	8.3	8.4	4.2	4.0	4.1	2.8	1.6	2.0
24	16.5	16.2	16.4	8.6	8.2	8.4	4.3	3.4	3.8	2.7	1.6	2.1
25	16.2	15.9	16.0	8.3	7.9	8.2	3.5	3.2	3.3	3.4	1.9	2.4
26	15.9	15.6	15.8	7.9	7.4	7.6	---	---	---	3.1	1.8	2.3
27	15.6	15.3	15.5	7.4	7.2	7.3	3.3	3.0	3.1	2.5	1.6	2.0
28	15.4	15.1	15.2	7.2	6.8	7.0	4.5	2.8	3.5	2.9	2.1	2.5
29	15.1	14.4	14.7	7.5	6.7	7.0	4.9	2.6	3.4	2.9	2.1	2.5
30	14.4	14.1	14.2	7.3	5.8	6.5	4.3	3.4	4.0	3.8	1.9	2.5
31	14.2	13.8	14.0	---	---	---	4.2	3.5	3.9	3.0	2.3	2.6
MONTH	22.8	13.8	18.0	13.8	5.8	10.1	---	---	---	---	---	---

03340900 BIG RACCOON CREEK AT FERNDAL, IN—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	
													FEBRUARY
1	3.1	2.5	2.7	2.7	2.3	2.4	9.8	7.5	8.6	14.3	12.6	13.2	
2	4.0	2.4	2.9	2.5	2.0	2.3	10.3	8.4	9.1	13.4	12.1	12.8	
3	3.5	2.7	3.1	3.4	1.9	2.4	12.1	8.9	10.1	16.7	11.2	13.3	
4	3.0	2.3	2.5	3.3	2.2	2.6	11.7	10.1	10.7	13.2	11.4	12.2	
5	2.9	2.2	2.6	2.7	2.2	2.5	10.6	9.2	9.9	17.0	12.2	14.0	
6	3.0	2.7	2.8	3.6	2.1	2.6	10.2	8.9	9.4	16.2	12.2	13.9	
7	3.3	2.3	2.8	3.6	2.2	2.7	10.9	9.0	9.8	15.2	12.9	13.6	
8	3.8	2.3	2.8	3.8	2.3	2.9	10.1	8.9	9.6	14.8	12.4	13.3	
9	3.8	2.6	2.9	3.8	2.2	2.8	11.7	8.5	9.5	16.1	13.3	14.2	
10	3.2	2.3	2.8	3.6	2.0	2.7	13.4	8.3	10.4	15.7	13.4	13.9	
11	3.8	2.1	2.8	3.8	2.2	2.9	14.0	8.7	10.9	17.1	12.7	13.8	
12	3.7	2.2	2.6	3.6	2.6	2.9	14.2	9.0	11.1	15.7	12.6	13.7	
13	4.9	2.2	3.0	3.2	2.8	3.0	14.4	8.7	11.2	16.3	12.4	13.8	
14	3.3	2.3	2.7	4.1	2.7	3.2	14.6	9.3	11.4	13.9	13.3	13.6	
15	2.8	1.9	2.4	4.4	2.9	3.4	14.9	10.1	11.7	13.9	13.1	13.5	
16	2.7	1.5	2.2	4.7	3.0	3.5	13.8	10.5	11.7	14.3	13.4	13.7	
17	3.0	2.6	2.7	4.6	3.1	3.8	13.3	11.2	12.1	13.9	13.4	13.7	
18	2.9	2.6	2.7	5.2	3.8	4.4	13.6	10.4	11.7	14.1	13.4	13.8	
19	3.1	2.6	2.8	5.8	4.8	5.2	14.0	10.8	12.1	14.1	13.5	13.8	
20	4.7	2.6	3.2	6.2	4.9	5.3	13.8	11.3	12.3	13.9	13.6	13.8	
21	3.4	2.6	3.0	7.1	4.9	5.9	11.8	10.6	11.2	14.4	13.6	14.1	
22	3.1	2.6	2.9	7.1	5.9	6.4	14.3	10.5	11.9	15.3	14.3	14.8	
23	3.1	2.6	2.8	7.7	6.0	6.6	16.0	9.9	12.3	---	---	---	
24	2.8	2.2	2.6	7.7	5.9	6.6	13.1	10.6	11.8	---	---	---	
25	2.6	2.0	2.2	7.7	5.9	6.9	12.4	10.9	11.7	---	---	---	
26	3.1	2.0	2.3	8.3	6.4	7.0	16.9	11.8	13.6	---	---	---	
27	2.9	1.9	2.3	7.9	6.6	7.0	16.5	10.9	13.2	---	---	---	
28	3.7	2.1	2.5	7.9	6.3	7.0	15.5	11.7	13.0	---	---	---	
29	---	---	---	8.3	7.8	8.0	16.5	11.9	13.6	---	---	---	
30	---	---	---	8.9	8.0	8.4	16.3	12.1	13.7	---	---	---	
31	---	---	---	9.1	7.9	8.3	---	---	---	17.5	16.5	17.1	
MONTH	4.9	1.5	2.7	9.1	1.9	4.6	16.9	7.5	11.3	---	---	---	
		JUNE			JULY			AUGUST			SEPTEMBER		
1	17.1	16.9	17.0	19.8	17.0	18.0	21.3	20.9	21.1	21.5	20.0	21.3	
2	17.1	16.4	16.8	19.7	17.0	18.0	21.4	21.1	21.3	21.4	20.7	21.0	
3	17.0	16.6	16.8	20.2	17.1	18.2	21.7	21.3	21.5	21.4	20.4	20.9	
4	17.1	16.8	16.9	21.0	17.2	18.4	21.8	21.3	21.7	22.0	19.8	20.7	
5	17.2	16.7	16.9	20.3	17.3	18.4	22.3	21.7	22.1	21.8	19.4	20.6	
6	17.2	17.1	17.2	18.6	17.2	17.7	22.5	22.2	22.4	21.7	20.7	21.1	
7	17.4	16.7	17.1	18.2	17.4	17.7	22.7	22.2	22.5	21.6	20.6	21.0	
8	17.3	16.8	17.0	18.3	17.3	17.7	23.1	22.6	22.9	21.4	20.6	20.8	
9	18.0	16.7	17.2	18.2	17.5	17.8	23.5	23.0	23.2	21.2	20.5	20.9	
10	18.0	16.7	17.1	18.1	17.2	17.7	23.6	23.3	23.4	21.2	21.0	21.2	
11	18.0	16.8	17.3	18.3	17.6	17.9	23.9	23.4	23.7	21.3	21.1	21.2	
12	17.7	16.9	17.2	18.4	17.6	17.9	23.9	22.1	23.1	21.4	21.2	21.3	
13	18.1	16.9	17.3	18.4	17.8	18.1	23.5	22.2	22.7	21.5	21.3	21.4	
14	17.3	16.8	17.1	18.6	17.8	18.1	23.7	22.5	22.9	21.5	21.3	21.4	
15	17.9	17.2	17.5	18.4	17.8	18.1	24.2	21.9	22.9	21.6	21.4	21.5	
16	17.9	17.7	17.7	18.9	17.8	18.3	24.0	21.5	22.4	21.8	21.5	21.6	
17	18.0	17.4	17.7	18.8	18.0	18.3	24.8	21.5	22.6	21.9	21.7	21.7	
18	18.3	17.3	17.6	18.8	17.9	18.4	25.1	21.0	22.4	21.9	21.7	21.8	
19	18.3	17.1	17.6	19.0	18.2	18.6	25.1	20.7	22.3	22.2	21.8	22.0	
20	18.7	16.9	17.5	19.1	18.1	18.6	24.8	21.0	22.4	22.1	21.9	22.0	
21	18.6	16.9	17.6	19.0	18.2	18.7	24.9	21.1	22.6	22.0	21.9	22.0	
22	18.4	17.1	17.6	19.1	18.4	18.8	25.0	21.7	22.7	22.0	21.8	21.9	
23	18.8	17.0	17.7	19.0	18.5	18.8	24.5	21.2	22.3	21.9	21.2	21.6	
24	19.1	17.1	17.8	19.3	18.5	18.9	24.7	20.8	22.3	21.9	21.2	21.4	
25	19.1	17.1	17.8	19.5	18.6	19.0	24.4	21.1	22.4	22.1	20.8	21.3	
26	18.1	16.9	17.6	19.6	18.7	19.1	24.9	21.3	22.7	21.1	20.7	20.9	
27	19.9	16.5	17.7	19.8	18.8	19.2	24.9	21.8	22.8	21.5	20.5	20.9	
28	18.9	16.6	17.6	20.0	18.9	19.5	24.8	21.5	22.6	20.8	20.1	20.4	
29	19.9	16.9	18.0	20.5	19.8	20.2	23.4	21.6	22.2	20.6	19.8	20.2	
30	19.9	17.1	18.1	20.8	20.4	20.6	23.9	21.6	22.3	20.2	19.5	19.9	
31	---	---	---	21.0	20.7	20.9	21.7	20.0	21.5	---	---	---	
MONTH	19.9	16.4	17.4	21.0	17.0	18.6	25.1	20.0	22.4	22.2	19.4	21.2	

03341300 BIG RACCOON CREEK AT COXVILLE, IN

LOCATION.--Lat 39°39'09", long 87°17'37", in SW¹/₄SW¹/₄ sec.15, T.14 N., R.8 W., Parke County, Hydrologic Unit 05120108, (MECCA, IN quadrangle), 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 September 1992 (gage height only). October 1992 to current year (discharge). 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.--Records good except for estimated daily discharges, which are poor. Flow regulated by Cecil M. Harden Lake.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	89	517	133	392	e134	226	210	120	1,220	103	1,010	4,800
2	88	516	110	572	132	230	169	115	1,160	97	1,010	5,660
3	87	518	90	613	148	224	159	108	911	93	1,010	1,840
4	89	516	79	771	328	225	132	103	880	85	1,020	1,210
5	88	519	74	785	274	368	124	620	857	84	1,080	803
6	87	519	69	773	433	425	118	516	843	677	1,380	646
7	86	514	68	719	389	325	118	404	797	507	1,380	551
8	88	516	69	301	212	308	117	327	348	333	1,380	488
9	90	515	66	345	204	343	111	298	282	535	1,380	571
10	89	604	65	364	188	299	106	1,070	218	4,070	1,370	1,080
11	86	763	65	422	175	265	102	4,780	220	1,610	1,360	1,330
12	106	586	63	422	178	247	97	1,830	309	1,050	1,260	1,530
13	154	541	70	420	176	248	94	1,060	388	663	356	1,540
14	89	519	72	268	148	286	90	795	929	488	243	1,540
15	85	505	71	e230	284	275	87	686	898	1,570	208	1,530
16	86	489	71	e224	291	263	84	591	940	1,520	159	1,520
17	83	478	70	e220	334	255	87	517	859	684	141	1,500
18	74	465	60	e216	277	247	88	418	580	643	127	1,480
19	132	459	84	e200	262	242	84	357	301	541	117	1,460
20	501	448	123	e160	300	239	96	325	246	436	110	1,440
21	525	462	139	e154	342	255	117	350	220	508	105	1,420
22	478	543	314	e150	473	256	104	704	206	614	99	1,390
23	481	532	429	e147	868	236	94	1,170	191	550	94	890
24	487	524	424	e146	666	225	87	1,200	180	454	91	399
25	509	509	252	e145	517	225	190	1,210	170	387	88	320
26	521	497	240	e142	381	248	356	1,210	161	347	86	259
27	508	483	236	e140	268	231	216	1,200	140	320	84	481
28	507	470	222	e138	234	223	169	1,190	120	351	81	376
29	527	410	127	e137	---	239	146	1,070	113	717	82	325
30	534	176	122	e136	---	230	129	1,230	107	981	152	425
31	521	---	213	e135	---	219	---	1,280	---	1,010	138	---
TOTAL	7,875	15,113	4,290	9,987	8,616	8,127	3,881	26,854	14,794	22,028	17,201	38,804
MEAN	254	504	138	322	308	262	129	866	493	711	555	1,293
MAX	534	763	429	785	868	425	356	4,780	1,220	4,070	1,380	5,660
MIN	74	176	60	135	132	219	84	103	107	84	81	259
CFSM	0.57	1.12	0.31	0.72	0.69	0.59	0.29	1.93	1.10	1.59	1.24	2.89
IN.	0.65	1.25	0.36	0.83	0.72	0.67	0.32	2.23	1.23	1.83	1.43	3.22

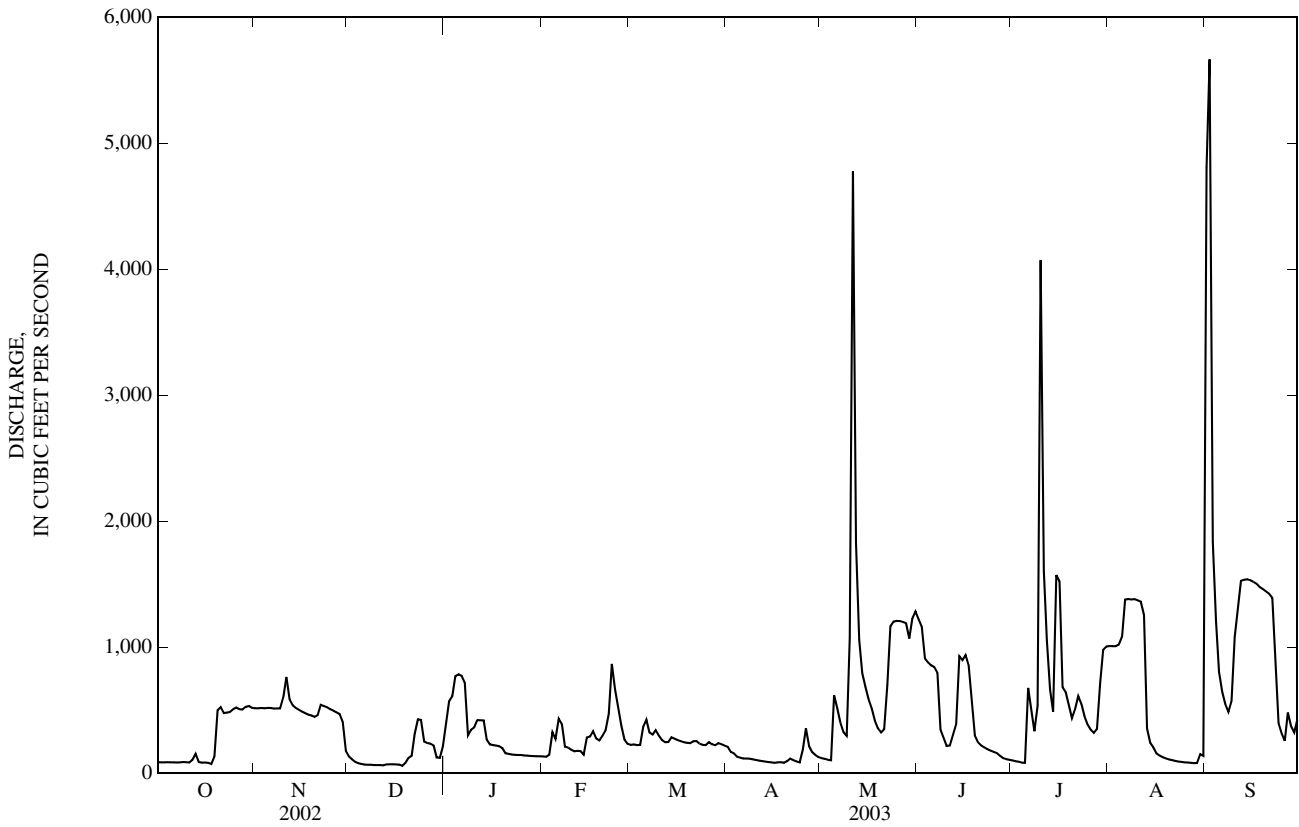
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2003, BY WATER YEAR (WY)

	336	576	619	550	627	644	642	631	541	356	234	235
MEAN	336	576	619	550	627	644	642	631	541	356	234	235
MAX	994	1,684	2,070	1,572	1,648	1,493	1,648	2,596	3,613	1,001	1,062	1,542
(WY)	(1990)	(1994)	(1968)	(1974)	(1969)	(1985)	(1957)	(2002)	(1957)	(1981)	(1958)	(1989)
MIN	17.5	44.3	48.2	25.9	72.8	100	115	86.2	64.2	59.4	34.4	34.6
(WY)	(1957)	(1957)	(1964)	(1977)	(1998)	(2000)	(2000)	(2000)	(1988)	(1988)	(1966)	(1966)

03341300 BIG RACCOON CREEK AT COXVILLE, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1957 - 2003	
ANNUAL TOTAL	259,217		177,570			
ANNUAL MEAN	710		486		497	
HIGHEST ANNUAL MEAN					914	1974
LOWEST ANNUAL MEAN					160	1966
HIGHEST DAILY MEAN	6,890	May 13	5,660	Sep 2	51,400	Jun 28, 1957
LOWEST DAILY MEAN	54	Aug 18	60	Dec 18	6.5	Oct 10, 1956
ANNUAL SEVEN-DAY MINIMUM	58	Aug 12	66	Dec 6	8.8	Oct 7, 1956
MAXIMUM PEAK FLOW			7,380	Sep 2	108,000	Jun 28, 1957
MAXIMUM PEAK STAGE			14.65	Sep 2	21.23	Jun 28, 1957
ANNUAL RUNOFF (CFSM)	1.59		1.09		1.11	
ANNUAL RUNOFF (INCHES)	21.52		14.74		15.06	
10 PERCENT EXCEEDS	1,620		1,190		1,180	
50 PERCENT EXCEEDS	478		301		263	
90 PERCENT EXCEEDS	75		88		67	

e Estimated



03341500 WABASH RIVER AT TERRE HAUTE, IN

LOCATION.--Lat 39°28'33", long 87°25'07", in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.21, T.12 N., R.9 W., Vigo County, Hydrologic Unit 05120111,(TERRE HAUTE, IN quadrangle), 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 fair. Flow partially regulated by upstream reservoirs.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 27, 1913, reached a stage of about 31.2 ft, present site and datum, discharge, 245,000 ft³/s.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

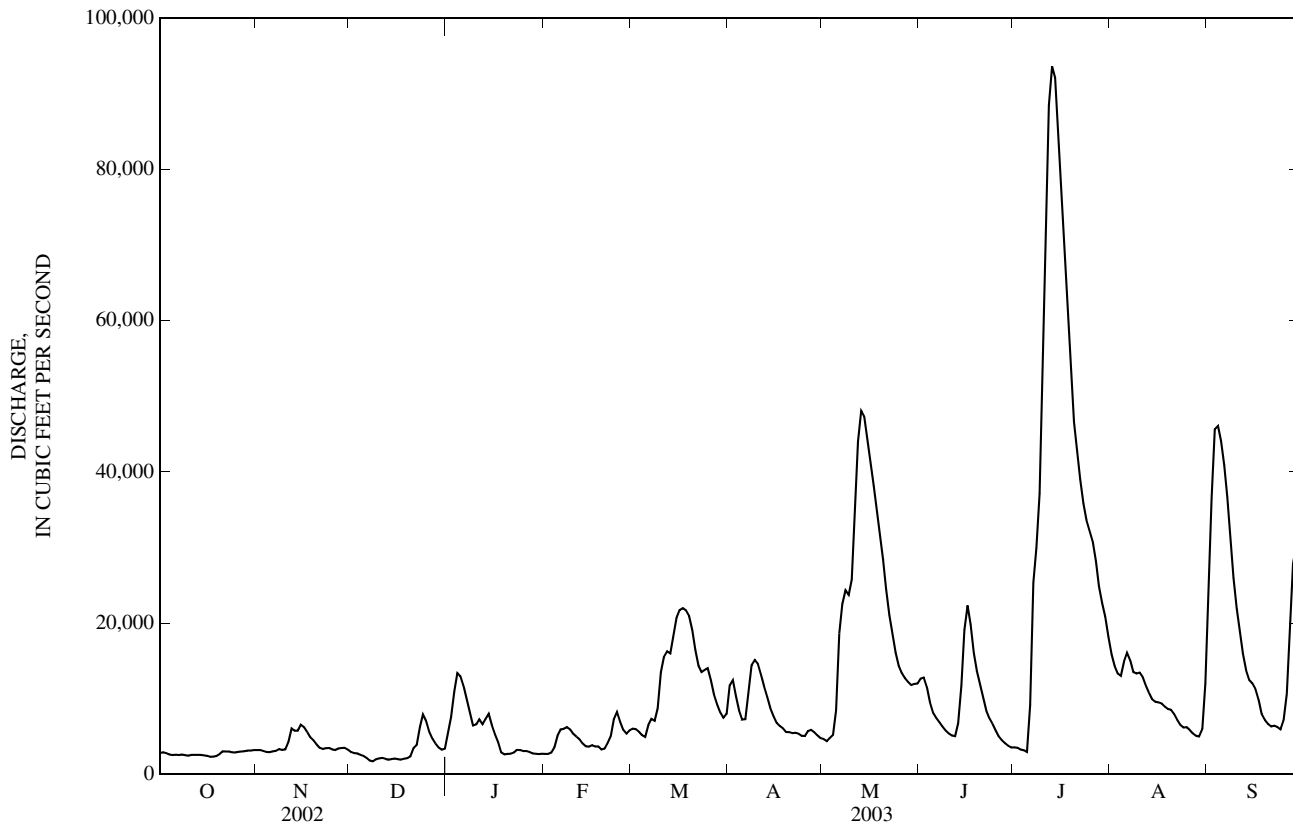
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,840	3,210	2,950	5,570	2,710	6,040	11,800	4,670	12,600	3,560	15,900	21,700
2	2,920	3,210	2,820	7,610	2,690	5,970	12,500	4,390	12,800	3,510	14,300	36,500
3	2,780	3,080	2,760	11,000	2,870	5,630	10,400	4,830	11,500	3,270	13,300	45,600
4	2,620	2,950	2,580	13,400	3,590	5,190	8,430	5,210	9,520	3,190	13,000	46,100
5	2,550	2,930	2,440	12,900	5,090	4,950	7,250	8,460	8,120	2,970	14,900	44,100
6	2,600	3,040	2,160	11,600	5,940	6,540	7,300	18,600	7,470	9,170	16,100	40,900
7	2,550	3,100	1,800	9,870	6,030	7,330	11,100	22,500	6,880	25,400	15,100	36,700
8	2,610	3,350	1,740	8,090	6,250	7,090	14,500	24,300	6,320	29,900	13,500	31,200
9	2,530	3,230	2,000	6,440	5,930	8,740	15,100	23,700	5,780	37,100	13,300	26,000
10	2,470	3,290	2,100	6,600	5,370	13,500	14,600	25,800	5,410	55,600	13,500	21,900
11	2,570	4,270	2,180	7,270	4,990	15,500	13,200	35,100	5,140	74,900	12,900	18,900
12	2,590	6,060	2,050	6,630	4,650	16,300	11,600	44,000	5,040	88,500	11,700	15,900
13	2,570	5,770	1,930	7,350	4,080	16,000	10,200	48,100	6,760	93,600	10,800	13,800
14	2,570	5,780	2,030	8,000	3,710	18,200	8,770	47,300	11,700	92,100	9,930	12,500
15	2,510	6,550	2,090	6,500	3,650	20,700	7,720	44,300	19,100	82,400	9,600	12,000
16	2,450	6,240	2,000	5,330	3,840	21,700	6,820	41,200	22,300	74,100	9,520	11,300
17	2,330	5,590	1,940	4,260	3,680	22,000	6,410	38,200	19,800	64,300	9,360	9,850
18	2,330	4,900	2,070	2,920	3,690	21,700	6,090	34,700	16,000	57,000	8,960	7,970
19	2,430	4,510	2,150	2,640	3,290	21,000	5,600	31,400	13,700	51,500	8,660	7,190
20	2,680	3,980	2,390	2,700	3,400	19,100	5,570	28,300	11,900	46,600	8,530	6,660
21	3,030	3,510	3,500	2,720	4,120	16,500	5,450	24,400	10,100	42,800	7,970	6,340
22	3,030	3,350	3,890	2,860	5,050	14,400	5,490	21,000	8,430	39,000	7,200	6,430
23	3,020	3,460	6,260	3,230	7,270	13,500	5,360	18,700	7,390	35,800	6,540	6,250
24	2,910	3,480	7,930	3,200	8,240	13,800	5,100	16,100	6,690	33,600	6,200	5,950
25	2,890	3,300	7,060	3,090	6,930	14,000	5,070	14,400	5,790	32,200	6,230	7,150
26	2,970	3,200	5,670	3,080	5,900	12,400	5,710	13,400	5,000	30,800	5,850	10,600
27	3,030	3,420	4,730	2,950	5,390	10,600	5,880	12,700	4,510	28,200	5,400	17,800
28	3,050	3,480	4,060	2,780	5,800	9,230	5,580	12,200	4,090	24,800	5,100	27,800
29	3,140	3,510	3,550	2,730	---	8,160	5,170	11,800	3,790	22,600	5,010	30,300
30	3,140	3,270	3,240	2,680	---	7,490	4,810	11,900	3,540	20,900	5,990	31,400
31	3,210	---	3,370	2,720	---	8,000	---	12,000	---	18,200	12,000	---
TOTAL	84,920	119,020	97,440	178,720	134,150	391,260	248,580	703,660	277,170	1,227,570	316,350	616,790
MEAN	2,739	3,967	3,143	5,765	4,791	12,620	8,286	22,700	9,239	39,600	10,200	20,560
MAX	3,210	6,550	7,930	13,400	8,240	22,000	15,100	48,100	22,300	93,600	16,100	46,100
MIN	2,330	2,930	1,740	2,640	2,690	4,950	4,810	4,390	3,540	2,970	5,010	5,950
CFSM	0.22	0.32	0.26	0.47	0.39	1.03	0.68	1.85	0.75	3.23	0.83	1.68
IN.	0.26	0.36	0.30	0.54	0.41	1.19	0.75	2.13	0.84	3.72	0.96	1.87

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2003, BY WATER YEAR (WY)

MEAN	4,843	6,743	10,190	13,550	15,600	18,630	19,000	15,800	12,050	8,561	5,106	4,226
MAX	24,900	40,220	44,490	77,540	47,990	51,250	41,940	64,810	44,130	39,600	21,330	21,440
(WY)	(2002)	(1993)	(1928)	(1950)	(1950)	(1982)	(1938)	(1943)	(1958)	(2003)	(1958)	(1989)
MIN	1,103	1,405	1,145	1,216	1,998	2,645	5,250	2,405	1,492	1,292	1,002	966
(WY)	(1957)	(1954)	(1964)	(1977)	(1963)	(1941)	(1931)	(1934)	(1934)	(1936)	(1941)	(1941)

03341500 WABASH RIVER AT TERRE HAUTE, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1928 - 2003	
ANNUAL TOTAL	4,881,810		4,395,630			
ANNUAL MEAN	13,370		12,040		11,170	
HIGHEST ANNUAL MEAN					22,800	1950
LOWEST ANNUAL MEAN					2,864	1931
HIGHEST DAILY MEAN	77,500	May 15	93,600	Jul 13	186,000	May 20, 1943
LOWEST DAILY MEAN	1,740	Dec 8	1,740	Dec 8	701	Aug 3, 1934
ANNUAL SEVEN-DAY MINIMUM	1,970	Dec 7	1,970	Dec 7	732	Sep 24, 1941
MAXIMUM PEAK FLOW			96,200	Jul 13	189,000	May 20, 1943
MAXIMUM PEAK STAGE			25.03	Jul 13	30.50	May 20, 1943
ANNUAL RUNOFF (CF5M)	1.09		0.98		0.91	
ANNUAL RUNOFF (INCHES)	14.81		13.33		12.37	
10 PERCENT EXCEEDS	32,600		30,100		27,600	
50 PERCENT EXCEEDS	6,900		6,500		6,450	
90 PERCENT EXCEEDS	2,480		2,690		2,000	



03342000 WABASH RIVER AT RIVERTON, IN

LOCATION.--Lat 39°01'13", long 87°34'07", in NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.30, T.7 N., R.10 W., Sullivan County, Hydrologic Unit 05120111, (MEROM, IN-IL quadrangle), on left bank at downstream side of Illinois Central Railroad bridge at Riverton, 0.5 mi downstream from Turtle Creek, 2 mi south of Merom, 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 fair except for estimated daily discharges, which are poor. 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3,000	3,100	3,380	4,600	2,800	5,940	8,390	4,880	13,400	4,690	e22,200	17,900
2	2,900	3,070	3,120	6,240	2,790	6,140	11,600	4,730	14,000	4,680	e19,200	29,700
3	2,930	3,050	3,000	7,890	2,810	6,120	11,700	4,470	13,800	4,610	e17,300	33,900
4	2,870	2,960	2,940	11,300	2,980	5,850	9,800	4,760	12,400	4,390	e15,800	37,300
5	2,710	2,870	2,810	13,000	3,620	5,960	8,120	6,480	10,500	4,280	e15,400	40,600
6	2,640	2,860	2,660	12,400	4,910	5,930	7,160	11,800	9,280	4,140	e16,900	43,200
7	2,640	2,920	2,450	11,000	5,580	6,940	7,500	19,300	8,600	13,500	e17,400	44,700
8	2,630	2,980	2,190	9,430	5,740	7,360	11,400	23,000	8,000	23,800	e16,300	44,800
9	2,640	3,130	2,090	7,760	5,860	7,210	13,900	24,500	7,400	27,000	e14,900	43,300
10	2,590	3,160	2,230	6,460	5,600	9,510	14,500	25,200	6,920	30,500	e14,700	39,000
11	2,550	3,340	2,320	6,610	5,160	13,400	13,900	31,400	6,710	34,600	e14,600	31,700
12	2,600	4,340	2,380	6,960	4,790	15,300	e12,500	34,400	6,990	42,900	e13,800	25,300
13	2,600	5,500	2,300	6,520	4,470	15,900	e11,000	37,700	6,840	54,800	e12,800	20,300
14	2,580	5,290	2,210	7,250	4,040	16,100	e9,660	41,800	9,060	71,800	11,800	16,800
15	2,570	5,490	2,240	7,400	4,070	18,600	e8,380	45,900	14,600	88,200	11,100	14,900
16	2,520	5,980	2,290	6,370	4,610	20,500	e7,360	48,900	20,500	95,500	10,700	13,800
17	2,470	5,720	2,260	5,470	4,210	21,400	6,670	49,700	22,300	96,700	10,600	12,700
18	2,390	5,210	2,220	4,400	3,970	21,700	6,240	48,800	20,100	93,900	10,400	11,100
19	2,390	4,710	2,520	3,450	3,870	21,700	5,880	e46,700	17,000	89,000	9,920	9,380
20	2,430	4,400	2,870	3,030	3,650	21,000	5,570	e44,000	14,700	e80,900	9,630	8,530
21	2,630	4,010	2,950	3,000	4,510	19,200	5,530	e40,000	12,900	e72,700	9,370	7,950
22	2,900	3,650	3,600	2,990	5,720	16,700	5,380	e33,900	11,100	e65,500	8,780	7,830
23	2,920	3,520	4,030	3,040	8,400	14,500	5,300	e27,600	9,480	e58,800	8,040	7,760
24	2,930	3,560	6,260	3,280	8,900	13,600	5,150	e23,400	8,470	e53,000	7,410	7,430
25	2,920	3,580	7,430	3,270	8,400	13,900	5,300	e19,800	7,720	e48,400	7,110	7,160
26	2,890	3,440	6,580	3,170	7,080	14,200	6,010	e17,300	6,870	e44,800	7,030	8,690
27	2,900	3,360	5,490	3,130	6,110	12,400	6,080	e15,700	6,140	e41,800	6,660	14,100
28	2,920	3,510	4,690	3,040	5,650	10,500	5,910	e14,600	5,610	e39,400	6,260	21,700
29	3,060	3,570	4,130	2,910	---	9,230	5,660	e13,900	5,210	e35,000	6,020	26,300
30	3,160	3,550	3,720	2,860	---	8,200	5,190	13,400	4,920	e29,500	5,900	28,000
31	3,130	---	3,660	2,810	---	7,500	---	13,400	---	e25,800	8,090	---
TOTAL	85,010	115,830	103,020	181,040	140,300	392,490	246,740	791,420	321,520	1,384,590	366,120	675,830
MEAN	2,742	3,861	3,323	5,840	5,011	12,660	8,225	25,530	10,720	44,660	11,810	22,530
MAX	3,160	5,980	7,430	13,000	8,900	21,700	14,500	49,700	22,300	96,700	22,200	44,800
MIN	2,390	2,860	2,090	2,810	2,790	5,850	5,150	4,470	4,920	4,140	5,900	7,160
CFSM	0.21	0.29	0.25	0.44	0.38	0.96	0.62	1.94	0.81	3.39	0.90	1.71
IN.	0.24	0.33	0.29	0.51	0.40	1.11	0.70	2.24	0.91	3.91	1.03	1.91

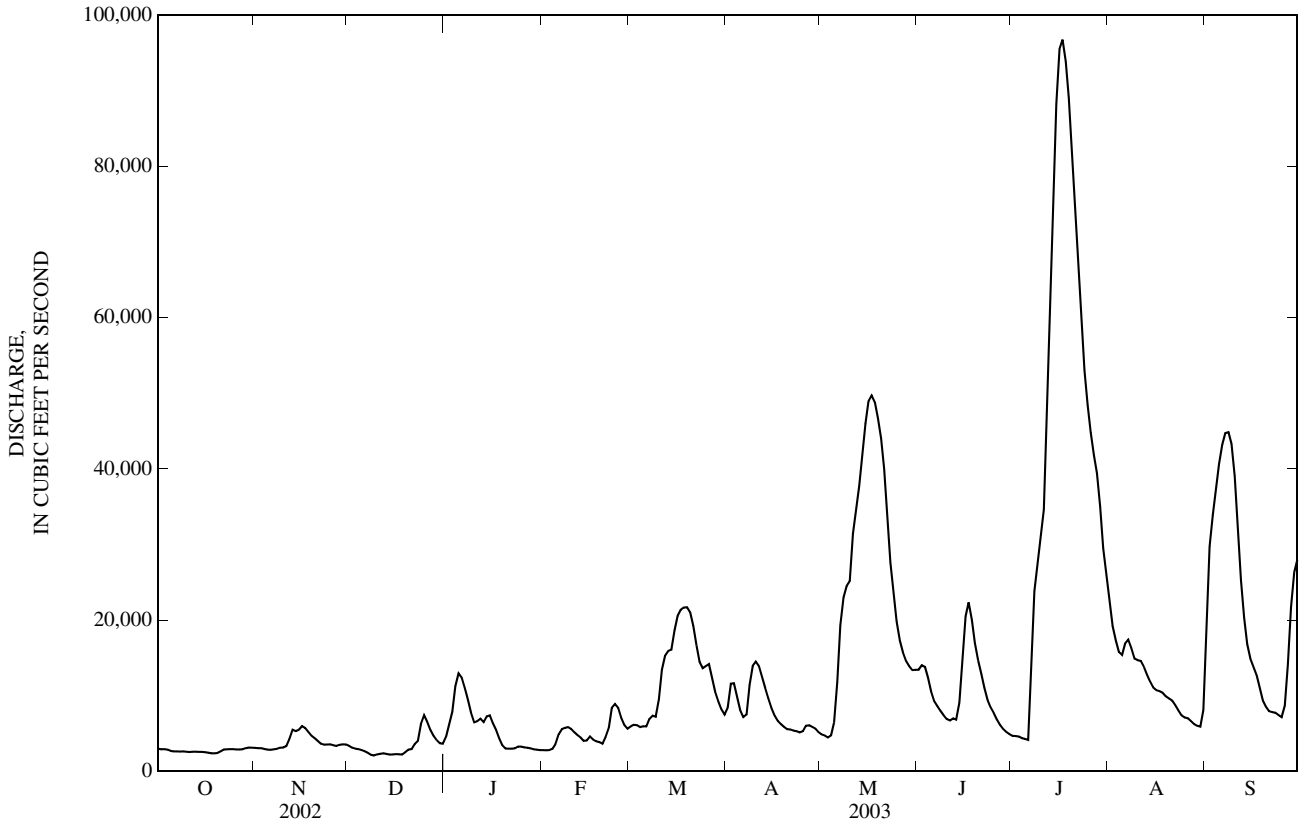
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2003, BY WATER YEAR (WY)

MEAN	5,195	7,347	10,800	13,570	17,120	20,700	20,960	17,800	13,980	9,749	5,919	4,827
MAX	26,610	39,340	39,250	80,210	54,530	60,520	41,840	68,010	45,640	44,660	23,680	25,370
(WY)	(2002)	(1993)	(1986)	(1950)	(1950)	(1982)	(1957)	(1943)	(1958)	(2003)	(1958)	(1989)
MIN	1,382	1,437	1,213	1,318	2,058	2,763	5,623	3,435	2,601	1,968	1,215	1,261
(WY)	(1957)	(1954)	(1964)	(1977)	(1963)	(1941)	(2000)	(1941)	(1977)	(1988)	(1941)	(1940)

03342000 WABASH RIVER AT RIVERTON, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1940 - 2003	
ANNUAL TOTAL	5,573,710		4,803,910		12,300	
ANNUAL MEAN	15,270		13,160		24,340	
HIGHEST ANNUAL MEAN					3,206	
LOWEST ANNUAL MEAN					200,000	
HIGHEST DAILY MEAN	85,600	May 17	96,700	Jul 17	200,000	May 21, 1943
LOWEST DAILY MEAN	2,090	Dec 9	2,090	Dec 9	858	Sep 27, 1941
ANNUAL SEVEN-DAY MINIMUM	2,250	Dec 8	2,250	Dec 8	870	Sep 25, 1941
MAXIMUM PEAK FLOW			97,100	Jul 17	201,000	May 21, 1943
MAXIMUM PEAK STAGE			23.61	Jul 17	29.36	May 21, 1943
ANNUAL RUNOFF (CFSM)	1.16		1.00		0.93	
ANNUAL RUNOFF (INCHES)	15.75		13.58		12.70	
10 PERCENT EXCEEDS	36,900		34,100		30,000	
50 PERCENT EXCEEDS	7,130		7,030		7,220	
90 PERCENT EXCEEDS	2,640		2,840		2,270	

e Estimated



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, (HYMERA, IN. quadrangle), 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 October 2003 (discontinued).

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 bench mark).

REMARKS.--Records poor. Flow affected by U.S. Soil Conservation Service floodwater-retarding structures.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e0.00	e0.38	e0.10	57	1.9	27	15	e25	e2.7	1.9	9.6	596
2	e0.00	e0.18	e0.10	38	2.4	26	12	e20	e2.1	2.3	8.1	956
3	e0.00	e0.16	e0.10	30	4.6	24	9.2	e13	e2.1	2.2	6.0	136
4	e0.00	e0.16	e0.10	24	e10	35	7.7	e10	e1.9	2.2	5.3	68
5	e0.00	e0.16	e0.09	21	e6.0	74	13	e239	e1.7	2.1	4.5	51
6	e0.00	e0.16	e0.10	19	e4.0	57	9.2	e77	e1.4	1.8	4.1	40
7	e0.00	e0.18	e0.10	15	e3.0	47	7.9	e122	e1.3	1.6	3.7	30
8	e0.00	e0.16	e0.11	13	e2.5	40	6.8	e57	e1.2	1.5	3.3	24
9	e0.00	e0.14	e0.10	10	e2.2	38	5.8	e50	e1.1	1.6	3.0	18
10	e0.00	e4.0	e0.12	8.7	e2.0	30	5.2	e158	e1.2	17	2.6	14
11	e0.00	e3.3	e0.11	e7.2	e1.8	24	4.5	e238	e1.9	9.4	2.4	13
12	e0.00	e1.5	e0.13	e5.6	e1.7	20	3.8	e73	e11	6.1	2.8	15
13	e0.00	e0.70	e0.23	e4.8	e1.7	25	3.3	e52	e6.4	4.2	2.2	14
14	e0.00	e0.50	e0.19	e4.0	e3.0	28	2.9	e41	e32	3.0	1.8	12
15	e0.00	e0.37	e0.17	e3.3	106	21	2.5	e37	e13	2.7	1.9	10
16	e0.00	e0.25	e0.16	e2.8	55	17	2.1	e31	e8.2	2.5	2.7	9.2
17	e0.00	e0.21	e0.19	e2.3	56	13	2.7	e27	e5.9	2.7	2.9	8.0
18	e0.00	e0.18	e10	e2.0	22	11	2.3	e22	e4.6	47	2.2	7.1
19	e0.00	e0.17	e70	e1.8	17	11	2.1	e18	e3.7	23	2.0	6.4
20	e0.00	e0.16	e50	e1.6	33	12	4.1	e16	e3.1	15	1.7	5.9
21	e0.00	e0.15	e35	e1.4	64	44	6.3	e14	e2.4	49	1.5	5.4
22	e0.00	e0.14	e26	e1.3	178	35	4.4	e12	e1.9	31	1.6	43
23	e0.00	e0.15	22	e1.2	108	26	3.5	e11	e1.7	19	1.5	18
24	e0.00	e0.15	19	e1.2	72	20	2.7	e10	e1.6	12	1.3	13
25	e0.10	e0.14	17	e1.2	57	25	68	e9.6	e1.5	8.6	1.1	11
26	e0.60	e0.12	13	e1.3	43	45	62	e8.7	1.6	7.0	1.0	13
27	e0.50	e0.12	12	e1.3	34	31	e28	e7.6	1.4	6.0	1.0	160
28	e0.30	e0.11	11	e1.3	29	23	e19	e6.1	1.3	22	0.96	55
29	e3.0	e0.11	11	e1.4	---	30	e16	e5.6	1.2	17	1.3	47
30	e1.8	e0.11	26	e1.4	---	24	e13	e4.6	1.3	12	1.2	37
31	e0.74	---	83	1.4	---	19	---	e3.7	---	11	59	---
TOTAL	7.04	14.32	407.20	285.5	920.8	902	345.0	1,418.9	122.4	344.4	144.26	2,436.0
MEAN	0.23	0.48	13.1	9.21	32.9	29.1	11.5	45.8	4.08	11.1	4.65	81.2
MAX	3.0	4.0	83	57	178	74	68	239	32	49	59	956
MIN	0.00	0.11	0.09	1.2	1.7	11	2.1	3.7	1.1	1.5	0.96	5.4
CFSM	0.01	0.03	0.79	0.55	1.97	1.74	0.69	2.74	0.24	0.67	0.28	4.86
IN.	0.02	0.03	0.91	0.64	2.05	2.01	0.77	3.16	0.27	0.77	0.32	5.43

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 2003, BY WATER YEAR (WY)

MEAN	4.79	14.9	22.8	23.5	26.8	32.8	32.3	25.8	12.7	12.0	4.81	9.26
MAX	62.3	79.0	96.8	105	67.4	112	74.9	122	58.5	79.3	25.4	81.2
(WY)	(2001)	(1994)	(1983)	(1969)	(1971)	(1973)	(1992)	(2002)	(2001)	(1973)	(1979)	(2003)
MIN	0.020	0.058	0.026	0.006	1.63	3.52	1.48	1.23	0.22	0.17	0.065	0.000
(WY)	(1988)	(1972)	(1977)	(1977)	(1978)	(2000)	(1971)	(1976)	(1977)	(1972)	(1983)	(1999)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

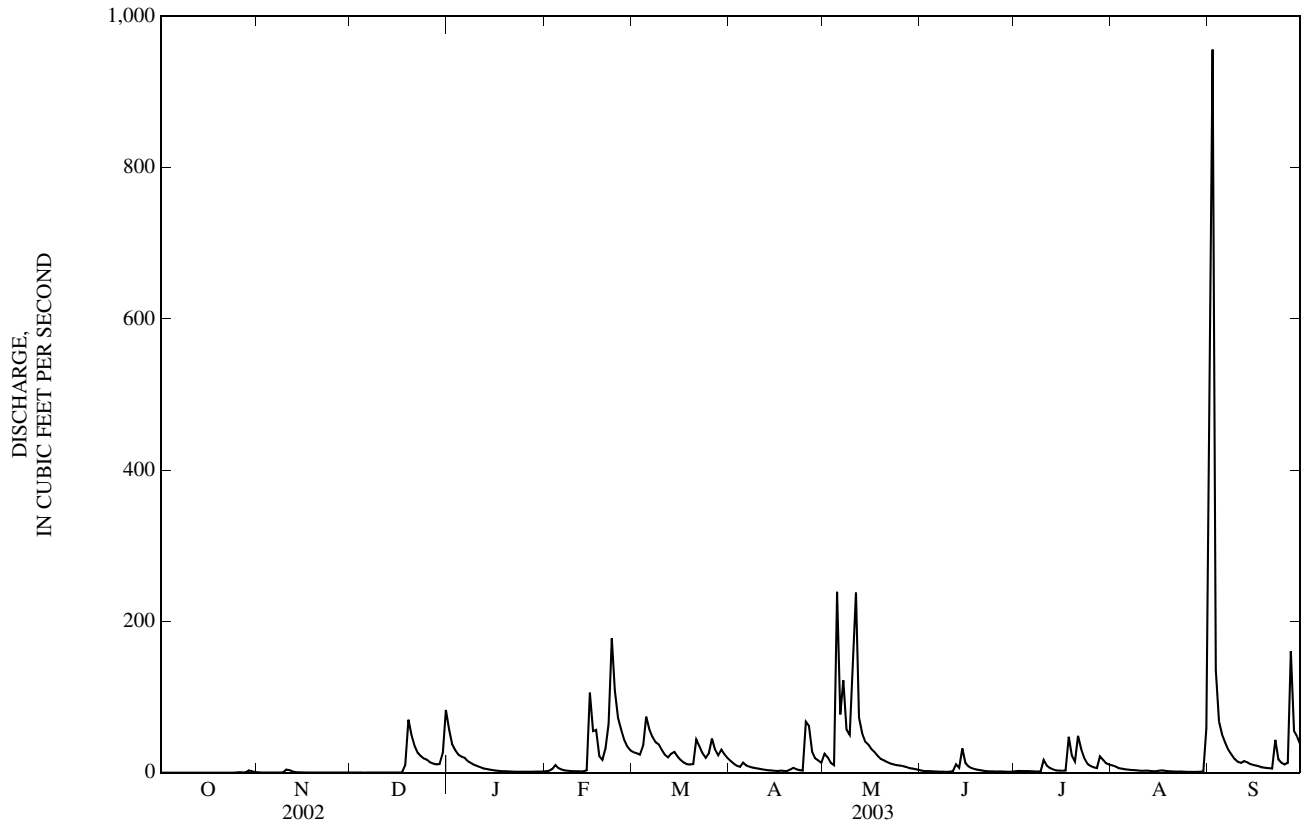
FOR 2003 WATER YEAR

WATER YEARS 1967 - 2003

ANNUAL TOTAL	7,838.41	7,347.82	
ANNUAL MEAN	21.5	20.1	18.5
HIGHEST ANNUAL MEAN			36.1
LOWEST ANNUAL MEAN			6.93
HIGHEST DAILY MEAN	1,230	956	1,250
LOWEST DAILY MEAN	0.00	0.00	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	0.00	0.00
MAXIMUM PEAK FLOW		1,650	2,430
MAXIMUM PEAK STAGE		18.65	19.51
ANNUAL RUNOFF (CFSM)	1.29	1.21	1.11
ANNUAL RUNOFF (INCHES)	17.46	16.37	15.03
10 PERCENT EXCEEDS	49	47	44
50 PERCENT EXCEEDS	1.7	4.5	3.7
90 PERCENT EXCEEDS	0.00	0.11	0.10

e Estimated

03342100 BUSSERON CREEK NEAR HYMERA, IN—Continued



03342500 BUSSERON CREEK NEAR CARLISLE, IN

LOCATION.--Lat 38°58'27", long 87°25'33", in NW¹/₄ survey 17, Vincennes Tract, Sullivan County, Hydrologic Unit 05120111, (CARLISLE, IN quadrangle), on left bank 10 ft downstream from bridge on State Highway 58, 1.5 mi northwest of Carlisle, and 6.7 mi upstream from mouth, and 7.5 mi south of Sullivan.

DRAINAGE AREA.--228 mi².

PERIOD OF RECORD.--October 1943 to October 2003 (discontinued).

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 fair except for estimated daily discharges, which are poor. Flow affected by U.S. Soil Conservation Service floodwater-retarding structures and surface-mined areas. Gage can be in backwater at times from the Wabash River.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	31	12	519	30	284	139	198	38	23	82	1,100
2	9.0	22	11	315	33	309	117	240	32	23	71	1,490
3	8.2	19	11	232	44	301	106	176	37	23	257	1,570
4	9.4	19	11	168	99	390	92	137	41	21	79	1,750
5	12	19	9.9	156	e94	726	100	1,170	34	19	66	1,700
6	12	19	11	142	e62	581	98	1,190	31	17	55	1,030
7	9.8	21	11	116	e54	439	87	798	30	16	53	469
8	9.0	18	12	100	e47	367	80	647	29	15	48	343
9	8.9	16	11	88	e44	320	73	894	27	17	40	263
10	7.9	179	14	74	e41	243	67	882	28	546	35	182
11	7.2	152	12	e54	e39	190	64	1,460	77	336	29	131
12	7.5	84	14	e47	e38	164	61	1,460	684	142	26	103
13	7.3	50	17	e44	e38	245	52	1,120	385	159	25	83
14	6.9	39	30	e41	e42	295	47	563	384	375	27	73
15	6.8	34	25	e37	265	224	45	449	299	688	26	62
16	6.6	28	21	e35	416	185	44	384	165	873	23	53
17	6.8	25	19	e32	216	162	46	334	118	932	23	45
18	7.2	21	22	e31	204	144	52	296	92	1,070	31	40
19	9.7	19	397	e29	135	174	48	246	78	1,100	25	37
20	11	18	424	e29	166	203	100	192	75	806	21	33
21	12	17	227	e27	405	306	225	146	58	659	19	30
22	10	16	137	e25	1,300	348	121	112	47	596	18	217
23	10	17	97	e24	1,470	226	88	86	41	424	16	186
24	9.6	17	77	e23	1,260	180	72	76	37	308	16	77
25	27	16	72	23	761	150	460	69	33	209	14	59
26	28	15	67	25	469	220	847	62	31	136	12	57
27	19	14	57	25	359	196	414	55	28	89	12	975
28	16	13	54	26	303	159	262	49	25	225	12	935
29	132	12	61	27	---	253	312	46	23	241	14	392
30	99	12	98	26	---	234	248	43	22	134	31	243
31	52	---	350	28	---	170	---	44	---	98	1,280	---
TOTAL	588.8	982	2,391.9	2,568	8,434	8,388	4,567	13,624	3,029	10,320	2,486	13,728
MEAN	19.0	32.7	77.2	82.8	301	271	152	439	101	333	80.2	458
MAX	132	179	424	519	1,470	726	847	1,460	684	1,100	1,280	1,750
MIN	6.6	12	9.9	23	30	144	44	43	22	15	12	30
CFSM	0.08	0.14	0.34	0.36	1.32	1.19	0.67	1.93	0.44	1.46	0.35	2.01
IN.	0.10	0.16	0.39	0.42	1.38	1.37	0.75	2.22	0.49	1.68	0.41	2.24

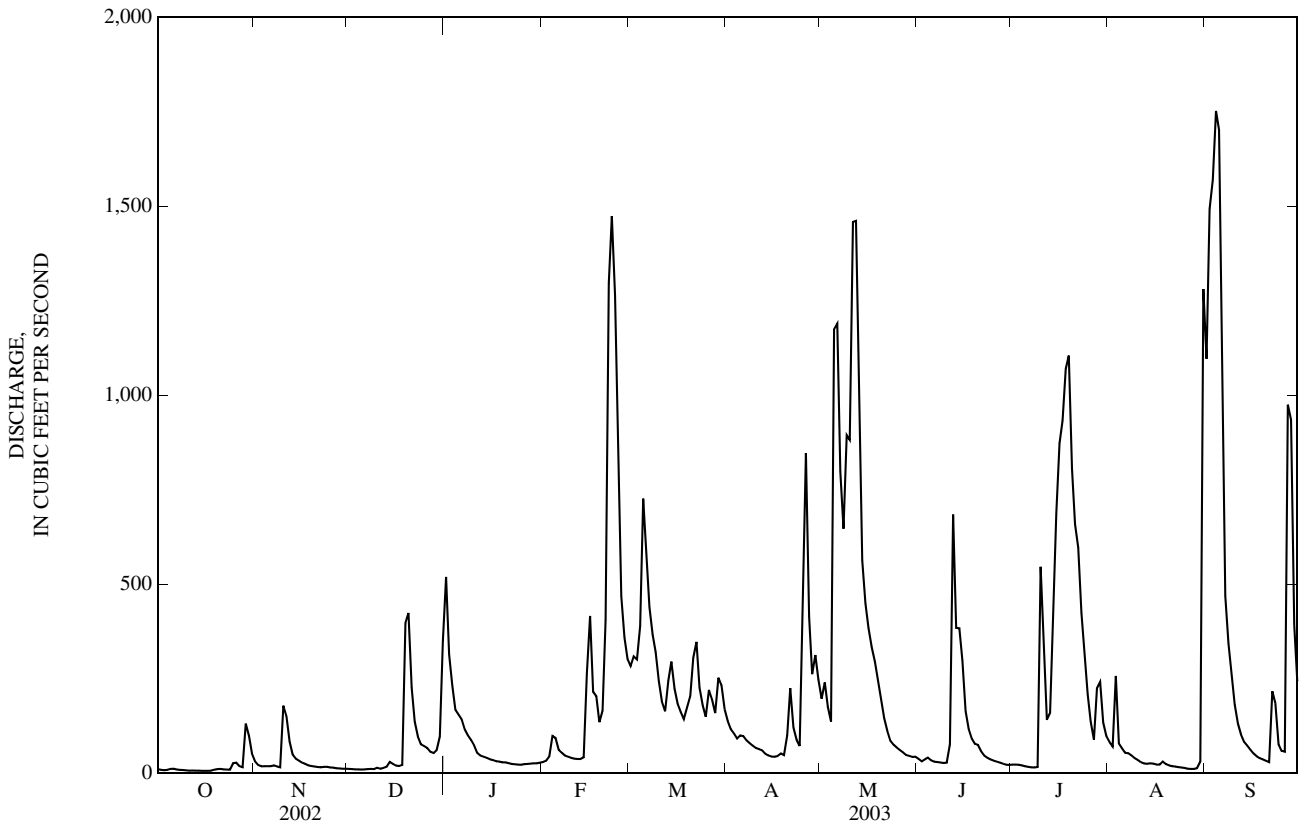
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 2003, BY WATER YEAR (WY)

MEAN	61.9	166	252	316	362	440	423	346	184	115	59.4	80.8
MAX	827	1,250	1,421	2,380	1,317	1,284	1,102	1,469	988	1,101	633	701
(WY)	(2001)	(1994)	(1983)	(1950)	(1950)	(1978)	(1945)	(2002)	(1945)	(1979)	(1979)	(1989)
MIN	1.39	0.94	2.87	3.64	11.3	12.8	35.6	31.6	8.88	0.035	1.89	0.88
(WY)	(1944)	(1955)	(1954)	(1977)	(1954)	(1954)	(1954)	(1954)	(1954)	(1954)	(1953)	(1953)

03342500 BUSSEYON CREEK NEAR CARLISLE, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1944 - 2003	
ANNUAL TOTAL	104,421.6		71,106.7		233	
ANNUAL MEAN	286		195		548	
HIGHEST ANNUAL MEAN					10.8	
LOWEST ANNUAL MEAN					1950	
HIGHEST DAILY MEAN	3,860	May 15	1,750	Sep 4	8,500	Jan 5, 1950
LOWEST DAILY MEAN	6.2	Sep 13	6.6	Oct 16	0.00	Jul 12, 1954
ANNUAL SEVEN-DAY MINIMUM	7.0	Sep 12	7.0	Oct 11	0.00	Jul 12, 1954
MAXIMUM PEAK FLOW			1,930	Feb 22	8,800	Jan 5, 1950
MAXIMUM PEAK STAGE			11.07	Feb 22	20.30	May 9, 1961
ANNUAL RUNOFF (CFSM)	1.25		0.85		1.02	
ANNUAL RUNOFF (INCHES)	17.04		11.60		13.89	
10 PERCENT EXCEEDS	852		530		642	
50 PERCENT EXCEEDS	54		61		57	
90 PERCENT EXCEEDS	8.5		12		5.9	

e Estimated



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, (VINCENNES IL-IN quadrangle), 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 September 1994 (discharge), October 1994 to current year (stage-only). 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.--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.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 29.33 ft, May 22, 1943; minimum gage height unknown prior to 1988, since 1988 minimum gage height, 3.92 ft, Sept. 4, 1988.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 24.10 ft, July 18; minimum gage height, 4.43 ft, Dec. 9, and 10.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.82	4.93	5.08	6.42	4.85	6.65	7.61	6.08	9.62	5.89	12.89	12.01
2	4.76	4.90	4.96	6.81	4.85	6.79	8.92	6.02	9.83	5.79	11.80	14.92
3	4.78	4.89	4.88	7.36	4.90	6.79	8.92	5.84	9.77	5.73	11.05	15.88
4	4.79	4.85	4.88	8.70	4.99	6.96	8.24	6.41	9.24	5.59	10.48	16.56
5	4.69	4.85	4.81	9.29	5.21	7.54	7.54	9.29	8.50	5.53	10.27	16.83
6	4.66	4.81	4.73	9.09	5.84	7.03	7.11	10.34	7.97	5.44	10.75	17.19
7	4.65	4.82	4.64	8.59	6.14	7.32	7.18	12.43	7.67	9.83	10.83	17.54
8	4.63	4.85	4.51	7.97	6.23	7.53	8.83	14.11	7.40	12.70	10.43	17.63
9	4.65	4.96	4.43	7.28	6.30	7.24	9.73	15.25	7.13	13.79	9.92	17.57
10	4.64	5.26	4.51	6.68	6.20	8.10	9.92	15.73	7.03	15.38	9.86	17.19
11	4.61	5.18	4.55	6.71	6.00	9.52	9.71	16.57	7.32	16.00	9.80	16.26
12	4.65	5.47	4.59	6.86	5.83	10.19	9.18	17.01	8.09	16.74	9.50	14.43
13	4.64	6.07	4.66	6.66	5.69	10.62	8.63	17.36	7.64	17.73	9.10	12.31
14	4.62	6.00	4.61	6.98	5.54	10.57	8.08	17.77	8.63	19.23	8.72	10.95
15	4.63	6.04	4.58	7.02	5.88	11.38	7.56	18.37	10.40	21.90	8.41	10.16
16	4.60	6.29	4.59	6.63	6.00	11.93	7.14	18.81	12.12	23.39	8.24	9.68
17	4.58	6.20	4.58	---	5.74	12.27	6.84	18.94	12.65	23.95	8.24	9.21
18	4.53	6.00	4.68	---	5.59	12.39	6.61	18.81	11.98	24.10	8.09	8.55
19	4.54	5.74	5.60	---	5.55	12.61	6.45	18.67	10.93	23.90	7.89	7.83
20	4.55	5.60	5.33	---	5.47	12.43	6.46	18.32	10.10	23.32	7.76	7.45
21	4.60	5.44	5.11	---	6.17	11.96	6.41	17.79	9.43	22.58	7.66	7.25
22	4.76	5.25	5.32	---	9.00	10.99	6.25	17.00	8.70	21.70	7.42	7.30
23	4.77	5.16	5.45	---	9.36	10.13	6.18	15.59	8.04	20.84	7.10	7.20
24	4.78	5.18	6.49	---	8.85	9.76	6.11	13.80	7.61	20.04	6.82	7.00
25	5.07	5.19	7.00	---	8.00	9.86	7.12	12.26	7.28	19.27	6.68	6.82
26	4.84	5.13	6.67	---	7.27	9.98	7.12	11.27	6.90	18.56	6.64	7.68
27	4.80	5.06	6.19	---	6.78	9.30	6.81	10.62	6.53	17.90	6.47	10.11
28	4.82	5.13	5.84	6.28	6.53	8.69	6.66	10.21	6.27	17.36	6.29	12.42
29	5.43	5.17	5.60	5.13	---	8.19	6.62	9.89	6.07	16.78	6.29	13.64
30	5.06	5.16	5.46	4.88	---	7.66	6.30	9.68	5.92	15.75	6.12	14.16
31	4.98	---	6.29	4.88	---	7.31	---	9.65	---	14.41	8.25	---
MEAN	4.74	5.32	5.18	---	6.24	9.34	7.54	13.54	8.56	16.17	8.70	12.12
MAX	5.43	6.29	7.00	---	9.36	12.61	9.92	18.94	12.65	24.10	12.89	17.63
MIN	4.53	4.81	4.43	---	4.85	6.65	6.11	5.84	5.92	5.44	6.12	6.82

03347000 WHITE RIVER AT MUNCIE, IN

LOCATION.--Lat 40°12'15", long 85°23'14", in NE $\frac{1}{4}$ NE $\frac{1}{4}$, sec.9, T.20 N., R.10 E., Delaware County, Hydrologic Unit 05120201, (MUNCIE WEST, IN quadrangle), 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 poor. Natural flow affected by regulation of Prairie Creek Reservoir and by diversion of municipal water supply by Muncie Water Works Co. above gage. Records of diversion available since October 1937.

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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	24	24	1,400	e52	e140	300	107	115	53	84	2,270
2	11	21	20	1,200	e53	e135	257	121	91	56	782	9,920
3	12	20	19	563	e70	e130	226	90	112	67	750	5,140
4	20	20	18	345	e380	e140	210	83	132	99	563	1,410
5	17	25	22	259	e260	655	252	441	120	2,330	399	729
6	20	25	19	215	e190	1,020	268	366	100	3,200	258	517
7	17	24	19	191	e150	493	251	273	91	4,000	201	399
8	15	25	20	194	e120	455	318	254	89	5,570	161	317
9	14	24	17	463	e110	2,050	267	371	81	5,410	164	262
10	15	148	19	437	e90	1,170	232	1,820	78	6,400	166	223
11	15	215	20	257	e70	657	211	2,860	83	3,170	124	195
12	16	110	19	e200	e62	659	195	1,790	96	1,130	164	170
13	16	62	21	e180	e54	1,570	173	787	279	711	218	142
14	15	46	24	e130	e52	2,160	149	521	472	522	168	124
15	13	37	24	e96	e56	1,120	145	615	382	414	114	118
16	13	34	23	e70	e43	915	135	424	242	346	95	112
17	14	33	32	e67	e39	750	124	329	181	283	91	92
18	15	30	69	e66	e38	578	120	316	140	246	75	76
19	20	31	446	e68	e39	486	114	279	115	220	60	69
20	17	29	826	e71	e45	583	114	253	94	197	54	68
21	18	24	451	e62	e56	780	111	229	76	211	51	62
22	17	29	244	e54	e150	775	97	206	69	224	50	195
23	16	31	169	e47	e600	487	88	189	60	278	47	379
24	15	32	116	e44	e400	367	80	174	51	240	45	239
25	22	31	103	e45	e290	315	84	159	45	185	39	229
26	24	30	99	e46	e240	515	97	139	57	146	38	222
27	36	28	65	e43	e200	441	84	117	67	125	37	2,260
28	25	29	66	e46	e180	355	73	107	68	116	40	1,740
29	23	27	61	e52	---	672	73	108	65	109	53	705
30	22	24	251	e51	---	520	73	105	64	94	167	453
31	22	---	1,250	e51	---	363	---	132	---	85	171	---
TOTAL	547	1,268	4,576	7,013	4,089	21,456	4,921	13,765	3,715	36,237	5,429	28,837
MEAN	17.6	42.3	148	226	146	692	164	444	124	1,169	175	961
MAX	36	215	1,250	1,400	600	2,160	318	2,860	472	6,400	782	9,920
MIN	11	20	17	43	38	130	73	83	45	53	37	62
CFSM	0.07	0.18	0.61	0.94	0.61	2.87	0.68	1.84	0.51	4.85	0.73	3.99
IN.	0.08	0.20	0.71	1.08	0.63	3.31	0.76	2.12	0.57	5.59	0.84	4.45

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 2003, BY WATER YEAR (WY)

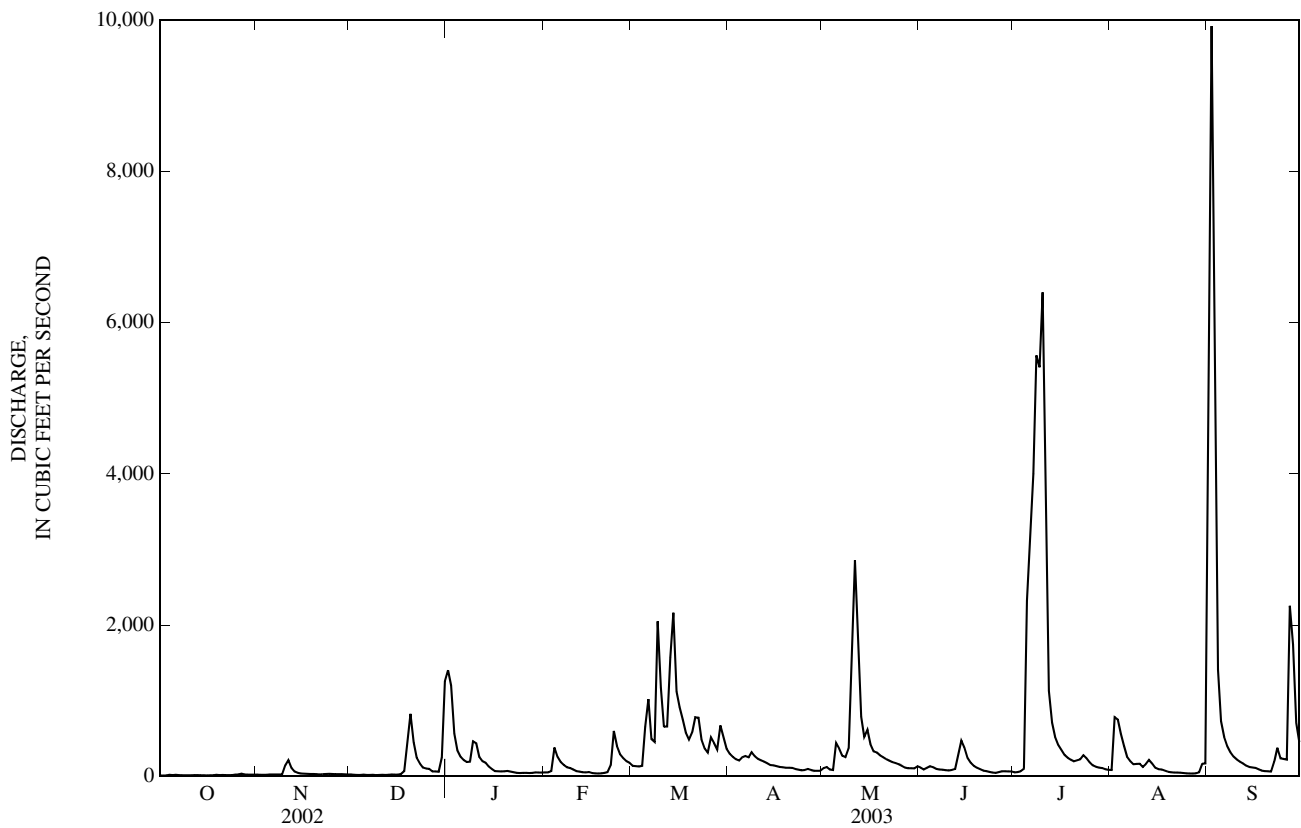
MEAN	66.8	144	223	295	337	412	402	272	218	135	70.6	70.9
MAX	807	1,068	1,119	1,654	1,122	963	1,476	1,239	1,492	1,169	816	961
(WY)	(2002)	(1994)	(1991)	(1950)	(1950)	(1978)	(1964)	(1933)	(1958)	(2003)	(1979)	(2003)
MIN	2.30	7.33	6.57	6.38	21.2	39.0	46.4	16.4	13.6	9.55	4.80	1.96
(WY)	(1957)	(1957)	(1961)	(1977)	(1935)	(1941)	(1941)	(1941)	(1988)	(1944)	(1940)	(1954)

WABASH RIVER BASIN

03347000 WHITE RIVER AT MUNCIE, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1932 - 2003	
ANNUAL TOTAL	94,758		131,853			
ANNUAL MEAN	260		361		220	
HIGHEST ANNUAL MEAN					421 1950	
LOWEST ANNUAL MEAN					42.1 1941	
HIGHEST DAILY MEAN	4,390	May 13	9,920	Sep 2	11,600	Apr 21, 1964
LOWEST DAILY MEAN	11	Oct 2	11	Oct 2	1.1	Sep 16, 1954
ANNUAL SEVEN-DAY MINIMUM	15	Oct 11	15	Oct 11	1.2	Sep 21, 1954
MAXIMUM PEAK FLOW			12,400	Sep 2	14,300	Apr 21, 1964
MAXIMUM PEAK STAGE			14.02	Sep 2	21.07	Jan 15, 1937
ANNUAL RUNOFF (CFSM)	1.08		1.50		0.91	
ANNUAL RUNOFF (INCHES)	14.63		20.35		12.39	
10 PERCENT EXCEEDS	604		707		487	
50 PERCENT EXCEEDS	83		115		77	
90 PERCENT EXCEEDS	19		21		13	

e Estimated



03347500 BUCK CREEK NEAR MUNCIE, IN

LOCATION.--Lat 40°08'05", long 85°22'25", in SW¼SE¼ sec.34, T.20 N., R.10 E., Delaware County, Hydrologic Unit 05120201, (MUNCIE EAST, IN quadrangle), 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 October 2003 (discontinued).

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 fair except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	20	17	155	e21	e26	51	31	28	20	34	702
2	16	21	17	97	e21	e26	46	36	25	21	298	1,940
3	16	21	17	58	29	e25	43	31	29	20	79	267
4	18	20	17	47	62	30	41	30	28	22	55	124
5	19	22	17	43	36	126	41	77	25	785	48	89
6	18	23	16	38	31	84	38	49	26	282	42	75
7	17	21	16	36	28	48	41	45	25	442	39	66
8	17	21	16	38	e25	132	40	39	26	189	36	59
9	16	22	15	63	e24	237	39	92	24	849	61	55
10	17	58	15	49	e23	87	37	380	25	488	60	51
11	17	47	16	37	e22	62	36	291	24	166	39	47
12	17	29	16	e31	e21	69	34	111	28	126	39	45
13	18	24	16	e29	e21	303	33	72	48	87	39	43
14	17	22	17	e28	e20	148	32	56	59	71	33	43
15	17	22	16	e26	e20	100	31	73	41	66	32	41
16	17	22	18	e25	e20	86	32	51	33	60	30	39
17	17	22	18	e24	e20	74	31	46	29	53	33	38
18	17	21	28	e24	e20	62	31	44	27	50	30	37
19	20	20	102	e23	e19	60	30	40	26	46	28	37
20	19	18	95	e23	e19	73	31	37	25	43	27	36
21	18	17	46	e23	e20	117	32	35	24	47	27	35
22	17	21	35	e22	63	76	31	34	24	46	27	59
23	17	22	e26	e22	98	60	30	33	22	44	27	48
24	17	24	e24	e22	58	52	30	32	20	38	26	41
25	21	23	e22	e22	e37	54	31	31	21	37	25	47
26	23	21	e22	e22	e32	72	31	31	24	35	25	53
27	20	20	e21	e22	e28	55	29	29	23	35	25	390
28	19	19	e21	e21	e26	50	29	27	22	35	25	112
29	20	19	e21	e21	---	120	29	26	23	33	30	74
30	21	19	104	e21	---	70	28	25	21	32	59	60
31	20	---	178	e21	---	57	---	29	---	31	42	---
TOTAL	559	701	1,025	1,133	864	2,641	1,038	1,963	825	4,299	1,420	4,753
MEAN	18.0	23.4	33.1	36.5	30.9	85.2	34.6	63.3	27.5	139	45.8	158
MAX	23	58	178	155	98	303	51	380	59	849	298	1,940
MIN	16	17	15	21	19	25	28	25	20	20	25	35
CFSM	0.51	0.66	0.93	1.03	0.87	2.40	0.97	1.78	0.77	3.91	1.29	4.46
IN.	0.59	0.73	1.07	1.19	0.91	2.77	1.09	2.06	0.86	4.50	1.49	4.98

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 2003, BY WATER YEAR (WY)

	22.4	31.7	37.8	41.0	50.1	57.1	56.7	45.8	42.4	32.5	23.6	21.7
MEAN	22.4	31.7	37.8	41.0	50.1	57.1	56.7	45.8	42.4	32.5	23.6	21.7
MAX	99.5	146	109	96.2	123	117	166	102	153	139	108	158
(WY)	(2002)	(1994)	(1991)	(1959)	(1971)	(1982)	(1964)	(2002)	(1958)	(2003)	(1979)	(2003)
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)

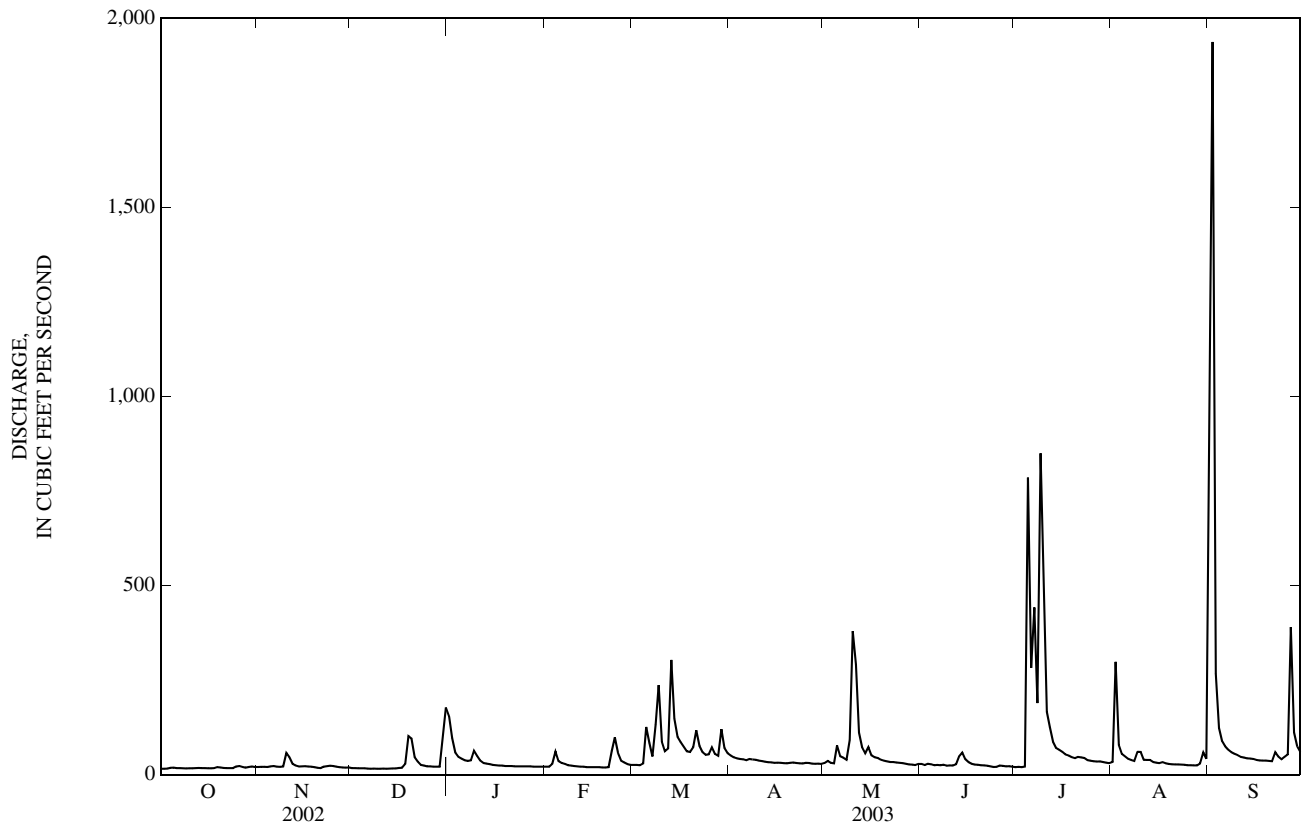
SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1955 - 2003

ANNUAL TOTAL	16,794	21,221	
ANNUAL MEAN	46.0	58.1	38.5
HIGHEST ANNUAL MEAN			58.1
LOWEST ANNUAL MEAN			15.4
HIGHEST DAILY MEAN	765	May 13	1,940
LOWEST DAILY MEAN	15	Sep 6	15
ANNUAL SEVEN-DAY MINIMUM	16	Dec 6	16
MAXIMUM PEAK FLOW			2,320
MAXIMUM PEAK STAGE			15.01
ANNUAL RUNOFF (CFSM)	1.30		1.64
ANNUAL RUNOFF (INCHES)	17.60		22.24
10 PERCENT EXCEEDS	87		87
50 PERCENT EXCEEDS	28		30
90 PERCENT EXCEEDS	17		18



03348000 WHITE RIVER AT ANDERSON, IN

LOCATION.--Lat 40°06'20", long 85°40'16", in NW¼NW¼ sec.17, T.19 N., R.8 E., Madison County, Hydrologic Unit 05120201, (ANDERSON SOUTH, IN quadrangle), 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 December 1993 (discharge), September 2000 to current year (stage only). 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. WDR IN-03-1: 1972.

GAGE.--Water-stage recorder. 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.--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.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 19.48 ft, Sept. 3; minimum gage height, 4.14 ft, Oct. 17-18.

REVISIONS.--Revised figures of discharge for the water year 1972, superseding those published in the report for 1972 are given below.

EXTREMES FOR 1972 WATER YEAR.--Maximum discharge, 4,420 ft³/s, gage height, 11.50 ft, Dec. 15, 1971.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	122	107	97	1,440	200	911	270	322	402	275	122	85
2	117	107	105	1,040	270	2,180	240	302	335	220	117	85
3	117	107	100	884	185	2,130	237	296	255	185	127	110
4	122	107	95	796	160	1,350	332	292	223	226	190	114
5	122	107	85	818	130	906	328	283	218	198	174	120
6	117	107	132	654	130	673	302	267	207	169	148	93
7	117	107	460	505	130	578	1,020	264	215	153	188	83
8	117	107	884	402	140	498	2,210	280	209	153	148	102
9	107	107	488	395	130	422	1,570	429	198	142	148	107
10	112	107	402	488	130	368	1,150	488	185	166	132	83
11	112	107	385	774	130	315	937	385	180	155	120	78
12	102	107	240	643	140	315	787	305	171	150	120	83
13	112	107	212	612	160	302	1,360	342	201	148	120	107
14	102	107	598	463	171	302	1,080	601	548	148	110	153
15	102	102	3,090	330	255	309	756	1,350	681	292	114	158
16	102	102	2,810	250	402	309	1,110	1,150	1,060	419	117	127
17	102	102	1,580	250	335	309	1,640	814	681	280	117	107
18	102	102	1,010	280	270	296	1,140	658	456	212	102	107
19	102	102	703	350	210	296	897	559	388	302	102	226
20	102	107	559	368	180	289	2,230	477	286	402	102	158
21	102	107	477	361	170	270	2,110	416	390	261	90	132
22	102	102	426	382	170	335	2,630	368	335	261	90	212
23	270	102	375	422	170	302	2,840	328	240	207	90	522
24	240	102	309	429	170	296	1,670	296	220	177	110	505
25	158	107	276	429	170	264	1,140	264	207	190	97	635
26	132	107	258	348	180	258	701	240	207	158	97	1,990
27	107	95	240	250	212	252	548	237	182	148	93	2,310
28	107	93	234	210	352	240	412	207	158	142	93	884
29	107	90	232	190	412	240	355	207	158	135	88	730
30	107	97	1,330	180	---	355	338	234	333	127	88	1,130
31	107	---	2,310	180	---	302	---	335	---	122	88	---
TOTAL	3,749	3,117	20,502	15,123	5,864	16,172	32,340	12,996	9,529	6,323	3,642	11,336
MEAN	121	104	661	488	202	522	1,078	419	318	204	117	378
MAX	270	107	3,090	1,440	412	2,180	2,840	1,350	1,060	419	190	2,310
MIN	102	90	85	180	130	240	237	207	158	122	88	78
CFSM	0.30	0.26	1.63	1.20	0.50	1.28	2.66	1.03	0.78	0.50	0.29	0.93
IN.	0.34	0.29	1.88	1.39	0.54	1.48	2.96	1.19	0.87	0.58	0.33	1.04

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 1972, BY WATER YEAR (WY)

MEAN	117	186	312	516	546	672	709	475	361	185	138	114
MAX	379	1,034	1,106	2,740	1,882	1,598	2,164	1,949	2,232	495	500	378
(WY)	(1956)	(1956)	(1958)	(1950)	(1950)	(1963)	(1964)	(1933)	(1958)	(1962)	(1958)	(1972)
MIN	30.3	45.4	45.1	44.4	67.5	81.5	94.0	41.5	76.6	37.9	25.1	20.9
(WY)	(1941)	(1935)	(1964)	(1945)	(1935)	(1941)	(1941)	(1941)	(1936)	(1936)	(1940)	(1941)

WABASH RIVER BASIN

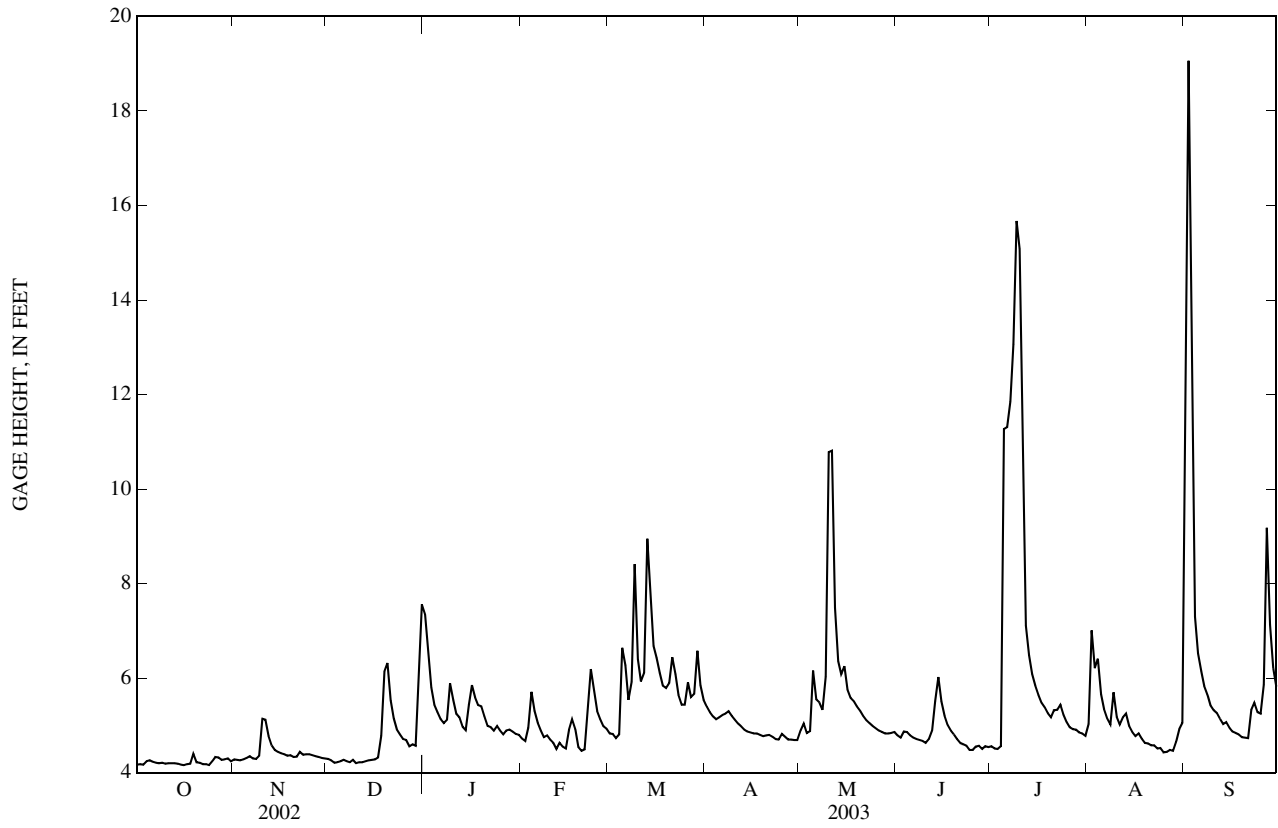
03348000 WHITE RIVER AT ANDERSON, IN—Continued

SUMMARY STATISTICS	FOR 1971 CALENDAR YEAR		FOR 1972 WATER YEAR		WATER YEARS 1932 - 1972	
ANNUAL TOTAL	113,085		140,693			
ANNUAL MEAN	310		384		362	
HIGHEST ANNUAL MEAN					704	1950
LOWEST ANNUAL MEAN					80.5	1941
HIGHEST DAILY MEAN	3,820	Feb 20	3,090	Dec 15	15,100	Apr 21, 1964
LOWEST DAILY MEAN	39	Aug 16	78	Sep 11	9.1	Sep 24, 1940
ANNUAL SEVEN-DAY MINIMUM	43	Jan 27	89	Aug 27	13	Sep 23, 1941
MAXIMUM PEAK FLOW			4,420	Dec 15	18,700	Apr 21, 1964
MAXIMUM PEAK STAGE			11.50	Dec 15	19.96	Jun 14, 1958
ANNUAL RUNOFF (CFSM)	0.76		0.95		0.89	
ANNUAL RUNOFF (INCHES)	10.36		12.89		12.11	
10 PERCENT EXCEEDS	678		888		759	
50 PERCENT EXCEEDS	142		222		157	
90 PERCENT EXCEEDS	82		102		55	

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.17	4.28	4.29	7.35	4.72	4.83	5.40	4.89	4.79	4.56	5.03	12.31
2	4.18	4.27	4.26	6.64	4.67	4.82	5.28	5.04	4.74	4.51	7.01	19.06
3	4.17	4.26	4.21	5.80	4.95	4.73	5.19	4.84	4.87	4.50	6.21	12.97
4	4.24	4.28	4.22	5.44	5.71	4.81	5.13	4.88	4.86	4.56	6.41	7.30
5	4.26	4.31	4.24	5.28	5.31	6.64	5.17	6.16	4.79	11.27	5.66	6.52
6	4.23	4.35	4.27	5.13	5.06	6.27	5.22	5.55	4.74	11.31	5.34	6.15
7	4.21	4.30	4.24	5.05	4.89	5.54	5.25	5.49	4.71	11.85	5.14	5.83
8	4.20	4.29	4.22	5.12	4.75	5.92	5.30	5.33	4.69	13.06	5.02	5.65
9	4.21	4.36	4.27	5.89	4.79	8.41	5.20	6.03	4.67	15.67	5.70	5.42
10	4.19	5.14	4.20	5.54	4.70	6.40	5.12	10.78	4.63	15.08	5.18	5.32
11	4.20	5.12	4.22	5.25	4.63	5.93	5.04	10.81	4.71	10.49	5.02	5.26
12	4.20	4.77	4.22	5.17	4.50	6.11	4.98	7.49	4.89	7.11	5.17	5.14
13	4.20	4.58	4.24	4.97	4.63	8.95	4.91	6.36	5.51	6.48	5.25	5.03
14	4.19	4.48	4.26	4.90	4.55	7.90	4.87	6.08	6.02	6.09	4.98	5.07
15	4.17	4.44	4.27	5.44	4.51	6.68	4.85	6.25	5.51	5.84	4.86	4.95
16	4.16	4.41	4.28	5.85	4.91	6.43	4.83	5.76	5.20	5.64	4.77	4.87
17	4.18	4.39	4.32	5.59	5.13	6.11	4.83	5.58	5.01	5.48	4.83	4.84
18	4.19	4.36	4.78	5.43	4.92	5.84	4.80	5.51	4.89	5.38	4.72	4.81
19	4.40	4.37	6.14	5.40	4.54	5.79	4.77	5.40	4.81	5.26	4.63	4.75
20	4.22	4.33	6.32	5.19	4.46	5.90	4.79	5.31	4.71	5.17	4.62	4.74
21	4.21	4.34	5.53	4.99	4.49	6.44	4.80	5.20	4.63	5.32	4.58	4.73
22	4.18	4.44	5.15	4.96	5.44	6.08	4.76	5.11	4.60	5.33	4.58	5.33
23	4.18	4.38	4.91	4.89	6.19	5.64	4.71	5.05	4.57	5.44	4.51	5.48
24	4.16	4.39	4.81	4.99	5.76	5.44	4.70	4.99	4.48	5.23	4.52	5.28
25	4.24	4.39	4.71	4.89	5.30	5.44	4.82	4.94	4.48	5.07	4.43	5.25
26	4.33	4.37	4.69	4.81	5.13	5.91	4.76	4.89	4.55	4.96	4.44	5.86
27	4.32	4.35	4.56	4.89	4.98	5.60	4.70	4.86	4.57	4.92	4.48	9.18
28	4.27	4.33	4.60	4.91	4.93	5.67	4.70	4.83	4.50	4.91	4.46	7.13
29	4.28	4.31	4.57	4.87	---	6.58	4.69	4.83	4.56	4.85	4.65	6.21
30	4.30	4.30	5.82	4.82	---	5.85	4.69	4.84	4.54	4.83	4.92	5.82
31	4.24	---	7.56	4.80	---	5.54	---	4.86	---	4.78	5.05	---
MEAN	4.22	4.42	4.72	5.30	4.95	6.07	4.94	5.74	4.81	6.93	5.04	6.54
MAX	4.40	5.14	7.56	7.35	6.19	8.95	5.40	10.81	6.02	15.67	7.01	19.06
MIN	4.16	4.26	4.20	4.80	4.46	4.73	4.69	4.83	4.48	4.50	4.43	4.73
CAL YR	2002	MEAN 5.06	MAX 14.94	MIN 4.14								
WTR YR	2003	MEAN 5.31	MAX 19.06	MIN 4.16								

03348000 WHITE RIVER AT ANDERSON, IN—Continued



03348130 WHITE RIVER AT RAIBLE AVENUE AT ANDERSON, IN

LOCATION.--Lat 40°06'38", long 85°42'39", in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.11, T.19 N., R.7 E., Madison County, Hydrologic Unit 05120201, (ANDERSON SOUTH, IN quadrangle), on the upstream side of bridge in southeast quadrant of Raible Avenue and White River, 0.3 mi upstream of waste-water treatment plant, 2 mi downstream of Killbuck Creek, and 3.0 mi downstream of the municipal power plant in Anderson.

DRAINAGE AREA.--519 mi² (estimated).

PERIOD OF RECORD.--September 1999 to current year.

GAGE.--Water-stage recorder. Datum of gage is 816.54 ft above National Geodetic Vertical Datum of 1929 (based on Department of Natural Resources Benchmark MAD17 reset 1984).

REMARKS.--Records fair except for estimated daily discharges, which are poor. Flow maybe affected at times by upstream regulation.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	106	115	128	2,710	e172	291	670	249	329	217	315	4,180
2	99	114	126	2,240	e172	278	560	489	296	223	821	11,500
3	97	109	121	1,190	e190	253	481	353	321	212	1,430	13,500
4	112	109	119	716	596	267	434	288	336	214	987	5,060
5	131	119	122	543	652	577	432	938	317	3,650	974	1,800
6	110	136	120	452	415	1,650	465	1,250	293	7,660	597	1,250
7	105	128	126	387	343	950	457	768	280	6,390	468	958
8	101	119	118	373	e250	655	523	656	270	8,230	395	798
9	98	117	117	642	e240	3,020	486	675	264	11,000	492	678
10	92	323	120	847	e220	2,620	431	3,520	250	11,800	750	584
11	93	582	113	549	e200	1,290	392	7,590	280	9,420	499	513
12	92	367	113	e340	e190	1,180	363	5,390	296	3,890	423	459
13	92	236	111	e310	e180	2,380	331	2,080	423	1,860	e400	424
14	91	193	122	e280	e190	4,490	305	1,340	1,050	1,330	e370	407
15	91	172	128	e240	e180	2,390	293	1,650	839	1,080	e350	387
16	89	163	127	e230	e154	1,730	285	1,300	557	898	e330	365
17	89	154	131	e225	e134	1,420	279	886	427	741	e310	339
18	90	146	207	e219	e134	1,110	270	768	361	649	e300	321
19	127	146	637	e214	e145	936	259	684	325	572	264	307
20	125	143	1,500	e220	e160	985	253	604	295	512	244	295
21	106	139	1,020	e219	e174	1,240	276	530	268	553	234	283
22	101	151	536	e210	e260	1,400	255	471	249	571	226	445
23	97	162	369	e180	857	948	239	432	237	529	215	658
24	94	160	294	e154	982	711	225	400	224	543	204	516
25	113	160	267	e160	593	614	240	371	211	438	196	521
26	139	153	245	e170	459	771	255	350	218	386	190	584
27	126	146	215	e150	353	798	235	e340	258	358	185	2,750
28	126	140	200	e160	328	667	219	e330	230	349	182	3,620
29	117	136	197	e170	---	1,500	217	e320	241	337	e196	1,480
30	126	133	254	e174	---	1,440	211	308	236	314	e360	944
31	120	---	1,950	e175	---	851	---	367	---	296	411	---
TOTAL	3,295	5,171	9,953	14,849	8,923	39,412	10,341	35,697	10,181	75,222	13,318	55,926
MEAN	106	172	321	479	319	1,271	345	1,152	339	2,427	430	1,864
MAX	139	582	1,950	2,710	982	4,490	670	7,590	1,050	11,800	1,430	13,500
MIN	89	109	111	150	134	253	211	249	211	212	182	283

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2003, BY WATER YEAR (WY)

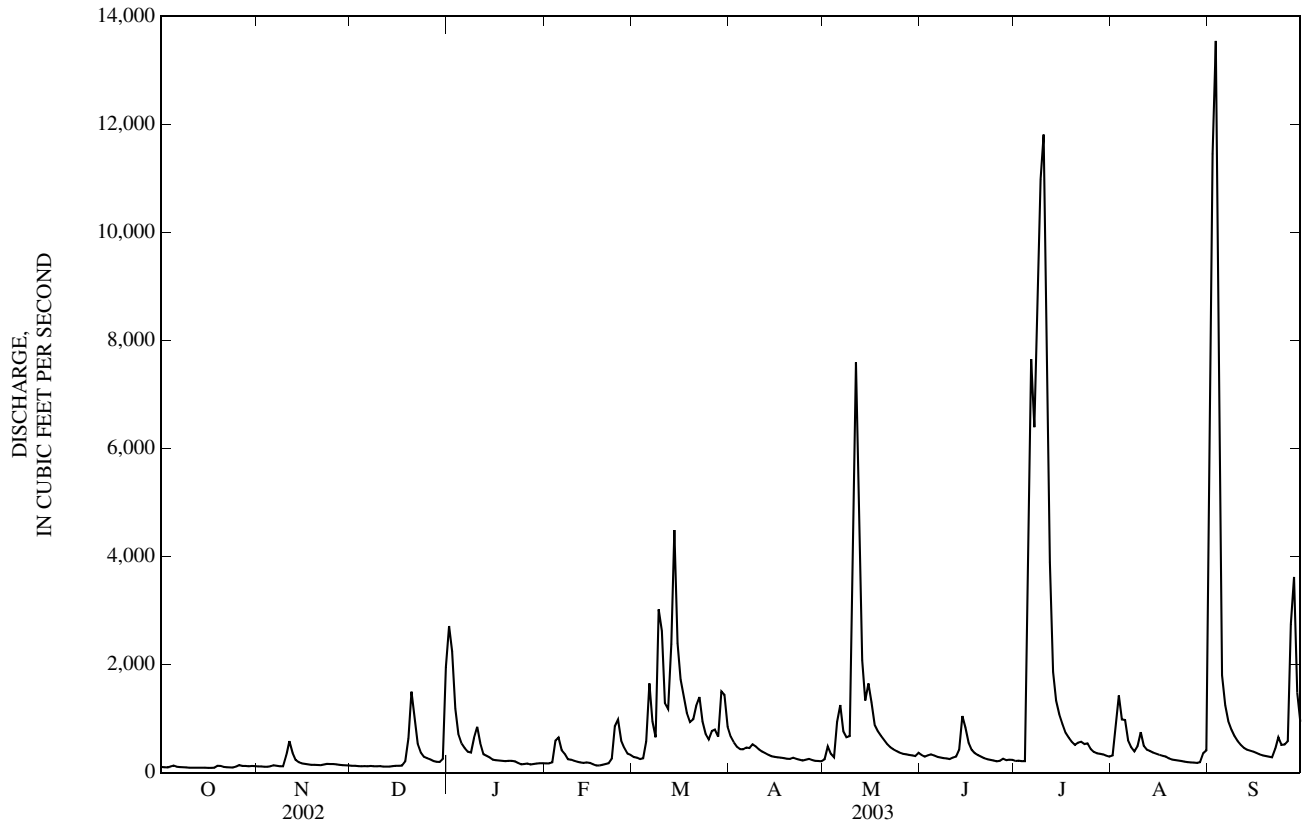
	579	281	554	315	649	774	830	1,074	450	868	280	653
MEAN	579	281	554	315	649	774	830	1,074	450	868	280	653
MAX	1,712	547	1,258	479	1,011	1,271	1,661	1,886	577	2,427	430	1,864
(WY)	(2002)	(2002)	(2002)	(2003)	(2002)	(2003)	(2002)	(2002)	(2000)	(2003)	(2003)	(2003)
MIN	90.9	93.4	126	110	319	325	345	421	339	212	157	120
(WY)	(2000)	(2000)	(2000)	(2000)	(2003)	(2000)	(2003)	(2000)	(2003)	(2002)	(2002)	(2002)

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1999 - 2003	
ANNUAL TOTAL	227,574		282,288			
ANNUAL MEAN	623		773		609	
HIGHEST ANNUAL MEAN					870	
LOWEST ANNUAL MEAN					310	
HIGHEST DAILY MEAN	10,300	May 14	13,500	Sep 3	13,500	Sep 3, 2003
LOWEST DAILY MEAN	83	Sep 12	89	Oct 16	74	Jan 22, 2000
ANNUAL SEVEN-DAY MINIMUM	86	Sep 12	91	Oct 12	77	Oct 26, 1999
MAXIMUM PEAK FLOW			15,200	Sep 3	15,200	Sep 3, 2003
MAXIMUM PEAK STAGE			17.24	Sep 3	17.24	Sep 3, 2003
10 PERCENT EXCEEDS	1,410		1,420		1,200	
50 PERCENT EXCEEDS	267		310		296	
90 PERCENT EXCEEDS	106		120		110	

e Estimated

03348130 WHITE RIVER AT RAIBLE AVENUE AT ANDERSON, IN—Continued



03348350 PIPE CREEK AT FRANKTON, IN

LOCATION.--Lat 40°13'38", long 85°45'58", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.31, T.21 N., R.7 E., Madison County, Hydrologic Unit 05120201, (FRANKTON, IN quadrangle), on right bank 20 ft downstream from bridge on County Road 500 West, at northeast edge of Frankton, 1.88 mi downstream of Plummer Brook mouth, and at mile 10.35.

DRAINAGE AREA.--113 mi².

PERIOD OF RECORD.--May 1968 to October 2003 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 810.00 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 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	17	15	866	e20	e32	162	38	47	26	50	635
2	10	16	13	397	e27	e31	122	160	42	25	63	1,950
3	10	15	13	209	39	e30	98	115	44	23	107	1,050
4	11	17	14	139	239	e30	87	77	48	22	92	451
5	13	18	12	110	e110	87	147	597	45	1,490	103	229
6	12	21	12	90	e64	171	119	656	41	2,360	80	147
7	12	19	12	77	e47	104	143	307	39	1,640	64	103
8	11	19	12	80	e37	170	210	233	38	2,030	55	78
9	11	21	11	222	e31	1,020	144	304	37	3,430	54	63
10	11	47	11	200	e26	563	112	1,260	35	3,330	81	53
11	10	276	11	109	e23	316	95	1,890	36	1,740	60	47
12	10	103	11	e90	e20	409	82	999	40	1,310	50	41
13	9.9	50	11	e60	e18	793	69	428	59	774	45	38
14	9.7	35	12	e50	e16	998	62	255	88	393	43	36
15	10	28	12	e43	e15	548	59	307	84	272	42	38
16	10	24	12	e38	e15	426	56	253	59	221	40	38
17	10	22	13	e33	e14	338	54	176	48	175	40	34
18	10	20	16	e30	e14	251	50	140	43	149	38	30
19	15	18	43	e28	e15	213	47	116	40	128	36	28
20	13	17	236	e26	e18	285	45	100	36	110	35	26
21	12	16	174	e24	e25	353	44	85	33	128	34	24
22	11	18	85	e23	97	353	42	75	31	151	33	64
23	11	19	58	e22	181	201	39	69	30	116	32	152
24	11	23	45	e21	81	148	37	63	28	93	30	86
25	13	22	42	e20	e60	120	41	58	27	80	29	225
26	17	19	36	e20	e44	119	44	54	27	72	28	185
27	13	18	31	e20	e39	106	39	50	28	67	26	853
28	13	16	29	e19	e35	97	36	48	26	65	25	680
29	14	15	30	e19	---	637	35	47	25	62	28	256
30	18	16	107	e19	---	437	34	46	26	57	105	159
31	18	---	655	e19	---	221	---	53	---	53	71	---
TOTAL	369.6	985	1,794	3,123	1,370	9,607	2,354	9,059	1,230	20,592	1,619	7,799
MEAN	11.9	32.8	57.9	101	48.9	310	78.5	292	41.0	664	52.2	260
MAX	18	276	655	866	239	1,020	210	1,890	88	3,430	107	1,950
MIN	9.7	15	11	19	14	30	34	38	25	22	25	24
CFSM	0.11	0.29	0.51	0.89	0.43	2.74	0.69	2.59	0.36	5.88	0.46	2.30
IN.	0.12	0.32	0.59	1.03	0.45	3.16	0.77	2.98	0.40	6.78	0.53	2.57

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 2003, BY WATER YEAR (WY)

	MEAN	40.3	87.7	125	125	157	197	167	113	121	87.1	45.7	48.1
MAX	410	519	482	409	416	544	467	325	409	664	250	529	
(WY)	(2002)	(1993)	(1991)	(1974)	(1990)	(1982)	(1972)	(2002)	(1980)	(2003)	(1998)	(1989)	
MIN	3.66	6.71	7.31	5.29	16.5	42.4	33.3	19.1	10.3	7.94	4.97	3.23	
(WY)	(2000)	(1998)	(1977)	(1977)	(1995)	(1981)	(1971)	(1976)	(1988)	(1977)	(1988)	(1999)	

SUMMARY STATISTICS

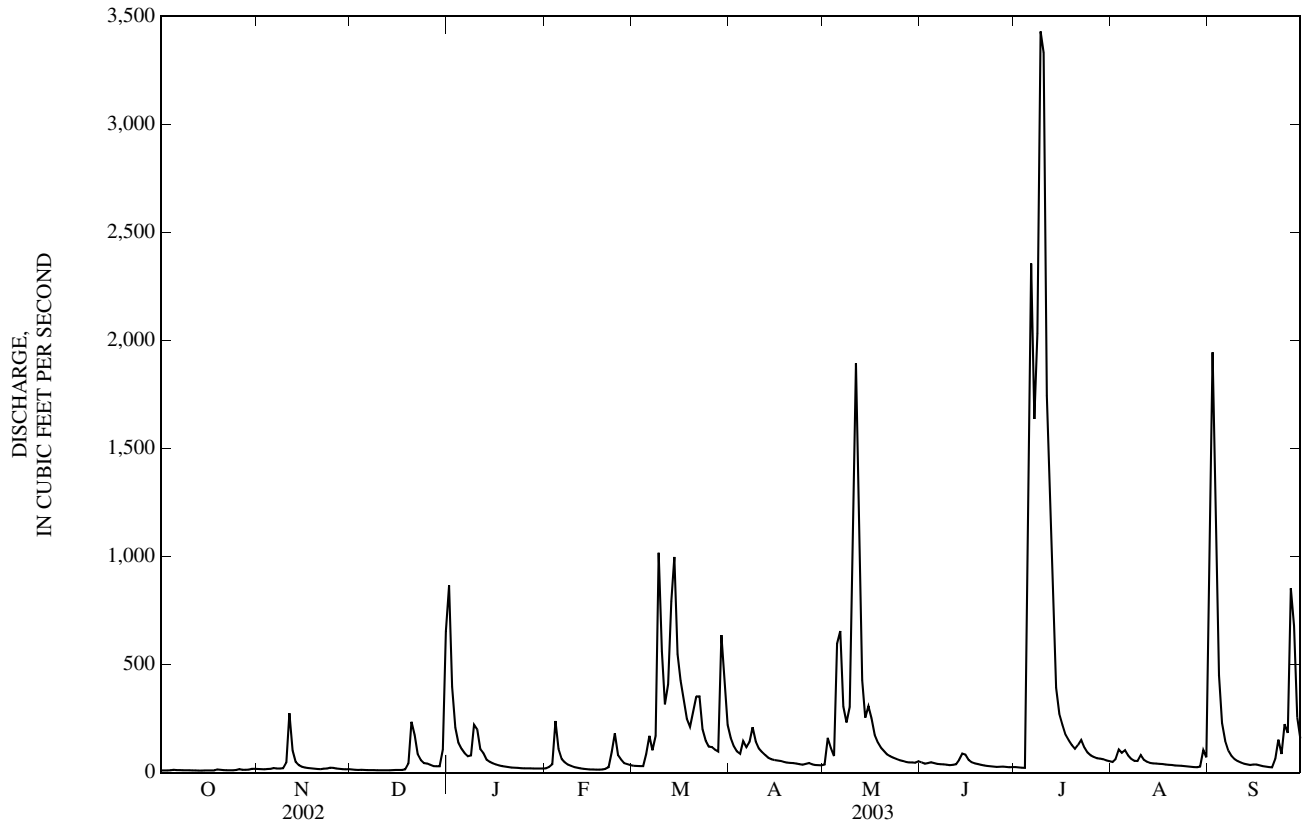
FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1969 - 2003

ANNUAL TOTAL	39,414.7	59,901.6	
ANNUAL MEAN	108	164	109
HIGHEST ANNUAL MEAN			180
LOWEST ANNUAL MEAN			32.7
HIGHEST DAILY MEAN	2,680	May 13	3,840
LOWEST DAILY MEAN	7.7	Sep 12	2.0
ANNUAL SEVEN-DAY MINIMUM	8.5	Sep 11	2.2
MAXIMUM PEAK FLOW			5,630
MAXIMUM PEAK STAGE			15.00
ANNUAL RUNOFF (CFSM)	0.96	1.45	0.97
ANNUAL RUNOFF (INCHES)	12.98	19.72	13.13
10 PERCENT EXCEEDS	229	344	251
50 PERCENT EXCEEDS	30	44	40
90 PERCENT EXCEEDS	11	13	9.1

03348350 PIPE CREEK AT FRANKTON, IN—Continued



03349000 WHITE RIVER AT NOBLESVILLE, IN

LOCATION.--Lat 40°02'50", long 86°01'00", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.36, T.19 N., R.4 E., Hamilton County, Hydrologic Unit 05120201, (NOBLESVILLE, IN quadrangle), 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. WDR IN-94-1: 1993 (M).

GAGE.--Water-stage recorder. Datum of gage is 738.16 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for estimated daily discharges, which are poor. Flow partially regulated by powerplant above station.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	174	180	184	4,500	268	531	1,610	377	630	331	455	4,450
2	148	170	174	3,830	280	489	1,310	783	536	321	605	11,500
3	136	169	160	2,530	316	460	1,080	921	518	312	1,750	14,700
4	144	161	144	1,560	938	423	946	634	570	296	1,510	14,100
5	179	167	144	1,180	1,340	643	917	1,780	549	3,500	1,480	4,650
6	190	189	146	969	919	2,030	954	3,520	501	10,700	1,100	2,410
7	154	208	141	822	700	1,820	932	2,400	473	12,900	805	1,780
8	147	195	140	784	e500	1,330	1,120	2,030	451	10,400	652	1,390
9	141	182	137	1,170	e460	4,170	1,090	1,640	437	14,700	598	1,160
10	136	269	129	1,800	e430	5,100	939	6,280	418	18,800	1,080	975
11	127	1,090	132	1,330	e370	2,990	832	13,000	411	17,300	904	836
12	126	e1,050	136	e840	e310	2,560	752	12,900	478	12,100	693	738
13	125	e657	136	e720	e280	3,720	673	7,250	553	5,250	621	662
14	121	e455	140	e640	e275	6,340	606	3,330	1,400	3,160	642	601
15	122	e345	156	e420	e295	5,440	568	3,280	1,420	2,490	569	586
16	121	295	155	e380	e220	3,610	550	3,110	1,040	2,300	475	541
17	118	264	153	e360	e200	3,010	530	2,180	794	1,770	437	497
18	119	246	176	e350	e195	2,430	513	1,750	664	1,450	421	454
19	149	230	481	e360	e210	2,000	486	1,510	579	1,230	377	428
20	193	219	1,760	e370	e240	2,120	478	1,300	519	1,050	341	404
21	e164	211	1,930	e330	e280	2,360	473	1,130	460	1,010	319	382
22	e144	221	1,110	e290	e460	2,960	471	991	414	1,150	300	553
23	e130	239	745	e260	1,180	2,200	450	893	386	1,050	282	1,110
24	e120	248	568	e225	1,470	1,610	424	820	359	954	262	1,030
25	143	248	502	e230	1,070	1,330	411	755	331	824	247	1,070
26	188	241	429	e240	785	1,320	410	697	314	708	229	1,300
27	217	223	378	e220	649	1,490	410	643	367	630	216	4,160
28	189	208	326	e240	574	1,300	405	603	366	593	208	6,230
29	190	195	316	e270	---	3,040	373	594	335	569	223	3,800
30	185	191	387	264	---	3,590	362	560	361	524	510	2,150
31	192	---	2,390	265	---	2,190	---	615	---	483	604	---
TOTAL	4,732	8,966	14,005	27,749	15,214	74,606	21,075	78,276	16,634	128,855	18,915	84,647
MEAN	153	299	452	895	543	2,407	702	2,525	554	4,157	610	2,822
MAX	217	1,090	2,390	4,500	1,470	6,340	1,610	13,000	1,420	18,800	1,750	14,700
MIN	118	161	129	220	195	423	362	377	314	296	208	382
CFSM	0.18	0.35	0.53	1.04	0.63	2.80	0.82	2.94	0.65	4.84	0.71	3.29
IN.	0.21	0.39	0.61	1.20	0.66	3.23	0.91	3.39	0.72	5.59	0.82	3.67

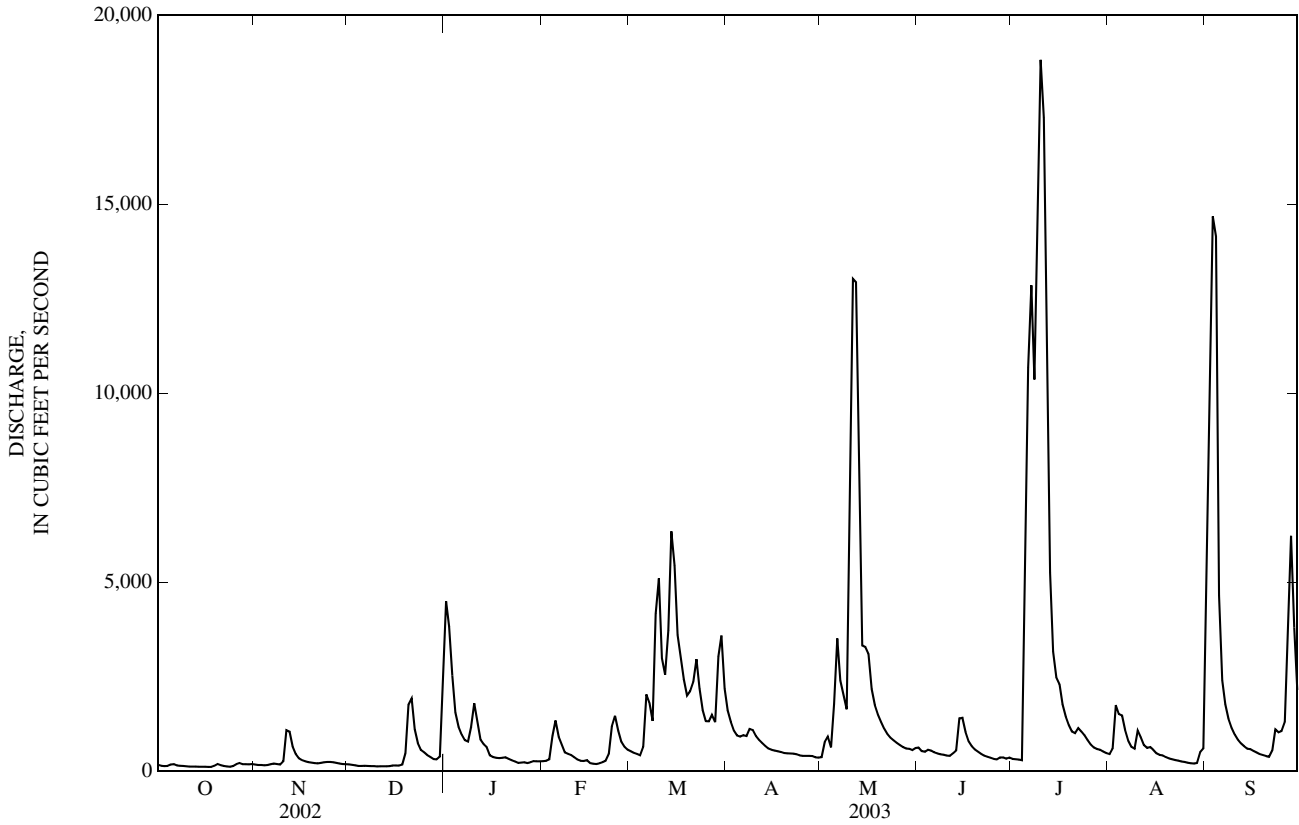
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 2003, BY WATER YEAR (WY)

MEAN	321	590	867	1,131	1,263	1,560	1,484	1,029	901	636	366	346
MAX	2,845	3,359	3,472	6,494	3,485	3,732	4,281	3,236	4,432	4,157	2,264	3,143
(WY)	(2002)	(1994)	(1991)	(1950)	(1950)	(1978)	(1964)	(2002)	(1958)	(2003)	(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)

03349000 WHITE RIVER AT NOBLESVILLE, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1947 - 2003	
ANNUAL TOTAL	365,988		493,674			
ANNUAL MEAN	1,003		1,353		872	
HIGHEST ANNUAL MEAN					1,455	1950
LOWEST ANNUAL MEAN					266	1954
HIGHEST DAILY MEAN	16,900	May 14	18,800	Jul 10	25,400	Dec 31, 1990
LOWEST DAILY MEAN	59	Sep 12	118	Oct 17	44	Sep 28, 1954
ANNUAL SEVEN-DAY MINIMUM	67	Sep 11	122	Oct 12	58	Sep 23, 1954
MAXIMUM PEAK FLOW			20,400	Jul 10	27,000	Dec 31, 1990
MAXIMUM PEAK STAGE			21.86	Jul 10	21.86	Jul 10, 2003
ANNUAL RUNOFF (CFSM)	1.17		1.58		1.02	
ANNUAL RUNOFF (INCHES)	15.87		21.40		13.81	
10 PERCENT EXCEEDS	2,240		3,020		1,960	
50 PERCENT EXCEEDS	413		531		410	
90 PERCENT EXCEEDS	136		163		139	

e Estimated



[(National Water-Quality Assessment Program White River Basin, Miami River Basin Study Unit)]

WATER-QUALITY RECORDS

These data described in the following table were collected and analyzed as part of the National Water Quality Assessment Program (NAWQA) in the White River Basin, Miami River Basin (WHMI) study units. The objectives of the NAWQA program are to broadly characterize the water-quality of the Nation's streams and aquifers in relation to human and natural factors. This project is one of 42 river basin and aquifer assessment projects being implemented across the nation on a staggered timeline. During the second decade of sampling, 14 of these projects will be actively collecting data. The period of high-intensity data collection for the WHMI project is in water years 2001-2004.

Water quality data from White River, W Bank, 1 RMI US 116th St at Fishers, IN are being reported as part of the Source Water-Quality Assessment (SWQA). The SWQA is a two year study beginning in October 2002. The first year's research will discover the presence and quantity of specific constituents in the water. The follow up year will focus on source water versus treated water comparisons to characterize which, if any, of the most frequently detected compounds in source water are not sufficiently removed by treatment processes and to help identify those treatment processes and (or) systems that are effective at removing select contaminants.

(- -, no data; <, concentration or value reported is less than that indicated; E, estimated value; K, value is estimated from a non-ideal colony count; M, presence verified, not quantified)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unf uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Organic carbon, water, fltrd, mg/L (00681)	E coli, modif. m-TEC, water, col/100 mL (90902)	1,4-Dichlorobenzene, water, fltrd, ug/L (34572)	1-Methylnaphthalene, water, fltrd, ug/L (62054)	1-Naphthol, water, fltrd, 0.7u GF ug/L (49295)
OCT													
31...	1330	224	752	13.3	8.4	1,080	8.0	8.9	3.6	15	<0.5	<0.5	<0.09
NOV													
14...	1030	544	745	9.1	7.8	652	12.0	9.0	6.3	110	<0.5	<0.5	<0.09
DEC													
17...	1130	222	751	16.5	8.5	1,030	2.0	2.4	3.4	120	<0.5	<0.5	<0.09
JAN													
10...	1030	2,330	746	12.2	8.2	700	4.0	3.9	3.9	460	<0.5	<0.5	<0.09
29...	1010	405	755	12.8	8.2	923	2.0	3.2	2.8	110	<0.5	<0.5	<0.09
FEB													
11...	1045	601	748	15.9	8.3	797	<-5.0	1.4	3.1	100	<0.5	<0.5	<0.09
27...	1130	900	751	15.5	8.2	681	0.0	1.0	4.5	66	<0.5	<0.5	<0.09
MAR													
18...	0950	3,350	733	11.6	8.0	528	19.0	7.8	5.2	230	<0.5	<0.5	--
APR													
14...	1040	818	749	12.6	8.0	727	28.0	12.6	4.4	--	<0.5	<0.5	<0.09
MAY													
07...	1000	3,940	734	8.2	7.8	504	23.0	17.0	5.8	1,800	<0.5	<0.5	<0.09
19...	1130	2,120	741	8.4	7.9	590	20.0	16.9	4.2	260	<0.5	<0.5	<0.09
JUN													
10...	1130	571	735	--	8.0	775	23.0	19.2	3.0	160	<0.5	<0.5	<0.09
27...	1030	429	738	8.8	8.3	799	25.0	23.6	3.1	140	<0.5	<0.5	<0.09
JUL													
07...	1140	16,600	732	5.6	7.6	316	32.0	23.8	7.6	770	<0.5	<0.5	<0.09
30...	1140	741	736	8.3	8.1	708	26.0	23.0	3.4	56	<0.5	<0.5	<0.09
AUG													
13...	0940	793	747	7.4	8.0	640	24.0	22.4	3.8	120	<0.5	<0.5	<0.09
SEP													
10...	0920	1,490	744	8.1	7.9	610	23.5	21.0	4.0	180	<0.5	<0.5	<0.09

[(National Water-Quality Assessment Program White River Basin, Miami River Basin Study Unit)—Continued]

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	2,4-D water, fltrd, ug/L (50470)	2,4-D water, fltrd, ug/L (39732)	2,4-DB water, fltrd 0.7u GF ug/L (38746)	2,6-Di- ethyl- aniline water fltrd 0.7u GF ug/L (82660)	2,6-Di- methyl- naphth- alene, water, fltrd, ug/L (62055)	2-[(2- Et-6-Me -Ph)- -amino] propan- 1-ol, ug/L (61615)	2Chloro -2,6-' diethyl acet- anilide wat flt ug/L (61618)	CIAT, water, fltrd, ug/L (04040)	CEAT, water, fltrd, ug/L (04038)	2-Ethyl -6- methyl- aniline water, fltrd, ug/L (61620)	OIET, water, fltrd, ug/L (50355)	2- Methyl- naphth- alene, water, fltrd, ug/L (62056)	3,4-Di- chloro- aniline water, fltrd, ug/L (61625)
OCT 31...	<0.009	0.05	<0.02	<0.006	<0.5	<0.1	<0.005	E0.015	<0.04	<0.004	E0.056	<0.5	<0.004
NOV 14...	<0.009	0.15	<0.02	<0.006	<0.5	<0.1	<0.005	E0.050	E0.04	<0.004	E0.160	<0.5	<0.006
DEC 17...	<0.009	0.03	<0.02	<0.006	<0.5	<0.1	<0.005	E0.010	<0.04	<0.004	E0.042	<0.5	0.012
JAN 10...	<0.009	0.06	<0.02	<0.006	<0.5	<0.1	<0.005	E0.116	E0.03	<0.004	E0.212	<0.5	0.008
29...	<0.009	0.02	<0.02	<0.006	<0.5	<0.1	<0.005	E0.063	E0.02	<0.004	E0.070	<0.5	0.014
FEB 11...	<0.009	0.04	<0.02	<0.006	<0.5	<0.1	<0.005	E0.063	E0.02	<0.004	E0.124	<0.5	0.007
27...	<0.009	0.13	<0.02	<0.006	<0.5	<0.1	<0.005	E0.057	E0.02	<0.004	E0.131	<0.5	0.005
MAR 18...	<0.009	0.06	<0.02	--	<0.5	--	--	--	E0.01	--	E0.130	<0.5	--
APR 14...	<0.009	E0.02	<0.02	<0.006	<0.5	<0.1	<0.005	E0.025	E0.01	<0.004	E0.063	<0.5	E0.004
MAY 07...	E0.209	E1.18	<0.02	<0.006	<0.5	<0.1	<0.005	E0.482	E0.40	<0.004	E1.65	<0.5	0.007
19...	<0.009	0.18	<0.02	<0.006	<0.5	<0.1	<0.005	E0.541	E0.21	<0.004	E0.317	<0.5	<0.004
JUN 10...	<0.009	0.08	<0.02	<0.006	<0.5	<0.1	<0.005	E0.132	E0.07	<0.004	E0.154	<0.5	E0.004
27...	<0.009	0.12	<0.02	<0.006	<0.5	<0.1	<0.005	E0.138	E0.05	<0.004	E0.320	<0.5	<0.006
JUL 07...	<0.009	0.17	<0.02	<0.006	<0.5	<0.1	<0.005	E0.453	E0.015	E0.002	E1.59	<0.5	<0.004
30...	<0.009	0.03	<0.02	<0.006	<0.5	--	<0.005	E0.114	E0.04	E0.001	E0.232	<0.5	0.005
AUG 13...	<0.009	0.14	<0.02	<0.006	<0.5	<0.1	<0.005	E0.128	E0.06	E0.001	E0.226	<0.5	E0.004
SEP 10...	<0.009	<0.02	<0.02	<0.006	<0.5	<0.1	<0.005	E0.078	E0.04	<0.004	E0.233	<0.5	<0.004

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	3-beta- Copros- tanol, water, fltrd, ug/L (62057)	3- Hydroxy carbo- furan, wat flt 0.7u GF ug/L (49308)	3-Keto- carbo- furan, water, fltrd, ug/L (50295)	3- Methyl- 1H- indole, water, fltrd, ug/L (62058)	3-tert- Butyl- 4-hy- droxy- anisole wat flt ug/L (62059)	4Chloro 2methyl phenol, water, fltrd, ug/L (61633)	4- Cumyl- phenol, water, fltrd, ug/L (62060)	4- Octyl- phenol, water, fltrd, ug/L (62061)	4- Nonyl- phenol, water, fltrd, ug/L (62085)	4-tert- Octyl- phenol, water, fltrd, ug/L (62062)	5-Meth- yl-1H- benzo- tri- azole, wat flt ug/L (62063)	9,10- Anthra- quinone water, fltrd, ug/L (62066)	Aceto- chlor ESA, water, fltrd 0.7u GF ug/L (61029)
OCT 31...	M	<0.006	<2	<1	<5	<0.006	<1	<1	E1	<1	<2	<0.5	<0.05
NOV 14...	M	<0.006	<2	<1	<5	<0.006	<1	<1	E1	<1	<2	<0.5	0.62
DEC 17...	<2	<0.006	<2	<1	<5	<0.006	<1	<1	<5	<1	<2	<0.5	<0.05
JAN 10...	<2	<0.006	<2	<1	<5	<0.006	<1	<1	<5	<1	<2	<0.5	0.22
29...	<2	<0.006	<2	<1	<5	<0.006	<1	<1	<5	<1	<2	<0.5	0.09
FEB 11...	<2	<0.006	<2	<1	<5	<0.006	<1	<1	<5	<1	<2	<0.5	0.19
27...	<2	<0.006	<2	<1	<5	<0.006	<1	<1	<5	<1	<2	<0.5	0.11
MAR 18...	<2	<0.006	<2	<1	<5	--	<1	<1	<5	<1	<2	<0.5	0.22
APR 14...	<2	<0.006	<2	<1	<5	<0.006	<1	<1	E2	<1	<2	<0.5	0.13
MAY 07...	M	<0.006	<2	<1	<5	<0.006	<1	<1	E1	<1	<2	E0.1	0.90
19...	<2	<0.006	<2	<1	<5	<0.006	<1	<1	E3	<1	<2	<0.5	0.50
JUN 10...	<2	<0.006	<2	<1	<5	<0.006	<1	<1	<5	<1	<2	<0.5	0.19
27...	<2	<0.006	<2	<1	<5	<0.006	<1	<1	E2	<1	<2	<0.5	0.22
JUL 07...	<2	<0.006	<2	<1	<5	<0.006	<1	<1	E2	<1	<2	<0.5	1.42
30...	<2	<0.006	<2	<1	<5	<0.006	<1	<1	<5	<1	<2	<0.5	0.28
AUG 13...	<2	<0.006	<2	<1	<5	<0.006	<1	<1	E6	<1	<2	<0.5	0.35
SEP 10...	<2	<0.006	<2	<1	<5	<0.006	<1	<1	<5	<1	<2	<0.5	0.26

[(National Water-Quality Assessment Program White River Basin, Miami River Basin Study Unit)]--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Aceto- chlor OA, water, fltrd 0.7u GF (61030)	Aceto- chlor, water, fltrd, ug/L (49260)	Aceto- phenone water, fltrd, ug/L (62064)	AHTN, water, fltrd, ug/L (62065)	Aci- fluor- fen, water, fltrd 0.7u GF (49315)	Ala- chlor ESA, water, fltrd 0.7u GF (50009)	Ala- chlor OA, water, fltrd 0.7u GF (61031)	Ala- chlor, water, fltrd, ug/L (46342)	Aldi- carb sulfone water, fltrd 0.7u GF (49313)	Aldi- carb sulf- oxide, wat flt 0.7u GF (49314)	Aldi- carb, water, fltrd 0.7u GF (49312)	Anthra- cene, water, fltrd, ug/L (34221)	Atra- zine, water, fltrd, ug/L (39632)
OCT 31...	<0.05	E0.005	<0.5	M	<0.007	0.11	0.05	<0.004	<0.02	<0.008	<0.04	<0.5	0.069
NOV 14...	0.71	0.238	<0.5	E0.1	<0.007	0.12	0.10	<0.004	<0.02	<0.008	<0.04	<0.5	0.520
DEC 17...	<0.05	E0.003	<0.5	E0.1	<0.007	0.13	0.07	<0.004	<0.02	<0.008	<0.04	<0.5	0.041
JAN 10...	0.18	0.009	<0.5	E0.1	<0.007	0.14	0.09	0.005	<0.02	<0.008	<0.04	<0.5	0.478
29...	0.08	E0.005	<0.5	E0.2	<0.007	0.06	0.08	<0.004	<0.02	<0.008	<0.04	<0.5	0.266
FEB 11...	0.11	E0.004	<0.5	E0.2	<0.007	0.24	0.10	E0.002	<0.02	<0.008	<0.04	<0.5	0.275
27...	0.08	E0.005	<0.5	E0.1	<0.007	0.05	0.05	0.005	<0.02	<0.008	<0.04	<0.5	0.215
MAR 18...	0.13	--	<0.5	E0.1	<0.007	0.12	0.06	--	<0.02	<0.008	<0.04	<0.5	--
APR 14...	0.06	0.012	<0.5	E0.1	<0.007	0.11	0.06	0.005	<0.02	<0.008	<0.04	<0.5	0.111
MAY 07...	1.15	4.32	<0.5	E0.1	<0.007	0.11	0.06	<0.009	<0.02	<0.008	<0.04	<0.5	20.1
19...	0.90	0.678	<0.5	E0.1	<0.007	0.15	0.08	0.034	<0.02	<0.008	<0.04	<0.5	6.77
JUN 10...	0.22	0.186	<0.5	E0.1	<0.007	<0.05	0.05	0.011	<0.02	<0.008	<0.04	<0.5	1.85
27...	0.21	0.070	<0.5	M	<0.007	0.10	0.07	0.006	<0.02	<0.008	<0.04	<0.5	1.14
JUL 07...	1.74	0.407	<0.5	<0.5	0.011	0.13	0.13	0.087	<0.02	<0.008	<0.04	<0.5	3.44
30...	0.34	0.049	<0.5	E0.1	<0.007	0.12	0.09	0.017	<0.02	<0.008	<0.04	<0.5	0.597
AUG 13...	0.41	0.034	<0.5	E0.1	<0.007	0.12	0.08	0.011	<0.02	<0.008	<0.04	<0.5	0.560
SEP 10...	0.17	0.017	<0.5	E0.1	<0.007	0.08	<0.05	0.007	<0.02	<0.008	<0.04	<0.5	0.358

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Azin- phos- methyl oxon, water, fltrd, ug/L (61635)	Azin- phos- methyl, water, fltrd 0.7u GF (82686)	Bendio- carb, water, fltrd, ug/L (50299)	Ben- flur- alin, water, fltrd 0.7u GF (82673)	Benomyl water, fltrd, ug/L (50300)	Bensul- furon, water, fltrd, ug/L (61693)	Ben- tazon, water, fltrd 0.7u GF (38711)	Benzo- [a]- pyrene, water, fltrd, ug/L (34248)	Benzo- phenone water, fltrd, ug/L (62067)	beta- Sitos- terol, water, fltrd, ug/L (62068)	beta- Stigma- stanol, water, fltrd, ug/L (62086)	Bispheno- l A, water, fltrd, ug/L (62069)	Bromo- cil, water, fltrd, ug/L (04029)
OCT 31...	<0.02	<0.050	<0.03	<0.010	<0.004	<0.02	E0.01	<0.5	<0.5	M	M	M	<0.03
NOV 14...	<0.02	<0.050	<0.03	<0.010	<0.004	<0.02	E0.01	<0.5	<0.5	M	<2	M	<0.03
DEC 17...	<0.02	<0.050	<0.03	<0.010	<0.004	<0.02	E0.01	<0.5	<0.5	<2	E1	M	<0.03
JAN 10...	<0.02	<0.050	<0.03	<0.010	<0.004	<0.02	E0.03	<0.5	<0.5	<2	<2	<1	<0.03
29...	<0.02	<0.050	<0.03	<0.010	<0.004	<0.02	E0.01	<0.5	<0.5	<2	<2	<1	<0.03
FEB 11...	<0.02	<0.050	<0.03	<0.010	<0.004	<0.02	E0.02	<0.5	<0.5	<2	<2	<1	<0.03
27...	<0.02	<0.050	<0.03	<0.010	<0.004	<0.02	E0.01	<0.5	<0.5	<2	<2	<1	<0.03
MAR 18...	--	--	<0.03	--	<0.004	<0.02	E0.01	<0.5	<0.5	<2	<2	<1	<0.03
APR 14...	<0.02	<0.050	<0.03	<0.010	<0.004	<0.02	<0.01	<0.5	<0.5	<2	<2	<1	<0.03
MAY 07...	<0.02	<0.050	<0.03	<0.010	E0.016	<0.02	E0.02	<0.5	<0.5	<2	E1	<1	<0.03
19...	<0.02	<0.050	<0.03	<0.010	<0.004	<0.02	E0.01	<0.5	<0.5	<2	<2	<1	<0.03
JUN 10...	<0.02	<0.050	<0.03	<0.010	<0.004	<0.02	<0.01	<0.5	<0.5	<2	<2	<1	<0.03
27...	<0.02	<0.050	<0.03	<0.010	<0.004	<0.02	E0.02	<0.5	<0.5	<2	<2	<1	<0.03
JUL 07...	<0.02	<0.050	<0.03	<0.010	0.040	<0.02	E0.10	<0.5	<0.5	<2	<2	<1	<0.03
30...	<0.02	<0.050	<0.03	<0.010	E0.009	<0.02	E0.06	<0.5	<0.5	<2	<2	<1	E0.01
AUG 13...	<0.02	<0.050	<0.03	<0.010	<0.004	<0.02	E0.04	<0.5	<0.5	<2	<2	<1	<0.03
SEP 10...	<0.02	<0.050	<0.03	<0.010	<0.008	<0.02	E0.03	<0.5	M	<2	<2	<1	<0.03

[(National Water-Quality Assessment Program White River Basin, Miami River Basin Study Unit)—Continued]

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Bromoxynil, water, fltrd, 0.7u GF ug/L (49311)	Caffeine, water, fltrd, ug/L (50305)	Camphor, water, fltrd, ug/L (62070)	Carbaryl, water, fltrd, 0.7u GF ug/L (49310)	Carbaryl, water, fltrd, 0.7u GF ug/L (82680)	Carbazole, water, fltrd, ug/L (62071)	Carbofuran, water, fltrd, 0.7u GF ug/L (49309)	Chloramben methyl ester, water, fltrd, ug/L (61188)	Chlorimuron, water, fltrd, ug/L (50306)	Chloro-di-amino-s-triazine, wat flt ug/L (04039)	Chlorothalonil, water, fltrd, 0.7u GF ug/L (49306)	Chlorpyrifos oxon, water, fltrd, ug/L (61636)	Chlorpyrifos water, fltrd, ug/L (38933)
OCT 31...	<0.02	M	<0.5	<0.03	<0.041	<0.5	<0.006	<0.02	<0.010	<0.01	<0.04	<0.06	<0.005
NOV 14...	<0.02	E0.1	<0.5	<0.03	E0.005	<0.5	<0.006	<0.02	<0.010	<0.01	<0.04	<0.06	<0.005
DEC 17...	<0.02	E0.1	<0.5	<0.03	<0.041	<0.5	<0.006	<0.02	<0.010	<0.01	<0.04	<0.06	<0.005
JAN 10...	<0.02	E0.1	<0.5	<0.03	<0.041	<0.5	<0.006	<0.02	E0.040	E0.01	<0.04	<0.06	<0.005
29...	<0.02	E0.2	<0.5	<0.03	<0.041	<0.5	<0.006	<0.02	<0.010	<0.01	<0.04	<0.06	<0.005
FEB 11...	<0.02	E0.2	<0.5	<0.03	<0.041	<0.5	<0.006	<0.02	E0.034	<0.01	<0.04	<0.06	<0.005
27...	<0.02	E0.1	<0.5	<0.03	<0.041	<0.5	<0.006	<0.02	<0.010	<0.01	<0.04	<0.06	<0.005
MAR 18...	<0.02	E0.1	<0.5	<0.03	<1	<0.5	<0.006	<0.02	<0.010	<0.01	<0.04	--	<0.5
APR 14...	<0.02	E0.1	<0.5	<0.03	<0.041	<0.5	<0.006	<0.02	<0.010	<0.01	<0.04	<0.06	<0.005
MAY 07...	<0.02	E0.1	<0.5	<0.03	E0.007	<0.5	<0.006	<0.02	E0.200	E0.04	<0.04	<0.06	E0.004
19...	<0.02	M	<0.5	<0.03	E0.006	<0.5	<0.006	<0.02	0.069	<0.01	<0.04	<0.06	0.008
JUN 10...	<0.02	M	<0.5	<0.03	<0.041	<0.5	<0.006	<0.02	<0.010	<0.01	<0.04	<0.06	<0.005
27...	<0.02	M	<0.5	<0.03	<0.041	<0.5	<0.006	<0.02	0.013	<0.01	<0.04	<0.06	<0.005
JUL 07...	M	E0.1	<0.5	E0.07	E0.025	<0.5	0.012	<0.02	0.029	E0.16	<0.04	<0.01	0.008
30...	<0.02	E0.1	<0.5	<0.03	E0.006	<0.5	<0.006	<0.02	<0.010	<0.01	<0.04	<0.06	<0.005
AUG 13...	<0.02	E0.1	<0.5	<0.03	E0.007	<0.5	<0.006	<0.02	<0.010	<0.01	<0.04	<0.06	<0.005
SEP 10...	<0.02	E0.1	<0.5	<0.03	E0.006	<0.5	<0.006	<0.02	<0.010	E0.02	<0.04	<0.06	<0.005

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Cholesterol, water, fltrd, ug/L (62072)	cis-Permethrin water fltrd, 0.7u GF ug/L (82687)	Clopyralid, water, fltrd, 0.7u GF ug/L (49305)	Cotinine, water, fltrd, ug/L (62005)	Cycloate, water, fltrd, ug/L (04031)	Cyfluthrin, water, fltrd, ug/L (61585)	Cypermethrin water, fltrd, ug/L (61586)	Dacthal mono-acid, water, fltrd, 0.7u GF ug/L (49304)	DCPA, water fltrd, 0.7u GF ug/L (82682)	DEET, water, fltrd, ug/L (62082)	Desulf-inyl fipronil, water, fltrd, ug/L (62170)	Diazinon oxon, water, fltrd, ug/L (61638)	Diazinon, water, fltrd, ug/L (39572)
OCT 31...	M	<0.006	<0.01	<1	<0.01	<0.008	<0.009	<0.01	<0.003	E0.1	<0.004	--	0.008
NOV 14...	M	<0.006	<0.01	<1	<0.01	<0.008	<0.009	<0.01	E0.002	E0.1	<0.004	--	0.013
DEC 17...	E1	<0.006	<0.01	<1	<0.01	<0.008	<0.009	<0.01	<0.003	M	<0.004	--	0.007
JAN 10...	<2	<0.006	<0.01	<1	<0.01	<0.008	<0.009	<0.01	<0.003	M	<0.004	--	E0.004
29...	<2	<0.006	<0.01	M	<0.01	<0.008	<0.009	<0.01	<0.003	E0.2	<0.004	<0.04	E0.005
FEB 11...	<2	<0.006	<0.01	<1	<0.01	<0.008	<0.009	<0.01	<0.003	<0.5	<0.004	<0.04	<0.005
27...	<2	<0.006	<0.01	<1	<0.01	<0.008	<0.009	<0.01	<0.003	M	<0.004	<0.04	<0.005
MAR 18...	<2	--	<0.01	<1	<0.01	--	--	<0.01	--	M	--	--	<0.5
APR 14...	<2	<0.006	<0.01	<1	<0.01	<0.008	<0.009	<0.01	<0.003	E0.1	<0.004	<0.04	<0.005
MAY 07...	M	<0.006	0.05	<1	<0.01	<0.008	<0.009	<0.01	<0.003	E0.1	<0.004	<0.01	0.011
19...	<2	<0.006	<0.01	<1	<0.01	<0.008	<0.009	<0.01	<0.003	E0.1	<0.004	<0.01	E0.004
JUN 10...	<2	<0.006	<0.01	<1	<0.01	<0.008	<0.009	<0.01	<0.003	E0.2	<0.004	<0.01	<0.005
27...	<2	<0.006	<0.01	<1	<0.01	<0.008	<0.009	<0.01	<0.003	E0.2	<0.004	<0.01	0.006
JUL 07...	<2	<0.006	0.04	<1	<0.01	<0.008	<0.009	<0.01	E0.001	E0.1	E0.003	<0.01	0.012
30...	<2	<0.006	<0.01	<1	<0.01	<0.008	<0.009	<0.01	<0.003	E0.3	<0.004	<0.01	E0.004
AUG 13...	<2	<0.006	<0.01	<1	<0.01	<0.008	<0.009	<0.01	<0.003	1.7	<0.004	<0.01	0.007
SEP 10...	<2	<0.006	<0.01	<1	<0.01	<0.008	<0.009	<0.01	<0.003	E0.2	<0.004	<0.01	<0.005

[(National Water-Quality Assessment Program White River Basin, Miami River Basin Study Unit)]--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Dicamba water fltrd 0.7u GF ug/L (38442)	Di- chlor- prop, water, fltrd 0.7u GF ug/L (49302)	Dicro- tophos, water fltrd, ug/L (38454)	Diel- drin, water, fltrd, ug/L (39381)	Di- ethoxy- nonyl- phenol, water, fltrd, ug/L (62083)	Di- ethoxy- octyl- phenol, water, fltrd ug/L (61705)	Dimeth- enamid ESA, water, fltrd, ug/L (61951)	Dimeth- enamid OA, water, fltrd, ug/L (62482)	Dimeth- oate, water, fltrd 0.7u GF ug/L (82662)	Dinoseb water, fltrd 0.7u GF ug/L (49301)	Diphen- amid, water, fltrd, ug/L (04033)	Diuron, water, fltrd 0.7u GF ug/L (49300)	D-Limo- nene, water, fltrd, ug/L (62073)
OCT 31...	<0.01	<0.01	<0.08	<0.005	E2	M	<0.05	<0.05	<0.006	<0.01	<0.03	<0.01	<0.5
NOV 14...	<0.01	<0.01	<0.08	<0.005	E1	<1	0.07	<0.05	<0.006	<0.01	<0.03	E0.01	<0.5
DEC 17...	<0.01	<0.01	<0.08	<0.005	<5	<1	<0.05	<0.05	<0.006	<0.01	<0.03	<0.01	<0.5
JAN 10...	<0.01	<0.01	<0.08	<0.005	<5	<1	<0.05	<0.05	<0.006	<0.01	<0.03	<0.01	<0.5
29...	<0.01	<0.01	<0.08	<0.005	<5	<1	<0.05	<0.05	<0.006	<0.01	<0.03	<0.01	<0.5
FEB 11...	<0.01	<0.01	<0.08	<0.005	<5	<1	<0.05	<0.05	<0.006	<0.01	<0.03	<0.01	<0.5
27...	<0.01	<0.01	<0.08	<0.005	<5	<1	<0.05	<0.05	<0.006	<0.01	<0.03	<0.01	<0.5
MAR 18...	<0.01	<0.01	--	--	<5	<1	<0.05	<0.05	--	<0.01	<0.03	<0.01	<0.5
APR 14...	<0.01	<0.01	<0.08	<0.005	<5	<1	<0.05	<0.05	<0.006	<0.01	<0.03	<0.01	<0.5
MAY 07...	0.05	<0.01	<0.08	<0.005	E2	<1	0.05	<0.05	<0.006	<0.01	<0.03	E0.24	<0.5
19...	<0.01	<0.01	<0.08	E0.004	E2	<1	0.05	<0.05	<0.006	<0.01	<0.03	0.03	<0.5
JUN 10...	<0.01	<0.01	<0.08	<0.005	<5	<1	<0.05	<0.05	<0.006	<0.01	<0.03	E0.01	<0.5
27...	<0.01	<0.01	<0.08	<0.005	<5	<1	<0.05	<0.05	<0.006	<0.01	<0.03	E0.01	<0.5
JUL 07...	0.10	E0.02	<0.08	<0.005	<5	<1	0.11	0.05	<0.006	<0.01	<0.03	0.04	<0.5
30...	<0.01	<0.01	<0.08	<0.005	<5	<1	0.06	<0.05	<0.006	<0.01	<0.03	<0.01	<0.5
AUG 13...	<0.01	<0.01	<0.08	<0.005	<5	<1	<0.05	<0.05	<0.006	<0.01	<0.03	<0.01	<0.5
SEP 10...	<0.01	<0.01	<0.08	<0.005	<5	<1	<0.05	<0.05	<0.006	<0.01	<0.03	<0.01	<0.5

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Ethion monoxon water, fltrd, ug/L (61644)	Ethion, water, fltrd, ug/L (82346)	Ethoxy- phenol, water, fltrd ug/L (61706)	Fenami- phos sulfone water, fltrd, ug/L (61645)	Fenami- phos sulf- oxide, water, fltrd, ug/L (61646)	Fenami- phos, water, fltrd, ug/L (61591)	Fenuron water, fltrd 0.7u GF ug/L (49297)	Desulf- inyl- fipro- nil amide, wat flt ug/L (62169)	Fipro- nil sulfide water, fltrd, ug/L (62167)	Fipro- nil sulfone water, fltrd, ug/L (62168)	Fipro- nil, water, fltrd, ug/L (62166)	Flufen- acet ESA, water, fltrd, ug/L (61952)	Flufe- nacet OA, water, fltrd, ug/L (62483)
OCT 31...	<0.03	<0.004	M	<0.008	<0.03	<0.03	<0.03	<0.009	<0.005	<0.005	<0.007	<0.05	<0.05
NOV 14...	<0.03	<0.004	M	<0.008	<0.03	<0.03	<0.03	<0.009	<0.005	<0.005	E0.012	<0.05	<0.05
DEC 17...	<0.03	<0.004	<1	<0.008	<0.03	<0.03	<0.03	<0.009	<0.005	<0.005	E0.006	<0.05	<0.05
JAN 10...	<0.03	<0.004	<1	<0.008	<0.03	<0.03	<0.03	<0.009	<0.005	<0.005	E0.007	<0.05	<0.05
29...	<0.03	<0.004	<1	<0.008	<0.03	<0.03	<0.03	<0.009	<0.005	<0.005	<0.007	<0.05	<0.05
FEB 11...	<0.03	<0.004	<1	<0.008	<0.03	<0.03	<0.03	<0.009	<0.005	<0.005	E0.002	<0.05	<0.05
27...	<0.03	<0.004	<1	<0.008	<0.03	<0.03	<0.03	<0.009	<0.005	<0.005	<0.007	<0.05	<0.05
MAR 18...	--	--	<1	--	--	--	<0.03	--	--	--	--	<0.05	<0.05
APR 14...	<0.03	<0.004	<1	<0.008	<0.03	<0.03	<0.03	<0.009	<0.005	<0.005	E0.007	<0.05	<0.05
MAY 07...	<0.03	<0.004	<1	<0.008	<0.03	<0.03	<0.03	<0.009	<0.005	<0.005	E0.008	<0.05	<0.05
19...	<0.03	<0.004	<1	<0.008	<0.12	<0.03	<0.03	<0.009	<0.005	<0.005	E0.007	<0.05	<0.05
JUN 10...	<0.03	<0.004	<1	<0.008	<0.03	<0.03	<0.03	<0.009	<0.005	<0.005	<0.007	<0.05	<0.05
27...	<0.03	<0.004	<1	<0.031	<0.03	<0.03	<0.03	<0.031	<0.005	<0.005	<0.007	<0.05	<0.05
JUL 07...	<0.03	<0.004	<1	<0.008	<0.03	<0.03	<0.03	<0.009	E0.004	<0.007	E0.011	<0.05	<0.05
30...	<0.03	<0.004	<1	<0.008	<0.03	<0.03	<0.03	<0.009	<0.005	<0.005	<0.007	<0.05	<0.05
AUG 13...	<0.03	<0.004	<1	<0.008	<0.03	<0.03	<0.03	<0.009	<0.005	<0.006	E0.006	<0.05	<0.05
SEP 10...	<0.03	<0.004	<1	<0.008	<0.03	<0.03	<0.03	<0.009	<0.005	<0.005	<0.007	<0.05	<0.05

[(National Water-Quality Assessment Program White River Basin, Miami River Basin Study Unit)—Continued]

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Fluomet-sulam, water, fltrd, ug/L (61694)	Fluo-meturon water fltrd 0.7u GF ug/L (38811)	Fluor-anthene water, fltrd, ug/L (34377)	Fonofos oxon, water, fltrd, ug/L (61649)	Fonofos water, fltrd, ug/L (04095)	HHCB, water, fltrd, ug/L (62075)	Hexa-zinone, water, fltrd, ug/L (04025)	Imaza-quin, water, fltrd, ug/L (50356)	Imaze-thapyr, water, fltrd, ug/L (50407)	Imida-cloprid water, fltrd, ug/L (61695)	Indole, water, fltrd, ug/L (62076)	Ipro-dione, water, fltrd, ug/L (61593)	Isobor-neol, water, fltrd, ug/L (62077)
OCT 31...	<0.01	<0.03	<0.5	<0.002	<0.003	M	--	<0.02	<0.02	<0.007	<0.5	<1	<0.5
NOV 14...	<0.01	<0.03	<0.5	<0.002	<0.003	M	--	<0.02	<0.02	<0.007	E0.1	<1	<0.5
DEC 17...	<0.01	<0.03	<0.5	<0.002	<0.003	M	--	<0.02	<0.02	<0.007	<0.5	<1	<0.5
JAN 10...	<0.01	<0.03	<0.5	<0.002	<0.003	M	--	<0.02	<0.02	<0.007	<0.5	<1	<0.5
29...	<0.01	<0.03	<0.5	<0.002	<0.003	E0.1	--	<0.02	<0.02	<0.007	E0.1	<1	<0.5
FEB 11...	<0.01	<0.03	<0.5	<0.002	<0.003	M	--	M	<0.02	<0.007	<0.5	<1	<0.5
27...	<0.01	<0.03	<0.5	<0.002	<0.003	M	--	<0.02	<0.02	<0.007	M	<1	<0.5
MAR 18...	<0.01	<0.03	<0.5	--	--	M	--	E0.01	E0.03	<0.007	<0.5	--	<0.5
APR 14...	<0.01	<0.03	<0.5	<0.002	<0.003	<0.5	--	<0.02	E0.01	<0.007	<0.5	<1	<0.5
MAY 07...	E0.05	<0.03	M	<0.002	<0.003	E0.1	--	E0.15	E0.13	E0.022	M	<1	<0.5
19...	<0.01	<0.03	<0.5	<0.002	<0.003	E0.1	<0.013	E0.02	E0.06	<0.007	<0.5	<1	<0.5
JUN 10...	<0.01	<0.03	<0.5	<0.002	<0.003	<0.5	<0.013	<0.02	<0.02	<0.007	<0.5	<1	<0.5
27...	<0.01	<0.03	<0.5	<0.002	<0.003	<0.5	<0.013	E0.01	<0.02	E0.006	<0.5	<1	<0.5
JUL 07...	E0.05	<0.03	<0.5	<0.002	<0.003	<0.5	<0.013	E0.05	E0.13	0.037	<0.5	<1	<0.5
30...	E0.02	<0.03	<0.5	<0.002	<0.003	E0.1	<0.013	M	E0.02	<0.007	<0.5	<1	<0.5
AUG 13...	<0.02	<0.03	<0.5	<0.002	<0.003	E0.1	<0.013	<0.02	<0.02	<0.007	<0.5	<1	<0.5
SEP 10...	E0.02	<0.03	<0.5	<0.002	<0.003	M	<0.013	<0.02	E0.02	<0.031	<0.5	<1	<0.5

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Iso-butyl alcohol -d6, surrog, wat unfl pct rcv (62835)	Isofen-phos, water, fltrd, ug/L (61594)	Iso-phorone water, fltrd, ug/L (34409)	Iso-propyl-benzene water, fltrd, ug/L (62078)	Iso-quin-oline, water, fltrd, ug/L (62079)	Linuron water fltrd 0.7u GF (38478)	Mala-oxon, water, fltrd, ug/L (61652)	Mala-thion, water, fltrd, ug/L (39532)	MCPA, water, fltrd 0.7u GF (38482)	MCPB, water, fltrd 0.7u GF (38487)	Menthol water, fltrd, ug/L (62080)	Meta-laxyl, water, fltrd, ug/L (50359)	Meta-laxyl, water, fltrd, ug/L (61596)
OCT 31...	102	<0.003	<0.5	<0.5	<0.5	<0.01	<0.008	<0.027	E0.01	<0.01	<0.5	<0.02	<0.005
NOV 14...	103	<0.003	<0.5	<0.5	<0.5	<0.01	<0.006	<0.027	M	<0.01	<0.5	<0.02	<0.005
DEC 17...	104	<0.003	<0.5	<0.5	<0.5	<0.01	<0.008	<0.027	<0.02	<0.01	<0.5	<0.02	<0.005
JAN 10...	113	<0.003	<0.5	<0.5	<0.5	<0.01	<0.008	<0.027	<0.02	<0.01	<0.5	<0.02	<0.005
29...	110	<0.003	<0.5	<0.5	<0.5	<0.01	<0.008	<0.027	<0.02	<0.01	<0.5	<0.02	<0.005
FEB 11...	97.6	<0.003	<0.5	<0.5	<0.5	<0.01	<0.008	<0.027	<0.02	<0.01	<0.5	<0.02	<0.005
27...	129	<0.003	<0.5	<0.5	<0.5	<0.01	<0.008	<0.027	<0.02	<0.01	<0.5	<0.02	<0.005
MAR 18...	98.2	--	<0.5	<0.5	<0.5	<0.01	--	--	<0.02	<0.01	<0.5	0.02	--
APR 14...	77.1	<0.003	<0.5	<0.5	<0.5	<0.01	<0.008	<0.027	<0.02	<0.01	<0.5	<0.02	<0.005
MAY 07...	128	<0.003	<0.5	<0.5	<0.5	<0.01	<0.008	<0.027	0.06	<0.01	<0.5	<0.02	0.015
19...	145	<0.003	<0.5	<0.5	<0.5	<0.01	<0.008	<0.027	<0.02	<0.01	<0.5	E0.01	<0.005
JUN 10...	95.2	<0.003	<0.5	<0.5	<0.5	<0.01	<0.008	<0.027	<0.02	<0.01	<0.5	E0.01	<0.005
27...	126	<0.003	<0.5	<0.5	<0.5	<0.01	<0.008	<0.027	<0.02	<0.01	<0.5	<0.02	<0.006
JUL 07...	112	<0.003	<0.5	<0.5	<0.5	<0.01	<0.008	<0.027	E0.01	<0.01	<0.5	E0.12	<0.008
30...	99.0	<0.003	<0.5	<0.5	<0.5	<0.01	<0.008	<0.027	<0.02	<0.01	<0.5	<0.02	<0.005
AUG 13...	100	<0.003	<0.5	<0.5	<0.5	<0.01	<0.008	<0.027	<0.02	<0.01	<0.5	<0.02	<0.005
SEP 10...	91.0	<0.003	<0.5	<0.5	<0.5	<0.01	<0.008	<0.027	<0.02	<0.01	<0.5	E0.01	<0.005

[(National Water-Quality Assessment Program White River Basin, Miami River Basin Study Unit)—Continued]

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Methi- althion water, fltrd, ug/L (61598)	Methio- carb, water, fltrd 0.7u GF ug/L (38501)	Meth- omyl, water, fltrd 0.7u GF ug/L (49296)	Methyl acetate water unfltrd ug/L (77032)	Methyl para- oxon, water, fltrd, ug/L (61664)	Methyl para- thion, water, fltrd 0.7u GF ug/L (82667)	Methyl salicy- late, water, fltrd, ug/L (62081)	Metola- chlor ESA, water, fltrd 0.7u GF ug/L (61043)	Metola- chlor OA, water, fltrd 0.7u GF ug/L (61044)	Metola- chlor, water, fltrd, ug/L (39415)	Metri- buzin, water, fltrd, ug/L (82630)	Metsul- furon, water, fltrd, ug/L (61697)	Myclo- butanil water, fltrd, ug/L (61599)
OCT 31...	<0.006	<0.008	<0.004	<0.4	<0.03	<0.006	<0.5	0.19	0.09	E0.012	<0.006	E0.06	<0.008
NOV 14...	<0.006	<0.008	<0.004	<0.4	<0.03	<0.006	E0.1	1.36	0.80	0.138	0.012	<0.03	<0.008
DEC 17...	<0.006	<0.008	<0.004	<0.4	<0.03	<0.006	<0.5	0.21	0.09	E0.009	<0.006	<0.03	<0.008
JAN 10...	<0.006	<0.008	<0.004	<0.4	<0.03	<0.006	<0.5	1.01	0.64	0.159	0.013	<0.03	<0.008
29...	<0.006	<0.008	<0.004	<0.4	<0.03	<0.006	<0.5	0.46	0.18	0.050	0.006	<0.03	<0.008
FEB 11...	<0.006	<0.008	<0.004	<0.4	<0.03	<0.006	<0.5	1.28	0.44	0.067	0.007	<0.03	<0.008
27...	<0.006	<0.008	<0.004	<0.4	<0.03	<0.006	<0.5	0.57	0.23	0.082	0.011	<0.03	<0.008
MAR 18...	--	<0.008	<0.004	<0.4	--	--	<0.5	1.06	0.48	E0.1	--	<0.03	--
APR 14...	<0.006	<0.008	<0.004	<0.4	<0.03	<0.006	<0.5	0.72	0.27	0.040	<0.006	<0.03	<0.008
MAY 07...	<0.006	<0.008	<0.004	<0.4	<0.03	<0.006	M	1.25	0.69	2.93	0.055	<0.03	<0.008
19...	<0.006	<0.008	<0.004	<0.4	<0.03	<0.006	<0.5	1.63	1.07	2.70	0.044	<0.03	<0.008
JUN 10...	<0.006	<0.008	<0.004	<0.4	<0.03	<0.006	<0.5	0.53	0.27	0.534	0.007	<0.03	<0.008
27...	<0.006	<0.008	<0.004	<0.4	<0.03	<0.006	<0.5	0.66	0.24	0.317	<0.006	<0.03	<0.008
JUL 07...	<0.006	<0.008	<0.004	<0.4	<0.03	<0.006	<0.5	2.07	1.47	1.77	0.078	<0.03	<0.008
30...	<0.006	<0.008	<0.004	<0.4	<0.03	<0.006	<0.5	0.85	0.45	0.284	0.006	<0.03	<0.008
AUG 13...	<0.006	<0.008	<0.004	<0.4	<0.03	<0.006	<0.5	1.09	0.62	0.240	0.008	<0.03	<0.008
SEP 10...	<0.006	<0.008	<0.004	<0.4	<0.03	<0.006	<0.5	0.84	0.42	0.158	<0.006	<0.03	<0.008

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	N-(4- Chloro- phenyl) -N'- methyl- urea, ug/L (61692)	Naphth- alene, water, fltrd, ug/L (34443)	Neburon water, fltrd 0.7u GF ug/L (49294)	Nico- sul- furon, water, fltrd, ug/L (50364)	Norflur azon, water, fltrd 0.7u GF ug/L (49293)	Ory- zalin, water, fltrd 0.7u GF ug/L (49292)	Oxamyl, water, fltrd 0.7u GF ug/L (38866)	p- Cresol, water, fltrd, ug/L (62084)	Penta- chloro- phenol, water, fltrd, ug/L (34459)	Phenan- threne, water, fltrd, ug/L (34462)	Phenol, water, fltrd, ug/L (34466)	Phorate oxon, water, fltrd, ug/L (61666)	Phorate water fltrd 0.7u GF ug/L (82664)
OCT 31...	<0.02	<0.5	<0.01	<0.01	<0.02	<0.02	<0.01	<1	M	<0.5	E0.2	<0.10	<0.011
NOV 14...	<0.02	<0.5	<0.01	<0.01	<0.02	<0.02	<0.01	<1	<2	<0.5	E0.4	<0.10	<0.011
DEC 17...	<0.02	<0.5	<0.01	<0.01	<0.02	<0.02	<0.01	<1	<2	<0.5	<0.5	<0.10	<0.011
JAN 10...	<0.02	<0.5	<0.01	<0.01	<0.02	<0.02	<0.01	<1	<2	<0.5	<0.5	<0.10	<0.011
29...	<0.02	<0.5	<0.01	<0.01	<0.02	<0.02	<0.01	M	<2	<0.5	<0.5	<0.10	<0.011
FEB 11...	<0.02	<0.5	<0.01	<0.01	<0.02	<0.02	<0.01	<1	<2	<0.5	E0.3	<0.10	<0.011
27...	<0.02	<0.5	<0.01	<0.01	<0.02	<0.02	<0.01	M	<2	<0.5	E0.2	<0.10	<0.011
MAR 18...	<0.02	<0.5	<0.01	<0.01	<0.02	<0.02	<0.01	<1	<2	<0.5	<0.5	--	--
APR 14...	<0.02	<0.5	<0.01	<0.01	<0.02	<0.02	<0.01	<1	<2	<0.5	E0.2	<0.10	<0.011
MAY 07...	<0.02	<0.5	<0.01	<0.01	<0.02	<0.02	<0.01	<1	M	<0.5	<0.5	<0.10	<0.011
19...	<0.02	<0.5	<0.01	<0.01	<0.02	<0.02	<0.01	<1	<2	<0.5	E0.2	<0.10	<0.011
JUN 10...	<0.02	<0.5	<0.01	<0.01	<0.02	<0.02	<0.01	<1	<2	<0.5	E0.4	<0.10	<0.011
27...	<0.02	<0.5	<0.01	<0.01	<0.02	<0.02	<0.01	<1	<2	<0.5	<0.5	<0.10	<0.011
JUL 07...	<0.02	<0.5	<0.01	E0.09	<0.02	<0.02	<0.01	<1	<2	<0.5	1.0	<0.10	<0.011
30...	<0.02	<0.5	<0.01	<0.01	<0.02	<0.02	<0.01	<1	<2	<0.5	1.0	<0.10	<0.011
AUG 13...	<0.02	<0.5	<0.01	<0.01	<0.02	<0.02	<0.01	<1	<2	<0.5	E0.2	<0.10	<0.011
SEP 10...	<0.02	<0.5	<0.01	<0.01	<0.02	<0.02	<0.01	<1	<2	<0.5	E0.3	<0.10	<0.011

[(National Water-Quality Assessment Program White River Basin, Miami River Basin Study Unit)—Continued]

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Phosmet oxon, water, fltrd, ug/L (61668)	Phosmet water, fltrd, ug/L (61601)	Picloram, water, fltrd, 0.7u GF ug/L (49291)	Prometon, water, fltrd, ug/L (04037)	Prometryn, water, fltrd, ug/L (04036)	Pronamide, water, fltrd, 0.7u GF ug/L (82676)	Propham water fltrd, 0.7u GF ug/L (49236)	Propiconazole, water, fltrd, ug/L (50471)	Propoxur, water, fltrd, 0.7u GF ug/L (38538)	Pyrene, water, fltrd, ug/L (34470)	Siduron water, fltrd, ug/L (38548)	Simazine, water, fltrd, ug/L (04035)	Sulfometuron, water, fltrd, ug/L (50337)
OCT 31...	<0.06	<0.008	<0.02	0.02	<0.005	<0.004	<0.010	<0.02	<0.008	<0.5	<0.02	0.013	<0.009
NOV 14...	<0.06	<0.008	<0.02	E0.01	<0.005	<0.004	<0.010	<0.02	<0.008	<0.5	<0.02	0.161	<0.009
DEC 17...	<0.06	<0.008	<0.02	E0.01	<0.005	<0.004	<0.010	<0.02	<0.008	<0.5	<0.02	0.009	<0.009
JAN 10...	<0.06	<0.008	<0.02	0.02	<0.005	<0.004	<0.010	<0.02	<0.008	<0.5	<0.02	0.073	<0.009
JAN 29...	<0.06	<0.008	<0.02	E0.01	<0.005	<0.004	<0.010	<0.02	<0.008	<0.5	<0.02	0.037	<0.009
FEB 11...	<0.06	<0.008	<0.02	E0.01	<0.005	<0.004	<0.010	<0.02	<0.008	<0.5	<0.02	0.042	<0.009
FEB 27...	<0.06	<0.008	<0.02	E0.01	<0.005	<0.004	<0.010	<0.02	<0.008	<0.5	<0.02	0.072	<0.009
MAR 18...	--	--	<0.02	<0.5	--	--	<0.010	<0.02	<0.008	<0.5	<0.02	--	<0.009
APR 14...	<0.06	<0.008	<0.02	E0.01	<0.005	<0.004	<0.010	<0.02	<0.008	<0.5	<0.02	0.020	<0.009
MAY 07...	<0.06	<0.008	<0.02	0.02	<0.005	<0.004	<0.010	<0.02	<0.008	M	E0.01	2.30	E0.010
MAY 19...	<0.06	<0.008	<0.02	0.02	<0.005	<0.004	<0.010	<0.02	<0.008	<0.5	<0.02	0.547	<0.009
JUN 10...	<0.06	<0.008	<0.02	E0.01	<0.005	<0.004	<0.010	<0.02	<0.008	<0.5	<0.02	0.120	<0.009
JUN 27...	<0.06	<0.008	<0.02	0.02	<0.005	<0.004	<0.010	<0.02	<0.008	<0.5	<0.02	0.080	<0.009
JUL 07...	<0.06	<0.008	0.16	0.05	<0.005	<0.004	<0.010	0.04	<0.008	<0.5	<0.02	0.243	<0.009
JUL 30...	<0.06	<0.008	<0.02	0.02	<0.005	<0.004	<0.010	<0.02	<0.008	<0.5	<0.02	0.033	<0.009
AUG 13...	<0.06	<0.008	<0.02	0.05	<0.005	<0.004	<0.010	<0.02	<0.008	<0.5	<0.02	0.037	<0.009
SEP 10...	<0.06	<0.008	<0.02	0.02	<0.005	<0.004	<0.010	<0.02	<0.008	<0.5	<0.02	0.085	<0.009

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Tebu-thiuron water fltrd, 0.7u GF ug/L (82670)	Terbacil, water, fltrd, ug/L (04032)	Terbufos oxon sulfone water, fltrd, ug/L (61674)	Terbufos, water, fltrd, 0.7u GF ug/L (82675)	Terbutylazine, water, fltrd, ug/L (04022)	tert-Amyl alcohol water unfltrd, ug/L (77073)	tert-Butyl alcohol water unfltrd, ug/L (77035)	Tetra-chloro-ethene, water, fltrd, ug/L (34476)	Tri-bromo-methane water, fltrd, ug/L (34288)	Tri-butyl phosphate, water, fltrd, ug/L (62089)	Tri-clopyr, water, fltrd, 0.7u GF ug/L (49235)	Triclo-san, water, fltrd, ug/L (62090)	Tri-ethyl citrate water, fltrd, ug/L (62091)
OCT 31...	<0.02	<0.010	<0.07	<0.02	M	<0.43	<1	<0.5	<0.5	<0.5	0.08	M	M
NOV 14...	E0.01	<0.010	<0.07	<0.02	E0.01	<0.43	<1	<0.5	<0.5	<0.5	0.21	M	E0.1
DEC 17...	<0.02	<0.010	<0.07	<0.02	0.01	<0.43	<1	<0.5	<0.5	E0.1	E0.02	<1	M
JAN 10...	<0.02	<0.010	<0.07	<0.02	<0.01	<0.43	<1	<0.5	<0.5	<0.5	0.04	<1	M
JAN 29...	<0.02	<0.010	<0.07	<0.02	<0.01	<0.43	<1	<0.5	<0.5	<0.5	<0.02	<1	E0.2
FEB 11...	<0.02	<0.010	<0.07	<0.02	<0.01	<0.43	<1	<0.5	<0.5	<0.5	0.02	<1	<0.5
FEB 27...	<0.02	<0.010	<0.07	<0.02	<0.01	<0.43	<1	<0.5	<0.5	<0.5	<0.02	M	M
MAR 18...	--	<0.010	--	--	--	<0.43	<1	<0.5	<0.5	<0.5	<0.02	<1	<0.5
APR 14...	<0.02	<0.010	<0.07	<0.02	<0.01	<0.43	<1	<0.5	<0.5	M	<0.02	<1	M
MAY 07...	<0.02	<0.010	<0.07	<0.02	<0.01	<0.43	<1	<0.5	<0.5	<0.5	0.07	<1	<0.5
MAY 19...	<0.02	<0.010	<0.07	<0.02	E0.01	<0.43	<1	<0.5	<0.5	<0.5	<0.02	<1	<0.5
JUN 10...	<0.02	<0.010	<0.07	<0.02	<0.01	<0.43	<1	<0.5	<0.5	<0.5	<0.02	<1	<0.5
JUN 27...	<0.02	<0.010	<0.07	<0.02	0.02	<0.43	<1	<0.5	<0.5	<0.5	<0.02	<1	<0.5
JUL 07...	<0.02	<0.010	<0.07	<0.02	M	<0.43	<1	<0.5	<0.5	<0.5	0.07	<1	<0.5
JUL 30...	E0.01	<0.010	<0.07	<0.02	E0.01	<0.43	<1	<0.5	<0.5	<0.5	<0.02	<1	<0.5
AUG 13...	E0.01	<0.010	<0.07	<0.02	M	<0.43	<1	<0.5	<0.5	<0.5	<0.02	<1	<0.5
SEP 10...	<0.02	<0.010	<0.07	<0.02	<0.01	<0.43	<1	<0.5	<0.5	M	<0.02	<1	<0.5

[(National Water-Quality Assessment Program White River Basin, Miami River Basin Study Unit)—Continued]

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Tri-fluor-alin, water, fltrd 0.7u GF (82661)	Tri-phenyl-phosphate, water, fltrd, ug/L (62092)	Tris(2-butoxy-ethyl) phosphate, wat flt ug/L (62093)	Tris(2-chloro-ethyl) phosphate, wat flt ug/L (62087)	Tris(di-chloro-i-Pr) phosphate, wat flt ug/L (62088)	1,1,1,2-Tetra-chloro-ethane, water, unfltrd ug/L (77562)	1,1,1-Tri-chloro-ethane, water, unfltrd ug/L (34506)	1,1,2,2-Tetra-chloro-ethane, water, unfltrd ug/L (34516)	CFC-113 water unfltrd ug/L (77652)	1,1,2-Tri-chloro-ethane, water, unfltrd ug/L (34511)	1,1-Di-chloro-ethane, water, unfltrd ug/L (34496)	1,1-Di-chloro-ethene, water, unfltrd ug/L (34501)	1,1-Di-chloro-propene water unfltrd ug/L (77168)
OCT 31...	<0.009	<0.5	<0.5	E0.1	M	<0.03	<0.03	<0.09	<0.06	<0.06	<0.04	<0.04	<0.05
NOV 14...	E0.004	M	<0.5	E0.1	E0.1	<0.03	<0.03	<0.09	<0.06	<0.06	<0.04	<0.04	<0.05
DEC 17...	<0.009	<0.5	<0.5	E0.1	<0.5	<0.03	<0.03	<0.09	<0.06	<0.06	<0.04	<0.04	<0.05
JAN 10...	<0.009	<0.5	<0.5	M	<0.5	<0.03	<0.03	<0.09	<0.06	<0.06	<0.04	<0.04	<0.05
29...	<0.009	<0.5	<0.5	<0.5	<0.5	<0.03	<0.03	<0.09	<0.06	<0.06	<0.04	<0.04	<0.05
FEB 11...	<0.009	<0.5	<0.5	<0.5	<0.5	<0.03	<0.03	<0.09	<0.06	<0.06	<0.04	<0.04	<0.05
27...	<0.009	<0.5	E0.2	<0.5	<0.5	<0.03	<0.03	<0.09	<0.06	<0.06	<0.04	<0.04	<0.05
MAR 18...	--	<0.5	<0.5	<0.5	<0.5	<0.03	<0.03	<0.09	<0.06	<0.06	<0.04	<0.04	<0.05
APR 14...	<0.009	<0.5	<0.5	<0.5	<0.5	<0.03	<0.03	<0.09	<0.06	<0.06	<0.04	<0.04	<0.05
MAY 07...	<0.009	<0.5	<0.5	<0.5	<0.5	<0.03	<0.03	<0.09	<0.06	<0.06	<0.04	<0.04	<0.05
19...	<0.009	M	<0.5	<0.5	<0.5	<0.03	<0.03	<0.09	<0.06	<0.06	<0.04	<0.04	<0.05
JUN 10...	<0.009	<0.5	E0.3	<0.5	M	<0.03	<0.03	<0.09	<0.06	<0.06	<0.04	<0.04	<0.05
27...	<0.009	<0.5	E0.3	M	<0.5	<0.03	<0.03	<0.09	<0.06	<0.06	<0.04	<0.04	<0.05
JUL 07...	<0.009	<0.5	<0.5	<0.5	<0.5	<0.03	<0.03	<0.09	<0.06	<0.06	<0.04	<0.04	<0.05
30...	<0.009	<0.5	E0.2	E0.1	E0.1	<0.03	<0.03	<0.09	<0.06	<0.06	<0.04	<0.04	<0.05
AUG 13...	<0.009	<0.5	E0.2	E0.1	E0.1	<0.03	<0.03	<0.09	<0.06	<0.06	<0.04	<0.04	<0.05
SEP 10...	<0.009	M	<0.5	M	M	<0.03	<0.03	<0.09	<0.06	<0.06	<0.04	<0.04	<0.05

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	1,2,3,4 Tetra-methyl-benzene water unfltrd ug/L (49999)	1,2,3,5 Tetra-methyl-benzene water unfltrd ug/L (50000)	1,2,3-Tri-chloro-benzene water unfltrd ug/L (77613)	1,2,3-Tri-chloro-propane water unfltrd ug/L (77443)	1,2,3-Tri-methyl-benzene water unfltrd ug/L (77221)	1,2,4-Tri-chloro-benzene water unfltrd ug/L (34551)	1,2,4-Tri-methyl-benzene water unfltrd ug/L (77222)	Dibromo-bromo-propane water unfltrd ug/L (82625)	1,2-Di-bromo-ethane, water, unfltrd ug/L (77651)	1,2-Di-chloro-benzene water unfltrd ug/L (34536)	1,2-Di-chloro-ethane, water, unfltrd ug/L (32103)	1,2-Di-chloro-propane water unfltrd ug/L (34541)	1,3,5-Tri-methyl-benzene water unfltrd ug/L (77226)
OCT 31...	<0.2	<0.2	<0.3	<0.16	<0.1	<0.1	<0.06	<0.5	<0.04	<0.03	<0.1	<0.03	<0.04
NOV 14...	<0.2	<0.2	<0.3	<0.16	<0.1	<0.1	<0.06	<0.5	<0.04	<0.03	<0.1	<0.03	<0.04
DEC 17...	<0.2	<0.2	<0.3	<0.16	<0.1	<0.1	<0.06	<0.5	<0.04	<0.03	<0.1	<0.03	<0.04
JAN 10...	<0.2	<0.2	<0.3	<0.16	<0.1	<0.1	<0.06	<0.5	<0.04	<0.03	<0.1	<0.03	<0.04
29...	<0.2	<0.2	<0.3	<0.16	<0.1	<0.1	<0.06	<0.5	<0.04	<0.03	<0.1	<0.03	<0.04
FEB 11...	<0.2	<0.2	<0.3	<0.16	<0.1	<0.1	<0.06	<0.5	<0.04	<0.03	<0.1	<0.03	<0.04
27...	<0.2	<0.2	<0.3	<0.16	<0.1	<0.1	<0.06	<0.5	<0.04	<0.03	<0.1	<0.03	<0.04
MAR 18...	<0.2	<0.2	<0.3	<0.16	<0.1	<0.1	<0.06	<0.5	<0.04	<0.03	<0.1	<0.03	<0.04
APR 14...	<0.2	<0.2	<0.3	<0.16	<0.1	<0.1	E0.06	<0.5	<0.04	<0.03	<0.1	<0.03	E0.02
MAY 07...	<0.2	<0.2	<0.3	<0.16	<0.1	<0.1	<0.06	<0.5	<0.04	<0.03	<0.1	<0.03	<0.04
19...	<0.2	<0.2	<0.3	<0.16	<0.1	<0.1	<0.06	<0.5	<0.04	<0.03	<0.1	<0.03	<0.04
JUN 10...	<0.2	<0.2	<0.3	<0.16	<0.1	<0.1	<0.06	<0.5	<0.04	<0.03	<0.1	<0.03	<0.04
27...	<0.2	<0.2	<0.3	<0.16	<0.1	<0.1	<0.06	<0.5	<0.04	<0.03	<0.1	<0.03	<0.04
JUL 07...	<0.2	<0.2	<0.3	<0.16	<0.1	<0.1	<0.06	<0.5	<0.04	<0.03	<0.1	<0.03	<0.04
30...	<0.2	<0.2	<0.3	<0.16	<0.1	<0.1	<0.06	<0.5	<0.04	<0.03	<0.1	<0.03	<0.04
AUG 13...	<0.2	<0.2	<0.3	<0.16	<0.1	<0.1	<0.06	<0.5	<0.04	<0.03	<0.1	<0.03	<0.04
SEP 10...	<0.2	<0.2	<0.3	<0.16	<0.1	<0.1	<0.06	<0.5	<0.04	<0.03	<0.1	<0.03	<0.04

[(National Water-Quality Assessment Program White River Basin, Miami River Basin Study Unit)—Continued]

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	1,3-Di-chloro-benzene water unfltrd ug/L (34566)	1,3-Di-chloro-propane water unfltrd ug/L (77173)	1,4-Di-chloro-benzene water unfltrd ug/L (34571)	2,2-Di-chloro-propane water unfltrd ug/L (77170)	2-Chloro-toluene water unfltrd ug/L (77275)	2-Ethyl-toluene water unfltrd ug/L (77220)	3-Chloro-propene water unfltrd ug/L (78109)	4-Chloro-toluene water unfltrd ug/L (77277)	4-Iso-propyl-toluene water unfltrd ug/L (77356)	Acetone water unfltrd ug/L (81552)	Acrylo-nitrile water unfltrd ug/L (34215)	Benzene water unfltrd ug/L (34030)	Bromo-benzene water unfltrd ug/L (81555)
OCT 31...	<0.03	<0.1	<0.05	<0.05	<0.04	<0.06	<0.12	<0.05	<0.12	<7	<1	<0.04	<0.04
NOV 14...	<0.03	<0.1	<0.05	<0.05	<0.04	<0.06	<0.12	<0.05	<0.12	<7	<1	<0.04	<0.04
DEC 17...	<0.03	<0.1	<0.05	<0.05	<0.04	<0.06	<0.12	<0.05	<0.12	<7	<1	<0.04	<0.04
JAN 10...	<0.03	<0.1	<0.05	<0.05	<0.04	<0.06	<0.12	<0.05	<0.12	<7	<1	<0.04	<0.04
29...	<0.03	<0.1	<0.05	<0.05	<0.04	<0.06	<0.12	<0.05	<0.12	<7	<1	E0.01	<0.04
FEB 11...	<0.03	<0.1	<0.05	<0.05	<0.04	<0.06	<0.12	<0.05	<0.12	<7	<1	<0.04	<0.04
27...	<0.03	<0.1	<0.05	<0.05	<0.04	<0.06	<0.12	<0.05	<0.12	E2	<1	E0.02	<0.04
MAR 18...	<0.03	<0.1	<0.05	<0.05	<0.04	<0.06	<0.12	<0.05	<0.12	<7	<1	<0.04	<0.04
APR 14...	<0.03	<0.1	<0.05	<0.05	<0.04	E0.02	<0.12	<0.05	<0.12	<7	<1	E0.02	<0.04
MAY 07...	<0.03	<0.1	<0.05	<0.05	<0.04	<0.06	<0.12	<0.05	<0.12	<7	<1	<0.04	<0.04
19...	<0.03	<0.1	<0.05	<0.05	<0.04	<0.06	<0.12	<0.05	<0.12	<7	<1	<0.04	<0.04
JUN 10...	<0.03	<0.1	<0.05	<0.05	<0.04	<0.06	<0.12	<0.05	<0.12	<7	<1	E0.02	<0.04
27...	<0.03	<0.1	<0.05	<0.05	<0.04	<0.06	<0.12	<0.05	<0.12	<7	<1	<0.04	<0.04
JUL 07...	<0.03	<0.1	<0.05	<0.05	<0.04	<0.06	<0.12	<0.05	<0.12	<7	<1	<0.04	<0.04
30...	<0.03	<0.1	<0.05	<0.05	<0.04	<0.06	<0.12	<0.05	<0.12	<7	<1	<0.04	<0.04
AUG 13...	<0.03	<0.1	<0.05	<0.05	<0.04	<0.06	<0.12	<0.05	<0.12	<7	<1	<0.04	<0.04
SEP 10...	<0.03	<0.1	<0.05	<0.05	<0.04	<0.06	<0.12	<0.05	<0.12	<7	<1	<0.04	<0.04

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Bromo-chloro-methane water unfltrd ug/L (77297)	Bromo-di-chloro-methane water unfltrd ug/L (32101)	Bromo-ethene, water, unfltrd ug/L (50002)	Bromo-methane water unfltrd ug/L (34413)	Carbon di-sulfide water unfltrd ug/L (77041)	Chloro-benzene water unfltrd ug/L (34301)	Chloro-ethane, water, unfltrd ug/L (34311)	Chloro-methane water unfltrd ug/L (34418)	cis-1,2-Di-chloro-ethene, water, unfltrd ug/L (77093)	Di-bromo-chloro-methane water unfltrd ug/L (32105)	Di-bromo-methane water unfltrd ug/L (30217)	Di-chloro-di-fluoro-methane wat unfltrd ug/L (34668)	Di-chloro-methane water unfltrd ug/L (34423)
OCT 31...	<0.12	0.11	<0.1	<0.3	<0.07	<0.03	<0.1	<0.2	0.54	E0.1	<0.05	<0.18	<0.2
NOV 14...	<0.12	<0.05	<0.1	<0.3	<0.07	<0.03	<0.1	<0.2	0.23	<0.2	<0.05	<0.18	<0.2
DEC 17...	<0.12	<0.05	<0.1	<0.3	<0.07	<0.03	<0.1	<0.2	0.35	<0.2	<0.05	<0.18	<0.2
JAN 10...	<0.12	<0.05	<0.1	<0.3	<0.07	<0.03	<0.1	<0.2	E0.07	<0.2	<0.05	<0.18	<0.2
29...	<0.12	<0.05	<0.1	<0.3	<0.07	<0.03	<0.1	<0.2	0.32	<0.2	<0.05	<0.18	<0.2
FEB 11...	<0.12	<0.05	<0.1	<0.3	<0.07	<0.03	<0.1	<0.2	0.23	<0.2	<0.05	<0.18	<0.2
27...	<0.12	<0.05	<0.1	<0.3	<0.07	<0.03	<0.1	<0.2	0.19	<0.2	<0.05	<0.18	<0.2
MAR 18...	<0.12	<0.05	<0.1	<0.3	<0.07	<0.03	<0.1	<0.2	E0.09	<0.2	<0.05	<0.18	<0.2
APR 14...	<0.12	E0.04	<0.1	<0.3	<0.07	<0.03	<0.1	<0.2	E0.05	<0.2	<0.05	<0.18	<0.2
MAY 07...	<0.12	E0.03	<0.1	<0.3	<0.07	<0.03	<0.1	<0.2	E0.02	<0.2	<0.05	<0.18	<0.2
19...	<0.12	E0.03	<0.1	<0.3	<0.07	<0.03	<0.1	<0.2	E0.09	<0.2	<0.05	<0.18	<0.2
JUN 10...	<0.12	<0.05	<0.1	<0.3	<0.07	<0.03	<0.1	<0.2	E0.08	<0.2	<0.05	<0.18	<0.2
27...	<0.12	<0.05	<0.1	<0.3	<0.07	<0.03	<0.1	<0.2	0.30	<0.2	<0.05	<0.18	<0.2
JUL 07...	<0.12	<0.05	<0.1	<0.3	<0.07	<0.03	<0.1	<0.2	E0.03	<0.2	<0.05	<0.18	<0.2
30...	<0.12	E0.03	<0.1	<0.3	<0.07	<0.03	<0.1	<0.2	E0.07	<0.2	<0.05	<0.18	<0.2
AUG 13...	<0.12	E0.06	<0.1	<0.3	<0.07	<0.03	<0.1	<0.2	E0.07	<0.2	<0.05	<0.18	<0.2
SEP 10...	<0.12	E0.04	<0.1	<0.3	<0.07	<0.03	<0.1	<0.2	E0.08	<0.2	<0.05	<0.18	<0.2

[(National Water-Quality Assessment Program White River Basin, Miami River Basin Study Unit)—Continued]

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Diethyl ether, water, unfltrd ug/L (81576)	Diisopropyl ether, water, unfltrd ug/L (81577)	Ethyl methacrylate, water, unfltrd ug/L (73570)	Ethyl methyl ketone, water, unfltrd ug/L (81595)	Ethylbenzene, water, unfltrd ug/L (34371)	Hexachlorobutadiene, water, unfltrd ug/L (39702)	Hexachloroethane, water, unfltrd ug/L (34396)	Iodomethane, water, unfltrd ug/L (77424)	Iso-butyl methyl ketone, water, unfltrd ug/L (78133)	Iso-propylbenzene, water, unfltrd ug/L (77223)	Methacrylonitrile, water, unfltrd ug/L (81593)	Methyl acrylate, water, unfltrd ug/L (49991)	Methyl methacrylate, water, unfltrd ug/L (81597)
OCT 31...	<0.2	<0.10	<0.2	<5.0	<0.03	<0.1	<0.2	<0.35	<0.4	<0.06	<0.6	<2.0	<0.3
NOV 14...	<0.2	<0.10	<0.2	<5.0	<0.03	<0.1	<0.2	<0.35	<0.4	<0.06	<0.6	<2.0	<0.3
DEC 17...	<0.2	<0.10	<0.2	<5.0	<0.03	<0.1	<0.2	<0.35	<0.4	<0.06	<0.6	<2.0	<0.3
JAN 10...	<0.2	<0.10	<0.2	<5.0	<0.03	<0.1	<0.2	<0.35	<0.4	<0.06	<0.6	<2.0	<0.3
29...	<0.2	<0.10	<0.2	<5.0	<0.03	<0.1	<0.2	<0.35	<0.4	<0.06	<0.6	<2.0	<0.3
FEB 11...	<0.2	<0.10	<0.2	<5.0	<0.03	<0.1	<0.2	<0.35	<0.4	<0.06	<0.6	<2.0	<0.3
27...	<0.2	<0.10	<0.2	<5.0	<0.03	<0.1	<0.2	<0.35	<0.4	<0.06	<0.6	<2.0	<0.3
MAR 18...	<0.2	<0.10	<0.2	<5.0	<0.03	<0.1	<0.2	<0.35	<0.4	<0.06	<0.6	<2.0	<0.3
APR 14...	<0.2	<0.10	<0.2	<5.0	E0.02	<0.1	<0.2	<0.35	<0.4	<0.06	<0.6	<2.0	<0.3
MAY 07...	<0.2	<0.10	<0.2	<5.0	<0.03	<0.1	<0.2	<0.35	<0.4	<0.06	<0.6	<2.0	<0.3
19...	<0.2	<0.10	<0.2	<5.0	<0.03	<0.1	<0.2	<0.35	<0.4	<0.06	<0.6	<2.0	<0.3
JUN 10...	<0.2	<0.10	<0.2	<5.0	<0.03	<0.1	<0.2	<0.35	<0.4	<0.06	<0.6	<2.0	<0.3
27...	<0.2	<0.10	<0.2	<5.0	<0.03	<0.1	<0.2	<0.35	<0.4	<0.06	<0.6	<2.0	<0.3
JUL 07...	<0.2	<0.10	<0.2	<5.0	<0.03	<0.1	<0.2	<0.35	<0.4	<0.06	<0.6	<2.0	<0.3
30...	<0.2	<0.10	<0.2	<5.0	<0.03	<0.1	<0.2	<0.35	<0.4	<0.06	<0.6	<2.0	<0.3
AUG 13...	<0.2	<0.10	<0.2	<5.0	<0.03	<0.1	<0.2	<0.35	<0.4	<0.06	<0.6	<2.0	<0.3
SEP 10...	<0.2	<0.10	<0.2	<5.0	<0.03	<0.1	<0.2	<0.35	<0.4	<0.06	<0.6	<2.0	<0.3

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Methyl tert-pentyl ether, water, unfltrd ug/L (50005)	meta+para-Xylene, water, unfltrd ug/L (85795)	Naphthalene, water, unfltrd ug/L (34696)	Methyl n-butyl ketone, water, unfltrd ug/L (77103)	n-Butyl benzene, water, unfltrd ug/L (77342)	n-propylbenzene, water, unfltrd ug/L (77224)	o-Xylene, water, unfltrd ug/L (77135)	sec-Butylbenzene, water, unfltrd ug/L (77350)	Styrene, water, unfltrd ug/L (77128)	t-Butyl ethyl ether, water, unfltrd ug/L (50004)	Methyl t-butyl ether, water, unfltrd ug/L (78032)	tert-Butylbenzene, water, unfltrd ug/L (77353)	Tetrachloroethene, water, unfltrd ug/L (34475)
OCT 31...	<0.08	<0.06	<0.5	<0.7	<0.2	<0.04	<0.07	<0.06	<0.04	<0.05	<0.2	<0.10	0.16
NOV 14...	<0.08	<0.06	<0.5	<0.7	<0.2	<0.04	<0.07	<0.06	E0.05	<0.05	<0.2	<0.10	E0.10
DEC 17...	<0.08	<0.06	<0.5	<0.7	<0.2	<0.04	<0.07	<0.06	<0.04	<0.05	<0.2	<0.10	0.12
JAN 10...	<0.08	<0.06	<0.5	<0.7	<0.2	<0.04	<0.07	<0.06	<0.04	<0.05	<0.2	<0.10	E0.05
29...	<0.08	<0.06	<0.5	<0.7	<0.2	<0.04	<0.07	<0.06	<0.04	<0.05	<0.2	<0.10	0.12
FEB 11...	<0.08	<0.06	<0.5	<0.7	<0.2	<0.04	<0.07	<0.06	<0.04	<0.05	<0.2	<0.10	E0.08
27...	<0.08	<0.06	<0.5	<0.7	<0.2	<0.04	<0.07	<0.06	<0.04	<0.05	<0.2	<0.10	E0.08
MAR 18...	<0.08	<0.06	<0.5	<0.7	<0.2	<0.04	<0.07	<0.06	<0.04	<0.05	<0.2	<0.10	E0.04
APR 14...	<0.08	E0.10	<0.5	<0.7	<0.2	<0.04	E0.05	<0.06	<0.04	<0.05	<0.2	<0.10	E0.02
MAY 07...	<0.08	<0.06	<0.5	<0.7	<0.2	<0.04	<0.07	<0.06	<0.04	<0.05	<0.2	<0.10	<0.03
19...	<0.08	<0.06	<0.5	<0.7	<0.2	<0.04	<0.07	<0.06	<0.04	<0.05	<0.2	<0.10	E0.02
JUN 10...	<0.08	E0.01	<0.5	<0.7	<0.2	<0.04	<0.07	<0.06	<0.04	<0.05	<0.2	<0.10	E0.02
27...	<0.08	<0.06	<0.5	<0.7	<0.2	<0.04	<0.07	<0.06	<0.04	<0.05	<0.2	<0.10	0.10
JUL 07...	<0.08	<0.06	<0.5	<0.7	<0.2	<0.04	<0.07	<0.06	<0.04	<0.05	E0.1	<0.10	<0.03
30...	<0.08	<0.06	<0.5	<0.7	<0.2	<0.04	<0.07	<0.06	<0.04	<0.05	<0.2	<0.10	E0.03
AUG 13...	<0.08	<0.06	<0.5	<0.7	<0.2	<0.04	<0.07	<0.06	<0.04	<0.05	<0.2	<0.10	E0.02
SEP 10...	<0.08	<0.06	<0.5	<0.7	<0.2	<0.04	<0.07	<0.06	<0.04	<0.05	<0.2	<0.10	E0.04

[(National Water-Quality Assessment Program White River Basin, Miami River Basin Study Unit)]--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Tetra- chloro- methane water unfltrd ug/L (32102)	Tetra- hydro- furan, water, unfltrd ug/L (81607)	Toluene water unfltrd ug/L (34010)	trans- 1,2-Di- chloro- ethene, water, unfltrd ug/L (34546)	trans- 1,3-Di- chloro- propene water unfltrd ug/L (34699)	trans- 1,4-Di- chloro- 2- butene, wat unfltrd ug/L (73547)	Tri- bromo- methane water unfltrd ug/L (32104)	Tri- chloro- ethene, water, unfltrd ug/L (39180)	Tri- chloro- fluoro- methane water unfltrd ug/L (34488)	Tri- chloro- methane water unfltrd ug/L (32106)	Vinyl chlor- ide, water, unfltrd ug/L (39175)	Di- chlor- vos, water fltrd, ug/L (38775)
OCT 31...	<0.06	<2	<0.05	<0.03	<0.09	<0.7	<0.10	E0.07	<0.09	0.30	<0.1	<0.01
NOV 14...	<0.06	<2	<0.05	<0.03	<0.09	<0.7	<0.10	E0.04	<0.09	E0.07	<0.1	E0.01
DEC 17...	<0.06	<2	<0.05	<0.03	<0.09	<0.7	<0.10	E0.05	<0.09	E0.02	<0.1	<0.01
JAN 10...	<0.06	<2	<0.05	<0.03	<0.09	<0.7	<0.10	E0.02	<0.09	E0.01	<0.1	<0.01
29...	<0.06	<2	E0.03	<0.03	<0.09	<0.7	<0.10	E0.05	<0.09	E0.01	<0.1	<0.01
FEB 11...	<0.06	<2	E0.02	<0.03	<0.09	<0.7	<0.10	E0.03	<0.09	E0.03	<0.1	<0.01
27...	<0.06	<2	E0.04	<0.03	<0.09	<0.7	<0.10	E0.04	<0.09	E0.02	<0.1	<0.01
MAR 18...	<0.06	<2	E0.03	<0.03	<0.09	<0.7	<0.10	E0.02	<0.09	E0.04	<0.1	<1.00
APR 14...	<0.06	<2	0.22	<0.03	<0.09	<0.7	<0.10	<0.04	<0.09	E0.07	<0.1	<0.01
MAY 07...	<0.06	<2	E0.02	<0.03	<0.09	<0.7	<0.10	<0.04	<0.09	E0.09	<0.1	<0.01
19...	<0.06	<2	E0.03	<0.03	<0.09	<0.7	<0.10	<0.04	<0.09	E0.10	<0.1	<0.01
JUN 10...	<0.06	<2	E0.02	<0.03	<0.09	<0.7	<0.10	<0.04	<0.09	E0.04	<0.1	<0.01
27...	<0.06	<2	E0.02	<0.03	<0.09	<0.7	<0.10	E0.04	<0.09	E0.05	<0.1	<0.01
JUL 07...	<0.06	<2	<0.05	<0.03	<0.09	<0.7	<0.10	<0.04	<0.09	E0.06	<0.1	E0.01
30...	<0.06	<2	E0.02	<0.03	<0.09	<0.7	<0.10	E0.01	<0.09	E0.08	<0.1	<0.01
AUG 13...	<0.06	<2	E0.03	<0.03	<0.09	<0.7	<0.10	<0.04	<0.09	0.19	<0.1	<0.01
SEP 10...	<0.06	<2	<0.05	<0.03	<0.09	<0.7	<0.10	<0.04	<0.09	0.12	<0.1	<0.01

03350700 STONY CREEK NEAR NOBLESVILLE, IN

LOCATION.--Lat 40°01'44", long 85°59'44", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.7, T.18 N., R.5 E., Hamilton County, Hydrologic Unit 05120201, (RIVERWOOD, IN quadrangle), on right bank, between dual bridges on State Road 37, 1.2 mi south of intersection of State Road 38 and State Road 37, 1.4 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 fair except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.7	8.9	10	209	e13	23	80	31	30	15	19	1,320
2	8.9	8.0	9.8	149	e14	24	63	77	28	14	19	1,450
3	8.7	8.1	9.4	104	e21	23	54	46	27	13	43	628
4	9.9	8.3	9.1	75	113	23	49	38	26	13	71	340
5	11	9.2	9.1	63	e52	81	45	165	24	254	65	158
6	9.6	10	9.0	52	e36	114	37	132	22	391	39	121
7	9.0	9.7	8.9	46	e30	69	43	148	21	409	30	94
8	9.0	9.1	9.0	54	e25	119	43	109	20	191	26	74
9	8.8	8.8	8.6	122	e22	323	39	114	19	971	24	61
10	8.8	40	8.7	96	e20	180	36	673	18	1,120	37	51
11	8.6	97	9.2	e54	e19	137	34	991	18	702	28	44
12	8.0	41	9.0	e41	e18	147	31	404	23	252	23	39
13	7.8	26	9.3	e35	e17	245	29	196	43	149	20	32
14	7.7	20	10	e28	e16	247	27	149	129	113	31	29
15	8.0	17	9.9	e25	e16	179	27	265	80	115	108	27
16	8.1	15	9.5	e24	e15	161	25	179	51	121	37	25
17	7.9	14	9.5	e23	e14	136	26	134	39	82	30	24
18	8.1	13	11	e21	e14	111	24	114	33	68	23	23
19	9.6	13	41	e19	e13	102	22	95	29	56	19	22
20	9.3	12	102	e18	e13	116	23	79	24	46	18	21
21	8.4	12	58	e17	e15	135	23	65	22	46	17	19
22	8.2	14	37	e16	70	126	21	57	21	48	16	47
23	7.9	13	27	e15	101	90	20	51	20	43	14	60
24	7.6	13	23	e14	55	73	20	46	19	34	13	38
25	9.8	12	23	e14	37	67	25	42	18	30	13	36
26	13	12	19	e14	31	87	28	39	18	28	12	43
27	9.6	11	16	e13	28	73	24	36	19	25	12	259
28	8.9	11	16	e13	25	69	22	36	18	26	13	171
29	9.2	11	16	e13	---	200	23	37	17	24	24	117
30	9.9	11	49	e12	---	143	21	32	17	22	34	85
31	9.9	---	205	e12	---	102	---	36	---	20	23	---
TOTAL	277.9	508.1	801.0	1,411	863	3,725	984	4,616	893	5,441	901	5,458
MEAN	8.96	16.9	25.8	45.5	30.8	120	32.8	149	29.8	176	29.1	182
MAX	13	97	205	209	113	323	80	991	129	1,120	108	1,450
MIN	7.6	8.0	8.6	12	13	23	20	31	17	13	12	19
CFSM	0.18	0.33	0.51	0.90	0.61	2.37	0.65	2.93	0.59	3.46	0.57	3.58
IN.	0.20	0.37	0.59	1.03	0.63	2.73	0.72	3.38	0.65	3.98	0.66	4.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2003, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)	MEAN	MAX	(WY)	MIN	(WY)	MEAN	MAX	(WY)	MIN	(WY)
	20.3	181	(2002)	2.41	(1996)	44.7	287	(1993)	3.96	(2000)	55.7	235	(1991)	4.99	(1998)
	56.1	145	(1974)	3.87	(1977)	75.8	190	(1990)	6.26	(1998)	85.0	203	(1978)	14.1	(2000)
	78.7	160	(1972)	16.9	(1971)	66.9	229	(1996)	16.1	(1988)	49.3	241	(1998)	6.50	(1988)
	34.4	176	(2003)	3.25	(1977)	20.8	176	(1979)	3.84	(1988)	21.9	210	(1989)	3.38	(1995)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

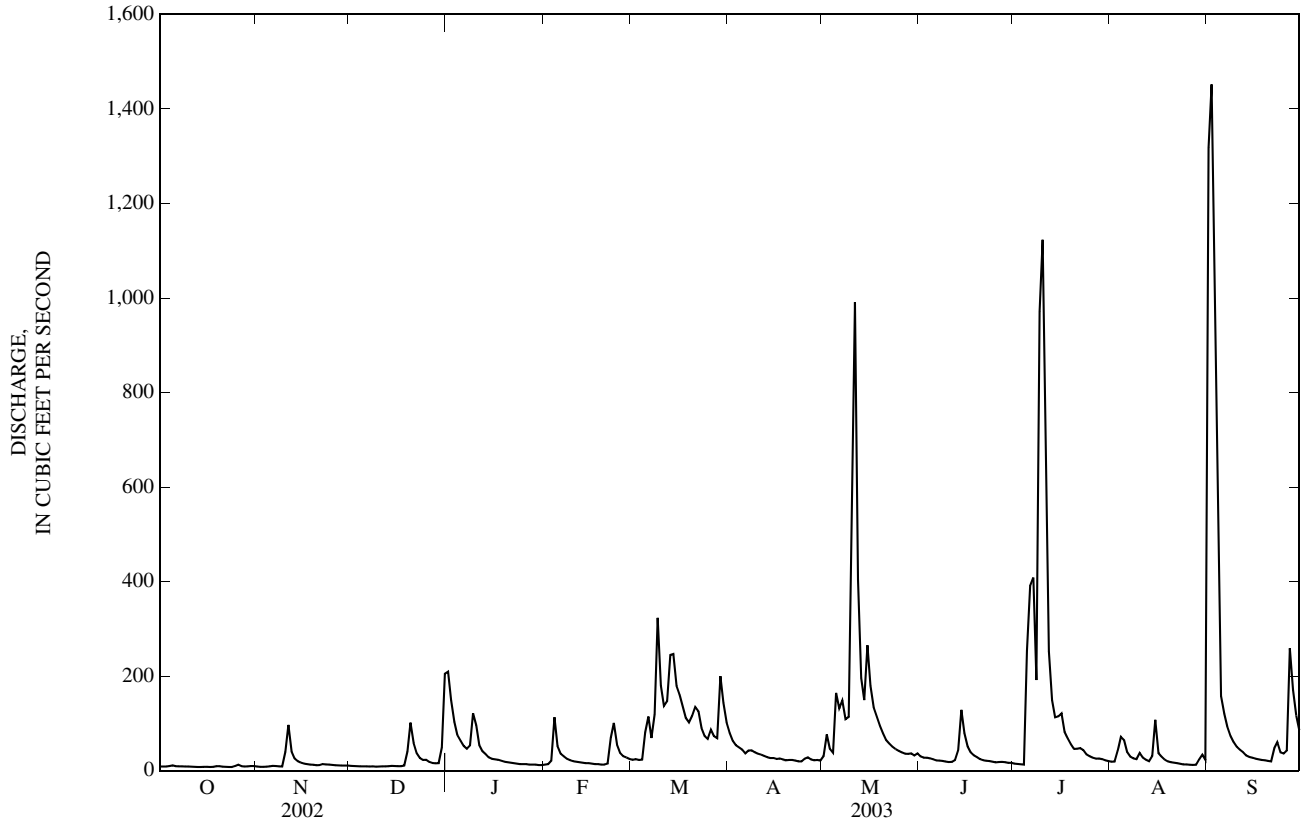
FOR 2003 WATER YEAR

WATER YEARS 1968 - 2003

ANNUAL TOTAL	19,886.9	25,879.0	
ANNUAL MEAN	54.5	70.9	50.6
HIGHEST ANNUAL MEAN			83.0
LOWEST ANNUAL MEAN			15.4
HIGHEST DAILY MEAN	1,300	May 13	1,760
LOWEST DAILY MEAN	5.3	Sep 18	0.88
ANNUAL SEVEN-DAY MINIMUM	5.6	Sep 12	0.96
MAXIMUM PEAK FLOW			2,260
MAXIMUM PEAK STAGE			9.21
ANNUAL RUNOFF (CFSM)	1.07	1.40	1.00
ANNUAL RUNOFF (INCHES)	14.56	18.95	13.54
10 PERCENT EXCEEDS	122	145	114
50 PERCENT EXCEEDS	23	25	23
90 PERCENT EXCEEDS	8.0	9.2	5.7

e Estimated

03350700 STONY CREEK NEAR NOBLESVILLE, IN—Continued



03351000 WHITE RIVER NEAR NORA, IN

LOCATION.--Lat 39°54'35", long 86°06'20", in NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.20, T.17 N., R.4 E., Marion County, Hydrologic Unit 05120201, (FISHERS, IN quadrangle), on downstream side of center bridge pier on 82nd Street, 2 mi east of Nora, 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 Nora.

REVISED RECORDS.--WSP 1335: 1930-31, 1934(m), 1936, 1941, 1943, 1945, 1947-48. WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 710.94 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Oct. 26, 192 to July 29, 1942, at site 200 ft downstream at same datum. Supplemental water-stage recorder 4.5 mi downstream.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Flow partially 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	226	218	252	5,590	394	711	2,250	611	893	416	611	8,190
2	204	204	244	5,210	401	664	1,820	1,030	775	407	630	15,300
3	188	196	232	3,670	446	624	1,520	1,270	732	396	1,610	16,500
4	220	198	220	2,300	1,030	590	1,330	940	756	384	1,980	18,300
5	245	201	211	1,720	1,750	817	1,240	2,130	739	3,280	1,980	10,300
6	235	236	208	1,410	1,390	2,060	1,220	4,510	683	10,800	1,560	3,690
7	209	232	200	1,180	1,030	2,540	1,220	3,880	639	15,900	1,080	2,680
8	188	228	227	1,070	759	1,830	1,320	3,250	620	14,200	844	2,090
9	183	210	200	1,410	e660	4,700	1,380	2,580	576	15,300	790	1,710
10	179	512	199	2,270	e600	6,580	1,210	5,940	563	22,900	1,180	1,410
11	175	e900	218	2,030	e560	4,360	1,080	15,000	544	24,100	1,300	1,200
12	168	1,180	216	1,310	e480	3,290	992	17,300	667	18,800	970	1,030
13	167	704	210	989	e435	4,260	903	12,900	830	9,590	796	907
14	163	542	228	e960	e430	7,380	817	5,400	1,520	4,760	720	817
15	164	438	234	e700	e450	7,440	767	4,500	1,810	3,610	873	760
16	162	382	232	e600	e400	4,930	737	4,400	1,400	3,520	632	697
17	159	345	230	e560	e372	4,020	777	3,200	1,040	2,850	674	641
18	160	322	246	e540	e370	3,280	760	2,500	848	2,360	590	584
19	197	313	532	e560	e380	2,690	679	2,130	741	1,990	513	545
20	205	292	1,530	e560	e400	2,680	655	1,860	658	1,680	453	518
21	215	289	2,360	e505	e425	2,910	650	1,630	585	1,580	417	490
22	191	308	1,530	e460	657	3,700	651	1,410	527	1,700	385	887
23	173	307	975	e420	1,480	3,050	597	1,270	481	1,610	361	1,380
24	164	313	730	e370	1,840	2,240	546	1,160	439	1,400	343	1,530
25	211	309	689	e380	1,480	1,850	589	1,070	416	1,230	315	1,360
26	255	302	607	e390	1,070	1,780	673	991	427	1,030	345	1,830
27	246	293	513	e335	889	1,840	615	911	442	930	403	4,560
28	221	280	465	e375	779	1,730	554	855	460	884	404	7,850
29	231	272	439	404	---	3,580	519	858	427	816	511	6,240
30	231	260	555	406	---	4,740	509	797	430	743	786	3,350
31	224	---	2,320	388	---	3,170	---	835	---	667	843	---
TOTAL	6,159	10,786	17,252	39,072	21,357	96,036	28,580	107,118	21,668	169,833	24,899	117,346
MEAN	199	360	557	1,260	763	3,098	953	3,455	722	5,478	803	3,912
MAX	255	1,180	2,360	5,590	1,840	7,440	2,250	17,300	1,810	24,100	1,980	18,300
MIN	159	196	199	335	370	590	509	611	416	384	315	490
CFSM	0.16	0.29	0.46	1.03	0.63	2.54	0.78	2.83	0.59	4.49	0.66	3.21
IN.	0.19	0.33	0.53	1.19	0.65	2.93	0.87	3.27	0.66	5.18	0.76	3.58

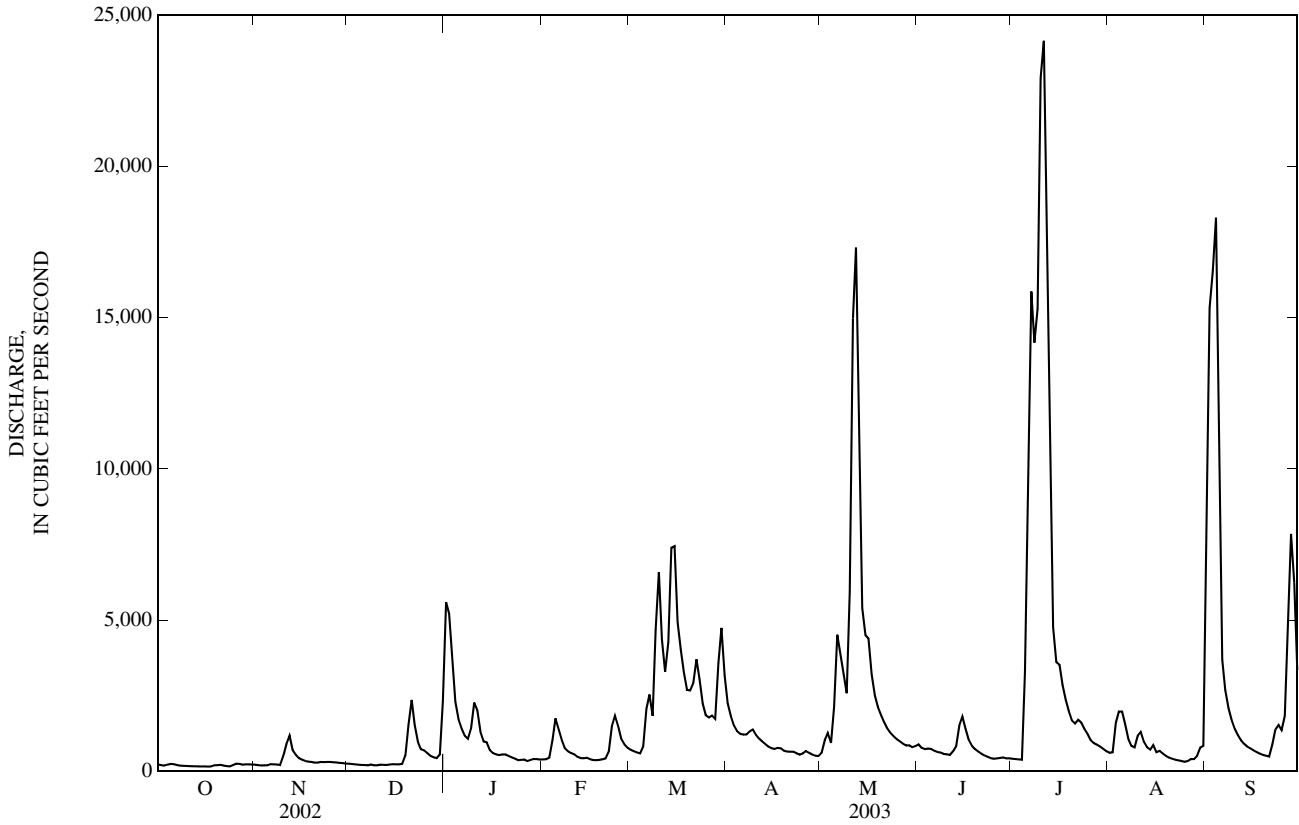
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2003, BY WATER YEAR (WY)

MEAN	405	730	1,093	1,563	1,662	2,081	2,036	1,479	1,164	787	459	426
MAX	3,819	5,115	4,366	9,015	4,805	5,113	5,878	6,815	6,093	5,478	2,612	4,397
(WY)	(2002)	(1993)	(1991)	(1950)	(1950)	(1978)	(1964)	(1943)	(1958)	(2003)	(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)

03351000 WHITE RIVER NEAR NORA, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1930 - 2003	
ANNUAL TOTAL	506,759		660,106		1,154	
ANNUAL MEAN	1,388		1,809		2,052	
HIGHEST ANNUAL MEAN					235	
LOWEST ANNUAL MEAN					1941	
HIGHEST DAILY MEAN	20,800	May 14	24,100	Jul 11	31,500	May 19, 1943
LOWEST DAILY MEAN	159	Oct 17	159	Oct 17	49	Sep 17, 1941
ANNUAL SEVEN-DAY MINIMUM	163	Oct 12	163	Oct 12	53	Sep 17, 1941
MAXIMUM PEAK FLOW			26,300	Jul 11	32,400	May 19, 1943
MAXIMUM PEAK STAGE			17.78	Jul 11	19.19	Jan 1, 1991
ANNUAL RUNOFF (CFSM)	1.14		1.48		0.95	
ANNUAL RUNOFF (INCHES)	15.46		20.14		12.86	
10 PERCENT EXCEEDS	3,010		3,940		2,610	
50 PERCENT EXCEEDS	604		732		529	
90 PERCENT EXCEEDS	208		220		163	

e Estimated



03351060 WHITE RIVER AT BROAD RIPPLE, IN

LOCATION.--Lat 39°52'17", long 86°08'16", in SW $\frac{1}{4}$ sec.36, T.17 N., R.3 E., Marion County, Hydrologic Unit 05120201, (INDIANAPOLIS WEST, IN quadrangle), on left bank at Indianapolis Water Company, 75 ft downstream from diversion canal, and 500 ft upstream from Broad Ripple dam, and at 243.2 mile.

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.

REVISED RECORDS.--WDR IN-93-1: 1992.

GAGE.--Water-stage recorder. Datum of gage is 709.91 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--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, 8.98 ft, July 11; minimum 2.75 ft, Oct. 17-18.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	2.82	2.87	4.96	2.97	3.18	3.93	3.46	3.30	2.97	3.14	6.90
2	---	2.80	2.87	4.65	2.98	3.16	3.76	3.49	3.23	2.95	3.21	7.18
3	---	2.80	2.85	4.15	3.05	3.13	3.64	3.50	3.24	2.93	3.87	7.40
4	---	2.79	2.85	3.79	3.51	3.11	3.57	3.38	3.25	2.96	3.71	---
5	---	2.81	2.83	3.62	3.68	3.35	3.53	4.52	3.23	5.57	3.73	4.81
6	---	2.85	2.82	3.49	3.46	4.15	3.53	4.93	3.18	6.85	3.47	4.22
7	2.80	2.85	2.84	3.38	3.33	3.90	3.54	4.53	3.15	7.30	3.35	3.94
8	2.78	---	2.84	3.34	3.16	3.84	3.62	4.33	3.13	---	3.23	3.73
9	2.78	---	2.81	3.59	3.14	5.08	3.59	4.18	3.11	---	3.31	3.62
10	2.78	3.40	2.81	3.92	3.13	5.13	3.51	6.40	3.10	8.95	3.53	3.49
11	2.78	---	2.84	3.70	3.09	4.38	3.45	7.52	3.09	8.50	3.42	3.41
12	2.77	---	2.83	3.40	3.04	4.27	3.40	7.45	3.26	---	3.29	3.33
13	2.77	---	2.85	3.29	2.99	4.97	3.34	---	3.47	---	3.23	3.29
14	2.76	---	2.86	3.30	3.03	5.65	3.31	---	3.79	---	3.22	3.25
15	2.77	3.02	2.86	3.15	3.07	5.25	3.26	---	3.70	---	3.21	3.22
16	2.76	2.99	2.86	3.10	2.96	4.76	3.25	---	3.47	4.19	---	3.18
17	2.75	2.95	2.86	3.09	2.94	4.53	3.34	4.18	3.31	3.93	---	3.15
18	---	2.93	---	3.07	2.97	4.29	3.27	3.99	3.23	3.79	3.12	3.13
19	---	2.93	---	3.09	3.01	4.11	3.22	3.85	3.17	3.65	3.08	3.11
20	2.83	2.91	3.87	3.08	3.01	4.18	3.21	3.76	3.12	3.56	3.02	3.10
21	2.82	2.92	3.89	3.07	3.01	4.30	3.21	---	3.08	3.57	3.02	3.08
22	2.80	2.94	3.51	3.02	3.35	4.53	3.20	---	3.05	3.61	2.98	3.39
23	2.77	2.93	3.31	2.99	3.70	4.14	3.16	3.48	3.01	3.54	2.98	3.59
24	2.76	2.93	3.22	2.99	3.74	3.90	3.13	3.43	2.98	3.49	2.95	3.53
25	2.91	2.93	3.21	2.98	3.50	3.82	3.22	3.38	2.95	3.40	2.94	3.61
26	2.86	2.93	3.13	2.99	3.34	3.79	3.22	3.35	3.01	3.33	2.97	3.83
27	2.86	2.92	3.09	2.97	3.25	3.82	3.17	3.30	3.00	3.34	3.02	5.17
28	2.82	2.90	3.05	2.98	3.21	3.89	3.12	3.30	3.00	3.29	2.98	5.75
29	2.87	2.89	3.04	2.97	---	4.93	3.12	3.29	2.98	3.27	3.23	4.76
30	2.84	2.89	3.21	2.97	---	4.79	3.10	3.25	2.98	3.22	3.23	4.19
31	2.83	---	4.56	2.96	---	4.19	---	3.33	---	3.19	3.35	---
MEAN	---	---	---	3.36	3.20	4.21	3.36	---	3.19	---	---	---
MAX	---	---	---	4.96	3.74	5.65	3.93	---	3.79	---	---	---
MIN	---	---	---	2.96	2.94	3.11	3.10	---	2.95	---	---	---

03351310 CROOKED CREEK AT INDIANAPOLIS, IN

LOCATION.--Lat 39°49'47", long 86°12'22", in NW¼SE¼ sec.16, T.16 N., R.3 E., Marion County, Hydrologic Unit 05120201, (INDIANAPOLIS WEST, IN quadrangle), on left bank 150 ft downstream from 42nd Street bridge in Indianapolis, at mile 1.6, 2.30 mi west-northwest of burial plot of John Dillinger in Crown Hill Cemetery, and 2.35 mi northeast of Indianapolis Motor Speedway.

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 for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	4.8	2.3	40	5.0	13	21	13	10	4.4	5.0	1,820
2	3.4	4.8	2.1	25	6.9	15	17	18	8.1	17	8.5	368
3	2.6	3.6	1.9	19	13	12	16	9.5	9.9	7.3	11	100
4	12	4.7	1.7	16	37	14	14	9.5	9.1	7.2	9.2	47
5	12	8.6	2.0	15	18	36	15	106	7.6	319	5.9	27
6	4.7	14	1.6	16	11	31	11	29	6.8	65	4.4	18
7	3.2	6.8	1.7	15	10	25	15	59	6.5	48	3.9	13
8	2.2	5.1	1.7	16	e7.4	49	13	27	6.0	29	3.2	11
9	1.8	4.3	1.6	21	e7.0	68	11	45	5.7	77	3.3	10
10	1.6	99	1.6	16	e6.6	29	10	156	5.6	86	3.3	8.9
11	1.5	36	1.7	12	e6.2	22	9.5	167	5.5	34	3.4	8.1
12	1.4	14	2.6	10	e6.0	22	8.6	39	24	28	3.6	7.4
13	1.3	8.2	2.7	9.2	e5.6	61	7.9	26	106	18	2.7	7.1
14	1.3	6.1	3.8	8.6	e5.6	39	7.6	22	58	14	2.6	7.0
15	1.4	5.8	3.8	7.8	8.8	28	7.3	32	24	21	2.4	6.8
16	1.3	5.5	2.8	e6.0	8.1	25	7.0	21	15	18	2.4	6.4
17	1.1	4.4	2.4	e5.5	6.9	22	14	17	11	11	27	6.1
18	1.4	3.7	4.2	e5.0	6.3	19	15	15	9.0	21	14	5.8
19	10	4.3	48	e4.5	6.9	21	9.6	13	7.5	13	6.9	5.7
20	5.5	4.0	33	e4.0	12	21	11	12	6.4	9.2	4.2	5.8
21	3.2	3.7	13	e3.5	14	29	13	10	5.3	25	3.4	5.8
22	2.4	7.9	8.4	e3.2	47	20	8.9	9.3	4.6	16	2.7	120
23	2.0	5.5	6.0	e3.0	38	16	7.3	8.7	4.0	12	2.4	34
24	1.8	4.2	5.0	e3.0	24	14	6.7	8.2	3.5	12	2.1	9.5
25	17	3.7	5.8	e3.0	e15	20	22	9.9	3.2	8.1	1.8	25
26	15	3.6	5.4	e3.0	e13	27	21	7.7	7.5	6.6	1.5	14
27	6.7	2.9	4.6	e2.8	e12	18	12	6.9	9.8	9.3	5.8	146
28	4.2	2.5	4.7	e2.8	12	32	11	9.1	4.7	15	3.8	32
29	15	2.4	5.5	e3.2	---	112	8.6	18	3.8	8.4	33	14
30	14	2.5	20	e3.0	---	35	7.5	9.5	3.8	6.2	30	9.5
31	6.8	---	80	e3.0	---	26	---	22	---	5.3	19	---
TOTAL	161.2	286.6	281.6	305.1	369.3	921	358.5	955.3	391.9	971.0	232.4	2,898.9
MEAN	5.20	9.55	9.08	9.84	13.2	29.7	11.9	30.8	13.1	31.3	7.50	96.6
MAX	17	99	80	40	47	112	22	167	106	319	33	1,820
MIN	1.1	2.4	1.6	2.8	5.0	12	6.7	6.9	3.2	4.4	1.5	5.7
CFSM	0.29	0.53	0.51	0.55	0.74	1.66	0.67	1.72	0.73	1.75	0.42	5.40
IN.	0.34	0.60	0.59	0.63	0.77	1.91	0.75	1.99	0.81	2.02	0.48	6.02

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2003, BY WATER YEAR (WY)

MEAN	9.39	19.6	20.7	18.4	24.5	30.3	29.1	27.8	18.3	12.9	7.84	11.2
MAX	60.9	88.2	95.4	54.8	79.4	63.7	58.2	110	90.8	57.7	30.8	96.6
(WY)	(1987)	(1994)	(1991)	(1974)	(1975)	(1991)	(1972)	(1996)	(1998)	(1979)	(1978)	(2003)
MIN	1.06	0.70	1.23	0.94	4.17	5.65	5.63	4.31	1.59	1.59	1.94	1.07
(WY)	(1998)	(2000)	(1977)	(1977)	(1978)	(1981)	(1971)	(1988)	(1988)	(1997)	(1991)	(1991)

SUMMARY STATISTICS

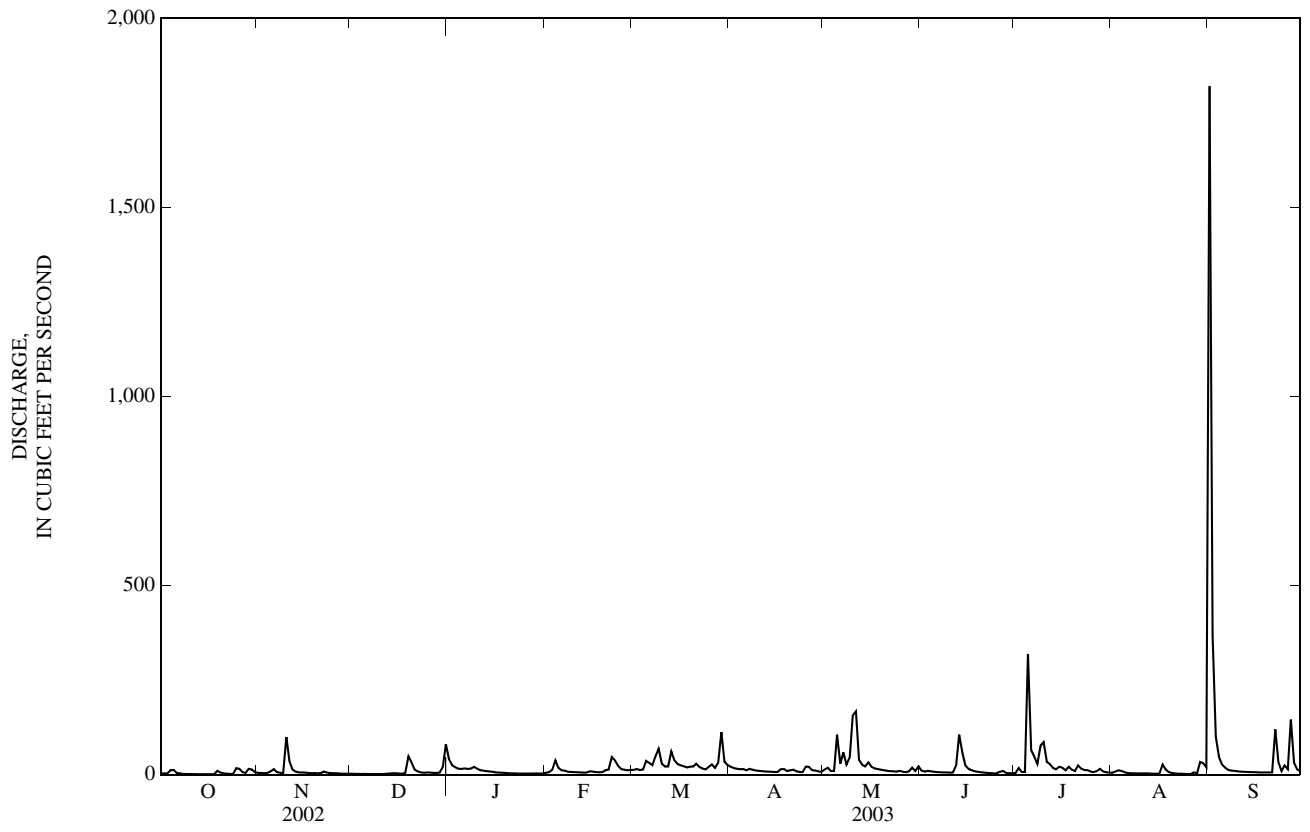
FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1970 - 2003

ANNUAL TOTAL	7,894.3	8,132.8		
ANNUAL MEAN	21.6	22.3	19.1	
HIGHEST ANNUAL MEAN			29.6	1974
LOWEST ANNUAL MEAN			8.30	1977
HIGHEST DAILY MEAN	647	May 13	1,820	Sep 1, 2003
LOWEST DAILY MEAN	1.1	Aug 11	1.1	Oct 7, 1991
ANNUAL SEVEN-DAY MINIMUM	1.3	Aug 7	1.3	Oct 12, 1991
MAXIMUM PEAK FLOW			3,400	Sep 1, 1978
MAXIMUM PEAK STAGE			11.90	Sep 1, 1978
ANNUAL RUNOFF (CFSM)	1.21	1.24	13.31	1.07
ANNUAL RUNOFF (INCHES)	16.41	16.90	14.51	37
10 PERCENT EXCEEDS	44	33	7.5	1.6
50 PERCENT EXCEEDS	8.4	8.8		
90 PERCENT EXCEEDS	1.7	2.6		

e Estimated



03351500 FALL CREEK NEAR FORTVILLE, IN

LOCATION.--Lat 39°57'15", long 85°52'05", in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.5, T.17 N., R.6 E., Hamilton County, Hydrologic Unit 05120201, (INGALLS, IN quadrangle), 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 fair except for estimated daily discharges, which are poor.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage, about 12 ft March 1913 (information by local resident).

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

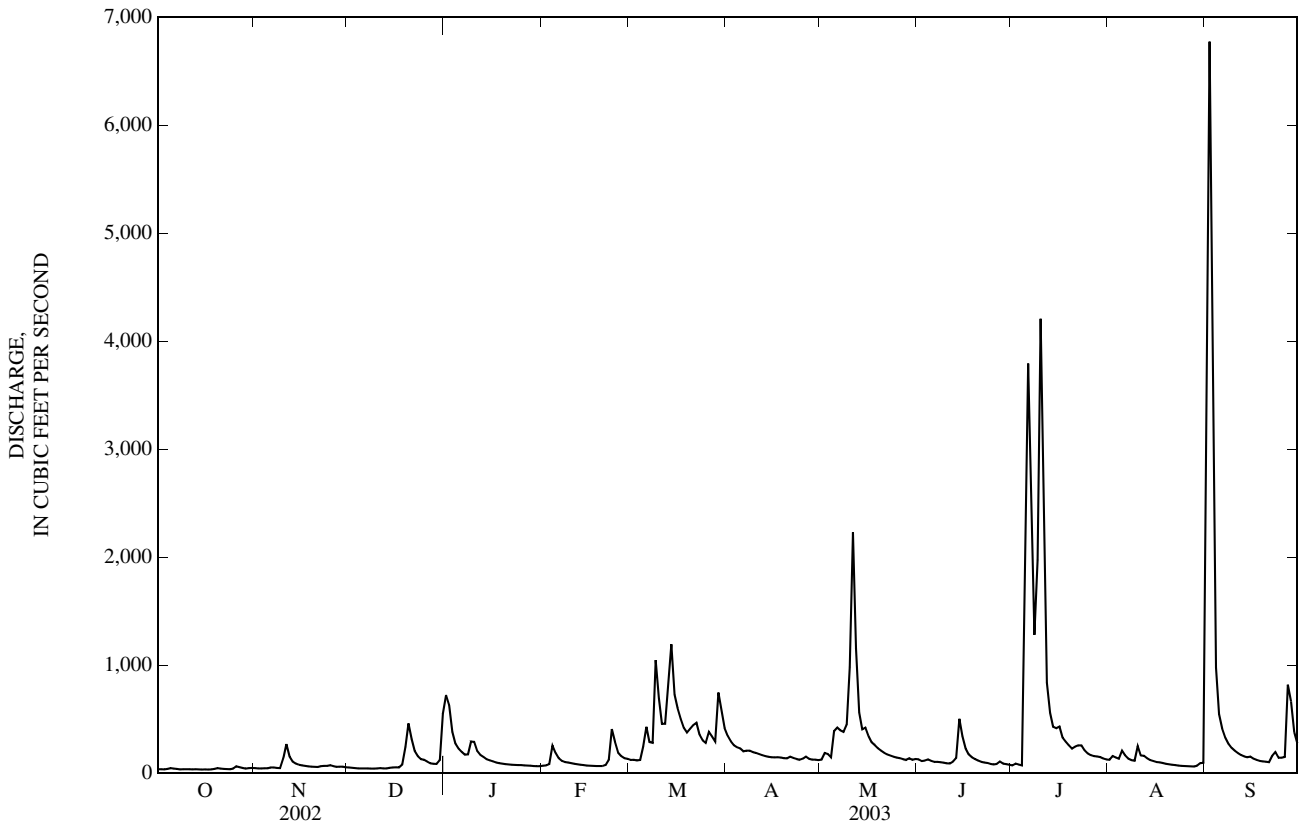
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	48	54	724	e70	124	347	128	129	73	125	1,870
2	38	46	e52	633	e74	126	295	187	114	89	159	6,770
3	36	46	e49	385	e86	120	261	179	118	81	147	4,480
4	41	47	e46	277	257	123	241	150	128	73	135	979
5	49	47	e46	230	e190	248	230	391	116	1,560	210	549
6	44	54	e45	198	e140	430	205	424	106	3,790	167	413
7	41	54	e45	172	e115	290	210	398	105	2,750	136	332
8	37	51	e44	176	e105	283	210	383	103	1,280	122	274
9	38	48	e44	294	e100	1,050	197	451	100	1,970	117	236
10	38	140	e45	291	e94	695	189	983	93	4,210	253	210
11	37	271	48	206	e88	459	179	2,230	92	2,280	166	188
12	37	155	45	e170	e84	458	169	1,160	110	840	163	170
13	38	110	45	e150	e80	816	160	562	142	562	140	157
14	37	90	51	e130	e76	1,190	153	406	504	431	122	149
15	36	79	55	e120	e72	730	150	424	345	418	114	156
16	36	73	55	e110	e70	605	147	346	230	432	105	136
17	35	69	54	e100	e69	504	150	286	176	332	102	124
18	37	65	81	e95	e68	422	146	260	150	293	95	114
19	41	61	244	e90	e67	377	141	232	133	260	88	111
20	48	60	462	e86	e67	412	138	210	118	229	84	107
21	45	59	317	e82	e76	446	154	191	107	247	80	104
22	40	66	206	e79	e125	467	142	175	101	258	76	162
23	39	69	157	e78	410	357	132	164	95	259	73	197
24	39	69	131	e76	292	304	126	154	87	214	70	144
25	44	76	125	e76	e190	280	136	146	83	185	68	145
26	64	66	109	e74	e160	383	155	140	87	168	66	152
27	58	61	93	e72	e140	342	135	132	109	159	65	820
28	50	62	88	e70	e134	294	127	123	90	156	63	664
29	44	62	87	e68	---	747	127	139	85	150	71	382
30	48	56	122	e66	---	595	122	125	80	137	94	280
31	50	---	552	e66	---	419	---	133	---	129	98	---
TOTAL	1,303	2,260	3,597	5,444	3,499	14,096	5,274	11,412	4,036	24,015	3,574	20,575
MEAN	42.0	75.3	116	176	125	455	176	368	135	775	115	686
MAX	64	271	552	724	410	1,190	347	2,230	504	4,210	253	6,770
MIN	35	46	44	66	67	120	122	123	80	73	63	104
CFSM	0.25	0.45	0.69	1.04	0.74	2.69	1.04	2.18	0.80	4.58	0.68	4.06
IN.	0.29	0.50	0.79	1.20	0.77	3.10	1.16	2.51	0.89	5.29	0.79	4.53

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 2003, BY WATER YEAR (WY)

MEAN	71.8	119	170	209	249	299	292	234	187	127	76.3	67.7
MAX	539	788	727	1,210	720	674	829	753	888	775	467	686
(WY)	(2002)	(1994)	(1991)	(1950)	(1950)	(1978)	(1964)	(1996)	(1958)	(2003)	(1979)	(2003)
MIN	20.1	27.4	24.2	24.4	42.1	71.2	70.3	71.4	39.2	24.7	16.0	14.5
(WY)	(1964)	(2000)	(1964)	(1977)	(1964)	(1981)	(1971)	(1955)	(1988)	(1966)	(1988)	(1999)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1942 - 2003	
ANNUAL TOTAL	81,714		99,085		175	
ANNUAL MEAN	224		271		61.4	
HIGHEST ANNUAL MEAN					301	2002
LOWEST ANNUAL MEAN					1966	
HIGHEST DAILY MEAN	4,440	May 14	6,770	Sep 2	6,950	Apr 21, 1964
LOWEST DAILY MEAN	23	Sep 12	35	Oct 17	7.0	Oct 1, 1941
ANNUAL SEVEN-DAY MINIMUM	26	Sep 8	37	Oct 11	9.7	Aug 21, 1988
MAXIMUM PEAK FLOW			8,450	Sep 2	8,750	Apr 21, 1964
MAXIMUM PEAK STAGE			9.83	Sep 2	9.88	Apr 21, 1964
ANNUAL RUNOFF (CFSM)	1.32		1.61		1.03	
ANNUAL RUNOFF (INCHES)	17.99		21.81		14.04	
10 PERCENT EXCEEDS	479		458		354	
50 PERCENT EXCEEDS	119		129		92	
90 PERCENT EXCEEDS	38		47		31	

e Estimated



03352500 FALL CREEK AT MILLERSVILLE, IN

LOCATION.--Lat 39°51'07", long 86°05'15", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.9, T.16 N., R.4 E., Marion County, Hydrologic Unit 05120201, (INDIANAPOLIS EAST, IN quadrangle), on right bank at downstream side of Emerson Way bridge at Millersville, 2.4 mi upstream of Keystone Avenue, 2.9 mi downstream of Interstate 465, 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. WRD IN-02-1: 1991, 1994(P). WRD IN-03-1: 1991, 1994, 1997-2002(P).

GAGE.--Water-stage recorder and Acoustic Doppler Velocity Meter. 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 except for estimated daily discharges, which are poor. 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.

REVISIONS.--The peak discharges for water years 1991 and 1994 have been revised to 8,200 ft³/s, Dec. 31, 1990, gage height, 13.36 ft, and 6,890 ft³/s, Nov. 15, 1993, gage height, 12.40 ft, superseding original figures published in reports for 1991 and 1994, and revisions published in reports for 1997-2002. The peak discharge for the 2002 water year has been revised to 6,550 ft³/s, May 14, 2002, gage height, 12.14 ft, superseding figure published in the report for 2002.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	65	62	1,280	123	232	566	177	179	94	163	4,730
2	52	62	61	1,190	125	227	474	320	160	87	176	10,500
3	50	61	95	837	146	218	407	269	182	89	183	7,890
4	62	66	49	584	337	211	358	213	161	94	196	3,760
5	80	73	49	468	373	341	338	792	153	2,090	229	1,450
6	63	80	36	393	300	632	328	846	143	4,580	221	867
7	55	76	54	324	248	584	296	674	148	4,830	184	627
8	53	72	54	313	202	527	288	643	139	3,390	153	471
9	50	74	55	417	181	1,410	298	637	130	2,840	144	372
10	49	325	49	477	172	1,500	247	1,300	123	4,790	163	307
11	48	348	51	405	161	968	213	3,140	122	4,740	202	269
12	48	162	52	306	148	805	216	2,900	199	2,640	189	230
13	48	104	53	268	129	1,300	206	1,360	261	1,320	174	209
14	47	89	62	243	133	2,020	193	802	525	863	154	197
15	47	82	69	218	169	1,560	178	766	662	742	235	184
16	46	83	69	214	152	1,130	178	631	443	830	164	174
17	46	72	61	e186	137	893	228	495	312	617	163	162
18	46	69	73	e170	126	722	230	418	235	518	136	149
19	58	67	213	e160	127	625	197	354	205	442	111	137
20	61	66	511	e150	141	628	185	310	178	356	102	130
21	57	67	519	e144	147	738	189	291	149	390	95	128
22	55	80	374	e138	288	799	186	234	139	416	94	215
23	54	77	e255	e134	676	638	173	214	124	372	96	250
24	54	71	e205	e132	615	500	164	197	115	333	85	203
25	68	68	e196	e129	434	456	211	193	106	273	84	207
26	90	67	e174	e126	341	561	233	192	106	232	76	199
27	67	65	e156	e124	289	541	174	174	143	220	110	847
28	64	63	e146	e122	255	468	154	161	125	239	128	1,160
29	69	64	e138	e121	---	1,140	162	199	117	211	150	753
30	77	63	e183	e120	---	1,200	147	177	107	188	222	483
31	67	---	762	121	---	789	---	200	---	174	198	---
TOTAL	1,786	2,781	4,886	10,014	6,675	24,363	7,417	19,279	5,891	39,000	4,780	37,260
MEAN	57.6	92.7	158	323	238	786	247	622	196	1,258	154	1,242
MAX	90	348	762	1,280	676	2,020	566	3,140	662	4,830	235	10,500
MIN	46	61	36	120	123	211	147	161	106	87	76	128
CFSM	0.19	0.31	0.53	1.08	0.80	2.64	0.83	2.09	0.66	4.22	0.52	4.17
IN.	0.22	0.35	0.61	1.25	0.83	3.04	0.93	2.41	0.74	4.87	0.60	4.65

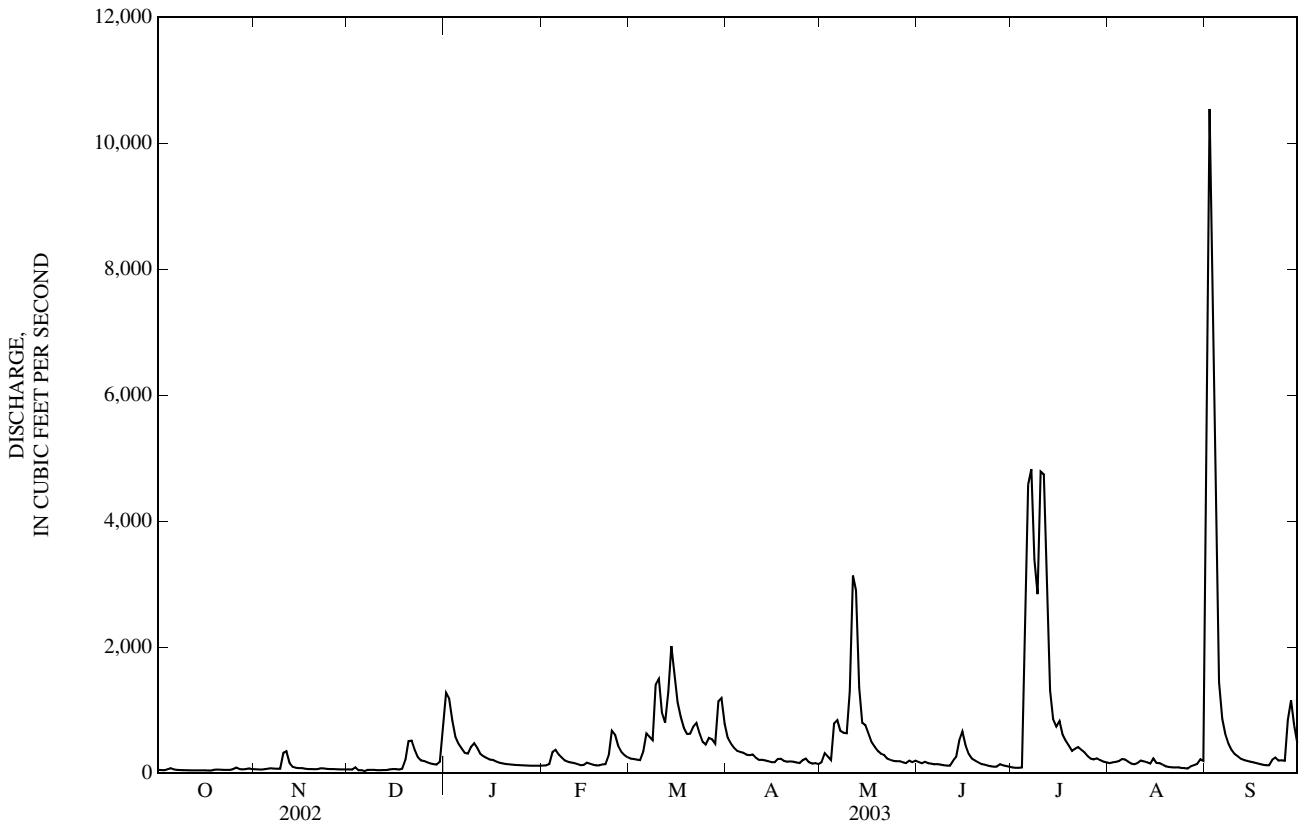
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1930 - 2003, BY WATER YEAR (WY)

MEAN	109	187	279	393	422	515	509	401	296	204	118	111
MAX	981	1,283	1,059	2,390	1,278	1,399	1,503	1,524	1,638	1,258	739	1,242
(WY)	(2002)	(1994)	(1991)	(1950)	(1950)	(1963)	(1964)	(1943)	(1998)	(2003)	(1979)	(2003)
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)

03352500 FALL CREEK AT MILLERSVILLE, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1930 - 2003	
ANNUAL TOTAL	132,412		164,132			
ANNUAL MEAN	363		450		294	
HIGHEST ANNUAL MEAN					539	1950
LOWEST ANNUAL MEAN					44.0	1941
HIGHEST DAILY MEAN	7,740	May 14	10,500	Sep 2	10,600	May 18, 1943
LOWEST DAILY MEAN	36	Dec 6	36	Dec 6	7.8	Sep 28, 1941
ANNUAL SEVEN-DAY MINIMUM	47	Oct 12	47	Oct 12	9.0	Sep 24, 1941
MAXIMUM PEAK FLOW			11,900	Sep 2	12,900	May 28, 1956
MAXIMUM PEAK STAGE			15.68	Sep 2	15.68	Sep 2, 2003
ANNUAL RUNOFF (CFSM)	1.22		1.51		0.99	
ANNUAL RUNOFF (INCHES)	16.53		20.49		13.43	
10 PERCENT EXCEEDS	775		833		658	
50 PERCENT EXCEEDS	166		186		130	
90 PERCENT EXCEEDS	61		62		47	

e Estimated



03353000 WHITE RIVER AT INDIANAPOLIS, IN

LOCATION.--Lat 39°44'14", long 86°10'08", in NW¹/₄NW¹/₄ sec.14, T.15 N., R.3 E., Marion County, Hydrologic Unit 05120201, (INDIANAPOLIS WEST, IN quadrangle), on left bank under Raymond Street bridge in Indianapolis, 3.7 mi downstream from Fall Creek, 2.3 mi upstream from Eagle Creek, 2.9 mi upstream from Indianapolis Power and Light Company dam, and at mile 229.2.

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 2.0 mi upstream Feb. 8, 1911, to Mar. 25, 1913, and at site 3.2 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. WDR IN-01-1 (P).

GAGE.--Acoustic Velocity Meter and Data Collection Platform. Datum of gage is 662.26 ft above National Geodetic Vertical Datum of 1929. March 1904 to July 1906, nonrecording gage at railroad bridge 1.9 mi upstream at datum approximately 2.9 ft higher. April 1930 to July 20, 1931, nonrecording gage at Indianapolis sanitation plant, 1.2 mi downstream at datum 2.26 ft lower. July 21, 1931 to Mar. 2, 1932, nonrecording gage and March 3, 1932, to September, 30 1940, water-stage recorder at Morris Street, 1.1 mi upstream at datum 2.26 ft lower. October 1, 1940, to September 30, 1998, water-stage recorder at Morris Street, 1.1 mi upstream at present datum. October 1, 1998, to May 16, 2000, Acoustic Velocity Meter at Interstate 70 bridge, 1.3 mi upstream at present datum. May 16, 2000 to present, Acoustic Velocity Meter and Data collection Platform at Raymond Street.

REMARKS.--Records fair. Stage-discharge relation affected at times by large releases from Eagle Creek and by variable leakage at Indianapolis Power and Light Company dam. Natural flow affected by regulation of Morse Reservoir, Geist Reservoir and by diversion of municipal water supply by the Indianapolis Water Company.

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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	268	333	364	6,730	480	1,010	2,920	627	872	328	559	22,200
2	260	307	358	6,490	505	918	2,200	1,170	730	345	524	33,800
3	233	279	354	4,850	640	854	1,740	1,250	717	275	908	26,200
4	381	291	349	3,070	1,240	845	1,540	1,110	680	267	1,840	22,400
5	452	340	325	2,230	1,900	1,260	1,450	3,510	657	5,260	1,620	14,000
6	330	422	306	1,840	1,770	2,350	1,290	5,490	617	13,100	1,420	4,820
7	276	409	279	1,560	1,320	3,470	1,240	5,300	573	18,200	982	3,270
8	210	382	300	1,280	1,050	2,600	1,290	4,200	564	17,100	756	2,500
9	174	361	314	1,550	798	5,570	1,400	3,530	527	16,000	639	2,020
10	170	1,610	284	2,420	796	7,960	1,170	6,660	486	24,800	837	1,690
11	155	1,850	304	2,540	764	6,190	1,020	17,600	484	27,000	1,200	1,450
12	153	1,490	328	1,810	644	4,400	952	19,400	729	20,900	928	1,260
13	143	1,170	311	1,220	554	5,480	877	14,400	1,010	11,600	719	1,100
14	139	839	355	1,170	532	8,600	786	7,030	1,830	5,690	615	1,030
15	135	702	361	913	661	9,230	693	5,500	2,190	4,120	724	925
16	128	628	347	761	584	6,850	641	5,130	1,620	3,960	607	849
17	126	573	347	693	575	5,340	876	3,800	1,110	3,200	721	783
18	125	471	384	657	496	4,340	826	2,840	835	2,680	676	719
19	271	463	1,100	739	531	3,640	663	2,330	688	2,050	495	667
20	282	436	2,100	695	606	3,350	715	1,920	598	1,660	395	612
21	244	438	2,760	642	629	3,910	627	1,640	521	2,090	343	583
22	230	477	2,130	599	1,380	4,670	599	1,380	455	1,730	304	1,370
23	187	462	1,400	509	2,300	4,270	561	1,200	401	1,620	254	1,460
24	151	449	1,070	462	2,600	3,120	502	1,080	346	1,340	231	1,620
25	394	500	991	479	2,020	2,540	718	955	297	1,160	211	1,470
26	527	425	839	515	1,490	2,590	887	890	308	963	206	1,790
27	385	423	711	539	1,250	2,330	731	849	399	865	394	4,530
28	341	405	643	465	1,090	2,380	578	797	356	987	403	7,830
29	504	399	623	481	---	5,040	550	908	324	786	513	7,350
30	495	387	888	483	---	6,440	513	790	296	686	912	4,110
31	382	---	2,790	476	---	4,580	---	907	---	611	1,100	---
TOTAL	8,251	17,721	24,015	48,868	29,205	126,127	30,555	124,193	21,220	191,373	22,036	174,408
MEAN	266	591	775	1,576	1,043	4,069	1,018	4,006	707	6,173	711	5,814
MAX	527	1,850	2,790	6,730	2,600	9,230	2,920	19,400	2,190	27,000	1,840	33,800
MIN	125	279	279	462	480	845	502	627	296	267	206	583
CFSM	0.16	0.36	0.47	0.96	0.64	2.49	0.62	2.45	0.43	3.78	0.43	3.56
IN.	0.19	0.40	0.55	1.11	0.66	2.87	0.70	2.83	0.48	4.35	0.50	3.97

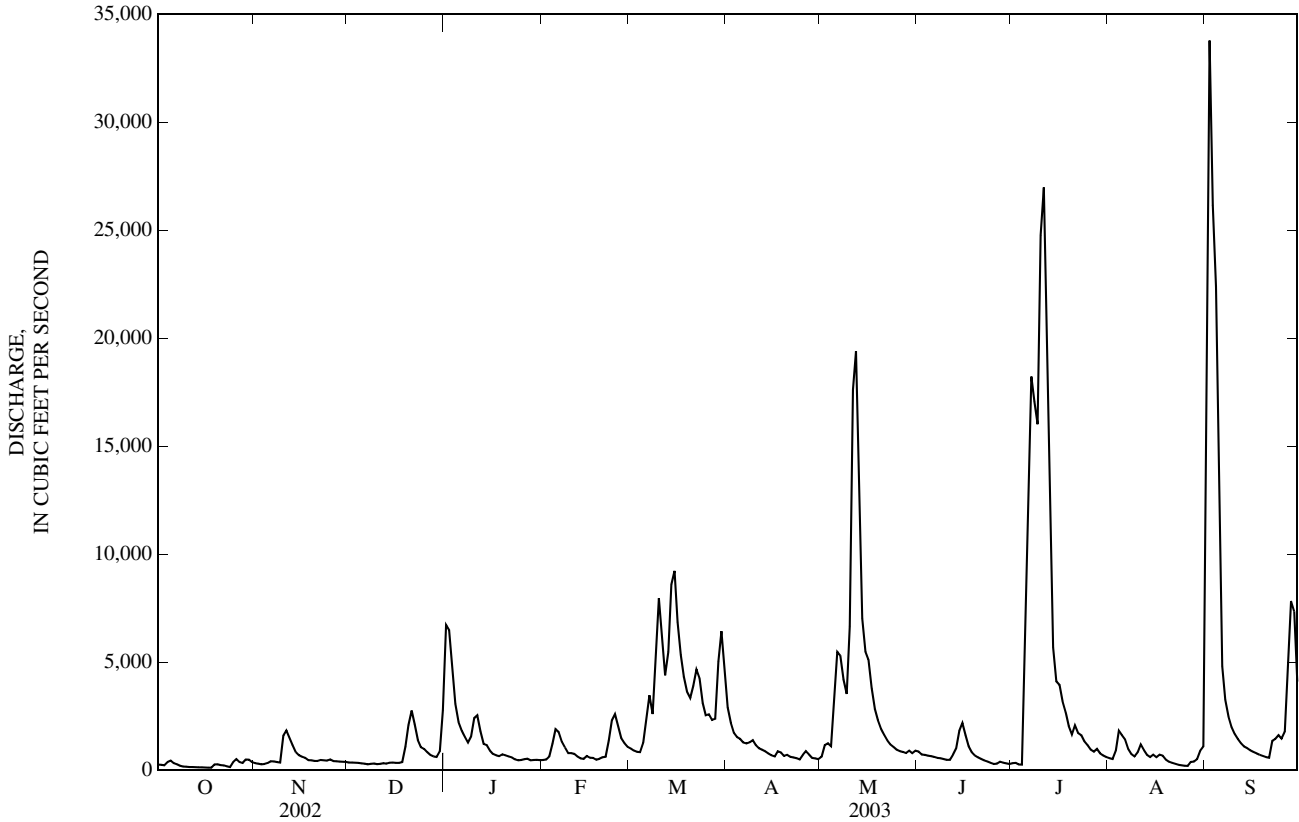
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2003, BY WATER YEAR (WY)

MEAN	478	908	1,376	1,898	2,118	2,696	2,652	1,974	1,465	961	533	497
MAX	4,791	6,425	5,826	12,120	6,452	6,610	7,777	8,594	7,910	6,173	3,399	5,814
(WY)	(2002)	(1994)	(1991)	(1950)	(1950)	(1963)	(1964)	(1943)	(1958)	(2003)	(1979)	(2003)
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)

WABASH RIVER BASIN

03353000 WHITE RIVER AT INDIANAPOLIS, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1931 - 2003	
ANNUAL TOTAL	666,481		817,972			
ANNUAL MEAN	1,826		2,241		1,459	
HIGHEST ANNUAL MEAN					2,698	1950
LOWEST ANNUAL MEAN					233	1941
HIGHEST DAILY MEAN	25,600	May 14	33,800	Sep 2	36,800	Dec 31, 1990
LOWEST DAILY MEAN	99	Sep 10	125	Oct 18	8.0	Sep 29, 1941
ANNUAL SEVEN-DAY MINIMUM	105	Sep 7	136	Oct 12	12	Sep 24, 1941
MAXIMUM PEAK FLOW			42,500	Sep 1	42,500	Sep 1, 2003
MAXIMUM PEAK STAGE			19.65	Sep 1	21.57	Jan 16, 1937
ANNUAL RUNOFF (CFSM)	1.12		1.37		0.89	
ANNUAL RUNOFF (INCHES)	15.16		18.61		12.12	
10 PERCENT EXCEEDS	4,270		5,180		3,380	
50 PERCENT EXCEEDS	802		826		657	
90 PERCENT EXCEEDS	156		305		148	



03353120 PLEASANT RUN AT ARLINGTON AVENUE AT INDIANAPOLIS, IN

LOCATION.--Lat 39°46'33", long 86°03'50", in SW¹/₄NW¹/₄ sec.2, T.15 N., R.4 E., Marion County, Hydrologic Unit 05120201, (INDIANAPOLIS EAST, IN quadrangle), 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 fair except for estimated daily discharges, which are poor.

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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	e1.9	e1.0	36	e0.78	e3.2	3.9	6.9	1.8	0.46	0.71	792
2	1.4	e1.8	e0.86	14	e3.0	e3.1	3.1	4.8	1.2	0.48	1.6	51
3	1.3	e1.7	e0.75	7.3	13	e3.1	2.6	2.1	8.7	0.42	1.2	11
4	22	2.7	e0.65	4.8	14	e5.4	14	11	2.1	16	29	5.3
5	3.7	11	e0.55	6.5	6.1	28	13	76	1.4	253	9.7	3.2
6	1.7	4.3	e0.48	6.7	e2.2	13	3.4	8.3	1.3	18	1.9	2.3
7	1.4	e2.1	e0.47	4.3	e1.7	9.1	7.0	20	1.6	4.7	1.0	1.6
8	1.2	e1.8	e0.46	5.6	e1.4	33	3.3	5.7	1.0	23	0.76	1.4
9	e1.1	13	e0.45	4.6	e1.3	24	2.5	8.2	0.95	58	0.60	1.3
10	e1.1	131	0.42	2.8	e1.3	9.9	2.1	146	1.6	63	3.3	1.2
11	e1.0	17	1.9	e1.7	e1.2	5.8	1.8	48	4.3	10	6.6	1.0
12	e0.90	5.3	1.2	e1.5	e1.1	6.3	1.5	10	37	5.0	1.7	1.0
13	e0.85	e2.8	0.85	e1.3	e1.1	40	1.3	5.3	12	2.7	0.63	0.99
14	e0.84	e1.9	7.2	e1.2	4.0	14	1.2	19	15	1.7	3.8	1.4
15	e0.86	4.2	2.3	e1.1	6.2	9.1	1.6	17	4.2	5.6	3.9	1.0
16	e0.82	3.8	1.2	e1.0	2.1	7.4	1.6	4.5	2.1	2.4	0.92	0.89
17	e0.77	e2.3	5.3	e0.99	e1.6	6.0	21	3.3	1.6	1.3	2.3	0.93
18	1.4	e1.8	6.9	e0.93	e1.7	5.1	4.4	2.9	1.2	10	0.64	0.98
19	8.9	4.1	49	e0.88	6.9	13	2.9	2.2	4.2	1.7	0.46	0.99
20	1.6	e2.3	19	e0.83	12	10	4.6	2.0	1.5	1.1	0.46	1.0
21	e1.2	6.2	4.8	e0.80	e6.2	27	2.4	1.6	0.85	56	0.43	0.96
22	e1.1	7.9	2.9	e0.78	60	8.3	1.8	1.4	0.69	5.7	0.46	46
23	e1.0	3.2	2.0	e0.74	18	5.5	1.4	1.2	0.63	3.6	0.39	2.9
24	1.3	e2.3	1.6	e0.74	e6.4	4.3	1.3	1.2	0.57	1.6	0.29	1.4
25	30	e2.1	e1.6	e0.74	e4.4	27	26	1.2	0.53	1.2	0.30	3.6
26	4.7	e1.7	e1.8	e0.73	e3.5	13	6.7	1.2	1.3	0.93	0.39	37
27	e1.9	e1.5	e2.0	e0.73	e3.3	6.1	3.0	0.96	0.78	9.8	12	47
28	e1.6	e1.3	e3.0	e0.72	e3.2	31	5.8	13	0.44	4.1	1.2	6.1
29	26	e1.1	5.4	e0.71	---	46	3.8	6.9	0.45	1.5	12	2.8
30	5.1	e1.4	28	e0.69	---	9.0	2.0	1.8	0.43	0.94	5.1	1.5
31	e2.3	---	60	e0.68	---	5.3	---	9.2	---	0.73	50	---
TOTAL	130.34	245.5	214.04	112.09	187.68	431.0	151.0	442.86	111.42	564.66	153.74	1,029.74
MEAN	4.20	8.18	6.90	3.62	6.70	13.9	5.03	14.3	3.71	18.2	4.96	34.3
MAX	30	131	60	36	60	46	26	146	37	253	50	792
MIN	0.77	1.1	0.42	0.68	0.78	3.1	1.2	0.96	0.43	0.42	0.29	0.89
CFSM	0.55	1.08	0.91	0.48	0.88	1.83	0.66	1.88	0.49	2.40	0.65	4.53
IN.	0.64	1.20	1.05	0.55	0.92	2.12	0.74	2.17	0.55	2.77	0.75	5.05

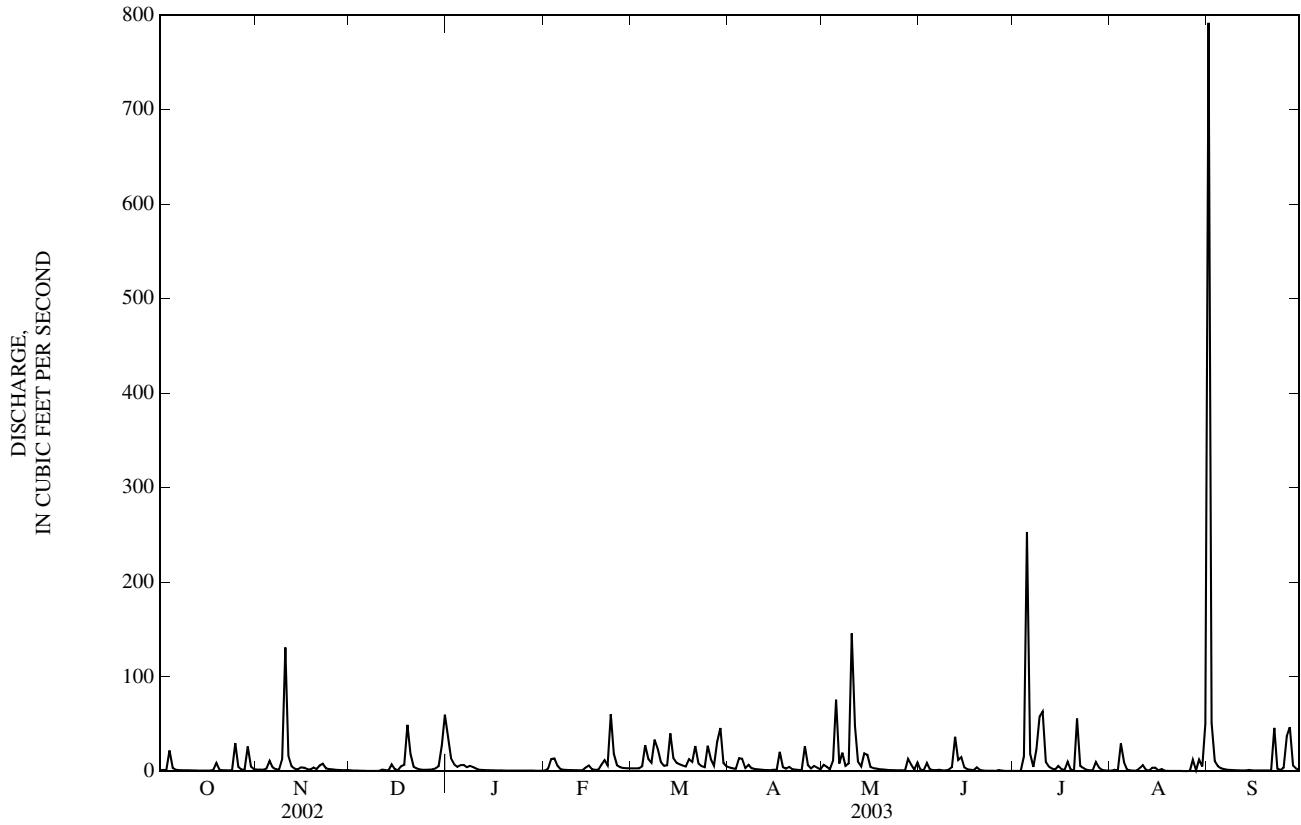
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2003, BY WATER YEAR (WY)

MEAN	4.66	8.64	8.49	7.68	8.68	12.7	11.2	10.5	7.69	8.53	4.91	5.06
MAX	27.5	36.9	33.3	25.0	25.7	42.3	28.5	37.8	49.2	33.8	21.3	34.3
(WY)	(1987)	(1994)	(1991)	(1969)	(1971)	(1963)	(1961)	(1996)	(1998)	(1979)	(1979)	(2003)
MIN	0.38	1.05	0.72	0.45	1.11	1.81	1.61	1.12	0.69	0.61	0.67	0.49
(WY)	(1964)	(2000)	(1964)	(1977)	(1978)	(2001)	(1971)	(1964)	(1967)	(1967)	(1967)	(1967)

03353120 PLEASANT RUN AT ARLINGTON AVENUE AT INDIANAPOLIS, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1960 - 2003	
ANNUAL TOTAL	3,352.46		3,774.07			
ANNUAL MEAN	9.18		10.3		8.24	
HIGHEST ANNUAL MEAN					11.6	1978
LOWEST ANNUAL MEAN					3.25	1966
HIGHEST DAILY MEAN	238	May 13	792	Sep 1	792	Sep 1, 2003
LOWEST DAILY MEAN	0.42	Dec 10	0.29	Aug 24	0.00	Sep 11, 1960
ANNUAL SEVEN-DAY MINIMUM	0.50	Dec 4	0.39	Aug 20	0.00	Oct 5, 1960
MAXIMUM PEAK FLOW			1,940	Sep 1	2,600	Jun 25, 1978
MAXIMUM PEAK STAGE			11.25	Sep 1	13.86	Jun 25, 1978
ANNUAL RUNOFF (CFSM)	1.21		1.36		1.09	
ANNUAL RUNOFF (INCHES)	16.45		18.52		14.78	
10 PERCENT EXCEEDS	22		19		17	
50 PERCENT EXCEEDS	2.3		2.2		1.9	
90 PERCENT EXCEEDS	0.90		0.74		0.50	

e Estimated



03353200 EAGLE CREEK AT ZIONSVILLE, IN

LOCATION.--Lat 39°56'47", long 86°15'37", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.2, T.17 N., R.2 E., Boone County, Hydrologic Unit 05120201, (ZIONSVILLE, IN quadrangle), on right upstream end of Zionsville Road bridge over Eagle Creek, 0.15 mi south of Highway 334, 1.0 mi downstream from Little Eagle Creek, 0.34 mi downstream from Long Branch Ditch, and at mile 24.4.

DRAINAGE AREA.--106 mi².

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

REVISED RECORDS.--WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 813.85 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 9, 1957, nonrecording gage, and prior to Oct. 1, 1999 a continuous water-stage recorder at site 0.4 mi upstream and at datum 816.85 ft.

REMARKS.--Records good except for estimated daily discharges, which are poor. Prior to 1989, low flow affected by the Zionsville well field located on the right bank downstream of the gage.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 28, 1957, reached a stage of 19.20 ft. from floodmark (datum 816.85 ft).

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

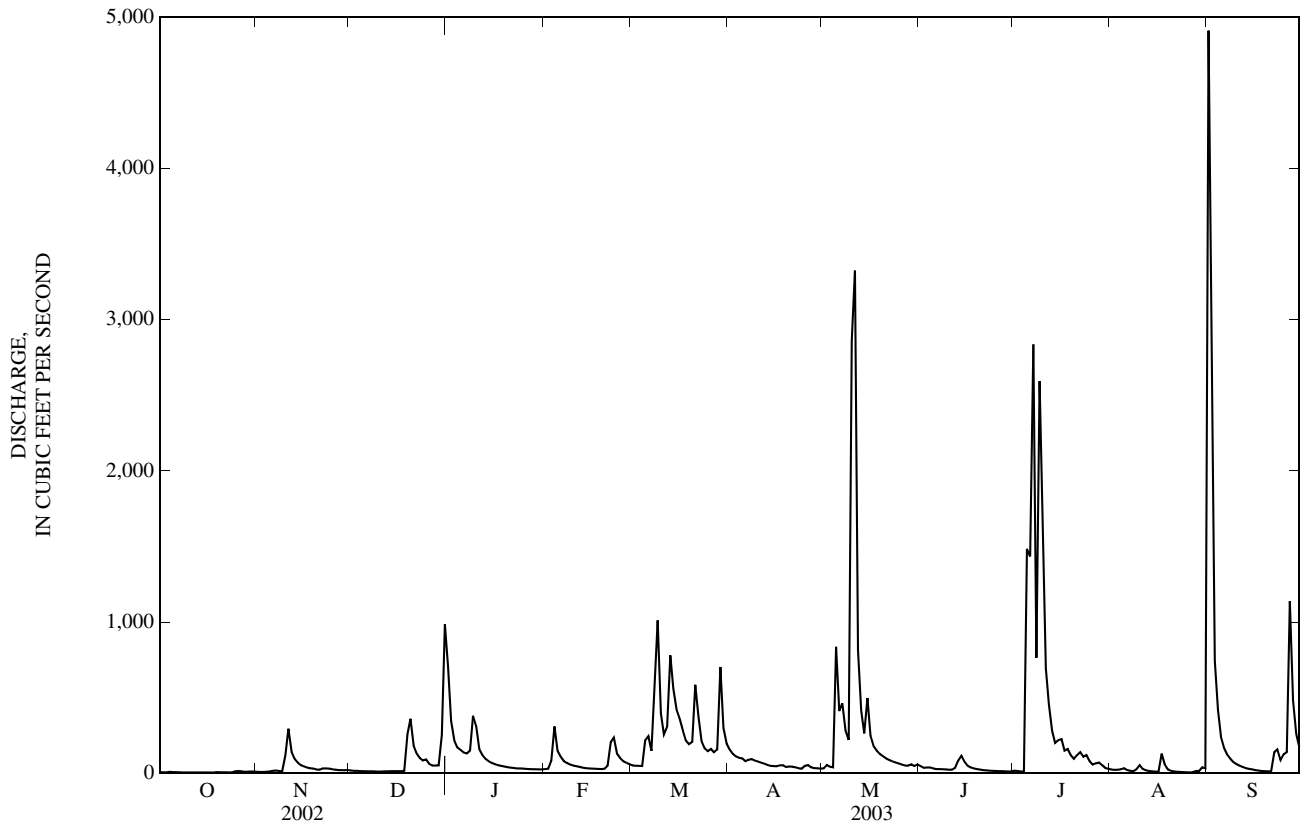
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.2	11	19	703	e28	e52	157	33	48	18	e25	4,910
2	6.7	9.5	17	346	e30	e51	128	54	37	16	e23	2,600
3	6.0	9.4	16	218	82	e49	112	44	39	12	e24	746
4	10	10	15	171	309	e48	103	40	39	11	e26	418
5	8.7	13	14	155	e150	218	99	837	33	1,480	e34	240
6	7.7	17	14	137	e110	245	80	413	28	1,430	e22	166
7	7.0	19	14	131	e80	149	90	463	29	2,830	e17	124
8	6.6	16	13	150	e68	543	93	283	27	763	e15	96
9	6.0	14	12	381	e58	1,010	85	221	26	2,590	e27	74
10	5.8	118	12	311	e52	397	78	2,860	24	1,820	e54	60
11	5.6	294	12	e160	e47	256	71	3,320	24	694	e28	49
12	5.7	143	13	e120	e43	308	65	814	36	457	e20	41
13	5.9	96	14	e95	e38	780	56	414	83	283	e16	33
14	5.8	70	15	e80	e35	558	49	264	116	200	e13	30
15	5.9	54	15	e68	e33	422	48	498	78	218	e11	26
16	5.6	45	14	e60	e31	363	47	250	50	226	e10	21
17	5.7	38	13	e54	e30	286	53	180	39	e150	e130	19
18	5.5	33	17	e49	e29	217	53	149	32	e160	e59	16
19	7.8	31	258	e45	e28	193	42	128	28	e120	e25	15
20	7.4	25	360	e41	e30	209	45	113	25	e96	e17	14
21	7.0	24	183	e38	e50	586	44	99	21	e120	e12	13
22	6.8	32	131	e36	207	374	40	87	19	e140	e10	140
23	6.4	32	100	e33	237	215	33	79	18	e110	9.0	159
24	6.3	31	85	e32	e130	165	31	72	17	e120	7.8	87
25	13	28	92	e31	e100	147	50	65	15	e80	7.1	126
26	15	24	63	e29	e80	162	55	58	15	e58	6.5	140
27	14	22	51	e28	e70	139	39	51	15	e66	6.7	1,140
28	10	20	51	e27	e60	158	34	50	13	e72	15	483
29	11	21	53	e27	---	703	34	59	13	e54	16	260
30	12	22	253	e26	---	302	31	48	13	e36	40	174
31	11	---	987	e26	---	196	---	58	---	e30	32	---
TOTAL	246.1	1,321.9	2,926	3,808	2,245	9,501	1,945	12,104	1,000	14,460	758.1	12,420
MEAN	7.94	44.1	94.4	123	80.2	306	64.8	390	33.3	466	24.5	414
MAX	15	294	987	703	309	1,010	157	3,320	116	2,830	130	4,910
MIN	5.5	9.4	12	26	28	48	31	33	13	11	6.5	13
CFSM	0.07	0.42	0.89	1.16	0.76	2.89	0.61	3.68	0.31	4.40	0.23	3.91
IN.	0.09	0.46	1.03	1.34	0.79	3.33	0.68	4.25	0.35	5.07	0.27	4.36

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 2003, BY WATER YEAR (WY)

MEAN	27.1	81.9	121	116	148	194	171	118	93.0	67.6	34.2	29.2
MAX	330	542	530	452	423	459	532	456	523	520	444	414
(WY)	(2002)	(1993)	(1991)	(1974)	(1976)	(1963)	(1964)	(1996)	(1958)	(1979)	(1958)	(2003)
MIN	0.000	0.80	1.65	1.23	9.05	23.9	24.6	12.0	1.55	1.52	0.000	0.000
(WY)	(1967)	(2000)	(1977)	(1977)	(1964)	(2000)	(2000)	(1988)	(1988)	(1966)	(1966)	(1966)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1958 - 2003	
ANNUAL TOTAL	48,335.4		62,735.1		99.8	
ANNUAL MEAN	132		172		188	
HIGHEST ANNUAL MEAN					15.9	1974
LOWEST ANNUAL MEAN					0.00	2000
HIGHEST DAILY MEAN	4,010	May 13	4,910	Sep 1	6,840	Dec 30, 1990
LOWEST DAILY MEAN	2.0	Sep 15	5.5	Oct 18	0.00	Sep 9, 1959
ANNUAL SEVEN-DAY MINIMUM	2.2	Sep 12	5.7	Oct 12	0.00	Sep 15, 1959
MAXIMUM PEAK FLOW			7,470	Sep 1	12,400	Apr 20, 1964
MAXIMUM PEAK STAGE			12.34	Sep 1	14.64	Apr 20, 1964
ANNUAL RUNOFF (CFSM)	1.25		1.62		0.94	
ANNUAL RUNOFF (INCHES)	16.96		22.02		12.79	
10 PERCENT EXCEEDS	277		352		216	
50 PERCENT EXCEEDS	38		48		30	
90 PERCENT EXCEEDS	5.7		11		1.3	

e Estimated



03353450 EAGLE CREEK RESERVOIR NEAR INDIANAPOLIS, IN

LOCATION.--Lat 39°49'20", long 86°18'11", in NW¹/₄NW¹/₄ sec. 22, T.16 N., R.2 E., Marion County, Hydrologic Unit 05120201, (CLERMONT, IN quadrangle), 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 0.00 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, 30,940 acre-ft May 11, 2003, elevation, 794.84 ft; minimum, 11,390 acre-ft Nov. 17-18, 1991, elevation, 778.70 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 30,940 acre-ft May 11, elevation, 794.84 ft; minimum, 21,910 acre-ft Oct. 25, elevation, 788.39 ft.

MONTHEND ELEVATION AND CONTENTS, AT 2400, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30	789.39	23,210	
Oct. 31	788.50	22,050	-1160
Nov. 30	789.06	22,780	+730
Dec. 31	790.16	24,220	+1440
CAL YR 2002	--	--	+1530
Jan. 31	789.02	22,730	-1490
Feb. 28	788.99	22,690	-40
Mar. 31	790.37	24,520	+1830
Apr. 30	790.97	25,360	+840
May 31	790.95	25,330	-30
June 30	790.72	25,010	-320
July 31	791.28	25,790	+780
Aug. 31	790.81	25,130	-660
Sept. 30	790.51	24,710	-420
WTR YR 2003	--	--	+1500

03353451 EAGLE CREEK BELOW RESERVOIR AT INDIANAPOLIS, IN

LOCATION.--Lat 39°49'20", long 86°18'11", in NW¹/₄NW¹/₄ sec. 22, T.16 N., R.2 E., Marion County, Hydrologic Unit 05120201, (CLERMONT, IN quadrangle), 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 2.0 mi west of Indianapolis.

DRAINAGE AREA.--162 mi².

PERIOD OF RECORD.--October 1992 to current year. Published as "03353450 Eagle Creek Reservoir near Indianapolis" October 1992 to September 1994.

GAGE.--Water stage recorder located 100 ft downstream of outlet structure. Datum of gage is 741.15 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Mean daily discharges below 50 ft³/s published. Unit discharges below 50 ft³/s available in district office. For a complete record of Eagle Creek in this vicinity use records of Eagle Creek at Indianapolis, IN (station 03353500) about 4.9 mile downstream. Prior to Oct. 1993, this station was published under Eagle Creek Reservoir at Indianapolis (station 03353450).

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	12	11	---	11	13	11	10	14	13	13	---
2	11	12	9.7	15	11	12	11	11	14	12	13	---
3	13	12	10	---	---	13	11	11	14	12	13	---
4	14	11	10	---	---	12	---	12	14	12	13	---
5	15	11	10	---	---	---	---	12	13	15	12	---
6	15	11	10	---	---	---	13	---	14	---	12	---
7	15	11	10	e13	---	---	12	---	13	---	11	---
8	15	9.7	11	10	---	---	---	---	15	---	12	---
9	14	9.7	11	---	12	---	12	---	13	---	13	---
10	13	10	11	---	---	---	11	---	13	---	13	---
11	12	13	11	---	12	---	12	---	13	20	12	---
12	13	13	11	11	12	---	---	---	13	---	12	---
13	15	---	11	---	11	---	---	23	14	---	11	---
14	14	---	10	12	11	---	11	---	---	---	10	---
15	13	---	10	12	11	---	10	---	17	---	9.9	31
16	14	---	10	11	12	---	10	16	13	16	10	e24
17	14	13	10	12	12	---	13	---	13	15	---	23
18	13	12	9.9	13	11	---	11	---	13	---	---	22
19	12	11	9.9	15	10	---	10	---	14	---	---	19
20	13	11	---	12	11	---	11	---	15	---	19	12
21	13	12	---	12	11	---	12	---	14	---	13	12
22	13	12	---	12	11	---	12	---	14	---	12	12
23	13	11	---	13	---	---	11	---	14	16	13	---
24	12	12	---	13	14	---	11	14	14	16	12	---
25	13	12	13	12	14	---	11	14	13	15	14	---
26	12	12	13	11	13	11	---	16	14	14	13	---
27	12	12	12	e12	---	11	11	13	14	14	13	---
28	11	11	11	12	---	11	11	13	14	17	14	---
29	12	9.9	12	11	---	---	10	14	13	14	14	---
30	11	11	---	11	---	15	9.9	14	13	13	15	---
31	11	---	---	11	---	12	---	14	---	13	---	---
TOTAL	402	297.3	257.5	266	210	110	267.9	207	399	247	341.9	155
MEAN	13.0	11.4	10.7	12.1	11.7	12.2	11.2	13.8	13.8	14.5	12.7	19.4
MAX	15	13	13	15	14	15	13	23	17	20	19	31
MIN	11	9.7	9.7	10	10	11	9.9	10	13	12	9.9	12
CFSM	0.08	0.07	0.07	0.07	0.07	0.08	0.07	0.09	0.08	0.09	0.08	0.12
IN.	0.09	0.07	0.06	0.06	0.05	0.03	0.06	0.05	0.09	0.06	0.08	0.04

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2003, BY WATER YEAR (WY)

MEAN	9.03	9.08	9.00	9.55	9.73	11.0	13.9	12.5	11.4	10.8	9.16	9.21
MAX	13.0	12.6	12.0	13.3	12.0	16.0	24.2	23.0	14.4	14.5	13.0	19.4
(WY)	(2003)	(2001)	(1997)	(1997)	(1997)	(1997)	(1996)	(1996)	(1997)	(2003)	(1999)	(2003)
MIN	3.63	3.69	3.88	4.07	4.84	8.65	10.4	4.94	4.07	4.40	3.49	3.55
(WY)	(1995)	(1995)	(1996)	(1996)	(1995)	(1994)	(2000)	(1993)	(1993)	(1993)	(1994)	(1994)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

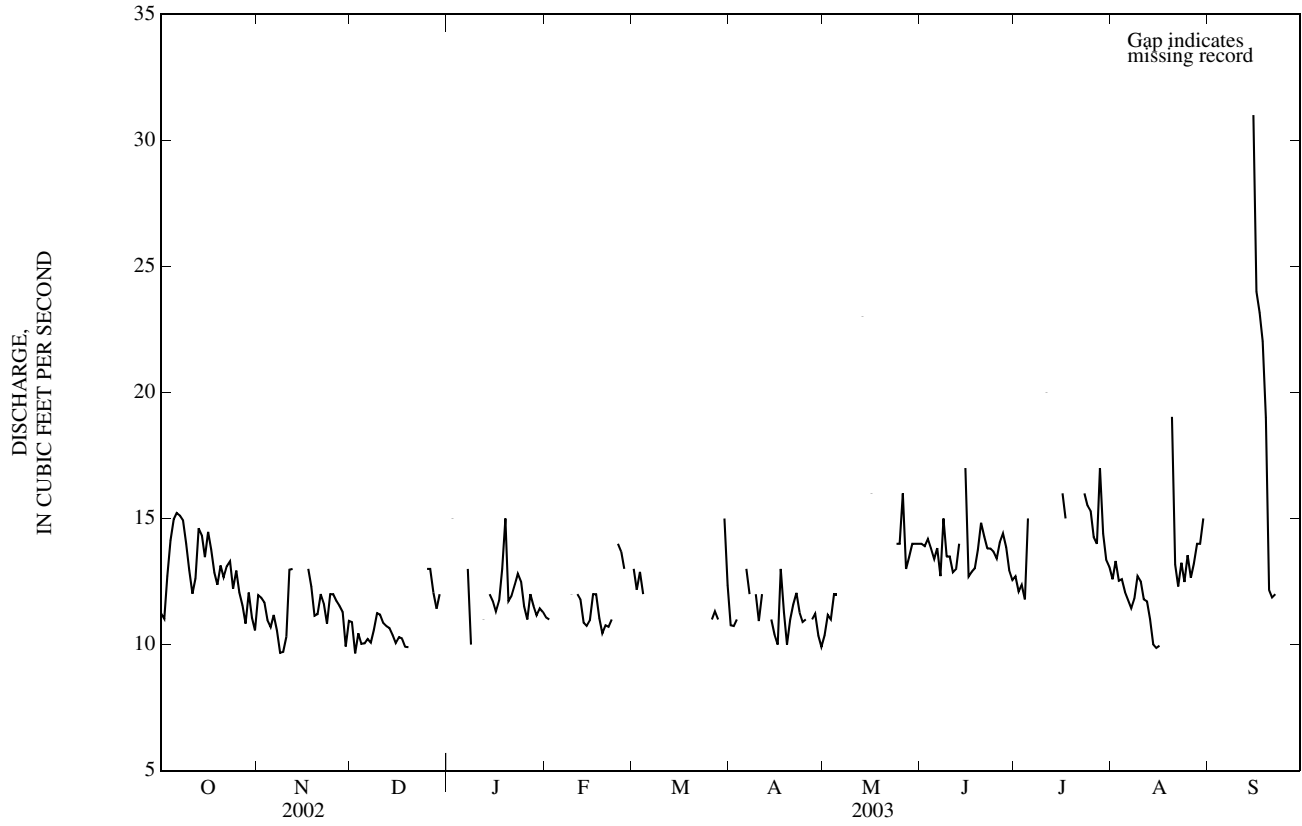
FOR 2003 WATER YEAR

WATER YEARS 1992 - 2003

ANNUAL TOTAL	2,360.8		3,160.6			
ANNUAL MEAN	12.0		12.6		10.1	
HIGHEST ANNUAL MEAN					13.1	
LOWEST ANNUAL MEAN					4.34	
HIGHEST DAILY MEAN	17	Jul 6	31	Sep 15	34	Apr 5, 1996
LOWEST DAILY MEAN	9.0	Jan 23	9.7	Nov 8	2.0	Sep 14, 1994
ANNUAL SEVEN-DAY MINIMUM	10	Dec 1	10	Dec 1	2.3	Sep 8, 1994
ANNUAL RUNOFF (CFSM)	0.074		0.078		0.062	
ANNUAL RUNOFF (INCHES)	0.54		0.73		0.84	
10 PERCENT EXCEEDS	14		15		14	
50 PERCENT EXCEEDS	12		12		11	
90 PERCENT EXCEEDS	10		10		4.2	

e Estimated

03353451 EAGLE CREEK BELOW RESERVOIR AT INDIANAPOLIS, IN—Continued



03353500 EAGLE CREEK AT INDIANAPOLIS, IN

LOCATION.--Lat 39°46'33", long 86°15'01", in NW¹/₄NW¹/₄ sec.6, T.15 N., R.3 E., Marion County, Hydrologic Unit 05120201, (CLERMONT, IN quadrangle), 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. WDR IN-93-1: 1992.

GAGE.--Water-stage recorder. Datum of gage is 697.00 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 9.21 ft higher, (erroneously published as 7.21 ft higher in 1992 report). Oct. 1, 1967 to Sept. 30, 1992 at datum 2 ft higher.

REMARKS.--Records fair except for estimated daily discharges, which are poor. 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e12	e17	e15	e1,480	18	124	31	31	105	30	20	8,370
2	e13	e17	e11	e655	72	28	27	24	21	18	18	6,380
3	e14	e16	e11	e313	174	28	52	88	24	17	34	1,670
4	e15	e16	e11	e207	184	95	154	120	20	29	65	796
5	e23	e20	e11	e206	173	180	158	779	19	1,070	24	432
6	e18	e18	e11	e205	171	426	102	899	18	2,510	21	243
7	e17	e18	e11	e160	170	454	60	665	18	2,620	19	231
8	e17	e17	e11	e53	137	213	153	421	84	965	17	217
9	e16	e18	e12	e200	35	938	92	311	23	2,340	21	206
10	e15	e102	e12	e295	159	1,050	23	1,200	18	2,230	18	198
11	e14	e47	e12	453	88	795	71	5,180	17	964	16	188
12	e15	e56	e12	313	21	566	117	1,960	81	757	16	177
13	e20	e143	e12	170	19	723	113	427	252	622	15	167
14	e17	e136	e13	139	21	850	64	505	264	247	13	158
15	e15	e135	e11	26	29	838	18	825	212	145	13	59
16	e19	e133	e11	23	93	957	48	369	39	132	12	46
17	e19	e89	e12	23	125	461	149	261	24	190	45	43
18	e21	e23	e14	87	22	231	22	220	22	340	171	41
19	e14	e21	e328	253	24	352	76	188	21	147	65	39
20	e15	e19	e464	32	30	230	139	109	23	182	29	26
21	e15	e20	e137	22	30	460	19	110	23	271	20	24
22	e15	e21	e135	21	401	582	18	109	21	208	16	121
23	e17	e19	e135	32	436	568	18	110	20	171	17	190
24	e16	e70	e134	20	351	424	16	81	20	34	16	185
25	e35	e79	e80	19	35	255	80	22	18	29	15	189
26	e19	e19	e27	97	106	243	196	68	26	27	15	215
27	e16	e17	e15	214	161	30	123	78	24	43	44	412
28	e15	e16	e14	21	158	174	21	30	21	193	21	846
29	e32	e15	e22	18	---	664	20	60	19	28	61	864
30	e21	e13	e118	18	---	766	17	125	18	24	98	672
31	e17	---	e680	18	---	41	---	100	---	22	272	---
TOTAL	547	1,350	2,502	5,793	3,443	13,746	2,197	15,475	1,515	16,605	1,247	23,405
MEAN	17.6	45.0	80.7	187	123	443	73.2	499	50.5	536	40.2	780
MAX	35	143	680	1,480	436	1,050	196	5,180	264	2,620	272	8,370
MIN	12	13	11	18	18	28	16	22	17	17	12	24
CFSM	0.10	0.26	0.46	1.07	0.71	2.55	0.42	2.87	0.29	3.08	0.23	4.48
IN.	0.12	0.29	0.53	1.24	0.74	2.94	0.47	3.31	0.32	3.55	0.27	5.00

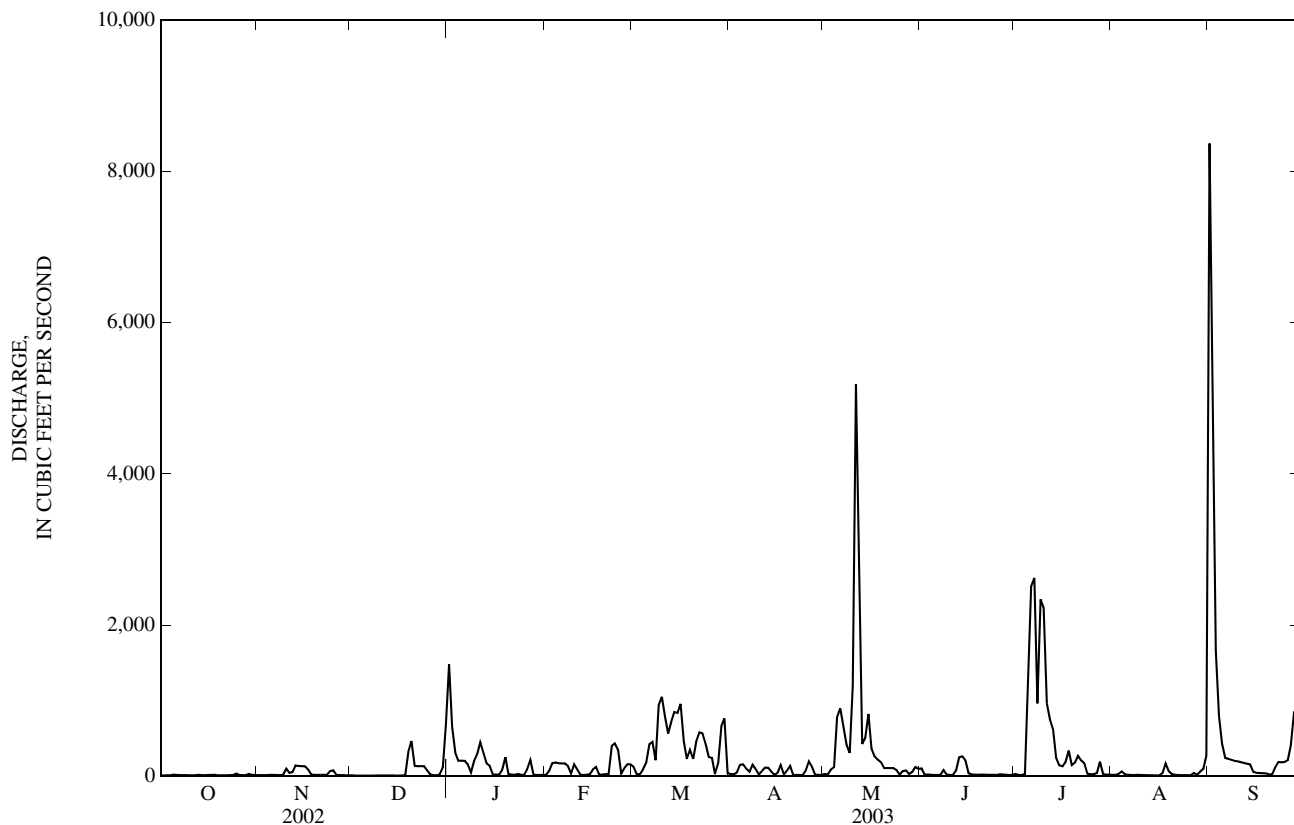
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2003, BY WATER YEAR (WY)

MEAN	40.3	110	163	201	239	303	295	221	149	91.2	38.3	50.2
MAX	574	851	906	1,485	765	900	906	1,127	904	800	490	780
(WY)	(2002)	(1993)	(1991)	(1950)	(1976)	(1978)	(1964)	(1943)	(1957)	(1979)	(1958)	(2003)
MIN	1.52	3.05	3.48	4.06	10.8	16.5	25.4	14.3	4.66	3.69	0.19	0.40
(WY)	(1941)	(1941)	(1945)	(1945)	(1998)	(2000)	(2000)	(1976)	(1988)	(1968)	(1941)	(1941)

03353500 EAGLE CREEK AT INDIANAPOLIS, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1939 - 2003	
ANNUAL TOTAL	78,705.5		87,825		158	
ANNUAL MEAN	216		241		316	
HIGHEST ANNUAL MEAN					18.8	
LOWEST ANNUAL MEAN					0.01	
HIGHEST DAILY MEAN	7,290	May 13	8,370	Sep 1	9,890	Dec 30, 1990
LOWEST DAILY MEAN	9.7	Aug 31	11	Dec 2	0.00	Aug 7, 1941
ANNUAL SEVEN-DAY MINIMUM	10	Aug 30	11	Dec 2	0.01	Aug 22, 1941
MAXIMUM PEAK FLOW			15,900	Sep 1	28,800	Jun 28, 1957
MAXIMUM PEAK STAGE			16.57	Sep 1	23.59	Jun 28, 1957
ANNUAL RUNOFF (CFSM)	1.24		1.38		0.91	
ANNUAL RUNOFF (INCHES)	16.83		18.78		12.34	
10 PERCENT EXCEEDS	522		574		358	
50 PERCENT EXCEEDS	35		46		38	
90 PERCENT EXCEEDS	13		15		6.1	

e Estimated



03353600 LITTLE EAGLE CREEK AT SPEEDWAY, IN

LOCATION.--Lat 39°47'15", long 86°13'41", in NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.32, T.16 N., R.3 E., Marion County, Hydrologic Unit 05120201, (INDIANAPOLIS WEST, IN quadrangle), on right bank at downstream side of 16th Street bridge in Speedway, 0.6 mi upstream from Dry Run, and 2.3 mi upstream from mouth.

DRAINAGE AREA.--24.3 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.

REVISED RECORDS.--WDR IN-95-1: Drainage area.

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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	6.0	10	74	e2.1	e7.4	25	29	13	4.3	4.1	2,130
2	3.9	5.4	9.8	42	e2.7	e6.7	20	30	9.4	16	3.8	450
3	6.7	6.6	9.8	31	e21	e6.2	16	12	15	5.9	26	103
4	30	8.1	9.2	24	70	e5.8	16	18	11	24	42	55
5	15	16	9.1	25	e22	86	15	255	8.0	599	18	34
6	7.9	18	9.0	27	e15	55	12	76	7.2	148	8.4	23
7	6.2	7.7	8.7	23	e12	43	20	173	7.2	45	6.1	17
8	4.6	5.4	8.8	24	e10	82	15	46	6.6	46	5.0	14
9	3.1	6.3	8.4	27	e8.6	97	12	74	5.6	151	42	11
10	2.4	247	8.2	19	e7.3	46	10	282	6.4	191	19	9.7
11	2.3	85	12	e13	e6.5	32	9.1	280	8.6	51	8.4	8.7
12	2.2	31	14	e11	e6.0	29	8.3	61	47	32	8.8	7.8
13	2.3	20	13	e9.4	e5.4	95	7.5	34	125	18	6.0	7.0
14	2.2	14	22	e8.6	e5.0	57	7.0	38	118	13	4.9	6.8
15	2.0	13	16	e9.0	e4.7	39	6.7	61	39	23	4.1	6.1
16	1.8	13	13	e7.5	e4.4	33	6.3	24	23	16	3.7	5.7
17	1.8	11	13	e6.2	e4.2	27	25	19	16	9.7	200	5.3
18	1.8	8.8	20	e5.2	e3.9	24	20	17	12	35	25	5.1
19	13	11	126	e4.3	e3.8	34	11	14	9.5	14	11	5.0
20	9.6	10	71	e3.6	e3.8	30	11	13	7.7	8.8	7.7	4.8
21	3.0	13	28	e3.2	e5.0	50	13	11	6.4	64	e5.4	4.5
22	2.5	23	19	e2.8	130	29	9.4	9.0	5.6	21	e4.0	161
23	2.3	14	13	e2.4	70	22	7.1	8.4	5.9	18	e3.0	27
24	2.3	10	e12	e2.3	43	19	6.2	7.5	5.1	17	e2.6	13
25	40	8.7	e15	e2.2	e27	45	50	7.0	4.8	8.4	e2.3	27
26	21	7.9	e13	e2.1	e19	49	30	6.7	12	6.2	e2.0	43
27	7.4	7.7	e12	e2.1	e14	27	14	6.2	13	15	39	178
28	4.8	7.7	e11	e2.0	e11	71	11	20	5.8	17	7.0	32
29	37	7.8	e13	e2.0	---	164	10	31	4.6	8.6	81	19
30	20	9.3	e80	e1.9	---	50	8.3	11	4.3	5.7	43	13
31	9.2	---	153	e1.9	---	33	---	39	---	4.8	35	---
TOTAL	272.4	652.4	780.0	418.7	537.4	1,394.1	431.9	1,712.8	562.7	1,636.4	678.3	3,426.5
MEAN	8.79	21.7	25.2	13.5	19.2	45.0	14.4	55.3	18.8	52.8	21.9	114
MAX	40	247	153	74	130	164	50	282	125	599	200	2,130
MIN	1.8	5.4	8.2	1.9	2.1	5.8	6.2	6.2	4.3	4.3	2.0	4.5
CFSM	0.36	0.89	1.04	0.56	0.79	1.85	0.59	2.27	0.77	2.17	0.90	4.70
IN.	0.42	1.00	1.19	0.64	0.82	2.13	0.66	2.62	0.86	2.51	1.04	5.25

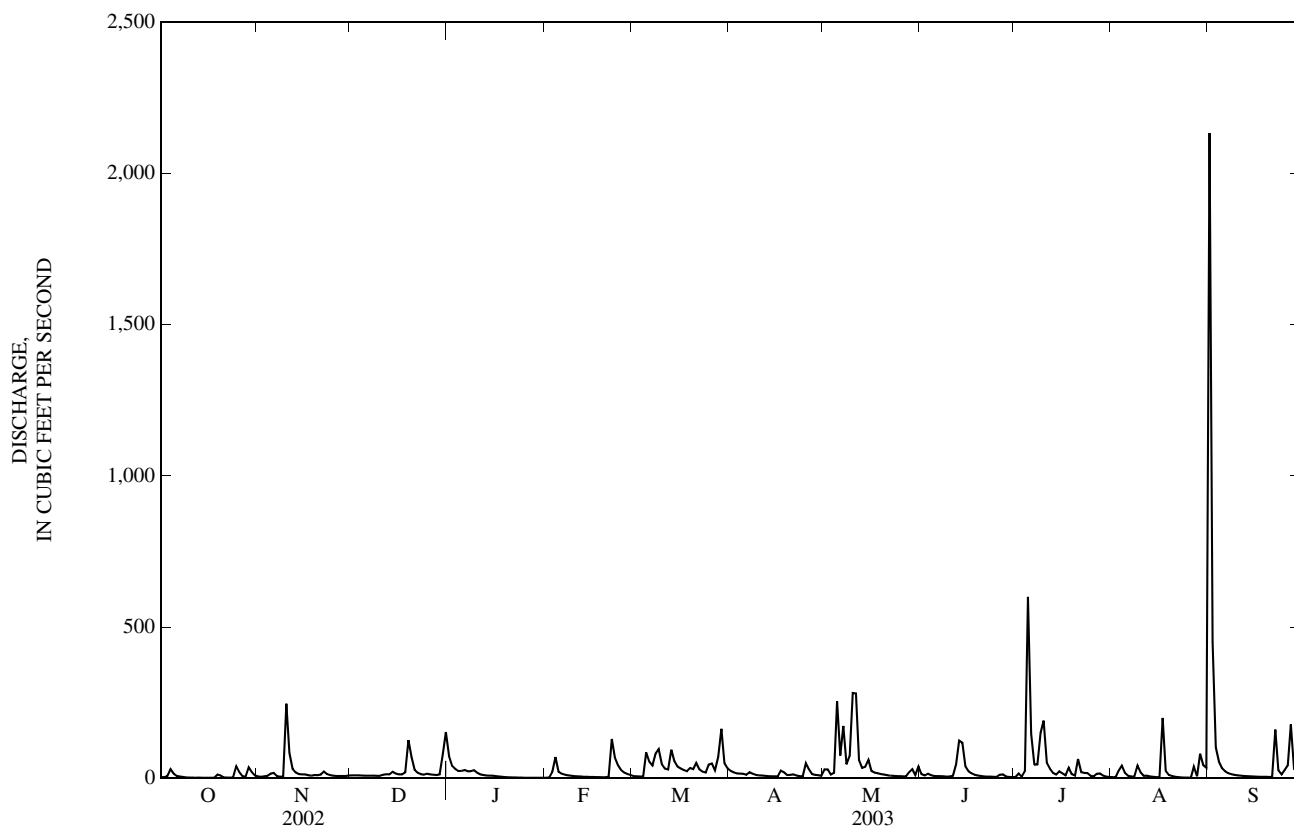
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2003, BY WATER YEAR (WY)

MEAN	12.7	24.7	28.5	25.7	31.0	37.3	36.2	34.3	21.6	19.7	11.8	14.2
MAX	88.9	115	111	78.3	77.1	87.8	84.4	140	112	92.3	44.7	114
(WY)	(1987)	(1994)	(1991)	(1969)	(1997)	(1978)	(1996)	(1996)	(1998)	(1979)	(1979)	(2003)
MIN	0.81	1.50	0.85	0.32	3.82	4.84	5.51	4.84	0.98	0.67	0.15	0.20
(WY)	(1967)	(1966)	(1977)	(1977)	(1978)	(1981)	(1976)	(1976)	(1988)	(1966)	(1966)	(1966)

03353600 LITTLE EAGLE CREEK AT SPEEDWAY, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1965 - 2003	
ANNUAL TOTAL	10,980.7		12,503.6		24.8	
ANNUAL MEAN	30.1		34.3		43.6	
HIGHEST ANNUAL MEAN					1993	
LOWEST ANNUAL MEAN					1966	
HIGHEST DAILY MEAN	652	May 13	2,130	Sep 1	2,130	Sep 1, 2003
LOWEST DAILY MEAN	1.1	Sep 15	1.8	Oct 16	0.00	Jul 8, 1966
ANNUAL SEVEN-DAY MINIMUM	1.2	Sep 11	2.0	Jan 26	0.07	Aug 2, 1966
MAXIMUM PEAK FLOW			3,870	Sep 1	3,870	Sep 1, 2003
MAXIMUM PEAK STAGE			12.79	Sep 1	12.79	Sep 1, 2003
ANNUAL RUNOFF (CFSM)	1.24		1.41		1.02	
ANNUAL RUNOFF (INCHES)	16.81		19.14		13.85	
10 PERCENT EXCEEDS	71		62		51	
50 PERCENT EXCEEDS	12		12		8.2	
90 PERCENT EXCEEDS	2.7		3.9		1.5	

e Estimated



03353611 WHITE RIVER AT STOUT GEN. STN. AT INDIANAPOLIS, IN

LOCATION.--Lat 39°42'52", long 86°12'02", in SE¹/₄NE¹/₄ sec.28, T.15N., R.3E., Marion County, Hydrologic Unit 05120201, (MAYWOOD, IN quadrangle), on right bank 0.34 mi above confluence with Lick Creek, 0.63 mi west of South Harding Street, 1.42 mi east of Lockburn Street and 1.46 mi south of Raymond Street, and at mile 226.3.

DRAINAGE AREA.--1,898 mi².

PERIOD OF RECORD.--Oct. 1, 1992 to current year.

GAGE.--Water-stage recorder. Datum of gage is 663.40 above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Natural flow affected by regulation of Morse Reservoir and Geist Reservoir, and by diversion of municipal water supply by the Indianapolis Water Company.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	342	371	386	8,080	525	1,240	3,320	973	1,170	586	834	26,500
2	340	360	386	7,360	564	1,090	2,630	1,680	1,010	623	796	37,800
3	328	350	387	5,240	751	1,000	2,180	1,740	1,020	518	1,150	25,800
4	454	358	386	3,410	1,500	1,010	2,030	1,610	961	500	2,100	21,100
5	448	386	375	2,560	2,190	1,620	2,000	4,420	936	5,910	1,850	13,100
6	368	e462	366	2,150	2,070	2,870	1,780	6,250	899	14,400	1,670	4,540
7	347	e430	354	1,790	1,560	4,080	1,720	5,960	853	19,900	1,270	3,160
8	316	391	364	1,440	1,220	3,120	1,790	4,660	850	18,000	1,050	2,520
9	296	384	370	1,800	903	6,630	1,890	4,010	813	17,400	949	2,110
10	293	2,080	358	2,730	930	9,240	1,610	7,840	759	28,300	1,160	1,810
11	284	2,260	366	2,900	876	7,000	1,450	21,100	768	30,200	1,510	1,600
12	282	1,740	375	2,110	715	4,840	1,390	21,500	1,070	22,400	1,250	1,430
13	276	1,390	370	1,390	612	6,200	1,290	14,700	1,400	11,700	1,020	1,280
14	274	959	386	1,330	595	9,760	1,160	7,010	2,170	5,310	915	1,210
15	271	794	386	989	770	10,300	997	5,610	2,360	3,820	1,020	1,090
16	267	701	383	811	672	7,700	932	4,970	1,850	3,660	900	1,020
17	264	626	384	730	673	5,670	1,350	3,700	1,400	3,080	1,080	950
18	261	485	401	690	556	4,560	1,220	2,870	1,130	2,820	1,020	889
19	343	472	1,410	834	607	4,010	991	2,440	990	2,200	797	839
20	350	445	2,650	770	711	3,670	1,100	2,070	901	1,880	666	780
21	332	450	3,130	684	737	4,310	936	1,850	809	2,460	593	754
22	326	497	2,480	635	1,850	5,040	897	1,620	732	2,030	538	1,630
23	304	470	1,650	530	2,870	4,670	845	1,460	667	1,910	466	1,660
24	284	465	1,280	485	3,140	3,540	767	1,360	603	1,610	426	1,790
25	507	540	1,160	509	2,370	2,890	1,150	1,220	537	1,440	395	1,670
26	534	436	935	559	1,790	2,980	1,410	1,160	554	1,240	388	1,970
27	393	432	778	e600	1,540	2,560	1,150	1,140	681	1,150	654	4,760
28	375	412	696	e520	1,340	2,670	894	1,070	616	1,310	665	8,230
29	575	402	685	527	---	5,780	860	1,210	573	1,070	812	7,790
30	509	399	1,080	526	---	7,310	795	1,090	543	961	1,240	4,330
31	392	---	3,430	517	---	4,900	---	1,230	---	888	1,500	---
TOTAL	10,935	19,947	28,147	55,206	34,637	142,260	42,534	139,523	29,625	209,276	30,684	184,112
MEAN	353	665	908	1,781	1,237	4,589	1,418	4,501	988	6,751	990	6,137
MAX	575	2,260	3,430	8,080	3,140	10,300	3,320	21,500	2,360	30,200	2,100	37,800
MIN	261	350	354	485	525	1,000	767	973	537	500	388	754
CFSM	0.19	0.35	0.48	0.94	0.65	2.42	0.75	2.37	0.52	3.56	0.52	3.23
IN.	0.21	0.39	0.55	1.08	0.68	2.79	0.83	2.73	0.58	4.10	0.60	3.61

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1992 - 2003, BY WATER YEAR (WY)

MEAN	974	2,008	1,584	2,299	2,073	2,927	2,844	3,275	2,336	1,777	624	1,105
MAX	5,339	7,366	4,215	4,949	4,000	5,526	5,334	7,735	6,924	6,751	1,360	6,137
(WY)	(2002)	(1994)	(1997)	(1999)	(1997)	(1997)	(2002)	(1996)	(1998)	(2003)	(1998)	(2003)
MIN	227	200	252	269	666	751	1,418	1,326	829	533	273	181
(WY)	(1995)	(2000)	(2000)	(2000)	(1995)	(2000)	(2003)	(2000)	(1994)	(1999)	(1999)	(1999)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

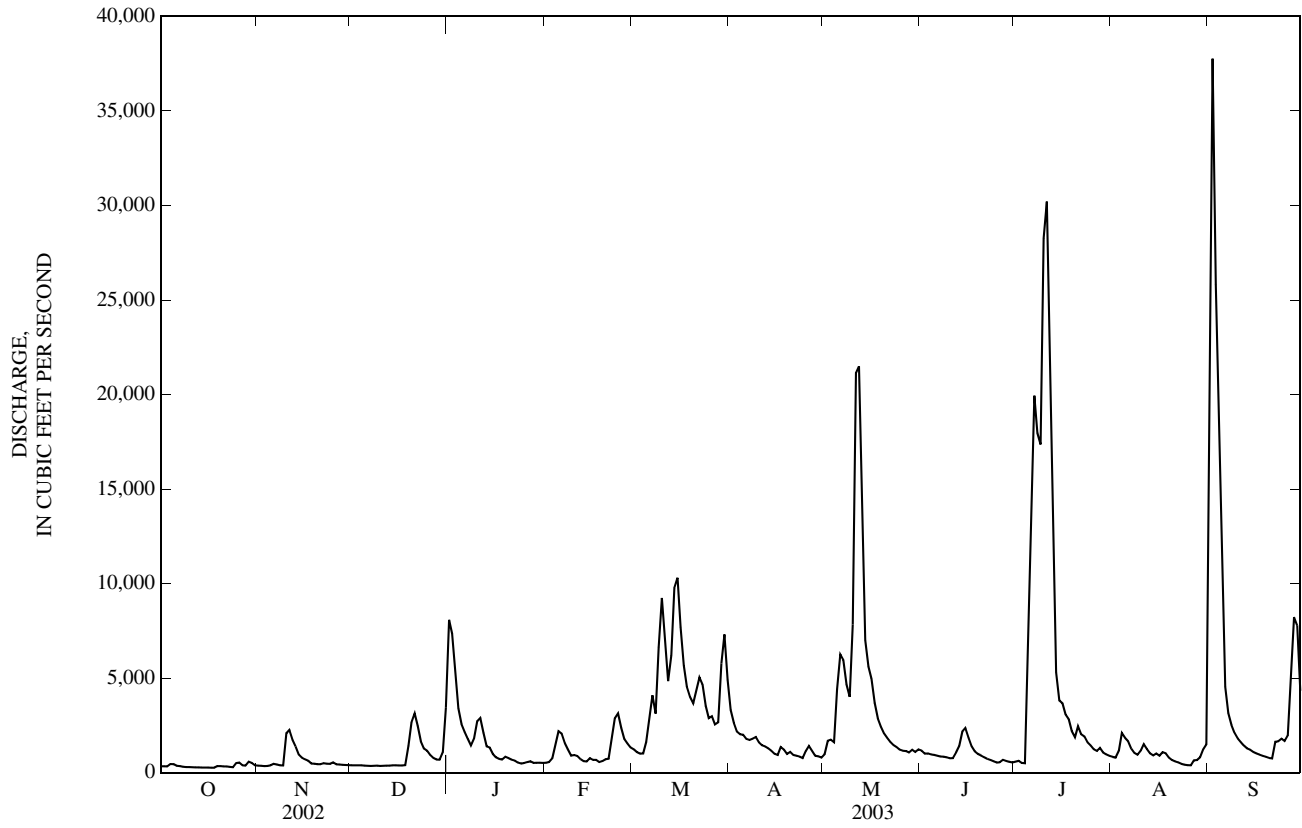
FOR 2003 WATER YEAR

WATER YEARS 1992 - 2003

ANNUAL TOTAL	780,342						926,886					
ANNUAL MEAN	2,138						2,539			1,984		
HIGHEST ANNUAL MEAN										2,947		1993
LOWEST ANNUAL MEAN										770		2000
HIGHEST DAILY MEAN	30,300					May 14	37,800		Sep 2	37,800		Sep 2, 2003
LOWEST DAILY MEAN	261					Oct 18	261		Oct 18	150		Oct 1, 1995
ANNUAL SEVEN-DAY MINIMUM	271					Oct 12	271		Oct 12	161		Sep 14, 1999
MAXIMUM PEAK FLOW							51,500		Sep 1	51,500		Sep 1, 2003
MAXIMUM PEAK STAGE							15.42		Sep 1	15.42		Sep 1, 2003
ANNUAL RUNOFF (CFSM)	1.13						1.34			1.05		
ANNUAL RUNOFF (INCHES)	15.29						18.17			14.20		
10 PERCENT EXCEEDS	4,770						5,430			4,480		
50 PERCENT EXCEEDS	935						1,080			977		
90 PERCENT EXCEEDS	318						380			291		

e Estimated

03353611 WHITE RIVER AT STOUT GEN. STN. AT INDIANAPOLIS, IN—Continued



03353611 WHITE RIVER AT STOUT GEN. STN. AT INDIANAPOLIS, IN—Continued

WATER-QUALITY RECORDS

INSTRUMENTATION.--Temperature recorder.

PERIOD OF RECORD.--

WATER TEMPERATURE.-- September 1992 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 31.6°C, July 25, 1999; minimum, -0.1°C, Jan. 29, 1995.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 26.0°C, Oct. 3; minimum, 1.8°C, Feb. 8, and 16.

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	25.0	22.9	23.8	15.1	13.5	14.3	10.2	8.3	9.4	5.4	4.7	5.0
2	25.6	23.8	24.6	15.1	13.4	14.3	10.0	7.5	9.3	6.5	4.3	5.4
3	26.0	24.3	25.2	16.1	13.3	14.7	9.5	8.3	9.0	6.3	4.6	5.5
4	25.5	23.5	25.0	15.7	13.8	14.8	9.0	6.0	7.9	5.8	4.6	5.4
5	23.9	22.7	23.3	17.4	13.6	15.2	9.3	7.0	8.7	7.2	5.2	6.2
6	23.3	22.6	23.0	---	---	---	9.3	6.9	8.7	7.6	6.1	6.8
7	22.9	21.4	22.1	---	---	---	9.6	6.0	8.4	7.3	5.0	6.1
8	22.1	20.8	21.4	15.0	12.6	13.7	9.2	6.3	8.6	8.6	6.0	7.0
9	21.8	20.3	21.2	16.2	13.8	14.9	9.4	6.2	8.5	8.6	6.9	7.8
10	21.9	20.3	21.1	16.6	14.4	15.4	9.5	7.4	9.0	7.4	5.6	6.5
11	22.4	20.2	21.4	14.5	13.7	14.2	10.6	9.0	9.6	5.6	4.2	4.9
12	22.6	21.3	21.9	14.1	13.1	13.7	10.8	9.4	10.0	5.1	2.6	3.8
13	22.0	20.6	21.3	13.6	11.5	12.6	10.4	9.3	9.8	5.1	2.9	4.0
14	21.5	19.2	20.4	13.1	12.1	12.6	10.4	9.4	9.9	5.0	3.3	4.1
15	20.7	19.0	19.8	12.9	11.5	12.3	10.0	8.1	9.3	3.8	2.4	3.1
16	20.2	18.4	19.1	11.6	10.5	10.9	9.8	8.2	9.1	3.3	1.9	2.6
17	19.5	17.8	18.5	11.7	9.9	10.7	10.6	7.3	9.1	3.1	2.3	2.7
18	19.4	17.1	18.4	13.0	11.5	12.2	12.2	9.2	10.4	4.0	2.2	2.8
19	20.7	17.3	18.8	12.8	10.8	11.9	13.3	8.1	10.9	3.3	2.4	2.9
20	18.4	16.5	17.5	12.9	11.3	12.2	8.1	6.8	7.5	4.2	2.6	3.4
21	18.5	16.4	17.6	14.0	11.7	12.6	8.2	6.5	7.5	3.6	2.1	2.8
22	19.1	17.2	17.9	13.2	10.8	11.7	8.2	7.1	7.7	4.2	2.0	3.0
23	18.5	16.7	17.5	11.5	10.4	11.1	8.3	6.2	7.3	4.6	2.5	3.4
24	19.2	17.0	17.8	12.0	10.4	11.1	7.8	6.2	7.1	4.7	2.7	3.6
25	19.6	13.8	17.2	11.3	9.4	10.3	7.3	5.5	6.4	4.8	2.7	3.6
26	15.1	13.5	14.2	10.9	9.7	10.3	6.3	4.6	5.3	4.0	2.3	3.3
27	15.9	14.3	14.9	10.7	9.6	10.2	6.1	3.9	4.8	---	---	---
28	16.8	14.8	15.8	10.4	9.6	9.9	9.1	4.0	5.9	---	---	---
29	17.8	12.5	15.7	10.9	9.2	10.0	8.8	4.2	6.3	4.0	2.0	3.1
30	13.9	11.8	12.7	10.3	9.1	9.8	9.2	7.7	8.3	4.3	2.5	3.3
31	14.8	13.4	14.1	---	---	---	9.4	5.0	7.9	4.3	2.8	3.5
MONTH	26.0	11.8	19.5	---	---	---	13.3	3.9	8.3	---	---	---

03353620 LICK CREEK AT INDIANAPOLIS, IN

LOCATION.--Lat 39°42'21", long 86°06'13", in NE¼NE¼ sec.32, T.15 N., R.4 E., Marion County, Hydrologic Unit 05120201, (BEECH GROVE, IN quadrangle), on left bank, at upstream side of Sherman Drive bridge, in Indianapolis, 0.35 mi downstream of Beach Creek mouth, 5.1 mi west of Wanamaker, IN., 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 fair except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	3.7	1.7	86	e1.4	e6.4	15	9.5	11	1.4	2.5	1,120
2	1.5	3.1	1.3	40	e2.0	e5.2	12	9.7	6.7	1.4	2.0	193
3	1.4	2.9	1.1	23	e20	e4.4	10	6.7	15	1.4	11	51
4	17	3.0	0.95	16	e36	e3.7	18	16	8.7	2.9	34	26
5	8.6	7.3	0.94	16	e20	64	49	218	5.9	281	14	14
6	3.6	9.0	1.0	16	12	45	16	37	5.0	40	4.6	9.0
7	3.3	5.6	1.1	15	6.8	28	17	26	5.1	14	2.8	6.2
8	1.9	4.8	1.0	15	e5.6	99	13	18	4.3	12	2.2	4.7
9	1.5	6.4	0.93	14	e5.0	111	11	16	3.9	59	1.7	4.8
10	1.3	200	0.93	9.8	e4.4	37	9.6	275	4.5	99	17	5.1
11	1.2	46	0.93	e8.6	e4.0	24	9.1	163	7.8	24	11	4.4
12	1.2	14	1.7	e7.0	e3.7	24	8.0	38	49	14	5.5	3.7
13	1.2	8.3	2.6	e6.6	e3.4	96	6.5	22	58	7.8	2.7	2.8
14	1.1	4.2	8.0	e4.7	e3.2	45	5.9	32	59	5.3	1.9	2.8
15	1.1	3.9	10	e4.0	e3.0	28	5.7	65	22	12	1.5	2.6
16	1.2	3.9	4.9	e3.4	e2.8	23	5.8	23	13	9.8	1.5	2.1
17	1.1	2.7	5.3	e3.0	e2.6	20	31	17	8.1	4.5	2.4	1.9
18	1.1	2.1	13	e2.7	e2.4	19	16	13	5.8	14	1.9	1.8
19	8.0	2.4	85	e2.4	e2.4	27	9.3	11	5.0	5.5	1.3	1.8
20	2.8	2.3	56	e2.2	e2.8	25	14	10	5.9	3.3	1.2	1.8
21	1.5	3.1	20	e2.0	e14	75	13	8.5	3.4	124	1.2	1.7
22	1.3	8.5	13	e1.9	155	32	7.9	7.4	3.0	22	1.2	39
23	1.9	4.0	8.1	e1.8	66	21	5.7	6.8	2.6	11	1.2	8.9
24	2.1	2.6	6.7	e1.7	33	16	5.5	6.0	2.2	6.3	1.2	5.1
25	38	2.0	13	e1.6	e24	36	48	5.6	2.0	4.6	1.2	8.4
26	13	1.5	6.6	e1.5	e17	36	29	5.4	2.5	3.3	1.1	20
27	5.3	1.2	e6.4	e1.4	e13	19	13	5.3	2.8	5.0	5.6	76
28	4.0	1.3	6.3	e1.3	e10	37	14	20	1.9	11	3.0	13
29	31	1.3	9.0	e1.3	---	152	20	27	1.6	5.0	23	8.2
30	14	1.9	41	e1.2	---	33	10	10	1.5	4.4	12	4.9
31	5.6	---	114	e1.2	---	22	---	51	---	3.7	33	---
TOTAL	179.6	363.0	442.48	312.3	475.5	1,213.7	448.0	1,178.9	327.2	812.6	206.4	1,644.7
MEAN	5.79	12.1	14.3	10.1	17.0	39.2	14.9	38.0	10.9	26.2	6.66	54.8
MAX	38	200	114	86	155	152	49	275	59	281	34	1,120
MIN	1.1	1.2	0.93	1.2	1.4	3.7	5.5	5.3	1.5	1.4	1.1	1.7
CFSM	0.37	0.78	0.91	0.65	1.09	2.51	0.96	2.44	0.70	1.68	0.43	3.51
IN.	0.43	0.87	1.06	0.74	1.13	2.89	1.07	2.81	0.78	1.94	0.49	3.92

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 2003, BY WATER YEAR (WY)

	9.38	20.5	22.8	20.5	25.9	30.8	27.3	27.0	18.4	17.5	10.4	9.74
MEAN	9.38	20.5	22.8	20.5	25.9	30.8	27.3	27.0	18.4	17.5	10.4	9.74
MAX	55.9	102	76.4	50.5	57.1	64.6	71.4	102	88.8	95.5	54.1	54.8
(WY)	(2002)	(1994)	(1991)	(1997)	(1975)	(1978)	(1996)	(1996)	(1998)	(1992)	(1979)	(2003)
MIN	1.03	0.71	2.14	1.00	4.67	5.46	3.92	1.87	0.39	2.55	1.28	0.17
(WY)	(1983)	(2000)	(1981)	(1981)	(1978)	(2001)	(1971)	(1988)	(1988)	(1991)	(1986)	(1999)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

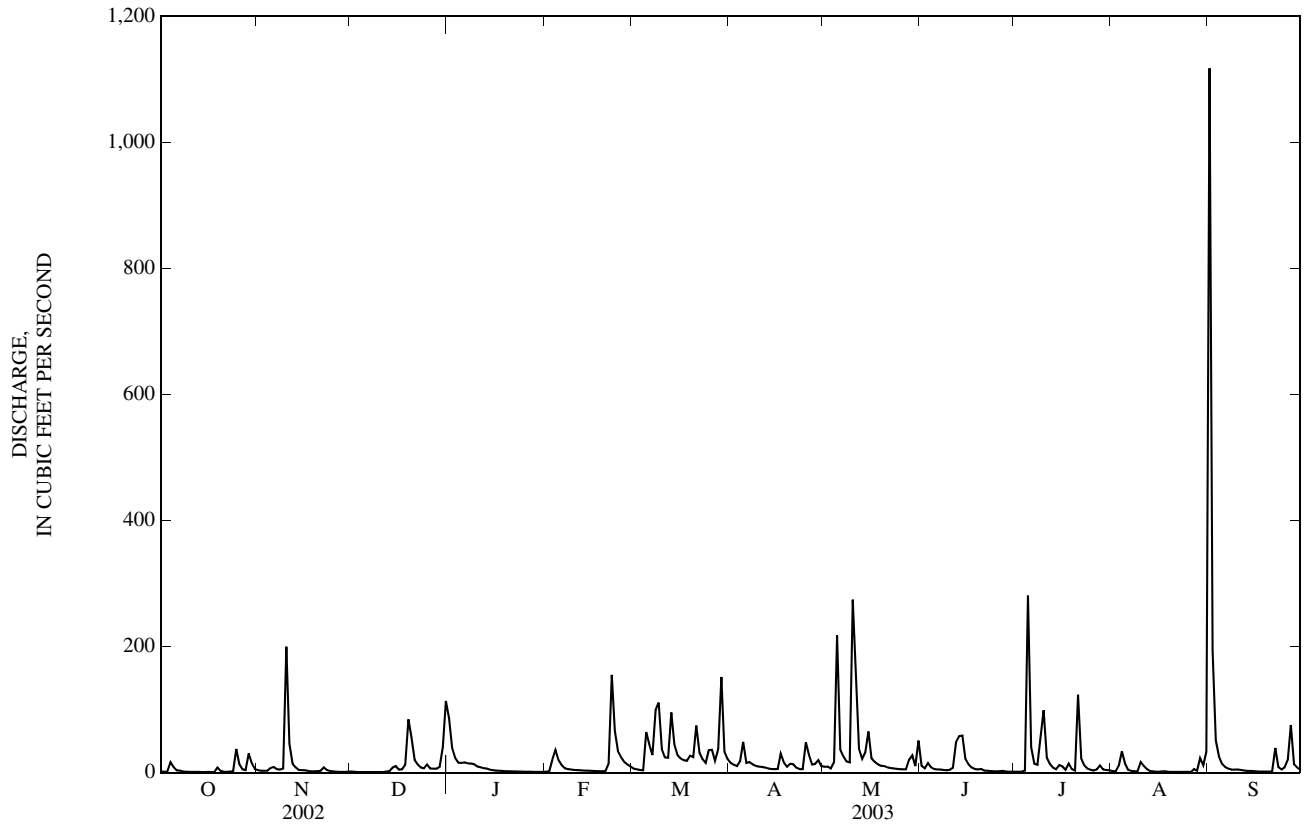
FOR 2003 WATER YEAR

WATER YEARS 1971 - 2003

ANNUAL TOTAL	8,712.65	7,604.38	
ANNUAL MEAN	23.9	20.8	20.0
HIGHEST ANNUAL MEAN			30.6
LOWEST ANNUAL MEAN			10.8
HIGHEST DAILY MEAN	722	May 13	1,120
LOWEST DAILY MEAN	0.71	Aug 30	0.93
ANNUAL SEVEN-DAY MINIMUM	0.71	Aug 30	0.98
MAXIMUM PEAK FLOW			1,730
MAXIMUM PEAK STAGE			7.59
ANNUAL RUNOFF (CFSM)	1.53	1.34	1.28
ANNUAL RUNOFF (INCHES)	20.78	18.13	17.42
10 PERCENT EXCEEDS	47	40	43
50 PERCENT EXCEEDS	6.4	6.4	6.7
90 PERCENT EXCEEDS	1.1	1.4	1.2

e Estimated

03353620 LICK CREEK AT INDIANAPOLIS, IN—Continued



03353637 LITTLE BUCK CREEK NEAR INDIANAPOLIS, IN

LOCATION.--Lat 39°40'00", long 86°11'48", in SW¹/₄SW¹/₄ sec.10, T.14 N., R.3 E., Marion County, Hydrologic Unit 05120201, (MAYWOOD, IN quadrangle), on right bank, 10 ft upstream from bridge on South Belmont Street, 0.75 mi west of State Road 37, 1.5 mi south of Interstate 465, and 2.2 mi above mouth.

DRAINAGE AREA.--17.0 mi².

PERIOD OF RECORD.--October 1989 to current year.

REVISED RECORDS.--WDR IN-95-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 666.20 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.52	4.1	e1.4	77	e3.7	18	22	12	11	0.03	1.4	595
2	0.24	2.7	e1.2	38	e4.0	20	18	12	7.3	0.04	1.1	183
3	0.02	2.2	e1.2	23	25	19	17	10	9.6	0.09	0.91	61
4	6.6	2.5	e1.2	16	29	19	17	13	8.1	0.00	13	33
5	6.1	4.8	e1.2	15	19	41	142	211	6.1	15	8.3	22
6	2.5	6.2	e1.2	15	13	37	36	51	4.6	20	5.8	16
7	1.2	3.8	e1.1	13	7.7	28	28	29	4.3	9.2	3.2	12
8	0.55	2.8	e1.1	13	e6.4	55	22	22	3.7	6.0	1.9	10
9	0.23	2.6	e1.1	12	e5.1	92	20	21	3.3	8.8	1.3	9.0
10	0.10	113	e1.2	9.5	e4.5	35	19	105	2.8	29	2.5	7.8
11	0.01	49	1.6	e8.2	e4.2	27	17	81	3.0	15	7.5	6.5
12	0.00	18	2.1	e7.4	e4.0	24	16	34	10	15	7.6	5.5
13	0.00	11	2.1	e6.7	e3.8	55	14	22	27	8.3	4.2	4.8
14	0.00	8.2	4.7	e6.3	e3.9	39	13	18	43	5.6	2.4	4.4
15	0.00	6.8	5.0	e6.0	e13	29	13	44	19	5.3	1.2	3.8
16	0.00	5.9	3.9	e5.7	e13	24	12	23	13	5.5	1.7	3.0
17	0.00	4.7	4.6	e5.4	e10	21	24	16	12	3.8	0.92	2.3
18	0.00	3.9	5.9	e5.2	e9.4	18	19	13	8.4	11	0.90	1.7
19	3.1	3.7	62	e5.0	e7.9	20	15	11	7.1	5.9	0.40	1.3
20	0.96	3.2	62	e4.7	e7.2	23	17	12	6.1	3.8	0.70	0.61
21	0.16	3.2	22	e4.6	14	44	16	12	5.2	81	0.01	0.19
22	0.00	5.1	14	e4.5	125	31	14	11	4.6	31	0.00	22
23	0.00	3.8	10	e4.3	81	23	12	10	4.0	15	0.00	14
24	0.00	3.1	8.0	e4.2	33	20	10	9.6	3.4	9.9	0.00	7.6
25	19	2.7	12	e4.1	28	25	35	9.2	2.9	7.1	0.00	7.1
26	13	2.3	7.2	e4.0	24	29	32	8.7	3.2	5.0	0.00	7.7
27	4.9	2.0	5.4	e3.9	19	22	20	8.3	4.3	3.7	1.5	70
28	2.7	1.9	6.5	e3.9	18	25	17	19	2.9	5.0	0.87	22
29	25	1.8	8.0	e3.8	---	117	17	36	1.7	4.3	19	13
30	16	1.8	24	e3.7	---	36	13	15	0.49	3.0	23	9.2
31	7.2	---	79	e3.7	---	26	---	16	---	2.1	24	---
TOTAL	110.09	286.8	361.9	336.8	535.8	1,042	687	914.8	242.09	334.46	135.31	1,155.50
MEAN	3.55	9.56	11.7	10.9	19.1	33.6	22.9	29.5	8.07	10.8	4.36	38.5
MAX	25	113	79	77	125	117	142	211	43	81	24	595
MIN	0.00	1.8	1.1	3.7	3.7	18	10	8.3	0.49	0.00	0.00	0.19
CFSM	0.21	0.56	0.69	0.64	1.13	1.98	1.35	1.74	0.47	0.63	0.26	2.27
IN.	0.24	0.63	0.79	0.74	1.17	2.28	1.50	2.00	0.53	0.73	0.30	2.53

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2003, BY WATER YEAR (WY)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
MEAN	10.7	22.7	20.4	23.7	23.2	29.5	33.7	34.7	25.7	16.6	5.99	9.96		
MAX	45.5	91.9	99.4	62.7	54.5	68.0	63.7	105	77.3	85.7	18.3	38.5		
(WY)	(2002)	(1994)	(1991)	(1999)	(1990)	(1991)	(1996)	(1996)	(1998)	(1992)	(1990)	(2003)		
MIN	0.058	0.000	1.02	1.42	6.39	5.82	5.39	4.60	4.99	2.67	0.43	0.000		
(WY)	(2000)	(2000)	(1998)	(2000)	(1998)	(2001)	(2001)	(2001)	(1991)	(1991)	(2002)	(1999)		

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

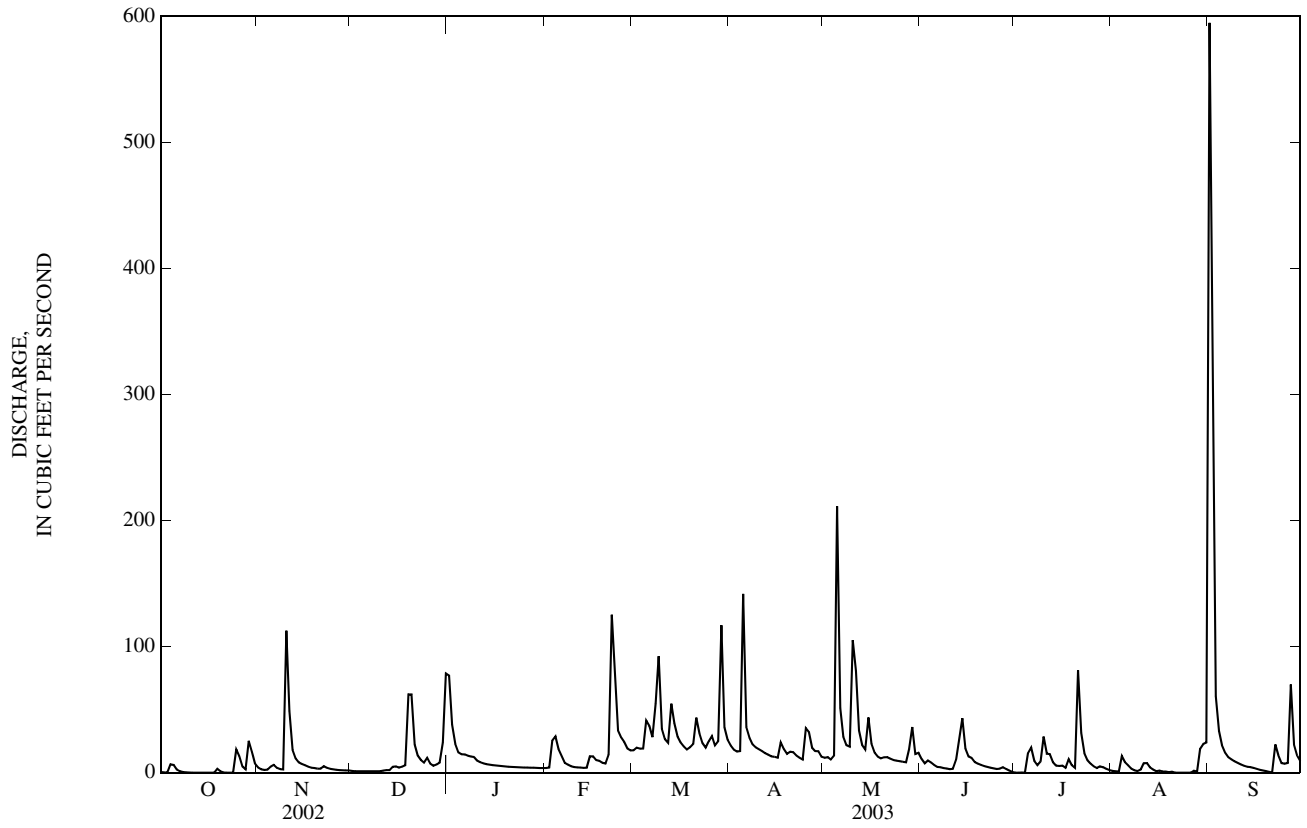
FOR 2003 WATER YEAR

WATER YEARS 1990 - 2003

ANNUAL TOTAL	9,379.86	6,142.55		
ANNUAL MEAN	25.7	16.8	21.4	
HIGHEST ANNUAL MEAN			32.3	2002
LOWEST ANNUAL MEAN			10.4	2000
HIGHEST DAILY MEAN	690	May 13	595	Sep 1
LOWEST DAILY MEAN	0.00	Aug 7	0.00	Oct 12
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 7	0.00	Oct 12
MAXIMUM PEAK FLOW			970	Sep 1
MAXIMUM PEAK STAGE			7.20	Sep 1
ANNUAL RUNOFF (CFSM)	1.51		0.99	
ANNUAL RUNOFF (INCHES)	20.53		13.44	
10 PERCENT EXCEEDS	62		33	44
50 PERCENT EXCEEDS	5.4		7.8	7.7
90 PERCENT EXCEEDS	0.00		0.92	0.00

e Estimated

03353637 LITTLE BUCK CREEK NEAR INDIANAPOLIS, IN—Continued



03353637 LITTLE BUCK CREEK NR INDIANAPOLIS, IN—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.0	11.4	---	---	---	---	---	9.9	10.9	---	---	---
2	8.0	e11.5	---	---	---	---	---	9.8	10.1	---	---	---
3	---	---	---	---	---	---	---	11.2	9.0	---	---	---
4	---	---	---	---	---	---	---	10.3	9.4	---	---	---
5	8.0	---	---	---	---	---	---	e7.5	9.9	---	e7.8	---
6	8.9	10.9	---	---	---	---	---	---	9.6	---	7.7	---
7	9.3	11.4	---	---	---	---	---	---	9.9	---	7.1	---
8	10.7	10.8	---	---	---	---	---	---	9.2	---	7.1	---
9	10.9	9.6	---	---	---	---	e14.8	---	9.8	7.9	7.5	---
10	e10.9	8.0	---	---	---	---	14.2	---	9.3	8.0	7.0	---
11	---	---	---	---	---	---	e14.0	---	8.7	8.6	7.1	e9.1
12	---	---	---	---	---	---	e12.3	---	7.7	8.7	7.2	9.2
13	---	---	---	---	---	---	e13.5	---	8.2	9.1	7.7	9.1
14	---	---	16.7	---	---	---	---	---	7.6	9.4	7.3	8.9
15	---	---	17.1	---	---	---	---	---	7.9	9.0	7.5	9.1
16	---	---	17.3	---	---	---	---	---	8.2	9.5	7.5	9.5
17	---	---	16.6	---	---	e11.0	e11.2	---	8.1	9.6	7.6	9.4
18	---	---	15.8	---	---	11.2	---	---	8.3	9.2	8.4	9.5
19	e9.7	---	e13.0	---	---	11.1	---	---	8.4	9.5	8.4	9.5
20	10.4	---	14.8	---	---	10.8	---	---	8.9	9.9	e8.2	9.8
21	---	---	---	---	---	10.1	---	---	9.1	---	---	e10.3
22	---	---	---	---	---	11.3	e13.0	11.0	9.1	---	---	e8.3
23	---	---	---	---	---	11.3	---	11.2	8.9	---	---	9.1
24	---	---	---	---	---	10.8	---	11.3	8.8	---	---	9.7
25	---	---	---	---	---	10.1	e11.8	11.2	8.6	---	---	9.7
26	---	---	---	---	---	7.6	e11.3	11.6	8.0	---	---	10.4
27	---	---	---	---	---	10.6	e11.3	11.5	8.9	---	---	9.5
28	---	---	---	---	---	9.8	e10.8	11.0	8.9	---	---	10.3
29	---	---	---	---	---	---	---	9.6	8.5	---	---	10.9
30	---	---	---	---	---	---	e10.0	10.0	e7.0	---	---	11.3
31	10.9	---	---	---	---	---	---	9.6	---	---	---	---

e Estimated

03353637 LITTLE BUCK CREEK NR INDIANAPOLIS, IN—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20.6	7.6	0.0	5.2	0.0	---	12.2	18.6	15.3	---	23.8	---
2	21.8	5.8	0.0	3.7	0.1	---	14.7	16.8	15.0	---	24.1	e21.0
3	---	6.2	0.0	2.9	1.1	---	16.3	15.7	14.2	---	23.7	21.4
4	---	7.7	0.0	2.2	1.3	e3.0	16.4	13.5	14.5	---	22.5	20.7
5	18.1	7.9	0.0	3.4	0.0	---	12.3	15.2	16.1	---	22.7	19.2
6	16.2	7.6	0.0	3.7	0.7	---	8.8	17.5	16.2	---	22.8	19.0
7	14.4	6.9	0.0	2.7	0.8	---	8.7	17.7	18.4	---	23.4	19.1
8	12.9	8.6	0.0	4.1	0.0	---	9.0	16.8	17.8	e24.0	23.0	19.7
9	13.5	10.7	e0.0	4.9	0.5	---	7.9	18.2	18.8	23.5	22.6	20.4
10	e14.0	13.1	0.0	3.3	1.1	---	9.5	e18.7	18.7	23.0	21.1	20.9
11	---	---	0.0	0.1	0.1	---	e11.0	---	19.9	22.3	21.7	20.9
12	---	---	0.0	0.0	0.0	---	e12.0	---	20.2	22.0	21.8	20.2
13	---	8.6	1.0	0.0	0.0	---	e13.0	---	20.7	22.2	22.4	21.1
14	---	9.6	2.8	0.1	0.0	---	e13.0	---	20.6	22.8	24.3	21.0
15	---	9.2	3.3	0.0	0.0	---	e15.0	---	20.7	21.3	25.8	19.9
16	---	6.6	3.6	0.0	0.0	---	e15.0	---	20.7	22.7	25.7	18.7
17	---	5.8	3.2	0.0	0.0	e13.0	e15.0	---	21.4	23.3	25.0	18.9
18	---	5.0	6.2	0.0	0.0	12.8	---	---	21.8	23.4	23.3	18.8
19	e12.2	7.6	e8.1	0.0	0.0	12.4	---	---	21.1	23.8	23.4	18.1
20	10.0	7.8	6.1	0.0	0.0	13.1	---	---	20.2	23.1	e24.0	16.3
21	---	7.5	---	0.0	0.0	12.0	e13.0	e15.0	20.2	e23.0	---	e16.0
22	---	5.8	---	0.0	0.0	10.5	e12.0	14.6	20.8	---	---	e18.7
23	---	5.0	---	0.0	0.0	11.6	e10.0	14.7	21.9	---	---	17.4
24	---	---	---	0.0	0.0	13.0	---	15.0	23.0	---	---	17.1
25	---	---	---	0.0	e0.0	12.8	e11.6	14.6	24.0	---	---	16.8
26	---	---	---	0.0	e0.0	12.1	e13.5	14.9	23.1	---	---	14.7
27	---	---	---	0.0	0.0	12.4	e13.5	15.5	21.6	---	---	16.9
28	---	---	---	0.0	e0.0	13.2	e15.0	15.2	21.6	---	---	14.9
29	---	---	---	0.0	---	9.7	e17.0	16.5	23.4	e22.5	---	13.3
30	e9.2	---	e6.5	0.0	---	7.9	e18.0	16.2	e23.5	22.4	---	12.3
31	9.1	---	6.8	0.0	---	8.8	---	16.4	---	23.1	---	---

e Estimated

03353637 LITTLE BUCK CREEK NR INDIANAPOLIS, IN—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	661	637	---	524	1,270	---	860	804	721	---	826	---
2	683	677	---	638	1,500	---	893	790	793	---	846	---
3	---	717	---	754	1,230	---	912	809	760	---	861	---
4	---	737	---	758	790	---	922	792	785	---	556	---
5	471	709	---	1,070	742	---	587	423	844	---	597	---
6	574	596	---	940	775	---	727	583	868	---	637	---
7	607	674	---	814	973	---	799	644	878	---	680	---
8	656	717	---	779	896	---	849	693	894	---	732	---
9	702	747	---	762	841	---	862	720	899	654	781	---
10	e723	409	---	764	890	---	881	e575	902	483	819	---
11	---	---	---	792	1,150	---	e881	---	908	593	657	e837
12	---	---	---	808	1,380	---	e870	---	725	535	575	838
13	---	619	---	808	---	---	e860	---	644	684	611	838
14	---	668	1,600	821	---	---	---	---	530	745	684	838
15	---	707	1,230	861	---	---	---	---	654	792	721	838
16	---	724	1,060	862	---	---	---	---	725	784	761	838
17	---	743	907	1,250	---	e835	e725	---	781	820	786	842
18	---	770	892	1,100	---	848	---	---	827	612	793	846
19	e680	792	e550	962	---	874	---	---	854	680	783	840
20	674	808	511	838	---	857	---	---	878	786	e810	836
21	---	821	---	844	---	746	---	e915	896	---	---	e836
22	---	804	---	871	---	764	e868	923	909	---	---	e450
23	---	777	---	901	---	816	---	914	914	---	---	523
24	---	---	---	940	---	841	---	910	919	---	---	586
25	---	---	---	954	---	806	e750	910	920	---	---	591
26	---	---	---	916	---	773	e675	852	924	---	---	599
27	---	---	---	1,130	---	837	e760	792	879	---	---	317
28	---	---	---	921	---	836	e780	705	890	---	---	356
29	---	---	---	1,050	---	606	---	596	889	---	---	397
30	e500	---	e890	1,340	---	757	e783	770	e897	792	---	440
31	574	---	604	1,160	---	818	---	697	---	808	---	---

e Estimated

03353637 LITTLE BUCK CREEK NR INDIANAPOLIS, IN—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Alkalinity, wat flt fxd end field, mg/L as CaCO3 (39036)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Carbonate, wat flt incrm. titr., field, mg/L (00452)	Chloride, water, fltrd, mg/L (00940)
OCT 08...	1130	0.49	753	10.1	8.5	662	18.0	13.0	200	203	E246	E1	57.6
NOV 06...	1230	6.1	750	11.2	8.1	632	6.0	7.5	210	215	260	1	53.8
NOV 27...	1330	1.8	764	16.2	8.1	870	3.0	3.5	--	--	--	--	--
DEC 09...	1230	3.9	767	15.3	8.3	1,000	1.0	0.0	300	303	E367	E1	107
JAN 15...	1110	11	766	13.9	8.2	1,020	-2.0	0.0	260	264	317	E2	105
FEB 13...	1130	13	759	15.1	8.2	1,320	8.0	0.0	290	286	E346	E1	214
MAR 17...	1040	17	737	12.9	8.2	865	26.0	11.0	260	261	314	2	79.9
APR 09...	1150	21	757	13.2	8.2	889	8.0	8.0	280	279	339	<1	101
APR 22...	1210	14	749	10.2	8.1	887	7.0	12.0	--	--	--	--	--
MAY 05...	1120	337	725	10.0	7.7	421	24.0	14.5	130	126	152	<1	40.0
MAY 20...	1040	15	744	8.9	7.8	890	19.0	16.5	--	--	--	--	--
JUN 02...	1330	9.6	744	9.4	8.3	790	19.0	16.0	250	249	304	<1	83.3
JUN 25...	1110	3.1	743	11.6	8.1	913	32.0	24.5	--	--	--	--	--
JUL 08...	1040	6.4	739	8.7	8.2	692	32.0	26.5	200	192	E234	<1	77.4
JUL 21...	1210	158	728	6.7	7.8	251	36.0	22.0	--	--	--	--	--
AUG 05...	1300	8.1	735	9.4	8.2	600	27.0	23.5	170	168	204	<1	66.5
SEP 02...	1130	144	741	7.6	7.8	427	22.0	21.5	130	133	162	<1	35.6

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Sulfate water, fltrd, mg/L (00945)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Particulate nitrogen, susp, water, mg/L (49570)	Phosphorus, water, unfltrd mg/L (00665)	Total carbon, suspnd sedimnt total, mg/L (00694)	Inorganic carbon, suspnd sedimnt total, mg/L (00688)	Organic carbon, suspnd sedimnt total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)	1,4-Naphthoquinone, water, fltrd, ug/L (61611)
OCT 08...	39.3	0.29	<0.04	0.21	0.035	<0.02	0.03	0.029	0.2	<0.1	0.2	3.9	<0.05
NOV 06...	41.4	0.35	<0.04	0.33	0.016	<0.02	0.03	0.031	0.2	<0.1	0.2	5.3	M
NOV 27...	--	0.19	<0.04	0.34	E0.006	<0.02	--	0.019	--	--	--	--	<0.05
DEC 09...	57.6	0.22	<0.04	0.39	0.008	<0.02	<0.02	0.016	0.2	<0.1	0.2	4.4	<0.05
JAN 15...	56.7	0.24	<0.04	0.94	0.016	<0.02	0.06	0.015	0.2	<0.1	0.2	3.4	<0.05
FEB 13...	57.5	<0.50	<0.04	0.87	0.012	<0.09	<0.02	0.017	0.3	<0.1	0.3	3.0	<0.05
MAR 17...	36.5	0.29	<0.04	0.91	0.009	<0.02	0.05	0.026	0.5	<0.1	0.5	4.4	<0.05
APR 09...	46.5	0.29	<0.04	1.30	E0.007	<0.02	0.07	0.067	1.9	<0.1	1.9	3.0	<0.05
APR 22...	--	0.32	<0.04	0.86	0.009	<0.02	--	0.017	--	--	--	--	<0.05
MAY 05...	19.7	2.5	<0.04	0.71	0.030	<0.02	0.97	0.46	9.6	0.3	9.3	6.8	<0.05
MAY 20...	--	0.37	<0.04	0.98	0.027	<0.02	--	0.033	--	--	--	--	<0.05
JUN 02...	38.9	0.35	<0.04	0.47	0.029	<0.02	0.07	0.032	0.6	<0.1	0.5	3.2	<0.05
JUN 25...	--	0.30	<0.04	0.33	0.032	<0.02	--	0.028	--	--	--	--	<0.05
JUL 08...	35.2	0.43	<0.04	0.37	0.009	E0.01	0.05	0.047	0.4	<0.1	0.4	4.7	--
JUL 21...	--	2.0	<0.04	0.57	0.025	<0.02	--	0.53	--	--	--	--	<0.05
AUG 05...	31.0	0.42	<0.04	0.30	0.013	E0.01	0.10	0.049	0.5	<0.1	0.5	4.5	<0.05
SEP 02...	23.9	1.0	<0.04	0.58	0.047	0.02	0.62	0.22	5.2	0.2	5.1	6.1	<0.05

03353637 LITTLE BUCK CREEK NR INDIANAPOLIS, IN—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	1-Naphthol, water, fltrd 0.7u GF ug/L (49295)	2-(4-t-Butylphenoxy)cyclohexanol wat flt ug/L (61637)	2,5-Di-chloro-aniline water, fltrd, ug/L (61614)	2,6-Di-ethyl-aniline water fltrd 0.7u GF ug/L (82660)	2-[(2-Et-6-Me-Ph)-amino]propan-1-ol, ug/L (61615)	2Amino-N-iso-propyl-benzamide, wat flt ug/L (61617)	2Chloro-2,6-'diethyl acet-anilide wat flt ug/L (61618)	CIAT, water, fltrd, ug/L (04040)	2-Ethyl-6-methyl-aniline water, fltrd, ug/L (61620)	3-(Tri-fluoro-methyl)-aniline water, fltrd, ug/L (61630)	3,4-Di-chloro-aniline water, fltrd, ug/L (61625)	3,5-Di-chloro-aniline water, fltrd, ug/L (61627)	3-Phen-oxy-benzyl alcohol water, fltrd, ug/L (61629)
OCT 08...	<0.09	<0.01	<0.03	<0.006	<0.1	<0.005	<0.005	E0.017	<0.004	<0.01	<0.004	<0.005	<0.05
NOV 06...	<0.09	<0.01	<0.03	<0.006	<0.1	<0.005	<0.005	E0.011	<0.004	<0.01	<0.004	<0.005	<0.05
NOV 27...	<0.09	<0.01	<0.03	<0.006	<0.1	<0.005	<0.005	E0.008	<0.004	<0.01	<0.004	<0.005	<0.05
DEC 09...	<0.09	<0.01	<0.03	<0.006	<0.1	<0.005	<0.005	E0.006	<0.004	<0.01	<0.004	<0.005	<0.05
JAN 15...	<0.09	<0.01	<0.03	<0.006	<0.1	<0.005	<0.005	E0.006	<0.004	<0.01	<0.004	<0.005	<0.05
FEB 13...	<0.09	<0.01	<0.03	<0.006	<0.1	<0.005	<0.005	E0.008	<0.004	<0.01	<0.004	<0.005	<0.05
MAR 17...	<0.09	<0.01	<0.03	<0.006	<0.1	<0.005	<0.005	E0.006	<0.004	<0.01	<0.004	<0.005	<0.05
APR 09...	<0.09	<0.01	<0.03	<0.006	<0.1	<0.005	<0.005	E0.007	<0.004	<0.01	<0.004	<0.005	--
APR 22...	<0.09	<0.01	<0.03	<0.006	<0.1	<0.005	<0.005	E0.010	<0.004	<0.01	<0.004	<0.005	<0.05
MAY 05...	E0.03	<0.01	<0.03	<0.006	<0.1	<0.005	<0.005	E0.023	<0.004	<0.01	<0.004	<0.005	<0.05
MAY 20...	<0.09	<0.01	<0.03	<0.006	<0.1	<0.005	<0.005	E0.010	<0.004	<0.01	<0.004	<0.005	<0.05
JUN 02...	<0.09	<0.01	<0.03	<0.006	<0.1	<0.005	<0.005	E0.067	<0.004	<0.01	<0.004	<0.005	<0.05
JUN 25...	<0.09	<0.01	<0.03	<0.006	<0.1	<0.005	<0.005	E0.021	<0.004	<0.01	<0.004	<0.005	<0.05
JUL 08...	<0.09	<0.01	<0.03	<0.006	<0.1	<0.005	<0.005	E0.043	<0.004	<0.01	<0.004	<0.005	<0.05
JUL 21...	E0.01	<0.01	<0.03	<0.006	<0.1	<0.005	<0.005	E0.013	<0.004	<0.01	<0.004	<0.005	--
AUG 05...	<0.09	<0.01	<0.03	<0.006	<0.1	<0.005	<0.005	E0.016	<0.004	<0.01	<0.004	<0.005	--
SEP 02...	<0.09	<0.01	<0.03	<0.006	<0.1	<0.005	<0.005	E0.012	<0.004	<0.01	<0.004	<0.005	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	4-(MeOH)-pendi-meth-alin, wat flt ug/L (61665)	4,4-Di'chloro-benzo-phen-one, wat flt ug/L (61631)	4Chloro-2methyl phenol, water, fltrd, ug/L (61633)	4Chloro phenyl-methyl sulfone water, fltrd, ug/L (61634)	Aceto-chlor, water, fltrd, ug/L (49260)	Ala-chlor, water, fltrd, ug/L (46342)	alpha-Endo-sulfan, water, fltrd, ug/L (34362)	alpha-HCH, water, fltrd, ug/L (34253)	Amino-methyl-phos-phonic acid, wat flt ug/L (62649)	Atra-zine, water, fltrd, ug/L (39632)	Azin-phos-methyl oxon, water, fltrd, ug/L (61635)	Azin-phos-methyl, water, fltrd 0.7u GF ug/L (82686)	Ben-flur-alin, water, fltrd 0.7u GF ug/L (82673)
OCT 08...	<0.1	<0.003	<0.006	<0.03	<0.006	<0.004	<0.005	<0.005	0.3	0.121	<0.02	<0.050	<0.010
NOV 06...	--	<0.003	<0.006	<0.03	<0.006	<0.004	<0.005	<0.005	<0.1	0.041	<0.02	<0.050	<0.010
NOV 27...	<0.1	<0.003	<0.006	<0.03	<0.006	<0.004	<0.005	<0.005	<0.1	0.025	<0.02	<0.050	<0.010
DEC 09...	<0.1	<0.003	<0.006	<0.03	<0.006	<0.004	<0.005	<0.005	<0.1	0.019	<0.02	<0.050	<0.010
JAN 15...	<0.1	<0.003	<0.006	<0.03	<0.006	<0.004	<0.005	<0.005	<0.1	0.018	<0.02	<0.050	<0.010
FEB 13...	<0.1	<0.003	<0.006	<0.03	<0.006	<0.004	<0.005	<0.005	<0.1	0.017	<0.12	<0.050	<0.010
MAR 17...	<0.1	<0.003	<0.006	<0.03	<0.006	<0.004	<0.005	<0.005	<0.1	0.011	<0.02	<0.050	<0.010
APR 09...	--	<0.003	<0.006	<0.03	E0.005	<0.004	<0.005	<0.005	<0.1	0.018	<0.02	<0.050	<0.010
APR 22...	<0.1	<0.003	E0.005	<0.03	0.018	<0.004	<0.005	<0.005	<0.1	0.038	<0.02	<0.050	<0.010
MAY 05...	<0.1	<0.003	E0.023	<0.03	0.062	<0.004	<0.005	<0.005	<0.1	0.092	<0.02	<0.050	<0.010
MAY 20...	<0.1	<0.003	<0.006	<0.03	0.011	<0.004	<0.005	<0.005	<0.1	0.036	<0.03	<0.050	<0.010
JUN 02...	--	<0.003	E0.004	<0.03	0.097	0.005	<0.005	<0.005	<0.1	0.542	<0.02	<0.050	<0.010
JUN 25...	<0.1	<0.016	<0.006	<0.03	0.008	<0.004	<0.005	<0.005	<0.1	0.119	<0.02	<0.050	<0.010
JUL 08...	<0.1	<0.003	<0.006	<0.03	0.019	<0.004	<0.005	<0.005	0.2	0.348	<0.02	<0.050	<0.010
JUL 21...	--	<0.003	<0.006	<0.03	0.012	<0.004	<0.005	<0.005	0.4	0.069	<0.03	<0.050	<0.010
AUG 05...	--	<0.003	E0.005	<0.03	<0.006	<0.004	<0.005	<0.005	0.3	0.085	<0.02	<0.050	<0.010
SEP 02...	--	<0.003	<0.006	<0.03	0.010	<0.004	<0.005	<0.005	0.1	0.053	<0.02	<0.050	<0.010

03353637 LITTLE BUCK CREEK NR INDIANAPOLIS, IN—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	beta-Endo-sulfan, water, fltrd, ug/L (34357)	Bifen-thrin, water, fltrd, ug/L (61580)	Butyl-ate, water, fltrd, ug/L (04028)	Car-baryl, water, fltrd, 0.7u GF ug/L (82680)	Carbo-furan, water, fltrd, 0.7u GF ug/L (82674)	Chlor-pyrifos oxon, water, fltrd, ug/L (61636)	Chlor-pyrifos water, fltrd, ug/L (38933)	cis-Per-methrin water fltrd, 0.7u GF ug/L (82687)	cis-Propi-cona-zole, water, fltrd, ug/L (79846)	Cyana-zine, water, fltrd, ug/L (04041)	Cyclo-ate, water, fltrd, ug/L (04031)	Cyflu-thrin, water, fltrd, ug/L (61585)	Cyhalo-thrin, water, fltrd, ug/L (61595)
OCT 08...	<0.01	<0.005	<0.002	<0.041	<0.020	<0.06	<0.005	<0.006	<0.008	<0.018	<0.005	<0.008	<0.009
NOV 06...	<0.01	<0.005	<0.002	E0.005	<0.020	<0.06	<0.005	<0.006	<0.008	<0.018	<0.005	<0.008	<0.009
NOV 27...	<0.01	<0.005	<0.002	<0.041	<0.020	<0.06	<0.005	<0.006	<0.008	<0.018	<0.005	<0.008	<0.009
DEC 09...	<0.01	<0.005	<0.002	<0.041	<0.020	<0.06	<0.005	<0.006	<0.008	<0.018	<0.005	<0.008	<0.009
JAN 15...	<0.01	<0.005	<0.002	<0.041	<0.020	<0.06	<0.005	<0.006	<0.008	<0.018	<0.005	<0.008	<0.009
FEB 13...	<0.01	<0.005	<0.002	<0.041	<0.020	<0.06	<0.005	<0.006	<0.008	<0.018	<0.005	<0.008	<0.009
MAR 17...	<0.01	<0.005	<0.002	<0.041	<0.020	<0.06	<0.005	<0.006	<0.008	<0.018	<0.005	<0.008	<0.009
APR 09...	<0.01	<0.005	<0.002	E0.011	<0.020	<0.06	<0.005	<0.006	<0.008	<0.018	<0.005	<0.008	<0.009
APR 22...	<0.01	<0.005	<0.002	E0.011	<0.020	<0.06	<0.005	<0.006	<0.008	<0.018	<0.005	<0.008	<0.009
MAY 05...	<0.01	<0.005	<0.002	E0.298	<0.020	<0.06	<0.005	<0.006	<0.008	<0.018	<0.005	<0.008	<0.009
MAY 20...	<0.01	<0.005	<0.002	E0.009	<0.020	<0.06	<0.005	<0.006	<0.008	<0.018	<0.005	<0.008	<0.009
JUN 02...	<0.01	<0.005	<0.002	E0.015	<0.020	<0.06	<0.005	<0.006	<0.008	<0.018	<0.005	<0.008	<0.009
JUN 25...	<0.01	<0.005	<0.002	<0.041	<0.020	<0.02	<0.005	<0.006	<0.008	<0.018	<0.005	<0.016	<0.009
JUL 08...	<0.01	<0.005	<0.002	E0.004	<0.020	<0.06	<0.005	<0.006	<0.008	<0.018	<0.005	<0.008	<0.009
JUL 21...	<0.01	<0.005	<0.002	E0.388	<0.020	<0.06	<0.005	<0.006	0.019	<0.018	<0.005	<0.008	<0.009
AUG 05...	<0.01	<0.005	<0.002	E0.017	<0.020	<0.06	<0.005	<0.006	<0.008	<0.018	<0.005	<0.008	<0.009
SEP 02...	<0.01	<0.005	<0.002	E0.052	<0.020	<0.06	<0.005	<0.006	<0.008	<0.018	<0.005	<0.008	<0.009

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Cyber-methrin water, fltrd, ug/L (61586)	DCPA, water fltrd, 0.7u GF ug/L (82682)	Desulf-inyl fipro-nil, water, fltrd, ug/L (62170)	Diazi-non, water, fltrd, ug/L (39572)	Dicro-tophos, water, fltrd, ug/L (38454)	Diel-drin, water, fltrd, ug/L (39381)	Dimeth-uate, water, fltrd, 0.7u GF ug/L (82662)	Disulf-oton sulfone water, fltrd, ug/L (61640)	Disulf-oton sulf-oxide, water, fltrd, ug/L (61641)	Disul-foton, water, fltrd, 0.7u GF ug/L (82677)	e-Di-metho-morph, water, fltrd, ug/L (79844)	Endo-sulfan ether, water, fltrd, ug/L (61642)	Endo-sulfan sulfate water, fltrd, ug/L (61590)
OCT 08...	<0.009	<0.003	<0.004	0.035	<0.08	<0.005	<0.006	<0.02	<0.002	<0.02	<0.02	<0.004	<0.006
NOV 06...	<0.009	<0.003	<0.004	0.101	<0.08	<0.005	<0.006	<0.02	<0.002	<0.02	<0.02	<0.004	<0.006
NOV 27...	<0.009	<0.003	<0.004	E0.025	<0.08	<0.005	<0.006	<0.02	<0.002	<0.02	<0.02	<0.004	<0.006
DEC 09...	<0.009	<0.003	<0.004	0.012	<0.08	<0.005	<0.006	<0.02	<0.002	<0.02	<0.02	<0.004	<0.006
JAN 15...	<0.009	<0.003	<0.004	0.012	<0.08	<0.005	<0.006	<0.02	<0.002	<0.02	<0.02	<0.004	<0.006
FEB 13...	<0.009	<0.003	<0.004	0.009	<0.08	<0.005	<0.006	<0.02	<0.002	<0.02	<0.02	<0.004	<0.006
MAR 17...	<0.009	<0.003	<0.004	0.007	<0.08	<0.005	<0.006	<0.02	<0.002	<0.02	<0.02	<0.004	<0.006
APR 09...	<0.009	<0.003	<0.004	0.013	<0.08	<0.005	<0.006	<0.02	<0.002	<0.02	<0.02	<0.004	<0.006
APR 22...	<0.009	<0.003	<0.004	0.012	<0.08	<0.005	<0.006	<0.02	<0.002	<0.02	<0.02	<0.004	<0.006
MAY 05...	<0.009	<0.003	<0.004	0.145	<0.08	<0.005	<0.006	<0.02	<0.002	<0.02	<0.02	<0.004	<0.006
MAY 20...	<0.009	<0.003	<0.004	0.018	<0.08	<0.005	<0.006	<0.02	<0.002	<0.02	<0.02	<0.004	<0.006
JUN 02...	<0.009	<0.003	<0.004	0.037	<0.08	<0.005	<0.006	<0.02	<0.002	<0.02	<0.02	<0.004	<0.006
JUN 25...	<0.016	<0.003	<0.004	E0.011	<0.08	<0.005	<0.006	<0.02	<0.002	<0.02	<0.02	<0.004	<0.006
JUL 08...	<0.009	<0.003	<0.004	0.040	<0.08	<0.005	<0.006	<0.02	<0.002	<0.02	<0.02	<0.004	<0.006
JUL 21...	<0.009	<0.003	<0.004	0.117	<0.08	<0.005	<0.006	<0.02	<0.002	<0.02	<0.02	<0.004	<0.006
AUG 05...	<0.009	<0.003	<0.004	0.029	<0.08	<0.005	<0.006	<0.02	<0.002	<0.02	<0.02	<0.004	<0.006
SEP 02...	<0.009	<0.003	<0.004	0.049	<0.08	<0.005	<0.006	<0.02	<0.002	<0.02	<0.02	<0.004	<0.006

03353637 LITTLE BUCK CREEK NR INDIANAPOLIS, IN—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethal- flur- alin, water, fltrd 0.7u GF ug/L (82663)	Ethion monoxon water, fltrd, ug/L (61644)	Ethion, water, fltrd, ug/L (82346)	Etho- prop, water, fltrd 0.7u GF ug/L (82672)	Fenami- phos sulfone water, fltrd, ug/L (61645)	Fenami- phos sulf- oxide, water, fltrd, ug/L (61646)	Fenami- phos, water, fltrd, ug/L (61591)	Fen- thion sulf- oxide, water, fltrd, ug/L (61647)	Fen- thion, water, fltrd, ug/L (38801)	Desulf- inyl- fipro- nil amide, wat flt ug/L (62169)	Fipro- nil sulfide water, fltrd, ug/L (62167)	Fipro- nil sulfone water, fltrd, ug/L (62168)
OCT 08...	<0.002	<0.009	<0.03	<0.004	<0.005	<0.008	<0.03	<0.03	<0.008	<0.02	<0.009	<0.005	<0.005
NOV 06...	<0.002	<0.009	<0.03	<0.004	<0.005	<0.008	<0.03	<0.03	<0.008	<0.02	<0.009	<0.005	<0.005
NOV 27...	<0.002	<0.009	<0.03	<0.004	<0.005	<0.008	<0.03	<0.03	<0.008	<0.02	<0.009	<0.005	<0.005
DEC 09...	<0.002	<0.009	<0.03	<0.004	<0.005	<0.008	<0.03	<0.03	<0.008	<0.02	<0.009	<0.005	<0.005
JAN 15...	<0.002	<0.009	<0.03	<0.004	<0.005	<0.008	<0.03	<0.03	<0.008	<0.02	<0.009	<0.005	<0.005
FEB 13...	<0.002	<0.009	<0.03	<0.004	<0.005	<0.008	--	<0.03	<0.008	<0.02	<0.009	<0.005	<0.005
MAR 17...	<0.002	<0.009	<0.03	<0.004	<0.005	<0.008	<0.03	<0.03	<0.008	<0.02	<0.009	<0.005	<0.005
APR 09...	<0.002	<0.009	<0.03	<0.004	<0.005	<0.008	<0.03	<0.03	<0.008	<0.02	<0.009	<0.005	<0.005
APR 22...	<0.002	<0.009	<0.03	<0.004	<0.005	<0.008	<0.03	<0.03	<0.008	<0.02	<0.009	<0.005	<0.005
MAY 05...	<0.002	<0.009	<0.03	<0.004	<0.005	<0.008	<0.03	<0.03	<0.008	<0.02	<0.009	<0.005	<0.005
MAY 20...	<0.002	<0.009	<0.03	<0.004	<0.005	<0.031	<0.03	<0.03	<0.008	<0.02	<0.009	<0.005	<0.005
JUN 02...	<0.002	<0.009	<0.03	<0.004	<0.005	<0.008	<0.03	<0.03	<0.008	<0.02	<0.009	<0.005	<0.005
JUN 25...	<0.002	<0.009	<0.03	<0.004	<0.005	<0.008	<0.03	<0.03	<0.008	<0.02	<0.009	<0.005	<0.005
JUL 08...	<0.002	<0.009	<0.03	<0.004	<0.005	<0.008	<0.03	<0.03	<0.008	<0.02	<0.009	<0.005	<0.005
JUL 21...	<0.002	<0.009	<0.03	<0.004	<0.005	<0.008	<0.03	<0.03	<0.008	<0.02	<0.009	<0.005	<0.005
AUG 05...	<0.002	<0.009	<0.03	<0.004	<0.005	<0.008	<0.03	<0.03	<0.008	<0.02	<0.009	<0.005	<0.005
SEP 02...	<0.002	<0.009	<0.03	<0.004	<0.005	<0.008	<0.03	<0.03	<0.008	<0.02	<0.009	<0.005	<0.005

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Fipro- nil, water, fltrd, ug/L (62166)	Flume- tralin, water, fltrd, ug/L (61592)	Fonofos oxon, water, fltrd, ug/L (61649)	Fonofos water, fltrd, ug/L (04095)	Glufo- sinate, water, fltrd 0.7u GF ug/L (62721)	Glypho- sate, water, fltrd 0.7u GF ug/L (62722)	Hexa- zinone, water, fltrd, ug/L (04025)	Ipro- dione, water, fltrd, ug/L (61593)	Isofen- phos, water, fltrd, ug/L (61594)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF (82666)	Mala- oxon, water, fltrd, ug/L (61652)	Mala- thion, water, fltrd, ug/L (39532)
OCT 08...	<0.007	<0.004	<0.002	<0.003	<0.1	<0.1	<0.013	<1	<0.003	<0.004	<0.035	<0.008	E0.005
NOV 06...	<0.007	<0.004	<0.002	<0.003	<0.1	<0.1	<0.013	<1	<0.003	<0.004	<0.035	<0.008	<0.027
NOV 27...	<0.007	<0.004	<0.002	<0.003	<0.1	<0.1	<0.013	<1	<0.003	<0.004	<0.035	<0.008	<0.027
DEC 09...	<0.007	<0.004	<0.002	<0.003	<0.1	<0.1	<0.013	<1	<0.003	<0.004	<0.035	<0.008	<0.027
JAN 15...	<0.007	<0.004	<0.002	<0.003	<0.1	<0.1	<0.013	<1	<0.003	<0.004	<0.035	<0.008	<0.027
FEB 13...	<0.007	<0.004	<0.002	<0.003	<0.1	<0.1	<0.013	<1	<0.003	<0.004	<0.035	<0.008	<0.027
MAR 17...	E0.006	<0.004	<0.002	<0.003	<0.1	0.1	<0.013	<1	<0.003	<0.004	<0.035	<0.008	<0.027
APR 09...	<0.007	<0.004	<0.002	<0.003	<0.1	<0.1	<0.013	<1	<0.003	<0.004	<0.035	<0.008	<0.027
APR 22...	<0.007	<0.004	<0.002	<0.003	<0.1	<0.1	<0.013	<1	<0.003	<0.004	<0.035	<0.008	<0.027
MAY 05...	E0.012	<0.004	<0.002	<0.003	<0.1	0.2	<0.013	<1	<0.003	<0.004	<0.035	<0.008	E0.011
MAY 20...	E0.006	<0.004	<0.002	<0.003	<0.1	<0.1	<0.013	<1	<0.003	<0.004	<0.035	<0.008	<0.027
JUN 02...	E0.003	<0.004	<0.002	<0.003	<0.1	<0.1	<0.013	<1	<0.003	<0.004	<0.035	<0.008	<0.027
JUN 25...	<0.007	<0.004	<0.002	<0.003	<0.1	<0.1	<0.013	<1	<0.003	<0.004	<0.035	<0.008	<0.027
JUL 08...	<0.007	<0.004	<0.002	<0.003	<0.1	<0.1	<0.013	<1	<0.003	<0.004	<0.035	<0.008	<0.027
JUL 21...	E0.007	<0.004	<0.002	<0.003	<0.1	1.1	<0.013	<1	<0.003	<0.004	<0.035	<0.008	E0.024
AUG 05...	<0.007	<0.004	<0.002	<0.003	0.1	0.3	<0.013	<1	<0.003	<0.004	<0.035	<0.008	<0.027
SEP 02...	E0.016	<0.004	<0.002	<0.003	<0.1	0.2	<0.013	<1	<0.003	<0.004	<0.035	<0.008	<0.027

03353637 LITTLE BUCK CREEK NR INDIANAPOLIS, IN—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Meta-laxyl, water, fltrd, ug/L (61596)	Methi-althion water, fltrd, ug/L (61598)	c-Per-methric acid methyl ester, wat flt ug/L (79842)	Methyl para-oxon, water, fltrd, ug/L (61664)	Methyl para-thion, water, fltrd 0.7u GF ug/L (82667)	t-Per-methric acid methyl ester, wat flt ug/L (79843)	Metola-chlor, water, fltrd, ug/L (39415)	Metri-buzin, water, fltrd, ug/L (82630)	Moli-nate, water, fltrd 0.7u GF ug/L (82671)	Myclo-butanil water, fltrd, ug/L (61599)	Naprop-amide, water, fltrd 0.7u GF ug/L (82684)	O-Et-O-Me-S-Pr-phos-phorothioate wat flt ug/L (61660)	Oxy-fluor-fen, water, fltrd, ug/L (61600)
OCT 08...	<0.005	<0.006	<0.04	<0.03	<0.006	<0.03	E0.012	<0.006	<0.002	<0.008	<0.007	<0.008	<0.007
NOV 06...	<0.005	<0.006	<0.04	<0.03	<0.006	<0.03	E0.011	<0.006	<0.002	<0.008	<0.007	<0.008	<0.007
NOV 27...	<0.005	<0.006	<0.04	<0.03	<0.006	<0.03	E0.009	<0.006	<0.002	<0.008	E0.004	<0.008	<0.007
DEC 09...	<0.005	<0.006	<0.04	<0.03	<0.006	<0.03	E0.003	<0.006	<0.002	<0.008	<0.007	<0.008	<0.007
JAN 15...	<0.005	<0.006	<0.04	<0.03	<0.006	<0.03	E0.010	<0.006	<0.002	<0.008	<0.007	<0.008	<0.007
FEB 13...	<0.005	<0.006	<0.04	<0.03	<0.006	<0.03	E0.012	<0.006	<0.002	<0.008	<0.007	<0.008	<0.007
MAR 17...	<0.005	<0.006	<0.04	<0.03	<0.006	<0.03	E0.008	<0.006	<0.002	<0.008	<0.007	<0.008	<0.007
APR 09...	<0.005	<0.006	<0.04	<0.03	<0.006	<0.03	E0.012	<0.006	<0.002	<0.008	<0.007	<0.008	<0.007
APR 22...	<0.005	<0.006	<0.04	<0.03	<0.006	<0.03	0.017	<0.006	<0.002	<0.008	<0.007	<0.008	<0.007
MAY 05...	<0.005	<0.006	<0.04	<0.03	<0.006	<0.03	0.039	0.192	<0.002	<0.008	<0.007	<0.008	<0.007
MAY 20...	<0.005	<0.006	<0.04	<0.03	<0.006	<0.03	0.014	<0.006	<0.002	<0.008	<0.007	<0.008	<0.007
JUN 02...	<0.005	<0.006	<0.04	<0.03	<0.006	<0.03	0.054	<0.006	<0.002	<0.008	<0.007	<0.008	<0.007
JUN 25...	<0.005	<0.006	<0.04	<0.03	<0.006	<0.03	E0.011	<0.006	<0.002	<0.008	<0.007	<0.008	<0.007
JUL 08...	<0.005	<0.006	<0.04	<0.03	<0.006	<0.03	0.021	<0.006	<0.002	<0.008	<0.007	<0.008	<0.007
JUL 21...	<0.005	<0.006	<0.04	<0.03	<0.006	<0.03	0.015	<0.006	<0.002	<0.008	<0.007	<0.008	<0.007
AUG 05...	<0.005	<0.006	<0.04	<0.03	<0.006	<0.03	E0.008	<0.006	<0.002	<0.008	<0.007	<0.008	<0.007
SEP 02...	<0.005	<0.006	<0.04	<0.03	<0.006	<0.03	E0.008	<0.006	<0.002	0.010	<0.007	<0.008	<0.007

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	p,p'-DDE, water, fltrd, ug/L (34653)	Para-oxon, water, fltrd, ug/L (61663)	Para-thion, water, fltrd, ug/L (39542)	Peb-ulate, water, fltrd 0.7u GF ug/L (82669)	Pendi-meth-alin, water, fltrd 0.7u GF ug/L (82683)	Phorate oxon, water, fltrd, ug/L (61666)	Phorate water fltrd 0.7u GF ug/L (82664)	Phosmet oxon, water, fltrd, ug/L (61668)	Phosmet water, fltrd, ug/L (61601)	Phoste-bupirim water, fltrd, ug/L (61602)	Pro-fenofos water, fltrd, ug/L (61603)	Prome-ton, water, fltrd, ug/L (04037)	Prome-tryn, water, fltrd, ug/L (04036)
OCT 08...	<0.003	<0.008	<0.010	<0.004	<0.022	<0.10	<0.011	<0.06	<0.008	<0.005	<0.006	0.04	<0.005
NOV 06...	<0.003	<0.008	<0.010	<0.004	<0.022	<0.10	<0.011	<0.06	<0.008	<0.005	<0.006	0.05	<0.005
NOV 27...	<0.003	<0.008	<0.010	<0.004	<0.022	<0.10	<0.011	<0.06	<0.008	<0.005	<0.006	0.03	<0.005
DEC 09...	<0.003	<0.008	<0.010	<0.004	<0.022	<0.10	<0.011	<0.06	<0.008	<0.005	<0.006	0.02	<0.005
JAN 15...	<0.003	<0.008	<0.010	<0.004	<0.022	<0.10	<0.011	<0.06	<0.008	<0.005	<0.006	0.02	<0.005
FEB 13...	<0.003	<0.008	<0.010	<0.004	<0.022	<0.10	<0.011	<0.06	<0.008	<0.005	<0.006	0.02	<0.005
MAR 17...	<0.003	<0.008	<0.010	<0.004	<0.022	<0.10	<0.011	<0.06	<0.008	<0.005	<0.006	0.02	<0.005
APR 09...	<0.003	<0.008	<0.010	<0.004	<0.022	<0.10	<0.011	<0.06	<0.008	<0.005	<0.006	E0.01	<0.005
APR 22...	<0.003	<0.008	<0.010	<0.004	E0.014	<0.10	<0.011	<0.06	<0.008	<0.005	<0.006	0.02	<0.005
MAY 05...	<0.003	<0.008	<0.010	<0.004	<0.022	<0.10	<0.011	<0.06	<0.008	<0.005	<0.006	0.10	<0.005
MAY 20...	<0.003	<0.008	<0.010	<0.004	<0.022	<0.10	<0.011	<0.06	<0.008	<0.005	<0.006	0.02	<0.005
JUN 02...	<0.003	<0.008	<0.010	<0.004	E0.007	<0.10	<0.011	<0.06	<0.008	<0.005	<0.006	0.07	<0.005
JUN 25...	<0.003	<0.016	<0.010	<0.004	<0.022	<0.10	<0.011	<0.06	<0.008	<0.005	<0.006	0.08	<0.005
JUL 08...	<0.003	<0.008	<0.010	<0.004	<0.022	<0.10	<0.011	<0.06	<0.008	<0.005	<0.006	0.07	<0.005
JUL 21...	<0.003	<0.008	<0.010	<0.004	<0.022	<0.10	<0.011	<0.06	<0.008	<0.005	<0.006	0.31	<0.005
AUG 05...	<0.003	<0.008	<0.010	<0.004	<0.022	<0.10	<0.011	<0.06	<0.008	<0.005	<0.006	0.06	<0.005
SEP 02...	<0.003	<0.008	<0.010	<0.004	<0.022	<0.10	<0.011	<0.06	<0.008	<0.005	<0.006	0.06	<0.005

03353637 LITTLE BUCK CREEK NR INDIANAPOLIS, IN—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Pronamide, water, fltrd, 0.7u GF ug/L (82676)	Propachlor, water, fltrd, ug/L (04024)	Propanil, water, fltrd, 0.7u GF ug/L (82679)	Propargite, water, fltrd, 0.7u GF ug/L (82685)	Propetamphos, water, fltrd, ug/L (61604)	Simazine, water, fltrd, ug/L (04035)	Sulfo-tepp, water, fltrd, ug/L (61605)	Sulprofos, water, fltrd, ug/L (38716)	Tebupirimphos oxon, water, fltrd, ug/L (61669)	Tebu-thiuron water fltrd, 0.7u GF ug/L (82670)	Tefluthrin metabolite R119365 wat flt ug/L (61671)	Tefluthrin metabolite R152913 wat flt ug/L (61672)	Tefluthrin, water, fltrd, ug/L (61606)
OCT 08...	<0.004	<0.010	<0.011	<0.02	<0.004	0.006	<0.003	<0.02	<0.006	<0.02	<0.02	<0.01	<0.008
NOV 06...	<0.004	<0.010	<0.011	<0.02	<0.004	0.007	<0.003	<0.02	<0.006	<0.02	<0.02	<0.01	<0.008
NOV 27...	<0.004	<0.010	<0.011	<0.02	<0.004	0.007	<0.003	<0.02	<0.006	<0.02	<0.02	<0.01	<0.008
DEC 09...	<0.004	<0.010	<0.011	<0.02	<0.004	0.006	<0.003	<0.02	<0.006	<0.02	<0.02	<0.01	<0.008
JAN 15...	<0.004	<0.010	<0.011	<0.02	<0.004	0.008	<0.003	<0.02	<0.006	<0.02	<0.02	<0.01	<0.008
FEB 13...	<0.004	<0.010	<0.011	<0.02	<0.004	<0.005	<0.003	<0.02	<0.006	<0.02	<0.02	<0.01	<0.008
MAR 17...	<0.004	<0.010	<0.011	<0.02	<0.004	E0.003	<0.003	<0.02	<0.006	<0.02	<0.02	<0.01	<0.008
APR 09...	<0.004	<0.010	<0.011	<0.02	<0.004	<0.005	<0.003	<0.02	<0.006	<0.02	--	--	<0.008
APR 22...	<0.004	<0.010	<0.011	<0.02	<0.004	0.008	<0.003	<0.02	<0.006	<0.02	--	--	<0.008
MAY 05...	<0.004	<0.010	<0.011	<0.02	<0.004	<0.005	<0.003	<0.02	<0.006	<0.02	--	--	<0.008
MAY 20...	<0.004	<0.010	<0.011	<0.02	<0.004	E0.004	<0.003	<0.02	<0.006	E0.01	--	--	<0.008
JUN 02...	<0.004	<0.010	<0.011	<0.02	<0.004	0.255	<0.003	<0.02	<0.006	<0.02	--	--	<0.008
JUN 25...	<0.004	<0.010	<0.011	<0.02	<0.004	0.108	<0.003	<0.02	<0.006	<0.02	--	--	<0.008
JUL 08...	<0.004	<0.010	<0.011	<0.02	<0.004	0.089	<0.003	<0.02	<0.006	<0.02	--	--	<0.008
JUL 21...	<0.004	<0.010	<0.011	<0.02	<0.004	0.016	<0.003	<0.02	<0.006	<0.02	--	--	<0.008
AUG 05...	<0.004	<0.010	<0.011	<0.02	<0.004	0.017	<0.003	<0.02	<0.006	<0.02	--	--	<0.008
SEP 02...	<0.004	<0.010	<0.011	<0.02	<0.004	0.010	<0.003	<0.02	<0.006	<0.02	--	--	<0.008

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Temephos, water, fltrd, ug/L (61607)	Terbacil, water, fltrd, 0.7u GF ug/L (82665)	Terbufos oxon sulfone water, fltrd, ug/L (61674)	Terbufos, water, fltrd, 0.7u GF ug/L (82675)	Terbuthylazine, water, fltrd, ug/L (04022)	Thio-bencarb water fltrd, 0.7u GF ug/L (82681)	trans-Propiconazole, water, fltrd, ug/L (79847)	Tri-allate, water, fltrd, 0.7u GF ug/L (82678)	Tribu-phos, water, fltrd, ug/L (61610)	Tri-fluralin, water, fltrd, 0.7u GF ug/L (82661)	z-Di-metho-morph, water, fltrd, ug/L (79845)	Di-chlorvos, water fltrd, ug/L (38775)	Suspnd. sedi-ment, sieve diametr percent <.063mm (70331)
OCT 08...	<0.3	<0.034	<0.07	<0.02	<0.01	<0.005	<0.01	<0.002	<0.004	<0.009	<0.05	<0.01	40
NOV 06...	<0.3	<0.140	<0.07	<0.02	<0.01	<0.005	<0.01	<0.002	<0.004	<0.009	<0.05	<0.01	56
NOV 27...	<0.3	<0.034	<0.07	<0.02	<0.01	<0.005	<0.01	<0.002	<0.004	<0.009	<0.05	<0.01	69
DEC 09...	<0.3	<0.034	<0.07	<0.02	<0.01	<0.005	<0.01	<0.002	<0.004	<0.009	<0.05	<0.01	32
JAN 15...	<0.3	<0.034	<0.07	<0.02	<0.01	<0.005	<0.01	<0.002	<0.004	<0.009	<0.05	<0.01	24
FEB 13...	<0.3	<0.034	<0.07	<0.02	<0.01	<0.005	<0.01	<0.002	<0.004	<0.009	<0.05	<0.01	70
MAR 17...	<0.3	<0.034	<0.07	<0.02	<0.01	<0.005	<0.01	<0.002	<0.004	<0.009	<0.05	<0.01	90
APR 09...	<0.3	<0.034	<0.07	<0.02	<0.01	<0.005	<0.01	<0.002	<0.004	<0.009	<0.05	<0.01	98
APR 22...	<0.3	<0.034	<0.07	<0.02	<0.01	<0.005	<0.01	<0.002	<0.004	<0.009	<0.05	<0.01	85
MAY 05...	<0.3	<0.034	<0.07	<0.02	<0.01	<0.005	<0.01	<0.002	<0.004	<0.009	<0.05	E0.01	81
MAY 20...	<0.3	<0.034	<0.07	<0.02	<0.01	<0.005	<0.01	<0.002	<0.004	<0.009	<0.05	<0.01	75
JUN 02...	<0.3	<0.034	<0.07	<0.02	<0.01	<0.005	<0.01	<0.002	<0.004	<0.009	<0.05	<0.01	34
JUN 25...	<0.3	<0.034	<0.07	<0.02	<0.01	<0.005	<0.01	<0.002	<0.004	<0.009	<0.05	<0.01	73
JUL 08...	<0.3	<0.034	<0.07	<0.02	<0.01	<0.005	<0.01	<0.002	<0.004	<0.009	<0.05	<0.01	92
JUL 21...	<0.3	<0.034	<0.07	<0.02	<0.01	<0.005	0.02	<0.002	<0.004	<0.009	<0.05	E0.01	90
AUG 05...	<0.3	<0.034	<0.07	<0.02	<0.01	<0.005	<0.01	<0.002	<0.004	<0.009	<0.05	<0.01	80
SEP 02...	<0.3	<0.034	<0.07	<0.02	<0.01	<0.005	<0.01	<0.002	<0.004	<0.009	<0.05	<0.01	--

WABASH RIVER BASIN

03353637 LITTLE BUCK CREEK NR INDIANAPOLIS, IN—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Suspended sediment concentration mg/L (80154)
OCT	
08...	17
NOV	
06...	5
27...	17
DEC	
09...	19
JAN	
15...	32
FEB	
13...	44
MAR	
17...	11
APR	
09...	101
22...	10
MAY	
05...	389
20...	53
JUN	
02...	58
25...	22
JUL	
08...	5
21...	401
AUG	
05...	4
SEP	
02...	138

03353700 WEST FORK WHITE LICK CREEK AT DANVILLE, IN

LOCATION.--Lat 39°45'39", long 86°30'54", in SE¹/₄SW¹/₄ sec.3, T.15 N., R.1 W., Hendricks County, Hydrologic Unit 05120201, (DANVILLE, IN quadrangle), at Danville Filtration Plant, 600 ft upstream of U.S. Highway 36 bridge, 0.6 mi upstream from small left bank tributary, and 7 mi west of Avon.

DRAINAGE AREA.--28.8 mi².

PERIOD OF RECORD.--May 1958 to October 2003 (discontinued).

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. Aug. 7, 1970 to Nov. 14, 1994, water-stage recorder on downstream side of bridge at same datum.

REMARKS.--Records fair except those for Oct. 1 - Dec. 9; Mar. 9 - Apr. 14; May 10 - June 9; Sept. 3-21, and estimated daily discharges, which are poor.

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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	3.9	8.0	213	e3.7	e11	37	9.3	12	13	6.1	3,770
2	0.77	2.1	7.0	99	e3.8	e12	28	16	10	20	5.3	1,270
3	0.75	1.6	e5.6	63	e10	e13	23	11	11	7.2	11	248
4	2.2	1.6	e4.4	46	e70	e15	21	10	9.6	5.3	88	119
5	0.15	2.2	e3.6	39	e40	e130	19	170	7.8	280	21	77
6	0.21	4.7	e3.0	33	e20	e90	14	95	7.3	775	12	54
7	0.26	4.8	e2.6	34	e17	52	16	68	6.9	142	8.5	42
8	0.09	3.4	e2.3	56	e14	252	15	42	5.6	103	7.0	33
9	0.08	3.1	e2.1	109	e13	251	14	62	5.6	268	9.4	27
10	0.08	69	e2.1	53	e12	91	12	501	5.2	266	56	22
11	0.11	104	e2.4	e32	e12	60	10	524	5.6	91	22	19
12	0.15	30	e3.4	e20	e11	55	10	162	7.2	50	15	16
13	0.18	19	4.4	e15	e10	138	9.7	82	30	29	10	16
14	0.19	14	4.9	e11	10	107	8.3	72	48	19	7.6	14
15	0.14	12	4.3	e9.0	33	78	8.8	144	19	17	6.2	14
16	0.14	10	3.9	e7.6	e16	75	8.8	55	11	13	5.5	11
17	0.11	9.4	3.7	e6.6	e13	58	12	35	9.0	9.8	4.9	11
18	0.13	8.7	7.2	e5.8	11	39	9.4	26	7.9	14	3.9	9.5
19	1.0	8.8	190	e5.4	11	39	8.3	20	6.8	9.9	3.4	8.9
20	0.14	7.8	162	e5.0	47	41	10	18	5.8	8.1	2.9	7.8
21	0.09	8.0	65	e4.7	102	79	11	14	5.3	171	2.6	8.3
22	0.07	11	36	e4.4	e180	52	8.9	12	4.9	120	2.3	115
23	0.09	12	25	e4.3	e70	34	7.4	12	4.6	54	1.9	61
24	0.13	11	21	e4.2	e40	29	7.3	9.9	4.1	25	1.5	28
25	2.8	9.4	e15	e4.1	e24	35	17	9.2	3.8	16	1.3	25
26	4.6	8.5	e12	e4.0	e17	58	24	9.1	4.2	12	1.2	30
27	3.0	7.8	e11	e3.9	e14	40	14	7.8	4.1	11	1.4	205
28	1.5	7.3	e10	e3.8	e12	49	12	9.5	3.4	11	1.0	70
29	7.5	8.4	e10	e3.8	---	187	11	14	3.2	9.5	2.6	40
30	18	10	103	e3.7	---	77	9.6	9.5	2.7	7.7	19	27
31	6.2	---	306	e3.7	---	47	---	21	---	6.8	12	---
TOTAL	51.86	413.5	1,040.9	907.0	836.5	2,294	416.5	2,250.3	271.6	2,584.3	352.5	6,398.5
MEAN	1.67	13.8	33.6	29.3	29.9	74.0	13.9	72.6	9.05	83.4	11.4	213
MAX	18	104	306	213	180	252	37	524	48	775	88	3,770
MIN	0.07	1.6	2.1	3.7	3.7	11	7.3	7.8	2.7	5.3	1.0	7.8
CFSM	0.06	0.48	1.17	1.02	1.04	2.57	0.48	2.52	0.31	2.89	0.39	7.41
IN.	0.07	0.53	1.34	1.17	1.08	2.96	0.54	2.91	0.35	3.34	0.46	8.26

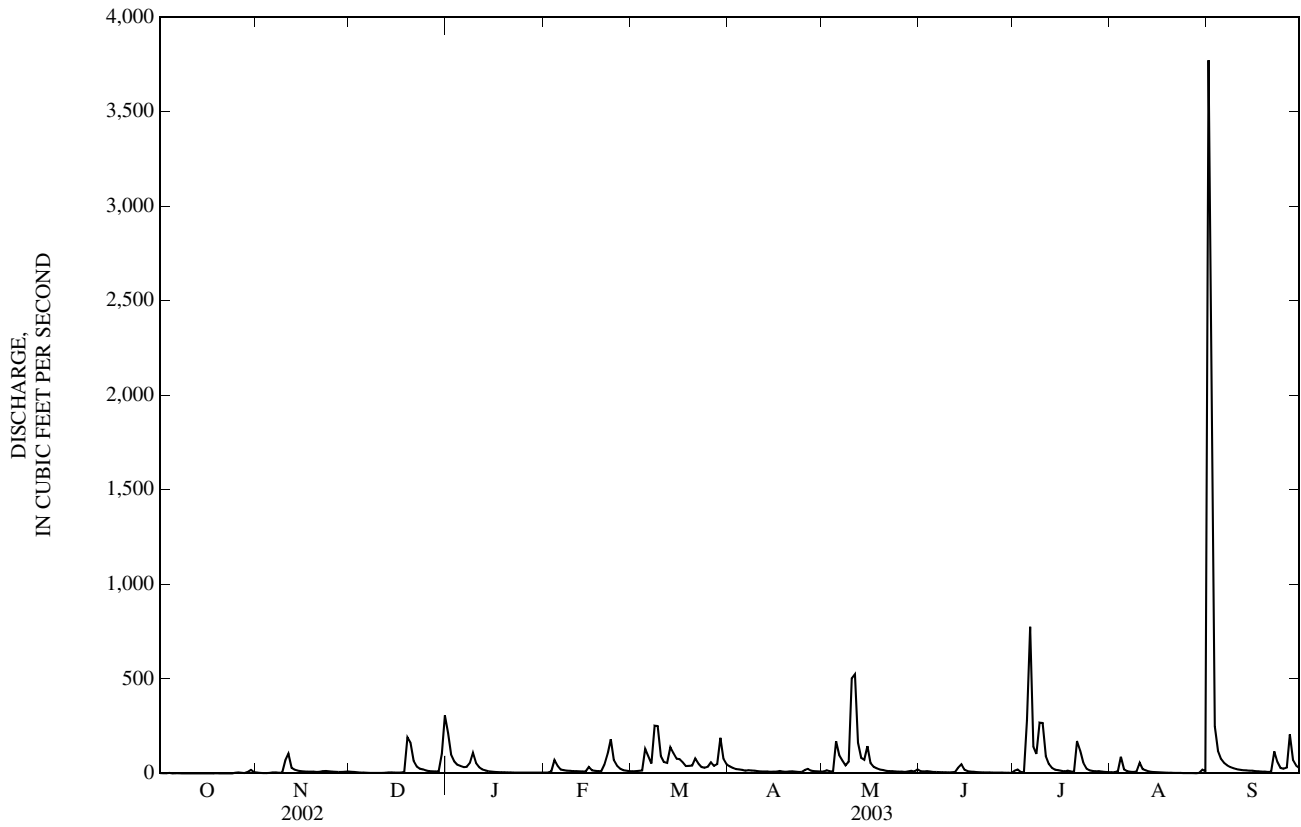
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 2003, BY WATER YEAR (WY)

MEAN	11.4	27.2	37.8	37.5	48.3	59.7	51.4	41.6	23.4	19.9	8.32	10.9
MAX	119	156	154	134	151	145	123	178	174	134	69.4	213
(WY)	(2002)	(1986)	(1991)	(1999)	(1990)	(1978)	(1996)	(1996)	(1998)	(1979)	(1979)	(2003)
MIN	0.000	0.041	0.035	0.062	2.82	8.86	9.14	3.87	0.51	0.14	0.026	0.000
(WY)	(1965)	(2000)	(1964)	(1977)	(1964)	(1994)	(1971)	(1976)	(1988)	(1991)	(1964)	(1999)

03353700 WEST FORK WHITE LICK CREEK AT DANVILLE, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1959 - 2003	
ANNUAL TOTAL	14,375.29		17,817.46			
ANNUAL MEAN	39.4		48.8		31.4	
HIGHEST ANNUAL MEAN					55.7	1973
LOWEST ANNUAL MEAN					6.35	1966
HIGHEST DAILY MEAN	1,430	May 13	3,770	Sep 1	3,770	Sep 1, 2003
LOWEST DAILY MEAN	0.07	Oct 22	0.07	Oct 22	0.00	Oct 3, 1960
ANNUAL SEVEN-DAY MINIMUM	0.13	Oct 8	0.13	Oct 8	0.00	Oct 3, 1960
MAXIMUM PEAK FLOW			7,090	Sep 1	7,090	Sep 1, 2003
MAXIMUM PEAK STAGE			13.79	Sep 1	13.79	Sep 1, 2003
ANNUAL RUNOFF (CFSM)	1.37		1.69		1.09	
ANNUAL RUNOFF (INCHES)	18.57		23.01		14.83	
10 PERCENT EXCEEDS	99		93		72	
50 PERCENT EXCEEDS	8.7		11		8.4	
90 PERCENT EXCEEDS	0.44		2.2		0.19	

e Estimated



03353800 WHITE LICK CREEK AT MOORESVILLE, IN

LOCATION.--Lat 39°36'28", long 86°22'56", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.35, T.14 N., R.1 E., Morgan County, Hydrologic Unit 05120201, (MOORESVILLE WEST, IN quadrangle), 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 fair except for estimated daily discharges, 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34	56	45	1,210	e56	165	305	111	145	53	59	4,870
2	35	42	40	580	e62	178	251	124	103	81	54	13,200
3	29	36	38	390	112	166	214	134	108	70	57	1,860
4	30	34	36	299	407	174	198	112	99	60	206	801
5	50	38	35	267	e220	537	216	744	85	1,110	128	506
6	35	56	33	254	e160	660	170	714	73	3,300	79	369
7	28	56	33	244	e130	385	169	466	70	809	63	296
8	28	48	33	245	e110	518	163	446	65	384	52	265
9	24	41	31	426	e97	1,620	145	359	60	1,360	46	217
10	22	322	31	342	e90	653	135	896	54	2,960	79	193
11	21	589	32	235	e85	421	128	3,140	54	913	85	179
12	20	254	34	e160	e80	365	120	1,240	118	472	68	160
13	19	154	35	e150	e78	605	112	557	140	291	81	147
14	18	111	37	e110	e84	843	105	367	1,160	210	50	135
15	18	92	36	e90	248	514	101	805	411	197	42	126
16	18	82	34	e80	e160	423	106	401	221	225	38	119
17	17	71	33	e74	e120	362	153	278	159	146	39	111
18	17	65	38	e69	e100	302	149	228	122	183	39	106
19	29	61	377	e65	e96	283	116	192	107	157	37	102
20	37	58	694	e62	152	282	111	168	94	114	33	97
21	27	54	373	e60	294	363	124	145	85	322	31	93
22	22	68	240	e58	757	379	110	127	79	569	29	353
23	20	71	177	e56	764	278	97	115	75	275	28	402
24	19	69	144	e54	373	234	88	106	71	181	27	226
25	52	63	143	e52	252	223	175	99	68	127	25	186
26	102	56	123	e54	223	366	279	92	66	101	25	176
27	61	51	103	e52	192	305	174	86	70	86	25	816
28	42	48	102	e52	180	259	136	83	64	101	30	507
29	65	45	109	e54	---	1,200	133	145	59	94	31	302
30	126	45	227	e52	---	586	116	115	55	76	72	223
31	79	---	851	e52	---	381	---	161	---	67	90	---
TOTAL	1,144	2,836	4,297	5,948	5,682	14,030	4,599	12,756	4,140	15,094	1,748	27,143
MEAN	36.9	94.5	139	192	203	453	153	411	138	487	56.4	905
MAX	126	589	851	1,210	764	1,620	305	3,140	1,160	3,300	206	13,200
MIN	17	34	31	52	56	165	88	83	54	53	25	93
CFSM	0.17	0.45	0.65	0.91	0.96	2.13	0.72	1.94	0.65	2.30	0.27	4.27
IN.	0.20	0.50	0.75	1.04	1.00	2.46	0.81	2.24	0.73	2.65	0.31	4.76

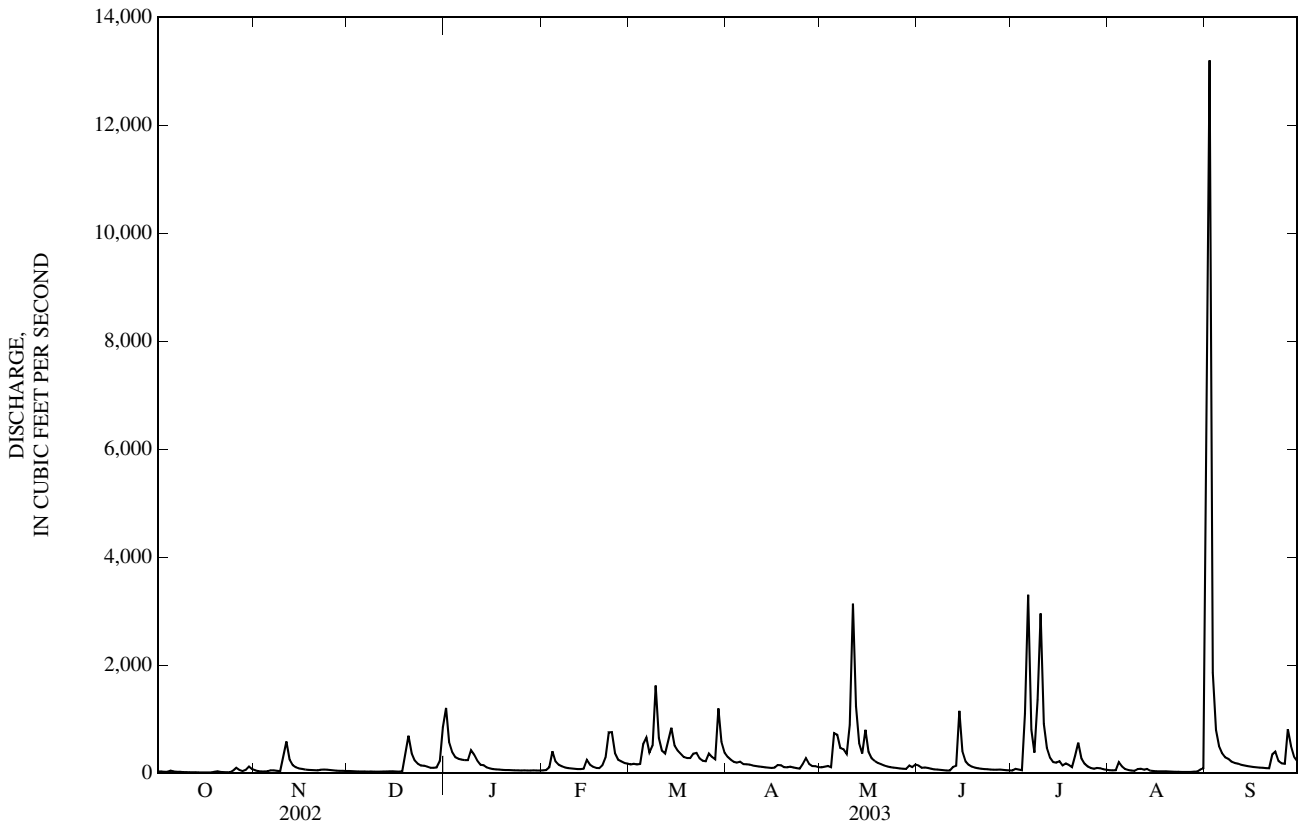
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2003, BY WATER YEAR (WY)

MEAN	78.7	191	261	257	323	418	371	306	177	148	77.4	74.4
MAX	592	1,193	975	845	942	1,154	1,328	1,062	936	764	567	905
(WY)	(2002)	(1994)	(1991)	(1969)	(1971)	(1963)	(1964)	(1996)	(1998)	(1979)	(1979)	(2003)
MIN	5.47	9.86	8.83	9.60	35.7	86.8	83.1	46.3	12.9	11.7	5.10	3.51
(WY)	(1998)	(1968)	(1964)	(1977)	(1964)	(2000)	(1971)	(1976)	(1988)	(1966)	(1966)	(1991)

03353800 WHITE LICK CREEK AT MOOREVILLE, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1957 - 2003	
ANNUAL TOTAL	98,810.7		99,417			
ANNUAL MEAN	271		272		224	
HIGHEST ANNUAL MEAN					372 1974	
LOWEST ANNUAL MEAN					51.1 1966	
HIGHEST DAILY MEAN	7,880	May 13	13,200	Sep 2	13,200	Sep 2, 2003
LOWEST DAILY MEAN	8.6	Sep 13	17	Oct 17	0.68	Aug 27, 1988
ANNUAL SEVEN-DAY MINIMUM	9.5	Sep 8	18	Oct 12	1.8	Sep 24, 1988
MAXIMUM PEAK FLOW			19,900	Sep 2	19,900	Sep 2, 2003
MAXIMUM PEAK STAGE			23.28	Sep 2	23.31	Jul 13, 1979
ANNUAL RUNOFF (CFSM)	1.28		1.28		1.06	
ANNUAL RUNOFF (INCHES)	17.34		17.44		14.34	
10 PERCENT EXCEEDS	593		516		473	
50 PERCENT EXCEEDS	102		111		90	
90 PERCENT EXCEEDS	20		34		13	

e Estimated



03354000 WHITE RIVER NEAR CENTERTON, IN

(Former 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, (MOORESVILLE WEST, IN quadrangle), 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.

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 fair. 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	677	708	667	8,420	936	1,850	4,950	1,270	1,960	850	1,580	13,600
2	616	620	644	9,180	956	1,800	3,850	1,810	1,730	960	1,490	49,900
3	579	573	637	6,930	1,120	1,690	3,250	1,910	1,660	905	1,500	48,700
4	572	551	643	4,820	2,060	1,630	2,890	1,980	1,620	800	2,860	32,600
5	939	563	626	3,540	2,320	2,840	3,740	5,820	1,500	3,800	2,750	26,200
6	769	729	603	3,040	2,530	3,780	2,880	7,470	1,420	13,400	2,540	16,300
7	648	708	585	2,690	2,120	4,670	2,620	7,660	1,360	15,400	2,170	6,690
8	602	652	567	2,330	1,750	4,680	2,560	6,340	1,290	19,300	1,850	5,110
9	554	600	578	2,430	1,520	7,340	2,590	5,200	1,270	23,400	1,650	4,100
10	523	1,680	579	2,930	1,380	9,280	2,420	7,330	1,180	30,900	1,680	3,460
11	510	4,130	578	3,320	1,360	9,050	2,180	18,900	1,190	34,700	2,050	3,000
12	494	2,370	601	2,910	1,240	6,370	2,040	22,500	1,620	37,100	2,110	2,680
13	484	1,990	608	2,120	1,110	6,600	1,930	24,300	1,890	29,700	1,870	2,400
14	466	1,560	628	1,900	1,060	9,810	1,800	18,500	4,580	16,000	1,630	2,220
15	470	1,290	669	1,690	1,670	10,900	1,650	10,600	3,970	7,430	1,500	2,070
16	462	1,170	660	1,470	1,500	10,100	1,530	8,640	3,170	6,540	1,550	1,910
17	455	1,070	645	1,320	1,290	7,560	1,730	6,720	2,410	5,500	1,470	1,790
18	456	952	682	1,250	1,200	6,190	2,020	5,320	1,910	4,880	1,680	1,700
19	491	873	1,540	1,280	1,100	5,340	1,640	4,360	1,620	4,060	1,420	1,620
20	608	837	3,640	1,320	1,260	4,890	1,580	3,710	1,440	3,290	1,240	1,520
21	562	811	3,430	1,200	1,690	5,320	1,610	3,230	1,290	4,360	1,130	1,440
22	539	869	3,170	1,130	3,280	6,020	1,460	2,860	1,180	5,260	1,070	2,200
23	515	878	2,300	1,050	5,300	6,060	1,380	2,530	1,080	3,660	1,020	3,070
24	493	818	1,850	953	3,910	4,910	1,290	2,300	1,020	3,050	964	2,690
25	535	852	1,680	933	3,220	3,830	1,610	2,080	952	2,580	932	2,630
26	1,160	827	1,480	944	2,580	4,490	2,590	1,900	914	2,270	914	2,540
27	858	761	1,320	981	2,230	3,680	1,950	1,870	982	2,010	926	5,970
28	683	742	1,190	972	2,000	3,470	1,590	1,700	958	2,290	1,170	8,250
29	737	701	1,150	933	---	7,220	1,490	2,270	900	2,080	1,110	9,970
30	1,230	694	1,490	950	---	8,280	1,350	1,890	867	1,830	1,730	7,300
31	889	---	3,370	944	---	7,340	---	2,060	---	1,680	1,790	---
TOTAL	19,576	31,579	38,810	75,880	53,692	176,990	66,170	195,030	48,933	289,985	49,346	273,630
MEAN	631	1,053	1,252	2,448	1,918	5,709	2,206	6,291	1,631	9,354	1,592	9,121
MAX	1,230	4,130	3,640	9,180	5,300	10,900	4,950	24,300	4,580	37,100	2,860	49,900
MIN	455	551	567	933	936	1,630	1,290	1,270	867	800	914	1,440
CFSM	0.26	0.43	0.51	1.00	0.78	2.34	0.90	2.57	0.67	3.83	0.65	3.73
IN.	0.30	0.48	0.59	1.15	0.82	2.69	1.01	2.97	0.74	4.41	0.75	4.16

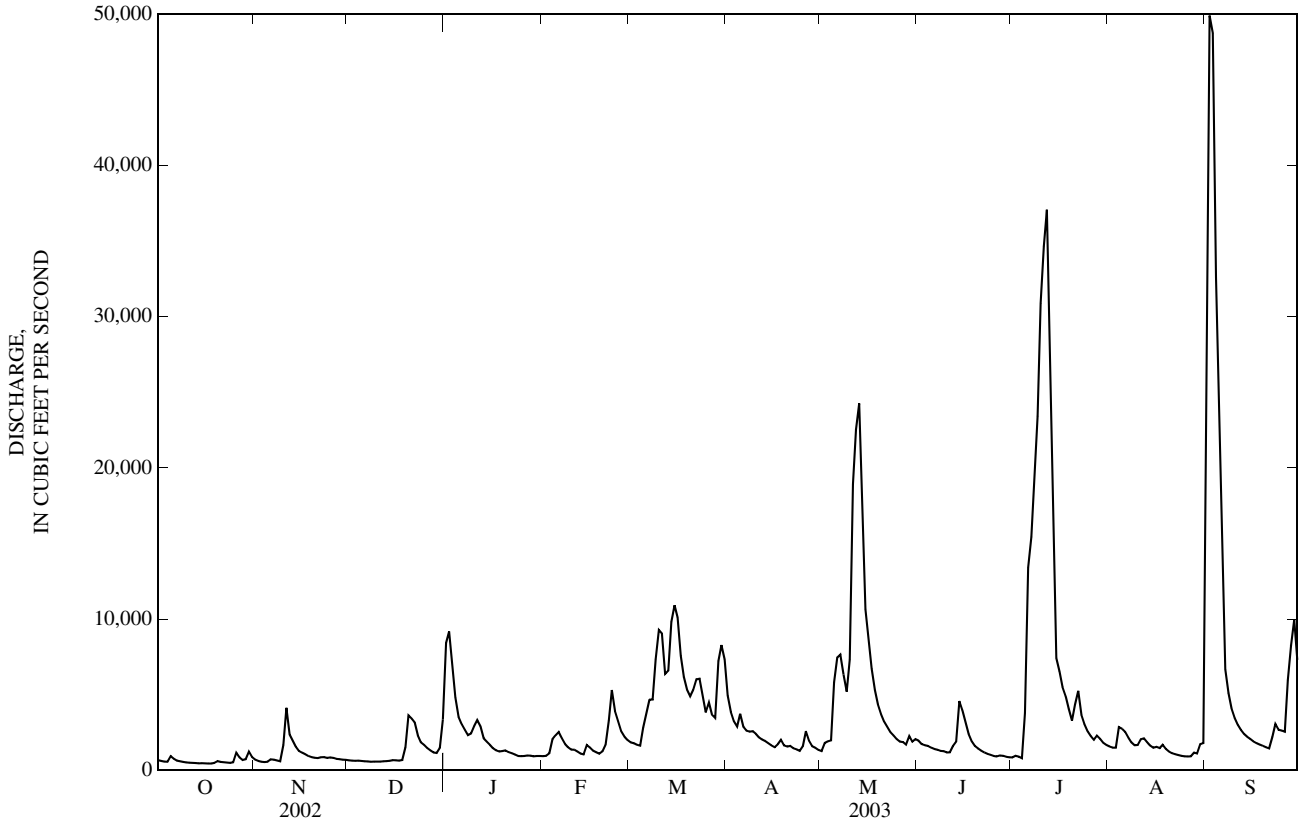
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 2003, BY WATER YEAR (WY)

MEAN	943	1,815	2,549	3,221	3,732	4,534	4,304	3,244	2,483	1,946	1,120	1,047
MAX	6,725	11,760	8,248	17,760	10,430	10,390	11,530	11,280	10,310	9,354	6,001	9,121
(WY)	(2002)	(1994)	(1958)	(1950)	(1950)	(1963)	(1964)	(1996)	(1998)	(2003)	(1979)	(2003)
MIN	281	320	305	302	460	1,083	1,097	799	419	344	338	213
(WY)	(1964)	(1954)	(1964)	(1977)	(1964)	(2000)	(1971)	(1976)	(1988)	(1954)	(1966)	(1954)

WABASH RIVER BASIN

03354000 WHITE RIVER NEAR CENTERTON, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1948 - 2003	
ANNUAL TOTAL	1,121,144		1,319,621			
ANNUAL MEAN	3,072		3,615		2,571	
HIGHEST ANNUAL MEAN					4,115 1950	
LOWEST ANNUAL MEAN					812 1954	
HIGHEST DAILY MEAN	37,800	May 14	49,900	Sep 2	49,900	Sep 2, 2003
LOWEST DAILY MEAN	455	Oct 17	455	Oct 17	138	Sep 27, 1954
ANNUAL SEVEN-DAY MINIMUM	469	Oct 13	469	Oct 13	157	Sep 27, 1954
MAXIMUM PEAK FLOW			65,700	Sep 2	65,700	Sep 2, 2003
MAXIMUM PEAK STAGE			20.04	Sep 2	20.04	Sep 2, 2003
ANNUAL RUNOFF (CFSM)	1.26		1.48		1.05	
ANNUAL RUNOFF (INCHES)	17.06		20.09		14.29	
10 PERCENT EXCEEDS	6,830		7,340		5,760	
50 PERCENT EXCEEDS	1,400		1,700		1,360	
90 PERCENT EXCEEDS	554		633		410	



WABASH RIVER BASIN

03354000 WHITE RIVER NEAR CENTERTON, IN—Continued

WATER-QUALITY RECORDS

INSTRUMENTATION.--Temperature recorder.

PERIOD OF RECORD.--

WATER TEMPERATURE.--October 1955 to April 1956; October 1966 to September 1967; January 1970 to September 1972; August 1975 to December 1977; June 1978 to December 1978; March 1980 to October 1984; and December 1988 to current year.

REMARKS.--No records.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 33.1°C, Sept. 7, 1977; minimum, -0.6°C, on a few days during 1976, 1977, 1999, and 2001.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: No records.

NO DATA AVAILABLE FOR WATER YEAR 2003

03357330 BIG WALNUT CREEK NEAR ROACHDALE, IN

LOCATION.--Lat 39°48'58", long 86°45'12", in SE¹/₄NW¹/₄ sec.21, T.16 N., R.3 W., Putnam County, Hydrologic Unit 05120203, (ROACHDALE, IN quadrangle), on right upstream bank at County Road 1100 South bridge, 3.4 mi southeast of Roachdale, 9.06 mi upstream from confluence with Plum Creek, and at mile 29.16.

DRAINAGE AREA.--131 mi².

PERIOD OF RECORD.--October 2001 to current year.

GAGE.--Water-stage recorder. Datum of gage is 800 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	e36	e36	e500	e40	e78	143	53	88	21	51	6,490
2	e19	e30	e33	e330	e44	e72	117	55	70	23	47	3,980
3	e18	e26	e32	e280	e60	e68	101	50	70	22	45	1,310
4	e18	e24	e28	e240	e300	69	94	47	64	19	90	653
5	e20	e25	e27	e200	e220	e420	92	777	56	472	63	423
6	e19	e27	e26	e180	e140	e310	74	500	52	1,720	47	312
7	e18	e30	e27	e160	e100	e210	77	322	53	793	41	253
8	e17	e34	e26	e190	e80	736	71	225	52	506	36	210
9	e16	e31	e24	e480	e60	1,170	65	244	46	1,350	35	181
10	e15	e140	e23	e330	e47	443	62	1,260	42	1,670	96	160
11	e14	e470	e22	e240	e39	272	61	3,110	44	667	73	146
12	e14	e190	e22	e190	e34	284	57	1,150	54	370	46	135
13	e13	e130	e23	e150	e28	543	52	527	63	244	36	126
14	e12	e94	e23	e120	e30	508	49	339	135	171	e31	119
15	e12	e80	e22	e100	e40	356	49	602	88	139	e27	114
16	e13	e70	e22	e84	e33	312	49	334	65	120	e25	106
17	e11	e64	e24	e74	e30	261	57	234	55	90	e23	100
18	e11	e58	e29	e66	e28	209	54	186	49	89	e21	95
19	e17	e52	e70	e58	e27	185	48	153	45	78	21	93
20	e14	e46	e360	e52	e40	174	54	131	40	65	23	93
21	e13	e46	e270	e48	e160	213	58	112	35	745	20	91
22	e12	e56	e200	e46	e600	204	51	99	33	802	19	256
23	e12	e60	e150	e42	e320	156	47	89	32	282	19	344
24	e11	e55	e120	e40	e210	130	43	81	29	180	19	242
25	e16	e50	e110	e39	e160	122	64	75	27	126	19	224
26	e27	e44	e86	e39	e130	166	91	e67	28	97	19	225
27	e29	e42	e70	e38	e110	147	71	e63	29	83	23	759
28	e28	e40	e64	e38	e100	135	61	62	25	103	26	491
29	e35	e40	e74	e39	---	324	57	100	24	88	54	346
30	e80	e42	e190	e38	---	228	53	79	23	68	162	285
31	e49	---	e640	e39	---	169	---	126	---	58	71	---
TOTAL	625	2,132	2,873	4,470	3,210	8,674	2,022	11,252	1,516	11,261	1,328	18,362
MEAN	20.2	71.1	92.7	144	115	280	67.4	363	50.5	363	42.8	612
MAX	80	470	640	500	600	1,170	143	3,110	135	1,720	162	6,490
MIN	11	24	22	38	27	68	43	47	23	19	19	91
CFSM	0.15	0.54	0.71	1.10	0.88	2.14	0.51	2.77	0.39	2.77	0.33	4.67
IN.	0.18	0.61	0.82	1.27	0.91	2.46	0.57	3.20	0.43	3.20	0.38	5.21

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2003, BY WATER YEAR (WY)

	2002	2003	2002	2003	2002	2003	2002	2003	2002	2003	2002	2003
MEAN	20.2	86.1	204	95.8	177	321	236	526	129	206	41.5	320
MAX	20.2	101	315	144	239	363	406	688	207	363	42.8	612
(WY)	(2003)	(2002)	(2002)	(2003)	(2002)	(2002)	(2002)	(2002)	(2002)	(2003)	(2003)	(2003)
MIN	20.2	71.1	92.7	47.4	115	280	67.4	363	50.5	48.5	40.2	28.0
(WY)	(2003)	(2003)	(2003)	(2002)	(2003)	(2003)	(2003)	(2003)	(2003)	(2002)	(2002)	(2002)

SUMMARY STATISTICS

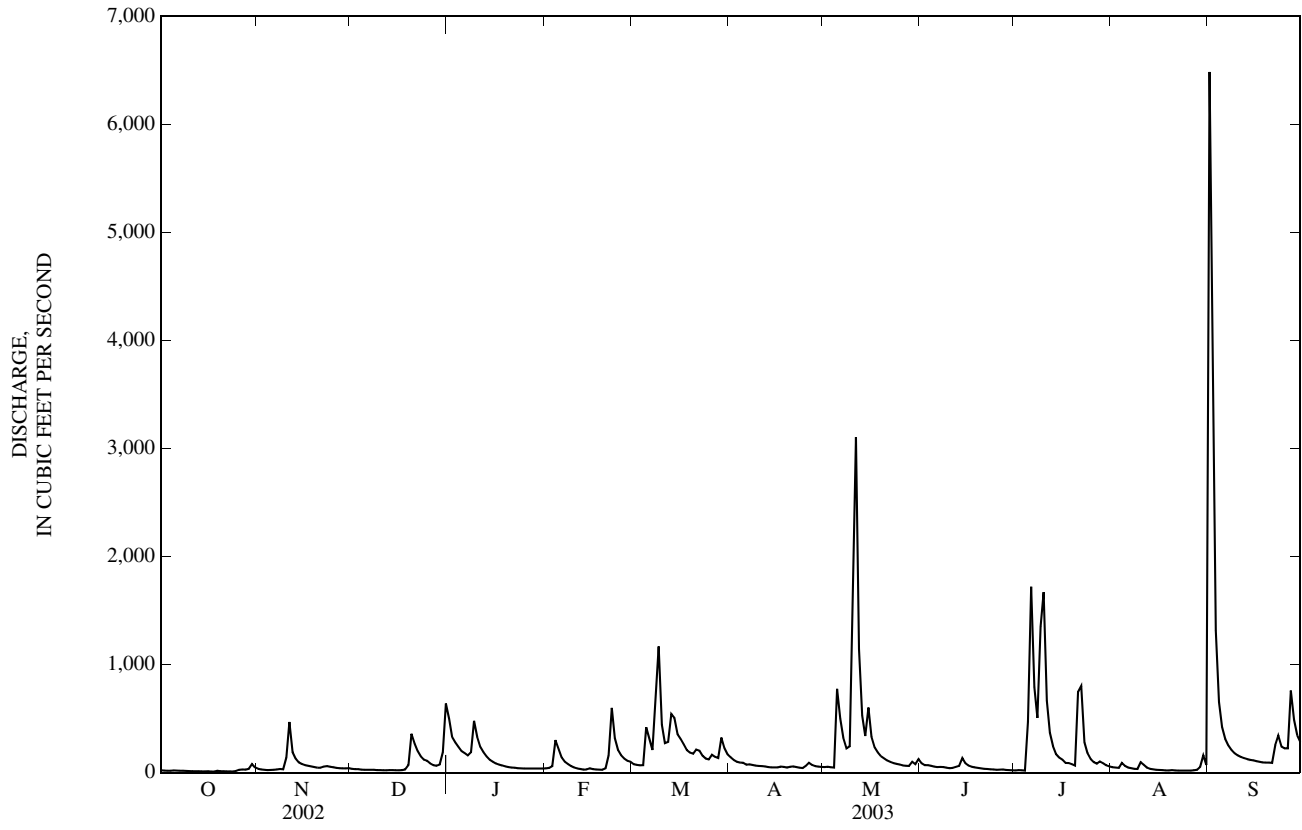
FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 2002 - 2003

ANNUAL TOTAL	68,331.3	67,725		
ANNUAL MEAN	187	186		
HIGHEST ANNUAL MEAN			186	2003
LOWEST ANNUAL MEAN			186	2003
HIGHEST DAILY MEAN	4,890	May 13	6,490	Sep 1, 2003
LOWEST DAILY MEAN	5.2	Sep 12	11	Oct 17, 2002
ANNUAL SEVEN-DAY MINIMUM	5.5	Sep 12	12	Oct 12, 2002
MAXIMUM PEAK FLOW			11,300	Sep 1, 2003
MAXIMUM PEAK STAGE			19.86	Sep 1, 2003
ANNUAL RUNOFF (CFSM)	1.43	1.42		
ANNUAL RUNOFF (INCHES)	19.40	19.23		
10 PERCENT EXCEEDS	465	358		
50 PERCENT EXCEEDS	64	65		
90 PERCENT EXCEEDS	13	22		

e Estimated



DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.6	12.0	---	---	---	---	---	---	---	---	---	e7.5
2	8.3	12.9	---	---	---	---	---	---	---	---	---	6.9
3	7.4	12.8	---	---	---	---	---	---	---	---	---	7.9
4	6.0	12.7	---	---	---	---	---	---	---	---	---	8.5
5	---	11.9	---	---	---	---	---	---	---	---	---	9.0
6	---	11.9	---	---	---	---	---	---	---	---	---	9.0
7	---	---	---	---	---	---	---	---	---	---	---	9.1
8	---	e15.5	---	---	---	---	---	---	---	---	---	9.0
9	---	e13.0	---	---	---	---	---	---	---	---	---	e8.8
10	e11.0	e10.2	---	---	---	---	---	---	---	---	---	---
11	10.0	8.0	---	---	---	---	---	---	---	---	---	---
12	8.9	---	---	---	---	---	---	---	---	---	e9.5	---
13	9.5	---	---	---	---	---	---	---	---	---	8.7	---
14	10.5	---	---	---	---	---	---	---	---	---	8.2	---
15	11.1	---	---	---	---	---	---	---	---	---	7.7	---
16	11.0	---	---	---	---	---	---	---	---	---	7.4	---
17	11.2	---	---	---	---	---	---	---	---	---	7.4	---
18	11.6	---	---	---	---	---	---	---	---	---	7.6	---
19	10.6	---	---	---	---	---	---	---	---	---	7.9	---
20	11.0	---	---	---	---	---	---	---	---	---	7.9	---
21	11.5	---	---	---	---	---	---	---	---	---	7.8	---
22	11.8	---	---	---	---	---	---	---	---	---	7.2	---
23	12.1	---	---	---	---	---	---	---	---	---	7.5	---
24	11.8	---	---	---	---	---	---	---	---	---	7.9	---
25	10.9	---	---	---	---	---	---	---	---	---	7.2	---
26	e10.7	---	---	---	---	---	---	---	---	---	6.7	---
27	11.3	---	---	---	---	---	---	---	---	---	5.8	---
28	11.3	---	---	---	---	---	---	---	---	---	5.9	---
29	10.9	---	---	---	---	---	---	---	---	---	e5.1	---
30	11.2	---	---	---	---	---	---	---	---	---	---	---
31	11.5	---	---	---	---	---	---	---	---	---	---	---

e Estimated

03357330 BIG WALNUT CREEK NR ROACHDALE, IN—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22.3	9.1	2.5	6.4	---	3.9	12.5	20.8	16.4	26.8	25.2	22.1
2	23.6	7.2	2.6	5.1	---	4.3	15.6	18.2	16.2	27.3	25.1	22.0
3	23.9	6.9	2.5	4.4	1.8	3.4	17.4	17.1	e15.4	27.9	24.9	21.5
4	23.2	7.8	1.8	3.5	1.6	4.6	17.8	15.5	15.8	28.9	24.6	21.3
5	20.0	8.3	1.9	4.3	1.6	4.2	13.1	14.8	18.0	25.1	24.2	20.4
6	18.0	8.1	1.8	5.1	1.6	3.1	8.8	16.2	18.0	23.3	24.5	20.3
7	16.7	---	1.8	e4.0	1.7	4.0	8.3	16.7	20.5	24.1	25.3	20.4
8	15.0	e10.2	1.9	---	1.7	4.8	8.6	e16.9	20.1	25.1	25.2	21.1
9	15.5	e11.5	1.8	---	1.7	2.9	8.2	18.7	e21.0	23.0	24.5	e21.0
10	16.0	e14.0	1.8	---	1.7	2.6	10.2	19.5	20.8	22.3	23.6	---
11	17.2	12.6	1.9	---	1.7	4.0	12.7	18.1	22.0	22.0	23.8	---
12	17.9	10.8	2.0	---	1.7	5.8	14.4	15.3	22.8	22.0	23.8	---
13	16.2	9.7	2.0	---	1.7	5.9	14.7	16.2	22.2	22.4	24.4	---
14	12.8	e10.5	2.3	---	1.7	5.5	16.1	16.6	21.0	23.2	26.1	---
15	12.4	e10.6	3.2	---	1.7	7.6	18.5	15.7	22.6	22.5	27.2	---
16	12.3	8.1	3.8	---	1.6	9.7	19.0	16.8	23.1	23.4	27.7	---
17	11.5	6.9	3.8	---	1.7	11.0	17.7	17.3	24.0	24.3	27.3	---
18	11.7	e5.6	6.5	---	1.7	12.0	16.6	17.9	24.5	24.4	26.0	---
19	13.5	---	9.2	---	1.7	12.1	17.7	18.8	24.0	25.0	25.3	---
20	11.5	8.7	7.7	---	1.8	13.0	19.1	18.1	22.8	24.9	25.8	---
21	11.0	8.6	6.1	---	1.7	12.5	16.1	16.8	22.9	23.5	26.7	---
22	11.1	7.1	6.1	---	1.7	10.6	13.6	16.9	23.7	22.1	28.2	---
23	10.9	6.1	4.3	---	2.0	11.0	13.8	16.8	24.5	21.6	26.5	---
24	11.2	6.2	3.7	---	2.2	12.9	13.7	17.1	25.8	21.9	25.5	---
25	10.6	6.3	2.0	---	2.2	13.2	12.8	17.0	26.8	22.4	26.2	---
26	e11.0	4.9	2.2	---	2.2	11.9	14.3	e17.0	25.9	23.1	27.1	---
27	11.7	4.6	2.2	---	2.3	12.4	16.4	---	24.2	24.1	28.3	---
28	11.9	3.8	3.1	---	2.7	13.3	17.5	17.9	23.7	23.3	28.0	---
29	10.5	4.2	3.5	---	---	10.0	19.4	17.8	24.9	e23.1	26.8	---
30	9.6	5.0	6.2	---	---	7.8	20.8	17.0	26.2	23.8	24.6	---
31	10.2	---	8.2	---	---	8.8	---	17.0	---	24.4	23.0	---

e Estimated

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	658	671	---	---	---	---	---	---	592	e625	557	191
2	650	681	---	---	---	---	---	---	608	619	540	202
3	641	685	---	---	---	---	---	---	e640	616	553	300
4	635	690	---	---	---	---	---	---	619	604	514	376
5	640	688	---	---	---	---	---	---	605	403	512	416
6	655	686	---	---	---	---	---	---	606	290	512	445
7	663	---	---	---	---	---	---	---	598	355	502	466
8	661	e673	---	---	---	---	---	---	596	391	500	488
9	654	e680	---	---	---	---	---	578	e589	315	494	e498
10	644	e615	---	---	---	---	---	447	590	331	512	---
11	628	475	---	---	---	---	---	246	591	431	496	---
12	618	554	---	---	---	---	---	331	584	491	552	---
13	631	607	---	---	---	---	---	405	580	527	591	---
14	653	e640	---	---	---	---	---	448	521	553	608	---
15	661	e660	---	---	---	---	---	400	558	569	619	---
16	657	671	---	---	---	---	---	472	583	568	626	---
17	654	682	---	---	---	---	---	512	583	574	629	---
18	650	e685	---	---	---	---	---	536	581	568	632	---
19	615	---	---	---	---	---	---	552	584	585	638	---
20	627	---	---	---	---	---	---	565	586	582	641	---
21	637	---	---	---	---	---	---	576	589	386	642	---
22	650	---	---	---	---	---	---	584	592	331	637	---
23	648	---	---	---	---	---	---	589	596	406	636	---
24	666	---	---	---	---	---	---	591	599	456	634	---
25	643	---	---	---	---	---	---	587	599	571	634	---
26	e645	---	---	---	---	---	---	e585	e598	569	633	---
27	665	---	---	---	---	---	---	---	---	510	625	---
28	659	---	---	---	---	---	---	566	---	505	613	---
29	647	---	---	---	---	---	---	569	---	e560	600	---
30	630	---	---	---	---	---	---	583	---	572	423	---
31	647	---	---	---	---	---	---	589	---	561	454	---

e Estimated

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unfiltered, uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Alkalinity, wat flt fxd end field, mg/L as CaCO3 (39036)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., mg/L (00453)	Carbonate, wat flt incrm. titr., mg/L (00452)	Chloride, water, fltrd, mg/L (00940)
OCT 10...	1430	29	744	14.3	8.5	630	21.0	15.0	230	228	275	1	34.0
NOV 07...	1240	173	751	15.9	8.1	698	14.0	5.5	270	269	E324	E2	30.2
DEC 10...	1430	87	750	15.8	8.1	728	3.0	0.5	270	268	E324	E1	31.0
JAN 22...	1100	89	758	--	8.0	731	<-5.0	0.0	280	275	332	2	27.7
FEB 10...	1240	74	739	--	8.2	688	0.0	0.0	--	--	--	--	29.0
MAR 04...	1130	62	740	15.2	8.3	603	8.0	3.0	280	272	E330	E1	37.4
APR 02...	1220	117	736	13.9	8.5	608	29.0	13.5	240	239	E285	E3	27.0
MAY 08...	1320	222	738	10.3	8.2	623	21.0	15.0	230	224	E273	E1	26.5
JUN 03...	1430	71	732	9.1	8.3	634	14.0	14.0	250	250	E305	<1	26.7
JUL 01...	1230	21	731	10.7	8.3	652	30.0	25.5	250	253	E308	<1	31.4
AUG 12...	1100	46	736	9.6	8.2	573	29.0	21.5	230	233	284	<1	24.2
SEP 09...	1000	184	739	9.0	8.0	570	26.0	19.5	240	246	300	<1	19.1

03357330 BIG WALNUT CREEK NR ROACHDALE, IN—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Sulfate water, fltrd, mg/L (00945)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Partic- ulate nitro- gen, susp, water, mg/L (49570)	Phos- phorus, water, unfltrd mg/L (00665)	Total carbon, suspnd sedimnt total, mg/L (00694)	Inor- ganic carbon, suspnd sedimnt total, mg/L (00688)	Organic carbon, suspnd sedimnt total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)	Suspnd. sedi- ment, sieve diametr percent <.063mm (70331)
OCT 10...	49.9	0.43	<0.04	0.59	0.010	<0.02	0.19	0.034	1.7	<0.1	1.6	4.0	38
NOV 07...	46.9	0.48	<0.04	2.25	0.012	<0.02	0.17	0.051	0.8	<0.1	0.8	3.7	36
DEC 10...	55.8	0.18	<0.04	1.95	0.008	<0.02	<0.02	0.014	0.1	<0.1	0.1	3.2	7
JAN 22...	50.4	0.21	<0.04	3.82	0.009	E0.01	0.07	0.012	0.1	<0.1	<0.1	2.7	38
FEB 10...	46.1	<0.50	<0.04	3.46	0.021	<0.09	0.03	0.029	0.3	<0.1	0.3	3.4	15
MAR 04...	45.3	0.25	<0.04	2.57	0.095	<0.02	0.03	0.043	0.2	<0.1	0.2	4.2	71
APR 02...	37.9	0.27	<0.04	3.89	0.023	<0.02	0.12	0.024	0.6	<0.1	0.6	2.5	70
MAY 08...	32.5	0.63	<0.04	7.21	0.126	<0.02	0.16	0.088	1.3	<0.1	1.3	3.2	83
JUN 03...	39.1	0.35	<0.04	4.26	0.032	<0.02	0.08	0.025	0.7	<0.1	0.7	2.3	61
JUL 01...	44.9	0.37	<0.04	1.20	0.025	<0.02	0.09	0.058	0.6	<0.1	0.6	3.5	69
AUG 12...	29.4	0.84	<0.04	1.92	0.052	<0.02	0.09	0.068	0.6	<0.1	0.6	3.7	61
SEP 09...	30.6	0.44	<0.04	1.51	0.052	<0.02	0.06	0.117	0.4	<0.1	0.3	3.6	--

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Sus- pended sedi- ment concen- tration mg/L (80154)
OCT 10...	3
NOV 07...	10
DEC 10...	22
JAN 22...	14
FEB 10...	38
MAR 04...	3
APR 02...	17
MAY 08...	49
JUN 03...	22
JUL 01...	12
AUG 12...	20
SEP 09...	9

03357350 PLUM CREEK NEAR BAINBRIDGE, IN

LOCATION.--Lat 39°45'42", long 86°43'46", in SW¼SE¼ sec.3, T.15 N., R.3 W., Putnam County, Hydrologic Unit 05120203, (NORTH SALEM, IN quadrangle), 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 poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.21	0.60	0.56	13	e0.71	2.1	4.3	1.1	1.5	0.29	0.26	279
2	0.20	0.48	e0.49	8.0	e0.73	2.5	3.7	1.0	1.2	0.28	0.24	22
3	0.20	0.46	e0.45	6.0	6.8	1.9	3.3	0.90	1.4	0.24	0.22	10
4	0.26	0.46	e0.44	5.1	6.7	5.0	3.0	0.97	1.2	0.23	0.21	5.1
5	0.27	0.61	e0.44	4.7	3.7	21	2.5	14	1.2	91	0.18	2.7
6	0.26	1.1	e0.43	4.2	e1.9	7.5	2.0	6.3	1.6	51	0.17	1.4
7	0.24	0.75	e0.43	4.3	e1.5	8.3	2.2	6.5	1.7	7.3	0.15	0.87
8	0.24	0.65	e0.42	6.9	e1.3	20	1.8	4.8	1.2	24	0.14	0.68
9	0.24	0.62	e0.42	8.7	e1.2	11	1.7	6.2	0.52	59	0.13	0.57
10	0.23	9.6	0.49	5.6	e1.0	6.0	1.5	30	0.48	51	0.13	0.48
11	0.23	7.8	0.49	3.9	e0.98	4.5	1.5	50	0.54	9.0	0.13	0.42
12	0.24	3.9	0.49	e3.0	e0.94	4.1	1.3	12	0.80	5.6	0.13	0.38
13	0.25	2.7	0.49	e2.3	e0.91	8.0	1.1	7.4	20	3.3	0.11	0.35
14	0.25	2.1	0.49	e1.7	e0.99	7.0	1.0	6.3	12	2.2	0.10	0.35
15	0.25	1.7	0.47	e1.4	10	6.0	0.99	9.3	5.4	7.1	0.09	0.32
16	0.25	1.4	0.44	e1.2	3.5	5.7	0.99	6.1	3.3	4.5	0.07	0.28
17	0.25	1.2	0.41	e1.1	e1.9	5.1	1.3	4.9	2.0	2.1	0.07	0.26
18	0.24	0.98	0.98	e1.0	e1.5	4.3	1.1	4.4	1.3	2.1	0.07	0.26
19	0.32	1.1	16	e0.94	e1.4	4.2	0.95	3.9	1.0	1.0	0.07	0.37
20	0.26	0.99	12	e0.90	e4.0	4.0	1.3	3.4	0.80	0.61	0.07	0.48
21	0.25	1.1	6.4	e0.84	8.1	6.2	1.1	2.7	0.72	67	0.07	0.49
22	0.25	1.5	4.7	e0.81	27	5.2	0.97	2.3	0.64	29	0.07	2.7
23	0.25	1.4	3.7	e0.79	7.8	4.2	0.84	2.0	0.58	8.4	0.07	1.1
24	0.25	1.2	e2.7	e0.75	e3.5	3.7	0.83	1.8	0.53	4.6	0.07	0.68
25	0.41	0.96	e2.4	e0.75	e2.6	4.4	3.1	1.6	0.48	2.6	0.06	0.72
26	0.60	0.88	e2.1	e0.74	e2.3	5.6	3.2	1.4	0.48	1.4	0.02	1.9
27	0.34	0.81	e2.0	e0.73	e2.0	4.6	1.9	1.2	0.45	0.83	0.00	11
28	0.31	0.80	e1.9	e0.73	2.0	4.8	1.5	1.4	0.38	0.81	0.00	4.2
29	3.4	0.86	e1.9	e0.72	---	9.1	1.3	2.2	0.34	0.60	0.06	2.1
30	2.7	0.74	10	e0.72	---	6.1	1.1	1.4	0.31	0.37	0.02	1.1
31	0.97	---	32	e0.71	---	5.0	---	3.1	---	0.31	0.11	---
TOTAL	14.62	49.45	106.63	92.23	106.96	197.1	53.37	200.57	64.05	437.77	3.29	352.26
MEAN	0.47	1.65	3.44	2.98	3.82	6.36	1.78	6.47	2.13	14.1	0.11	11.7
MAX	3.4	9.6	32	13	27	21	4.3	50	20	91	0.26	279
MIN	0.20	0.46	0.41	0.71	0.71	1.9	0.83	0.90	0.31	0.23	0.00	0.26
CFSM	0.16	0.55	1.15	0.99	1.27	2.12	0.59	2.16	0.71	4.71	0.04	3.91
IN.	0.18	0.61	1.32	1.14	1.33	2.44	0.66	2.49	0.79	5.43	0.04	4.37

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 2003, BY WATER YEAR (WY)

MEAN	1.44	3.59	4.52	3.72	5.57	6.49	5.46	4.43	2.80	2.48	1.08	1.35
MAX	12.5	20.6	18.4	13.5	17.1	19.1	12.7	16.7	13.7	14.1	7.90	12.8
(WY)	(2002)	(1986)	(1991)	(1974)	(1971)	(1978)	(1996)	(2002)	(1998)	(2003)	(1979)	(1989)
MIN	0.000	0.000	0.000	0.000	0.55	1.46	0.92	0.14	0.007	0.019	0.001	0.000
(WY)	(1997)	(1998)	(1998)	(1977)	(1998)	(1981)	(1971)	(1976)	(1988)	(1988)	(1991)	(1988)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

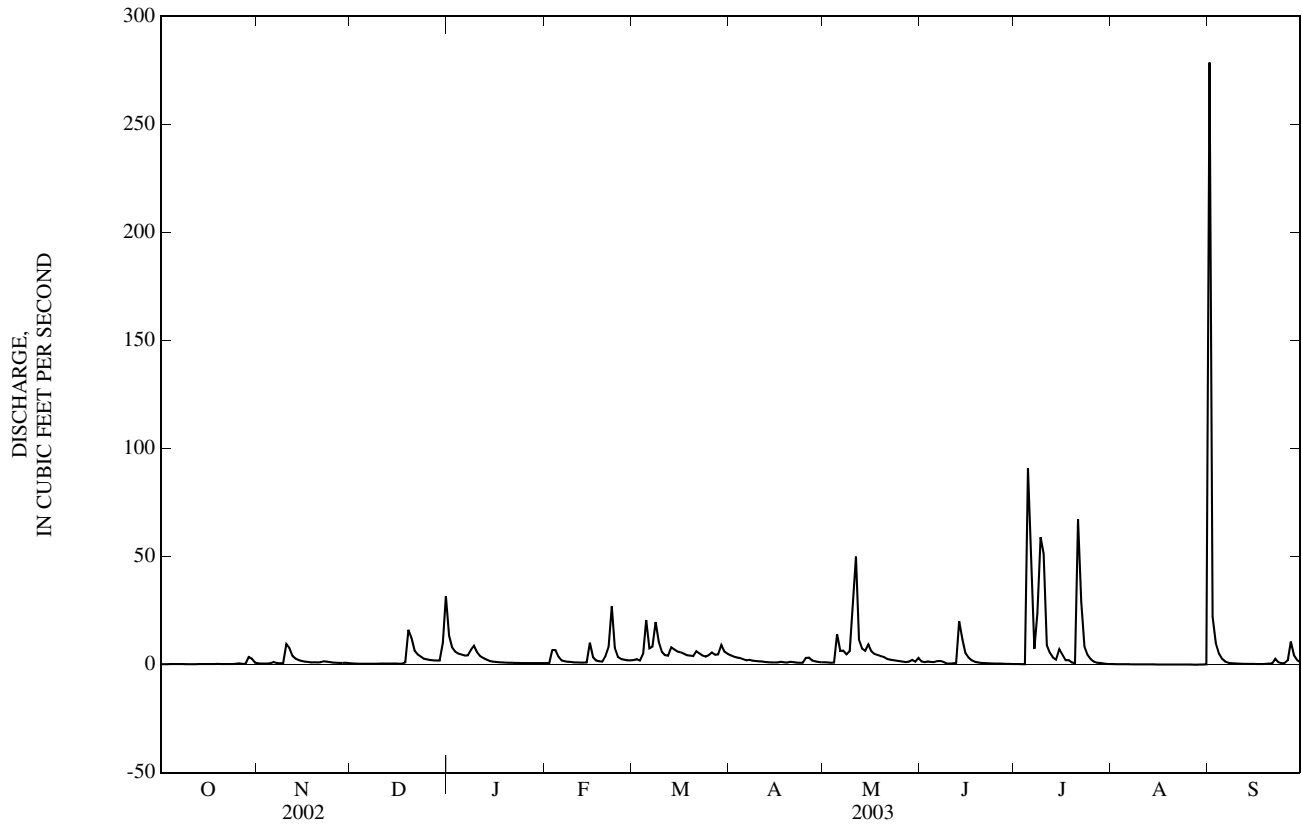
FOR 2003 WATER YEAR

WATER YEARS 1969 - 2003

ANNUAL TOTAL	1,611.49		1,678.30			
ANNUAL MEAN	4.42		4.60		3.56	
HIGHEST ANNUAL MEAN					5.83	
LOWEST ANNUAL MEAN					1.49	
HIGHEST DAILY MEAN	196	May 7	279	Sep 1	279	Sep 1, 2003
LOWEST DAILY MEAN	0.00	Sep 11	0.00	Aug 27	0.00	Aug 18, 1970
ANNUAL SEVEN-DAY MINIMUM	0.00	Sep 11	0.03	Aug 24	0.00	Aug 26, 1970
MAXIMUM PEAK FLOW			456	Jul 5	940	Sep 14, 1989
MAXIMUM PEAK STAGE			4.58	Jul 5	6.50	Sep 14, 1989
ANNUAL RUNOFF (CFSM)	1.47		1.53		1.19	
ANNUAL RUNOFF (INCHES)	19.98		20.81		16.12	
10 PERCENT EXCEEDS	8.2		8.0		7.2	
50 PERCENT EXCEEDS	0.98		1.2		0.98	
90 PERCENT EXCEEDS	0.10		0.24		0.01	

e Estimated

03357350 PLUM CREEK NEAR BAINBRIDGE, IN—Continued



03357500 BIG WALNUT CREEK NEAR REELSVILLE, IN

LOCATION.--Lat 39°32'11", long 86°58'35", in NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.28, T.13 N., R.5 W., Putnam County, Hydrologic Unit 05120203, (REELSVILLE, IN quadrangle), on left bank at downstream side of county highway bridge, 1.5 mi southwest of Reelsville, 3.8 mi southwest of Manhattan, and 4.1 mi upstream from Mill Creek.

DRAINAGE AREA.--326 mi².

PERIOD OF RECORD.--July 1949 to September 2002 (discharge). October 2002 to current year (stage only). 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.--Flow partly regulated by Soil Conservation Service control structures on tributaries to Little Walnut Creek beginning in 1971.

EXTREMES FOR PERIOD OF RECORD.--(October 2002 to current year) maximum gage height, 18.63 ft, June 28, 1957; minimum gage height unknown prior to 1988; (since 1988), minimum gage height, 1.62 ft, Oct. 5, 1991. (July 1949 to September 2002) maximum discharge, 30,700 ft³/s, June 28, 1957, gage height, 18.63 ft; minimum discharge, 1.4 ft³/s, Sept. 8, 1954.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 16.63 ft, Sept. 3; minimum gage height, 2.87 ft, Aug. 28.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.10	3.42	3.34	6.78	3.67	4.09	4.55	3.80	3.98	3.06	3.68	15.14
2	3.04	3.31	3.28	5.71	3.70	4.12	4.38	3.76	3.80	3.04	3.62	16.58
3	3.01	3.25	3.26	5.15	4.83	4.06	4.25	3.67	3.80	3.04	3.58	9.00
4	3.04	3.22	3.18	4.86	4.89	4.45	4.22	3.70	3.74	3.01	3.56	6.89
5	3.03	3.26	3.25	4.73	4.65	6.38	4.14	7.45	3.65	5.76	3.64	6.02
6	3.02	3.30	3.23	4.61	4.20	5.51	4.02	5.79	3.58	9.42	3.51	5.51
7	3.01	3.46	3.22	4.51	4.02	4.95	4.02	5.61	3.54	6.67	3.45	5.18
8	2.98	3.39	3.20	4.56	4.07	5.48	3.95	5.06	3.50	5.83	3.40	4.94
9	2.97	3.34	3.10	5.42	3.85	6.74	3.88	5.11	3.46	12.38	3.34	4.75
10	2.95	5.98	3.13	5.01	3.72	5.54	3.82	12.03	3.42	11.44	3.30	4.60
11	2.94	5.53	3.18	4.50	3.80	5.04	3.78	13.44	3.41	8.00	3.54	4.48
12	2.92	4.65	3.18	4.52	3.80	4.97	3.73	8.34	3.82	6.35	3.42	4.38
13	2.90	4.25	3.19	4.30	3.82	5.71	3.67	6.62	6.17	5.55	3.34	4.30
14	2.89	4.02	3.18	4.09	3.70	5.66	3.63	5.86	5.42	5.10	3.28	4.25
15	2.89	3.89	3.17	4.24	4.88	5.28	3.59	6.26	4.70	8.38	3.22	4.18
16	2.90	3.76	3.16	4.16	4.40	5.11	3.56	5.46	4.25	5.63	3.18	4.11
17	2.88	3.66	3.15	4.25	4.09	4.93	3.72	5.08	4.00	4.98	3.14	4.06
18	2.89	3.61	3.66	4.02	3.89	4.71	3.62	4.84	3.82	4.88	3.09	4.01
19	3.08	3.56	6.31	4.00	3.83	4.66	3.56	4.62	3.70	4.58	3.06	3.95
20	3.00	3.52	6.22	3.92	4.48	4.55	4.05	4.46	3.59	4.37	3.04	3.92
21	2.99	3.52	5.19	3.82	4.88	5.18	3.81	4.29	3.50	6.61	3.02	3.93
22	2.98	3.54	4.71	3.92	7.92	4.88	3.68	4.16	3.43	6.99	2.99	4.30
23	2.94	3.60	4.38	3.72	5.66	4.61	3.58	4.06	3.38	5.58	2.95	4.80
24	2.92	3.58	4.25	3.70	4.95	4.43	3.54	3.97	3.33	4.96	2.93	4.47
25	3.29	3.52	4.23	3.65	4.60	4.78	5.48	3.89	3.28	4.57	2.91	4.32
26	3.21	3.46	4.01	3.64	4.36	4.79	4.62	3.83	3.25	4.31	2.90	4.94
27	3.35	3.42	3.86	3.70	4.19	4.58	4.24	3.75	3.23	4.14	2.89	6.41
28	3.23	3.39	3.84	3.66	4.12	5.06	4.05	3.78	3.18	4.09	2.87	5.46
29	3.51	3.37	3.84	3.67	---	5.65	3.92	3.95	3.14	4.03	3.10	4.94
30	3.72	3.36	4.85	3.65	---	5.05	3.83	3.88	3.10	3.87	3.66	4.65
31	3.57	---	8.67	3.65	---	4.74	---	4.16	---	3.76	3.85	---
MEAN	3.07	3.70	3.95	4.33	4.39	5.02	3.96	5.31	3.74	5.63	3.27	5.62
MAX	3.72	5.98	8.67	6.78	7.92	6.74	5.48	13.44	6.17	12.38	3.85	16.58
MIN	2.88	3.22	3.10	3.64	3.67	4.06	3.54	3.67	3.10	3.01	2.87	3.92

WTR YR 2003 MEAN 4.33 MAX 16.58 MIN 2.87

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, (CATARACT, IN quadrangle), on right bank at downstream side of bridge on U.S. Highway 231, 3 mi east of Cataract, 5.7 mi south of Cloverdale, 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 good except for estimated daily discharges, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum instantaneous gage height may have occurred Dec. 30, 1990, during period of no gage height record.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

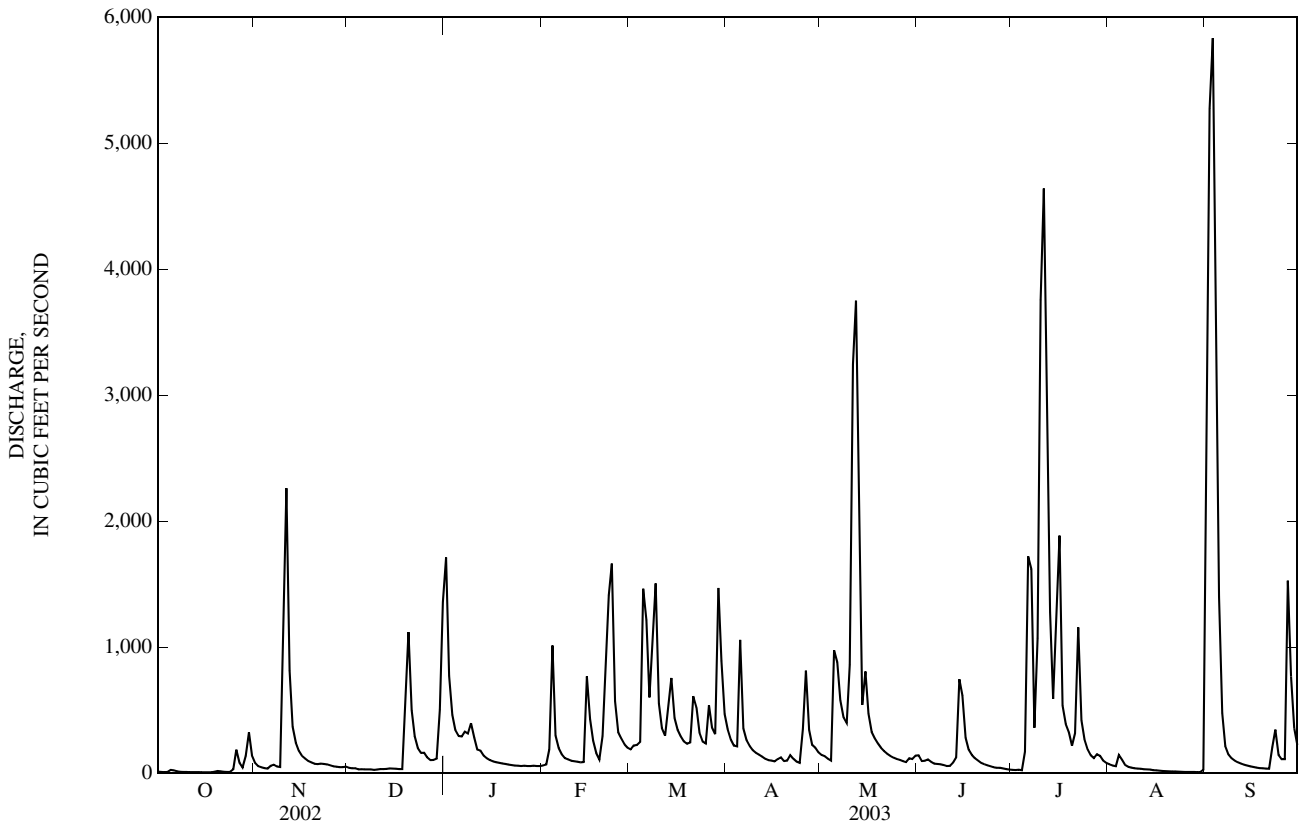
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	82	44	1,710	e62	191	350	146	143	27	70	2,610
2	12	57	40	774	e70	221	267	135	98	27	62	5,270
3	10	48	40	465	190	225	220	116	100	29	57	5,830
4	11	42	e31	342	1,010	250	214	101	110	24	146	4,250
5	27	38	e33	297	e300	1,460	1,060	976	91	171	108	1,400
6	23	59	e32	292	e200	1,220	356	882	76	1,720	66	478
7	17	68	e31	331	e150	602	262	579	74	1,620	52	217
8	13	55	e31	316	e120	1,020	218	444	72	362	45	150
9	11	50	e28	397	e110	1,510	184	399	65	1,070	40	120
10	10	1,450	31	284	e100	554	163	861	58	3,760	38	101
11	10	2,260	34	188	e96	359	149	3,240	59	4,640	36	87
12	10	814	35	e180	e92	299	134	3,750	86	3,470	33	77
13	9.5	370	35	e140	e87	551	115	1,650	126	1,280	31	69
14	9.2	243	39	e120	e90	756	105	544	745	590	30	62
15	8.7	179	38	e105	769	439	101	808	618	1,360	26	56
16	9.0	138	36	e95	e430	346	95	473	282	1,890	23	50
17	8.9	116	33	e88	e260	293	113	328	189	537	22	45
18	8.8	97	34	e84	e160	254	127	277	146	392	19	41
19	12	86	687	e78	e110	235	97	237	120	328	17	40
20	18	76	1,120	e74	296	245	102	201	101	220	16	38
21	16	74	500	e69	817	611	144	176	82	319	15	36
22	13	77	294	e66	1,410	523	115	154	72	1,160	14	208
23	11	75	200	e62	1,660	321	93	138	63	422	13	347
24	11	70	163	e60	573	253	82	124	55	270	12	146
25	31	63	163	e58	325	237	351	114	48	189	12	113
26	188	56	127	e60	276	540	814	106	44	143	11	113
27	84	52	105	e58	231	365	345	96	44	121	11	1,530
28	46	50	107	e58	205	311	225	88	39	151	11	768
29	139	49	116	e60	---	1,470	203	119	34	139	9.7	357
30	325	53	505	e58	---	892	168	114	30	102	10	226
31	141	---	1,360	e58	---	471	---	141	---	82	28	---
TOTAL	1,257.1	6,947	6,072	7,027	10,199	17,024	6,972	17,517	3,870	26,615	1,083.7	24,835
MEAN	40.6	232	196	227	364	549	232	565	129	859	35.0	828
MAX	325	2,260	1,360	1,710	1,660	1,510	1,060	3,750	745	4,640	146	5,830
MIN	8.7	38	28	58	62	191	82	88	30	24	9.7	36
CFSM	0.17	0.95	0.80	0.93	1.49	2.24	0.95	2.31	0.53	3.50	0.14	3.38
IN.	0.19	1.05	0.92	1.07	1.55	2.58	1.06	2.66	0.59	4.04	0.16	3.77

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 2003, BY WATER YEAR (WY)

MEAN	80.6	228	308	342	409	493	420	351	241	194	102	94.5
MAX	878	1,576	1,135	2,214	1,088	1,425	1,064	1,522	1,120	1,694	1,092	918
(WY)	(2002)	(1994)	(1958)	(1950)	(1971)	(1963)	(1964)	(1981)	(1957)	(1979)	(1993)	(1989)
MIN	2.88	4.19	4.05	6.55	41.1	108	74.5	35.1	11.2	6.84	3.72	0.91
(WY)	(1965)	(2000)	(1964)	(1977)	(1954)	(1994)	(1971)	(1954)	(1988)	(1954)	(1954)	(1954)

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1950 - 2003	
ANNUAL TOTAL	118,162.5		129,418.8			
ANNUAL MEAN	324		355		271	
HIGHEST ANNUAL MEAN					528	1979
LOWEST ANNUAL MEAN					37.3	1954
HIGHEST DAILY MEAN	6,050	May 14	5,830	Sep 3	11,500	Dec 30, 1990
LOWEST DAILY MEAN	3.8	Sep 12	8.7	Oct 15	0.10	Sep 7, 1954
ANNUAL SEVEN-DAY MINIMUM	4.1	Sep 9	9.2	Oct 12	0.20	Sep 2, 1954
MAXIMUM PEAK FLOW			5,950	Sep 3	12,200	Dec 30, 1990
MAXIMUM PEAK STAGE			17.62	Sep 3	22.58	Jun 24, 1960
ANNUAL RUNOFF (CF5M)	1.32		1.45		1.11	
ANNUAL RUNOFF (INCHES)	17.94		19.65		15.04	
10 PERCENT EXCEEDS	760		869		587	
50 PERCENT EXCEEDS	85		115		82	
90 PERCENT EXCEEDS	10		23		8.0	

e Estimated



03359000 MILL CREEK NEAR MANHATTAN, IN—Continued

WATER-QUALITY RECORDS

INSTRUMENTATION.--Temperature recorder.

PERIOD OF RECORD.--

WATER TEMPERATURE.--May 1993 to February 1996, July 1999 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 30.1°C, July 31, 1999; minimum, 1.1°C, Feb. 1-10, 12-14, 1994 and Dec. 10, 1995.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 27.8°C, Aug. 28, minimum, 2.0°C, Feb. 26-28, Mar. 2-3.

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	23.4	22.0	22.5	13.7	12.7	13.3	6.5	5.9	6.2	4.0	3.7	3.8
2	23.5	22.7	22.9	13.0	12.3	12.6	6.5	5.9	6.1	3.7	3.2	3.5
3	23.2	22.7	22.9	12.4	12.1	12.3	6.1	5.2	5.5	3.9	3.5	3.7
4	23.6	22.7	23.2	12.4	12.2	12.3	5.2	4.8	5.0	3.7	3.4	3.6
5	22.7	21.5	22.0	12.3	12.0	12.1	5.2	4.6	4.8	3.6	3.5	3.5
6	22.2	21.6	21.9	12.0	11.5	11.7	4.8	4.3	4.5	3.8	3.5	3.6
7	21.9	21.3	21.5	11.8	11.1	11.4	4.8	4.1	4.4	3.7	3.5	3.6
8	21.3	20.9	21.1	11.8	11.3	11.5	4.6	4.2	4.3	3.5	3.4	3.4
9	20.9	20.6	20.8	11.8	11.4	11.6	4.2	3.8	4.0	3.6	3.5	3.6
10	20.7	20.4	20.6	12.1	11.8	11.9	4.2	3.9	4.1	3.6	3.4	3.6
11	21.1	20.2	20.6	11.9	11.3	11.6	4.3	3.9	4.1	3.4	3.1	3.3
12	20.6	20.2	20.5	11.3	11.0	11.2	4.4	3.9	4.1	3.1	3.0	3.1
13	20.2	18.9	19.6	11.0	10.8	10.9	4.2	4.0	4.1	3.1	3.0	3.1
14	19.1	18.1	18.6	11.0	10.8	10.9	4.2	3.9	4.0	3.0	2.7	2.9
15	19.2	18.3	18.7	10.8	10.6	10.8	4.2	3.8	4.0	3.1	2.7	2.8
16	18.5	17.8	18.2	10.6	10.2	10.4	4.0	3.7	3.9	2.9	2.7	2.8
17	18.0	17.5	17.7	10.2	9.8	10.0	4.0	3.6	3.8	2.9	2.5	2.7
18	18.0	17.1	17.5	9.8	9.6	9.7	5.1	4.0	4.6	2.9	2.6	2.7
19	17.9	17.2	17.5	9.7	9.5	9.6	5.6	4.5	5.0	3.0	2.7	2.8
20	17.4	16.6	17.0	9.7	9.5	9.6	4.7	4.5	4.6	3.4	2.8	3.0
21	17.2	16.4	16.8	9.7	9.2	9.5	4.6	4.4	4.5	3.2	2.7	2.9
22	17.1	16.3	16.6	9.3	8.9	9.1	4.6	4.4	4.5	3.1	2.7	2.8
23	16.6	15.8	16.2	9.0	8.7	8.9	4.4	4.3	4.3	3.0	2.6	2.7
24	16.2	15.9	16.0	9.1	8.5	8.7	4.3	3.8	4.1	3.0	2.6	2.7
25	15.9	15.0	15.2	8.8	8.3	8.6	4.0	3.6	3.8	3.0	2.6	2.8
26	15.6	15.1	15.4	8.3	8.0	8.2	3.6	3.4	3.5	3.0	2.6	2.8
27	15.5	15.2	15.3	8.0	7.7	7.9	3.6	3.3	3.4	2.8	2.4	2.6
28	15.6	15.2	15.3	7.7	7.3	7.5	3.6	3.3	3.4	3.1	2.6	2.8
29	15.2	14.4	14.7	7.7	7.1	7.3	3.5	3.1	3.3	3.2	2.9	3.0
30	14.4	14.1	14.2	7.3	6.3	6.8	3.9	3.3	3.7	3.1	2.8	2.9
31	14.2	13.7	14.0	---	---	---	4.1	3.8	3.9	3.1	2.8	2.9
MONTH	23.6	13.7	18.5	13.7	6.3	10.3	6.5	3.1	4.3	4.0	2.4	3.1

03360000 EEL RIVER AT BOWLING GREEN, IN

LOCATION.--Lat 39°22'58", long 87°01'14", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.24, T.11 N., R.6 W., Clay County, Hydrologic Unit 05120203,(CENTER POINT, IN quadrangle), on left bank 500 ft downstream from bridge on State Highway 46 at Bowling Green, 0.2 mi downstream from Jordan Creek, 15 mi northwest of Spencer, and at mile 38.4.

DRAINAGE AREA.--830 mi².

PERIOD OF RECORD.--January 1931 to current year. Prior to October 1934, published as "near Centerpoint".

REVISED RECORDS.--WSP 893: 1935, 1937-39. WSP 973: 1937-38, 1939(M). WSP 1335: 1931(M). WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 548.02 ft above National Geodetic Vertical Datum of 1929, (levels by U.S. Army Corps of Engineers). See WSP 1725 for history of changes prior to Dec. 1, 1949.

REMARKS.--Records fair. Flow regulated by Cagles Mill Lake.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage, about 30.0 ft in 1875, present datum, from information by U.S. Army Corps of Engineers.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	119	508	186	3,310	553	1,270	1,160	551	1,720	157	1,780	4,030
2	117	206	191	1,880	328	1,320	1,210	533	1,650	153	1,740	13,300
3	119	175	184	1,220	356	1,290	1,650	485	1,580	148	1,710	13,500
4	117	169	179	984	1,020	1,310	1,710	399	1,420	145	1,710	7,180
5	118	230	174	1,090	1,010	2,150	1,780	1,490	698	142	1,690	1,920
6	120	240	169	1,140	1,260	2,290	1,340	2,170	488	1,980	1,650	1,300
7	169	186	160	1,290	1,150	1,760	1,250	1,660	386	2,560	1,650	986
8	225	239	159	1,430	713	1,870	1,210	1,300	358	1,250	1,780	798
9	230	234	151	1,630	372	2,670	1,050	1,140	295	1,620	1,740	828
10	198	939	147	1,860	367	2,570	593	2,020	272	5,460	1,700	898
11	165	2,140	150	1,640	396	1,880	558	7,460	267	8,430	1,690	1,350
12	139	1,210	152	1,400	394	1,630	533	8,500	335	2,960	1,680	1,710
13	114	1,230	163	1,000	388	1,770	468	3,440	392	1,550	1,590	1,870
14	100	e1,240	167	980	393	2,260	441	1,900	1,400	1,050	1,250	1,830
15	93	e1,230	223	530	860	2,020	427	1,540	1,120	1,890	609	1,790
16	92	e1,220	166	393	1,060	1,780	413	1,540	810	4,140	479	1,740
17	91	e1,210	150	429	751	1,680	429	1,150	1,040	1,400	245	1,700
18	90	e1,200	158	523	701	1,510	486	964	962	984	211	1,660
19	89	e1,190	912	881	919	900	433	908	778	869	207	1,630
20	95	e800	2,110	929	993	874	466	1,150	427	953	196	1,590
21	103	520	1,580	381	1,490	1,470	566	1,170	288	1,230	188	1,550
22	105	275	1,280	477	2,360	1,360	481	1,520	260	2,530	181	1,680
23	102	320	1,330	727	3,470	1,360	432	1,630	240	1,950	172	1,780
24	97	316	1,190	589	1,570	1,550	403	1,620	236	1,280	166	1,800
25	123	308	1,130	531	1,310	1,700	807	1,790	223	1,660	159	1,680
26	227	e300	824	453	1,430	2,120	1,560	1,760	211	1,860	154	1,640
27	338	286	480	381	1,350	1,730	935	1,710	203	1,740	150	2,630
28	208	278	389	420	1,280	1,260	973	1,670	195	1,220	146	2,490
29	307	254	377	432	---	2,170	1,200	1,700	171	1,300	142	2,100
30	384	195	568	446	---	1,760	747	1,710	162	1,690	154	1,490
31	591	---	1,770	597	---	1,350	---	1,690	---	1,820	215	---
TOTAL	5,185	18,848	16,969	29,973	28,244	52,634	25,711	58,270	18,587	56,121	27,134	80,450
MEAN	167	628	547	967	1,009	1,698	857	1,880	620	1,810	875	2,682
MAX	591	2,140	2,110	3,310	3,470	2,670	1,780	8,500	1,720	8,430	1,780	13,500
MIN	89	169	147	381	328	874	403	399	162	142	142	798
CFSM	0.20	0.76	0.66	1.16	1.22	2.05	1.03	2.26	0.75	2.18	1.05	3.23
IN.	0.23	0.84	0.76	1.34	1.27	2.36	1.15	2.61	0.83	2.52	1.22	3.61

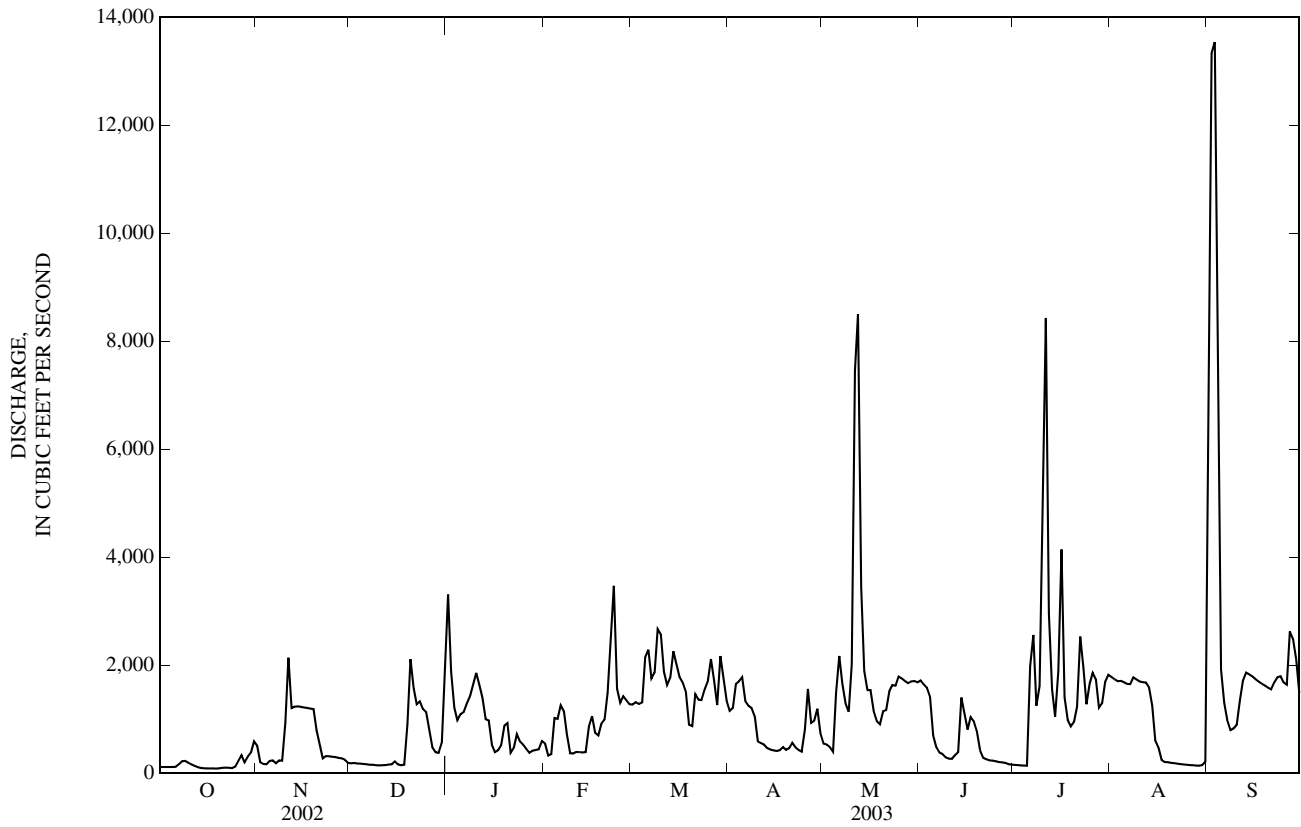
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2003, BY WATER YEAR (WY)

MEAN	302	588	894	1,213	1,299	1,547	1,597	1,250	889	611	328	330
MAX	1,838	3,076	2,960	7,212	3,249	3,843	4,120	5,090	4,077	2,746	2,656	2,682
(WY)	(2002)	(1986)	(1991)	(1950)	(1950)	(1938)	(1944)	(1943)	(1957)	(1987)	(1979)	(2003)
MIN	22.5	29.7	29.0	27.5	107	125	285	129	66.9	39.4	24.1	13.9
(WY)	(1941)	(1965)	(1964)	(1977)	(1934)	(1941)	(1971)	(1934)	(1988)	(1954)	(1936)	(1954)

03360000 EEL RIVER AT BOWLING GREEN, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1931 - 2003	
ANNUAL TOTAL	445,771		418,126			
ANNUAL MEAN	1,221		1,146		905	
HIGHEST ANNUAL MEAN					1,551	1950
LOWEST ANNUAL MEAN					161	1954
HIGHEST DAILY MEAN	12,600	May 14	13,500	Sep 3	28,700	Jun 29, 1957
LOWEST DAILY MEAN	65	Sep 18	89	Oct 19	11	Oct 7, 1954
ANNUAL SEVEN-DAY MINIMUM	67	Sep 13	93	Oct 14	12	Oct 2, 1954
MAXIMUM PEAK FLOW			15,700	Sep 2	34,000	Jan 4, 1950
MAXIMUM PEAK STAGE			20.77	Sep 2	23.53	Jan 4, 1950
ANNUAL RUNOFF (CF5M)	1.47		1.38		1.09	
ANNUAL RUNOFF (INCHES)	19.98		18.74		14.81	
10 PERCENT EXCEEDS	2,290		1,880		2,190	
50 PERCENT EXCEEDS	1,130		964		374	
90 PERCENT EXCEEDS	105		159		57	

e Estimated



03360500 WHITE RIVER AT NEWBERRY, IN

LOCATION.--Lat 38°55'39", long 87°00'41", in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.30, T.6 N., R.5 W., Greene County, Hydrologic Unit 05120202, (LYONS, IN quadrangle), on left bank, 0.4 mi upstream from bridge on State Highway 57 at Newberry, 2.0 mi downstream from Doans Creek, and at mile 112.4.

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. WDR IN-02-1: 1998, 1999 (P).

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 fair except for estimated daily discharges, which are poor. 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,310	1,980	1,260	10,700	1,610	5,160	12,400	3,850	4,200	1,510	4,300	4,980
2	1,190	1,730	1,200	13,300	1,680	5,190	9,900	3,410	4,320	1,480	4,070	13,700
3	1,100	1,420	1,160	13,800	1,780	5,210	7,590	3,220	4,130	1,500	3,890	18,900
4	1,090	1,220	1,130	12,200	2,350	5,130	6,840	3,460	3,910	1,530	3,770	23,800
5	1,110	1,160	1,120	9,240	3,230	7,160	6,490	9,020	3,780	1,430	4,000	35,500
6	1,060	1,190	1,100	7,270	3,750	9,540	7,370	14,900	3,160	1,460	4,800	47,500
7	1,180	1,220	1,060	6,220	4,080	10,200	6,610	14,500	2,750	7,060	4,630	45,900
8	1,120	1,250	1,070	5,670	3,880	9,490	5,690	14,400	2,520	12,100	4,370	36,800
9	1,120	1,210	1,050	5,310	3,310	9,900	5,290	14,800	2,360	13,400	4,140	22,800
10	1,070	1,870	1,020	5,020	2,680	11,000	5,000	12,900	2,220	17,800	3,870	9,790
11	998	4,910	1,030	5,250	2,360	12,700	4,470	16,300	2,290	21,800	3,680	6,730
12	926	7,030	1,040	5,450	2,230	13,000	4,030	19,300	3,040	24,500	3,750	6,030
13	896	5,190	1,110	5,200	2,120	12,200	3,710	21,600	3,080	28,500	4,000	5,670
14	835	4,040	1,610	4,400	2,060	11,500	3,450	24,700	5,040	32,700	3,860	5,340
15	806	3,580	1,550	3,740	3,060	12,600	3,230	27,300	7,200	34,300	3,470	4,950
16	782	3,130	1,440	3,220	5,190	14,000	3,040	27,700	7,300	33,300	2,860	4,650
17	762	2,810	1,420	2,690	4,560	14,500	2,910	25,100	6,260	28,000	2,610	4,370
18	747	2,590	1,340	2,340	3,490	13,600	2,990	17,700	5,650	18,500	2,350	4,130
19	796	2,440	3,320	e2,160	3,120	10,900	3,310	10,900	4,910	10,400	2,260	3,940
20	801	2,280	6,840	e2,000	3,240	9,010	3,180	8,320	4,110	8,000	2,230	3,750
21	799	2,080	7,590	e1,900	4,390	8,220	3,490	7,240	3,260	7,070	2,040	3,600
22	862	1,890	6,670	e1,800	8,240	9,200	3,520	6,390	2,710	10,500	1,900	3,720
23	856	1,660	5,610	e1,660	15,500	9,190	3,180	6,000	2,370	10,200	1,790	4,070
24	823	1,570	4,880	e1,500	15,900	8,970	2,870	5,590	2,150	8,580	1,700	4,780
25	928	1,550	4,210	e1,450	11,600	8,470	3,620	5,180	1,980	6,470	1,630	4,790
26	1,290	1,490	3,750	e1,550	7,780	7,860	7,150	4,970	1,850	5,710	1,570	4,620
27	1,330	1,480	3,320	e1,460	6,480	8,000	7,530	4,660	1,740	5,400	1,530	6,830
28	1,490	1,430	2,800	e1,350	5,630	7,410	5,760	4,420	1,670	5,400	1,490	9,960
29	1,940	1,380	2,620	e1,500	---	10,700	4,940	4,280	1,650	5,120	1,530	10,500
30	2,460	1,350	2,860	e1,630	---	12,600	4,610	4,330	1,570	4,640	1,730	11,200
31	2,070	---	4,970	1,570	---	13,200	---	4,490	---	4,460	2,380	---
TOTAL	34,547	68,130	81,150	142,550	135,300	305,810	154,170	350,930	103,180	372,820	92,200	373,300
MEAN	1,114	2,271	2,618	4,598	4,832	9,865	5,139	11,320	3,439	12,030	2,974	12,440
MAX	2,460	7,030	7,590	13,800	15,900	14,500	12,400	27,700	7,300	34,300	4,800	47,500
MIN	747	1,160	1,020	1,350	1,610	5,130	2,870	3,220	1,570	1,430	1,490	3,600
CFSM	0.24	0.48	0.56	0.98	1.03	2.10	1.10	2.41	0.73	2.57	0.63	2.65
IN.	0.27	0.54	0.64	1.13	1.07	2.43	1.22	2.78	0.82	2.96	0.73	2.96

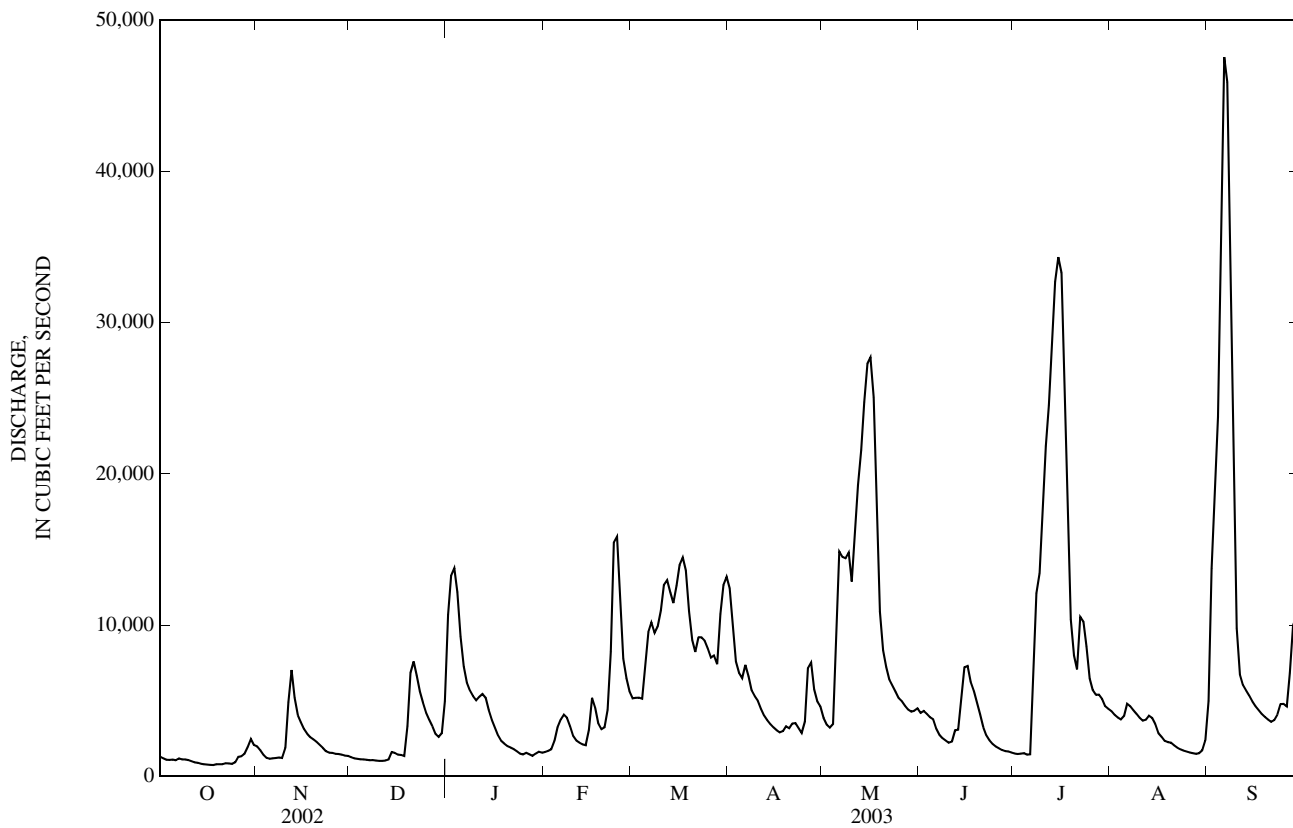
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2003, BY WATER YEAR (WY)

MEAN	1,628	3,058	4,596	6,673	6,966	8,635	8,831	7,112	4,707	3,357	1,970	1,740
MAX	11,310	24,180	16,780	36,920	21,870	19,150	20,340	25,090	19,350	13,270	15,900	13,510
(WY)	(2002)	(1994)	(1958)	(1950)	(1950)	(1963)	(1944)	(1943)	(1998)	(1979)	(1979)	(1989)
MIN	259	408	386	405	705	686	1,539	677	771	536	308	317
(WY)	(1941)	(1945)	(1945)	(1945)	(1931)	(1941)	(1941)	(1941)	(1988)	(1936)	(1941)	(1940)

03360500 WHITE RIVER AT NEWBERRY, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1929 - 2003	
ANNUAL TOTAL	2,375,546		2,214,087		4,928	
ANNUAL MEAN	6,508		6,066		8,752	
HIGHEST ANNUAL MEAN					958	
LOWEST ANNUAL MEAN					1941	
HIGHEST DAILY MEAN	58,600	May 17	47,500	Sep 6	103,000	Nov 18, 1993
LOWEST DAILY MEAN	537	Sep 14	747	Oct 18	200	Oct 1, 1941
ANNUAL SEVEN-DAY MINIMUM	574	Sep 8	785	Oct 15	211	Sep 26, 1941
MAXIMUM PEAK FLOW			49,400	Sep 6	105,000	Nov 18, 1993
MAXIMUM PEAK STAGE			22.93	Sep 6	25.87	Nov 18, 1993
ANNUAL RUNOFF (CFSM)	1.39		1.29		1.05	
ANNUAL RUNOFF (INCHES)	18.85		17.57		14.28	
10 PERCENT EXCEEDS	16,600		13,300		11,600	
50 PERCENT EXCEEDS	3,570		3,890		2,580	
90 PERCENT EXCEEDS	836		1,190		634	

e Estimated



03361000 BIG BLUE RIVER AT CARTHAGE, IN

LOCATION.--Lat 39°44'38", long 85°34'33", in SW¹/₄SW¹/₄ sec.18, T.15 N., R.9 E., Rush County, Hydrologic Unit 05120204, (CARTHAGE, IN quadrangle), on right bank 300 ft upstream from highway bridge, 0.5 mi northwest of Carthage, 2.2 mi downstream from Three Mile Creek, and at mile 50.7.

DRAINAGE AREA.--184 mi².

PERIOD OF RECORD.--October 1950 to current year. Prior to October 1961, published as Blue River at Carthage.

REVISED RECORDS.--WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 859.33 ft above National Geodetic Vertical Datum of 1929. Prior to July 19, 1951, nonrecording gage at site 300 ft downstream at same datum.

REMARKS.--Records good. Flow partly regulated by Big Blue River Conservancy District control structures on tributaries to Big Blue River beginning in 1969.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	74	65	607	78	126	260	102	120	78	114	1,550
2	61	69	65	554	78	129	222	134	111	78	128	3,870
3	58	68	62	349	89	124	197	114	125	75	128	1,740
4	63	68	61	260	272	125	185	105	124	72	117	672
5	74	71	62	215	183	329	344	404	113	1,580	109	475
6	61	81	60	183	137	452	263	352	105	1,040	100	388
7	59	72	59	160	119	303	248	456	105	845	94	332
8	57	71	60	159	106	362	257	336	103	594	90	285
9	57	68	59	266	101	1,050	219	285	101	1,660	101	245
10	57	127	59	238	98	568	201	769	96	2,100	169	208
11	56	211	64	165	93	404	183	2,060	102	859	139	177
12	56	125	63	145	89	392	166	1,100	122	594	145	153
13	56	105	63	130	e88	786	151	564	191	450	142	139
14	55	93	70	122	85	820	144	392	571	369	109	131
15	55	87	69	116	90	563	141	443	374	336	99	133
16	56	84	67	e114	80	485	136	349	247	317	92	122
17	56	79	67	e108	83	416	137	291	183	263	94	112
18	55	75	81	e104	83	351	130	251	155	247	87	107
19	68	73	249	e98	81	320	122	221	140	221	83	105
20	62	71	430	e96	79	320	121	201	126	198	79	101
21	60	72	270	94	81	468	125	181	115	306	76	97
22	60	81	177	93	171	429	118	166	108	378	74	188
23	57	79	136	93	483	322	111	156	104	310	72	203
24	57	76	119	e92	340	267	108	148	98	216	68	147
25	89	75	118	e90	217	244	117	141	95	172	67	129
26	102	73	103	e84	177	324	122	134	92	156	66	120
27	76	71	93	e84	152	267	107	127	91	149	81	571
28	70	69	90	e83	137	233	104	126	86	154	75	426
29	83	68	89	e81	---	506	108	137	84	141	75	300
30	89	67	148	e78	---	406	103	122	81	126	165	225
31	79	---	435	77	---	309	---	136	---	116	124	---
TOTAL	2,008	2,503	3,613	5,138	3,870	12,200	4,950	10,503	4,268	14,200	3,162	13,451
MEAN	64.8	83.4	117	166	138	394	165	339	142	458	102	448
MAX	102	211	435	607	483	1,050	344	2,060	571	2,100	169	3,870
MIN	55	67	59	77	78	124	103	102	81	72	66	97
CFSM	0.35	0.45	0.63	0.90	0.75	2.14	0.90	1.84	0.77	2.49	0.55	2.44
IN.	0.41	0.51	0.73	1.04	0.78	2.47	1.00	2.12	0.86	2.87	0.64	2.72

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2003, BY WATER YEAR (WY)

	MEAN	MAX	MIN	(WY)	MEAN	MAX	MIN	(WY)	MEAN	MAX	MIN	(WY)
	98.2	579	34.2	(1987)	162	925	38.6	(1994)	211	702	33.2	(1991)
	211	702	33.2	(1991)	227	619	27.9	(1959)	282	741	59.6	(1951)
	227	619	27.9	(1959)	326	967	84.2	(1963)	326	829	97.8	(1964)
	326	967	84.2	(1963)	265	916	81.5	(1996)	265	916	48.1	(1958)
	265	916	48.1	(1996)	213	848	32.5	(1958)	213	848	30.5	(1979)
	213	848	30.5	(1979)	157	581	30.5	(1979)	157	581	30.5	(1979)
	157	581	30.5	(1979)	102	649	24.4	(2003)	102	649	24.4	(2003)
	102	649	24.4	(2003)	84.0	448	24.4	(2003)	84.0	448	24.4	(2003)

SUMMARY STATISTICS

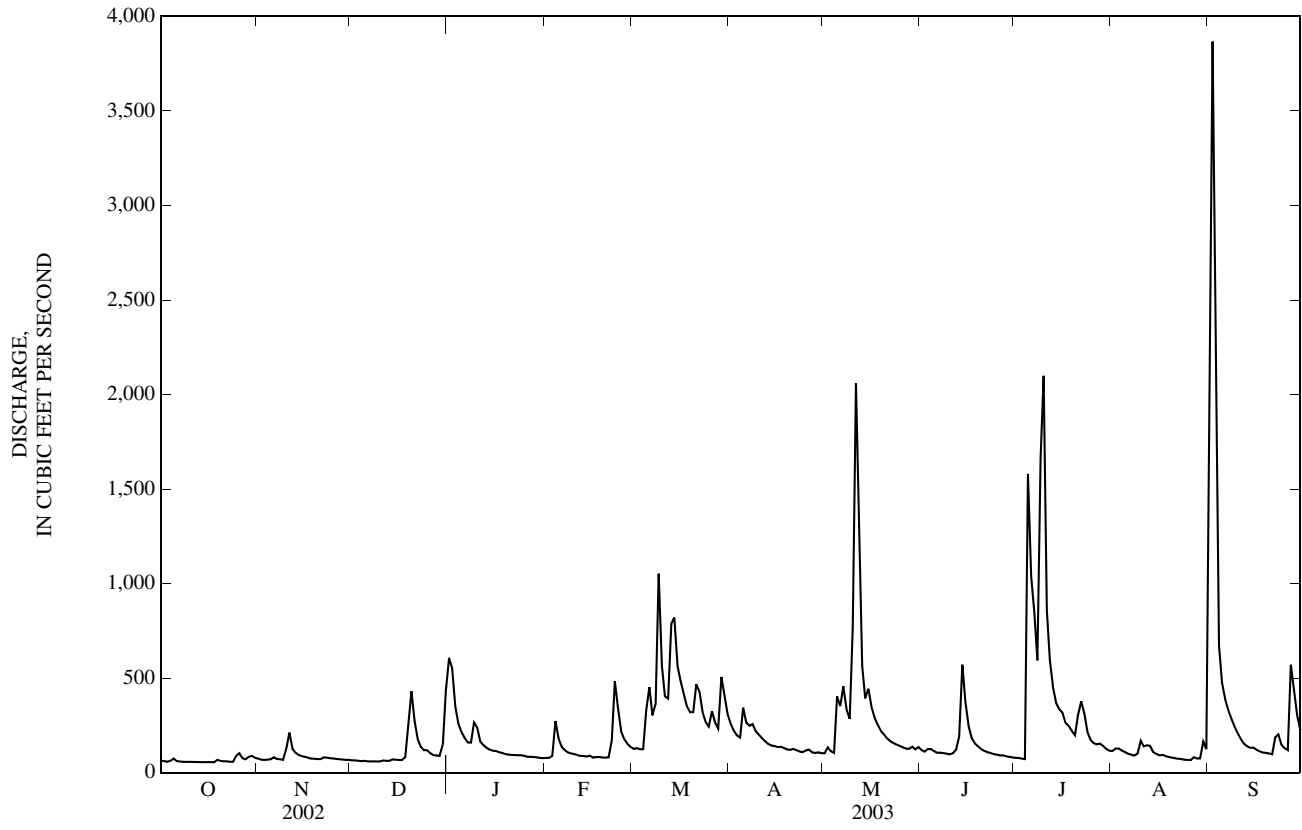
FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1951 - 2003

ANNUAL TOTAL	81,731	79,866	
ANNUAL MEAN	224	219	204
HIGHEST ANNUAL MEAN			324
LOWEST ANNUAL MEAN			78.8
HIGHEST DAILY MEAN	3,540	May 13	6,900
LOWEST DAILY MEAN	43	Sep 10	17
ANNUAL SEVEN-DAY MINIMUM	44	Sep 8	19
MAXIMUM PEAK FLOW			12,900
MAXIMUM PEAK STAGE			14.62
ANNUAL RUNOFF (CFSM)	1.22	1.19	1.11
ANNUAL RUNOFF (INCHES)	16.52	16.15	15.06
10 PERCENT EXCEEDS	451	429	406
50 PERCENT EXCEEDS	127	122	116
90 PERCENT EXCEEDS	58	67	51

03361000 BIG BLUE RIVER AT CARTHAGE, IN—Continued



03361500 BIG BLUE RIVER AT SHELBYVILLE, IN

LOCATION.--Lat 39°31'45", long 85°46'55", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.31, T.13 N., R.7 E., Shelby County, Hydrologic Unit 05120204, (SHELBYVILLE, IN quadrangle), 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 mi².

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.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	90	122	113	1,560	e170	392	632	274	316	186	243	1,080
2	89	113	109	1,750	e173	410	548	331	282	182	238	4,460
3	87	108	108	1,120	e174	421	488	348	285	175	296	6,270
4	94	106	105	787	444	416	459	308	298	167	274	3,220
5	99	109	104	630	506	862	657	1,260	280	2,070	261	1,140
6	98	110	105	546	395	1,370	657	1,470	259	4,570	248	803
7	89	114	96	490	341	1,010	549	1,090	252	2,440	226	624
8	86	108	107	473	285	1,020	547	1,090	249	1,550	206	514
9	85	105	99	581	e270	2,720	499	798	243	1,710	195	439
10	85	183	101	630	e260	1,930	463	1,080	232	3,410	230	384
11	85	450	103	494	252	1,210	434	3,760	237	3,440	265	337
12	83	323	105	382	235	1,010	407	3,860	338	1,520	278	299
13	82	240	108	e340	230	1,260	374	1,780	524	1,060	252	272
14	81	200	114	e312	244	2,230	351	1,070	2,080	785	224	252
15	81	175	124	e281	286	1,420	342	1,110	1,640	634	198	246
16	81	160	124	e268	227	1,160	335	1,010	1,000	605	186	233
17	81	150	123	e256	204	985	356	820	737	499	177	217
18	81	138	129	e243	248	821	359	678	549	444	174	203
19	87	132	403	e236	237	731	326	586	451	402	162	195
20	92	128	1,070	e230	224	766	316	526	383	353	156	190
21	88	126	792	e220	232	857	317	475	333	488	151	183
22	86	129	506	e212	598	1,040	306	433	301	797	146	217
23	86	133	368	e203	1,540	779	288	405	279	615	141	339
24	84	132	302	e197	1,130	643	276	380	259	487	135	292
25	107	127	281	e193	736	570	301	360	241	392	131	247
26	155	125	242	e190	577	590	362	342	230	339	128	235
27	139	121	209	e187	492	590	318	321	224	311	129	731
28	114	122	195	e180	432	534	291	314	211	354	145	1,000
29	127	e120	192	e180	---	967	287	334	199	317	140	645
30	143	115	314	e178	---	1,070	282	313	189	283	165	473
31	137	---	880	e173	---	764	---	332	---	260	225	---
TOTAL	3,002	4,524	7,731	13,722	11,142	30,548	12,127	27,258	13,101	30,845	6,125	25,740
MEAN	96.8	151	249	443	398	985	404	879	437	995	198	858
MAX	155	450	1,070	1,750	1,540	2,720	657	3,860	2,080	4,570	296	6,270
MIN	81	105	96	173	170	392	276	274	189	167	128	183
CFSM	0.23	0.36	0.59	1.05	0.95	2.34	0.96	2.09	1.04	2.36	0.47	2.04
IN.	0.27	0.40	0.68	1.21	0.98	2.70	1.07	2.41	1.16	2.73	0.54	2.27

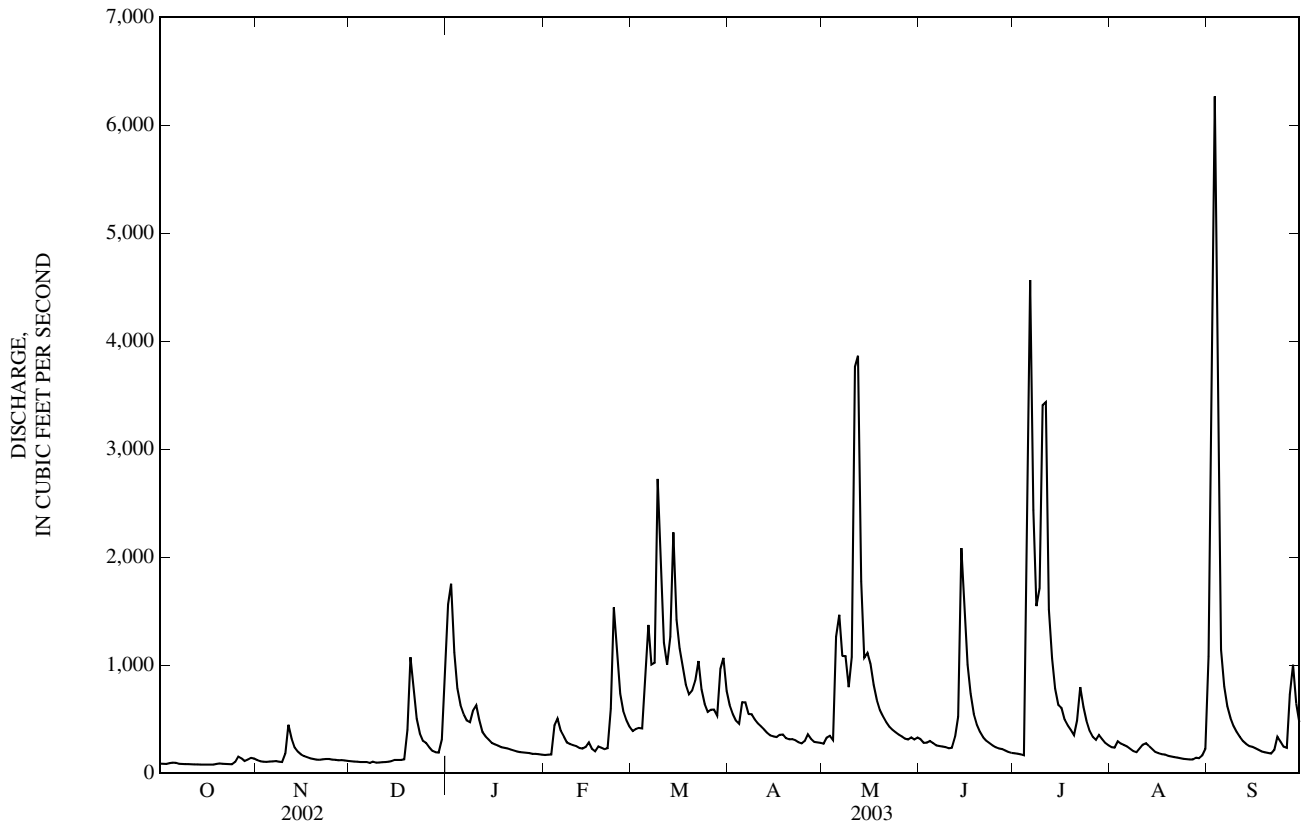
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 2003, BY WATER YEAR (WY)

MEAN	180	345	478	620	694	793	782	620	474	331	195	156
MAX	1,199	2,114	1,575	4,319	2,208	1,970	1,973	2,605	1,729	1,363	1,404	953
(WY)	(1987)	(1994)	(1967)	(1950)	(1950)	(1963)	(1964)	(1996)	(1998)	(1979)	(1979)	(1989)
MIN	41.7	52.5	52.3	38.3	92.0	204	183	149	81.2	56.1	46.4	43.1
(WY)	(1964)	(1954)	(1964)	(1977)	(1964)	(1957)	(1971)	(1976)	(1988)	(1954)	(1988)	(1999)

03361500 BIG BLUE RIVER AT SHELBYVILLE, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1944 - 2003	
ANNUAL TOTAL	188,698		185,865		471	
ANNUAL MEAN	517		509		166	
HIGHEST ANNUAL MEAN					908	1950
LOWEST ANNUAL MEAN					166	1954
HIGHEST DAILY MEAN	8,320	May 14	6,270	Sep 3	13,800	Mar 5, 1963
LOWEST DAILY MEAN	67	Sep 14	81	Oct 14	27	Jan 18, 1977
ANNUAL SEVEN-DAY MINIMUM	69	Sep 12	81	Oct 12	32	Jan 16, 1977
MAXIMUM PEAK FLOW			6,590	Sep 3	13,800	Nov 15, 1993
MAXIMUM PEAK STAGE			13.77	Sep 3	18.41	Nov 15, 1993
ANNUAL RUNOFF (CF5M)	1.23		1.21		1.12	
ANNUAL RUNOFF (INCHES)	16.67		16.42		15.20	
10 PERCENT EXCEEDS	1,090		1,080		1,010	
50 PERCENT EXCEEDS	274		285		241	
90 PERCENT EXCEEDS	89		108		75	

e Estimated



03361638 LEARY-WEBER DITCH AT MOHAWK, IN

LOCATION.--Lat 39°50'33", long 85°49'30", in NW¼SE¼ sec.11, T.16 N., R.6 E., Hancock County, Hydrologic Unit 05120204, (ACTON, IN quadrangle), 60 ft upstream of bridge on County Road 400N, 0.33 mi upstream of Sugar Creek, 0.70 mi east of Mohawk, and 3.06 mi southwest of Maxwell.

DRAINAGE AREA.--2.4 mi².

PERIOD OF RECORD.--July 2002 to current year.

GAGE.--Water-stage recorder. Datum of gage is 850.00 ft from topographic map.

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

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	25	e0.21	e0.50	e3.3	1.1	0.33	0.21	0.27	31
2	0.00	0.00	0.00	15	e0.35	e0.60	e2.6	1.8	0.32	0.20	0.23	38
3	0.00	0.00	0.00	8.1	e0.70	e0.90	2.1	1.2	0.53	0.17	0.19	19
4	0.00	0.00	0.00	5.5	e2.3	e1.4	1.9	1.1	0.41	0.14	0.17	5.4
5	0.00	0.00	0.00	4.4	e1.3	11	5.2	21	0.27	109	0.13	1.9
6	0.00	0.00	0.00	3.4	e0.80	7.6	2.8	8.3	0.26	62	0.06	0.87
7	0.00	0.00	0.00	3.8	e0.60	4.3	2.6	9.0	0.32	37	0.04	0.42
8	0.00	0.00	0.00	7.3	e0.40	22	2.3	4.9	0.31	17	0.02	0.25
9	0.00	0.00	0.00	9.3	e0.26	29	2.0	4.2	0.21	38	0.01	0.14
10	0.00	4.3	0.00	5.2	e0.21	13	1.8	25	0.20	50	0.00	0.08
11	0.00	5.1	0.00	3.6	e0.17	10	1.6	32	0.26	23	0.00	0.04
12	0.00	1.3	0.00	e2.4	e0.13	10	1.3	13	0.68	15	0.00	0.02
13	0.00	0.54	0.00	e1.9	e0.11	23	0.95	6.1	1.5	7.0	0.00	0.01
14	0.00	0.25	0.00	e1.5	e0.09	15	0.93	3.8	5.7	3.8	0.00	0.02
15	0.00	0.11	0.00	e1.2	e0.07	11	0.97	3.1	4.7	4.2	0.00	0.02
16	0.00	0.02	0.31	e1.0	e0.06	8.4	0.98	2.2	2.5	3.5	0.00	0.00
17	0.00	0.00	0.27	e0.78	e0.06	5.9	1.1	1.9	1.8	2.2	0.00	0.00
18	0.00	0.00	1.7	e0.60	e0.06	4.3	0.95	1.6	1.4	1.9	0.00	0.00
19	0.00	0.00	13	e0.50	e0.05	4.4	0.84	1.3	1.2	1.5	0.00	0.00
20	0.00	0.00	13	e0.44	e0.05	e4.6	0.99	1.2	0.83	1.2	0.00	0.00
21	0.00	0.00	4.0	e0.38	e0.10	e9.9	1.3	0.95	0.69	3.5	0.00	0.00
22	0.00	0.00	2.0	e0.33	e13	e6.6	0.96	0.90	0.60	2.6	0.00	0.51
23	0.00	0.00	0.99	e0.29	e23	e4.4	0.72	0.84	0.53	1.6	0.00	0.68
24	0.00	0.00	0.79	e0.26	e4.0	e3.4	0.71	0.82	0.42	1.1	0.00	0.27
25	0.00	0.00	0.49	e0.23	e2.4	e2.7	2.0	0.72	0.39	0.83	0.00	0.18
26	0.00	0.00	0.08	e0.21	e1.6	e3.3	2.8	0.58	0.47	0.68	0.00	0.15
27	0.00	0.00	0.09	e0.19	e1.1	e3.4	1.6	0.51	0.35	0.72	0.00	10
28	0.00	0.00	0.11	e0.17	e0.70	e2.6	1.3	0.61	0.28	0.75	0.00	3.7
29	0.00	0.00	0.06	e0.16	---	e6.8	1.1	0.62	0.23	0.52	0.00	1.8
30	0.00	0.00	10	e0.16	---	e4.6	0.99	0.49	0.19	0.38	0.00	1.2
31	0.00	---	23	e0.18	---	e4.4	---	0.69	---	0.32	0.00	---
TOTAL	0.00	11.62	69.89	103.48	53.88	239.00	50.69	151.53	27.88	390.02	1.12	115.66
MEAN	0.000	0.39	2.25	3.34	1.92	7.71	1.69	4.89	0.93	12.6	0.036	3.86
MAX	0.00	5.1	23	25	23	29	5.2	32	5.7	109	0.27	38
MIN	0.00	0.00	0.00	0.16	0.05	0.50	0.71	0.49	0.19	0.14	0.00	0.00
CFSM	0.00	0.14	0.81	1.20	0.69	2.76	0.61	1.75	0.33	4.51	0.01	1.38
IN.	0.00	0.15	0.93	1.38	0.72	3.19	0.68	2.02	0.37	5.20	0.01	1.54

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2002 - 2003, BY WATER YEAR (WY)

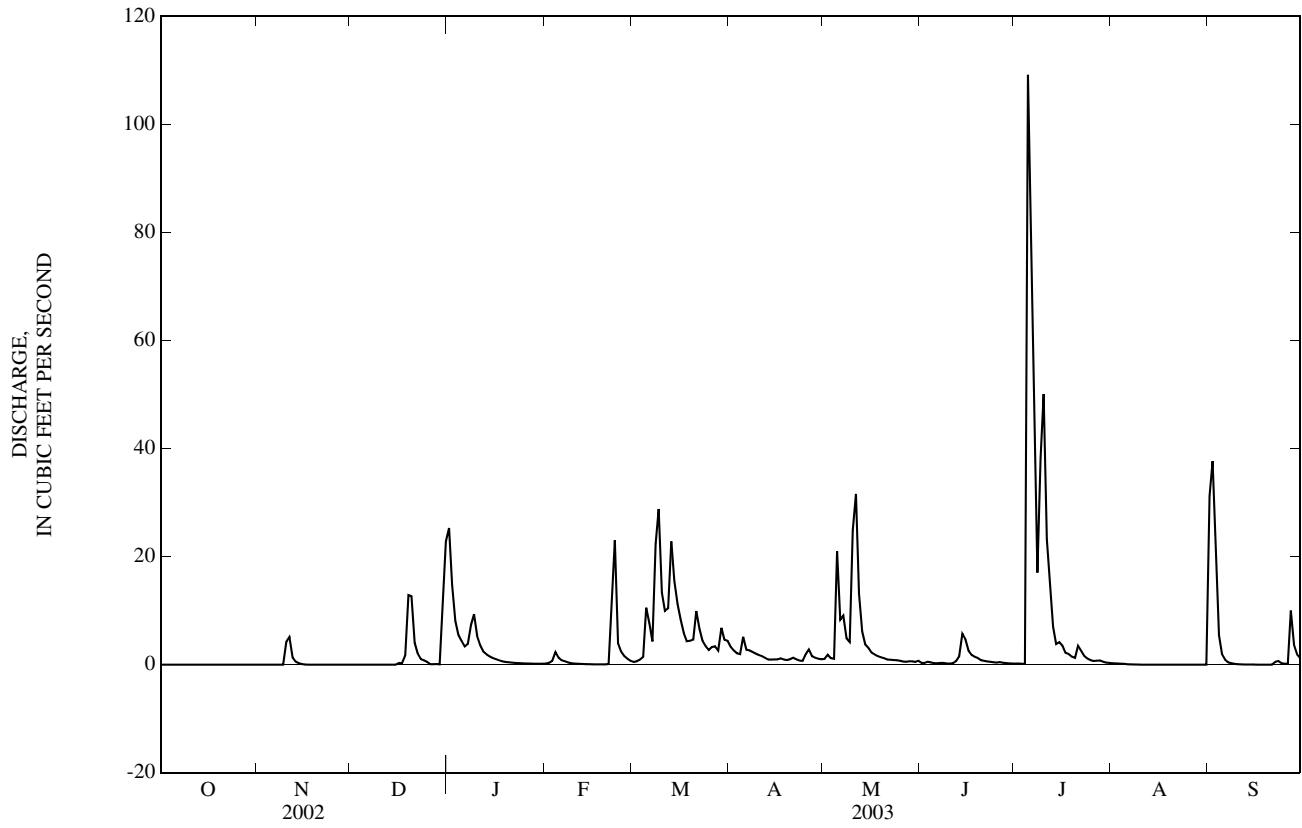
MEAN	0.000	0.39	2.25	3.34	1.92	7.71	1.69	4.89	0.93	7.14	0.018	1.93
MAX	0.000	0.39	2.25	3.34	1.92	7.71	1.69	4.89	0.93	12.6	0.036	3.86
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)
MIN	0.000	0.39	2.25	3.34	1.92	7.71	1.69	4.89	0.93	1.69	0.001	0.000
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2002)	(2002)	(2002)

SUMMARY STATISTICS

	FOR 2003 WATER YEAR		WATER YEARS 2002 - 2003	
ANNUAL TOTAL	14.77			
ANNUAL MEAN	3.33		3.33	
HIGHEST ANNUAL MEAN			3.33	
LOWEST ANNUAL MEAN			3.33	
HIGHEST DAILY MEAN	109	Jul 5	109	Jul 5, 2003
LOWEST DAILY MEAN	0.00	Oct 1	0.00	Aug 2, 2002
ANNUAL SEVEN-DAY MINIMUM	0.00	Oct 1	0.00	Aug 2, 2002
MAXIMUM PEAK FLOW	230	Jul 5	230	Jul 5, 2003
MAXIMUM PEAK STAGE	6.93	Jul 5	6.93	Jul 5, 2003
ANNUAL RUNOFF (CFSM)	0.000		0.000	
ANNUAL RUNOFF (INCHES)	0.00		0.00	
10 PERCENT EXCEEDS	8.6		8.6	
50 PERCENT EXCEEDS	0.51		0.51	
90 PERCENT EXCEEDS	0.00		0.00	

e Estimated

03361638 LEARY-WEBER DITCH AT MOHAWK, IN—Continued



[(National Water-Quality Assessment Program), White River Basin, Miami River Basin Study Unit]

WATER-QUALITY RECORDS

These data described in the following table were collected and analyzed as part of the National Water Quality Assessment Program (NAWQA) in the White River Basin, Miami River Basin (WHMI) study units. The objectives of the NAWQA program are to broadly characterize the water-quality of the Nation's streams and aquifers in relation to human and natural factors. This project is one of 42 river basin and aquifer assessment projects being implemented across the nation on a staggered timeline. During the second decade of sampling, 14 of these projects will be actively collecting data. The period of high-intensity data collection for the WHMI project is in water years 2001-2004.

Water quality data from Leary Weber Ditch at Mohawk, IN are being reported as part of the NAWQA Agricultural Chemical Transport topical study. The key aspect of this study is the investigation of the sources, transport, and fate of selected agricultural chemicals in a variety of agricultural settings across the Nation. The final objective is to interpret study results as to the implications for managing the water and water-quality impacts of agricultural systems. Beginning in October 2002, the WHMI is one of five NAWQA study units engaged in research of selected agricultural settings.

(- , no data; <, concentration or value reported is less than that indicated; E, estimated value;
K, value is estimated from a non-ideal colony count; M, presence verified, not quantified)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unfltrd uS/cm 25 degC (00095)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Residue water, fltrd, sum of constituents mg/L (70301)
APR													
17...	1045	1.2	8.1	524	69.5	22.8	0.84	6.91	26.7	0.15	1.39	16.3	299
25...	1000	0.95	--	--	--	--	--	--	--	--	--	--	--
MAY													
05-06	0145	--	7.9	460	57.1	17.7	1.19	4.07	18.2	0.24	7.67	13.1	258
05...	0245	19	7.7	503	61.5	19.4	1.37	6.79	--	--	7.01	--	--
05...	0445	26	7.9	464	55.3	16.6	1.22	3.51	18.8	0.17	7.19	13.3	262
05...	0645	33	8.9	425	52.5	16.0	1.43	3.49	18.2	0.23	7.42	12.5	239
06...	0145	12	7.8	496	56.4	17.5	0.88	4.21	21.2	0.24	7.11	14.4	312
06...	1345	7.4	8.2	517	65.3	20.1	0.82	4.28	19.8	<0.17	7.35	13.9	281
28...	2100	0.81	8.0	542	62.5	20.8	1.01	6.01	24.0	<0.17	3.81	15.6	290
JUN													
12...	1230	0.69	8.0	545	64.5	21.9	0.96	7.19	25.3	<0.17	7.28	14.6	295
JUN													
14-15	0645	--	8.0	545	69.0	22.4	0.95	4.48	21.2	0.22	9.05	14.4	312
14...	1220	7.0	7.8	522	61.9	19.2	1.02	3.94	17.7	0.23	8.90	13.7	291
14...	1620	6.3	7.9	542	69.5	21.8	1.01	4.55	19.4	0.23	9.07	14.3	309
14...	2320	7.4	7.5	550	65.9	20.9	0.80	3.98	20.4	0.26	8.46	14.4	308
15...	1730	3.7	8.1	569	71.4	22.8	0.80	4.33	21.6	0.20	8.56	15.0	322
24...	1010	0.46	8.1	588	74.9	24.9	0.69	5.87	24.2	0.18	7.63	15.6	330
JUL													
05-08	0115	--	7.4	222	27.4	7.21	3.88	2.03	4.78	0.18	6.77	6.1	124
05...	0215	5.4	7.7	266	31.2	9.84	3.31	3.14	10.3	<0.17	5.65	8.1	144
05...	0515	144	7.4	166	17.9	5.02	4.32	1.41	3.74	<0.17	4.02	5.1	94
05...	0715	215	7.2	154	15.7	4.33	4.85	2.65	3.30	0.19	4.00	4.7	86
05...	0915	171	7.5	166	16.7	4.69	4.32	1.28	3.37	<0.17	5.64	4.9	91
05...	1715	77	7.5	210	22.9	6.35	3.90	2.29	5.04	0.23	6.07	5.8	118
05...	2115	136	7.3	173	--	--	--	--	--	--	--	--	--
07...	0115	44	7.7	287	36.1	10.6	2.85	2.41	7.78	0.19	8.55	8.3	160
08...	1040	17	7.5	386	47.8	14.7	2.59	3.26	11.4	0.17	9.69	10.4	211
15...	0810	2.6	7.9	538	71.1	21.9	1.21	5.82	17.7	<0.17	8.70	13.8	340
SEP													
01...	1130	15	7.6	266	30.4	8.04	2.46	3.90	8.57	0.20	7.74	6.7	139
SEP													
01-04	1130	--	7.9	266	35.2	11.0	2.65	2.81	7.65	0.17	8.86	6.6	153
01...	1330	29	7.7	280	31.7	10.2	2.48	3.94	9.51	0.26	7.28	7.5	152
01...	1630	--	--	--	--	--	--	--	--	--	--	--	--
01...	1830	71	7.6	200	21.8	5.90	2.76	2.09	4.95	<0.17	6.89	4.4	101
01...	2030	65	7.6	196	22.8	5.86	3.11	1.97	4.64	<0.17	7.89	4.2	103
01...	2245	52	7.6	201	25.4	7.29	3.10	2.04	5.16	<0.17	8.12	4.6	114
02...	0845	36	7.5	244	32.1	9.50	2.68	2.29	6.55	0.17	8.72	5.7	142
02...	1800	37	7.4	295	41.3	12.6	2.31	2.87	8.44	<0.17	9.65	7.4	173
04...	0645	6.6	7.8	397	54.2	16.7	1.62	4.02	12.3	0.19	9.81	10.9	236

[(National Water-Quality Assessment Program), White River Basin, Miami River Basin Study Unit]—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho- phos- phate, water, fltrd, mg/L as P (00671)	Partic- ulate nitro- gen, susp, water, mg/L (49570)	Phos- phorus, water, unfltrd mg/L (00665)	Total carbon, suspnd sedimnt total, mg/L (00694)	Inor- ganic carbon, suspnd sedimnt total, mg/L (00688)	Organic carbon, suspnd sedimnt total, mg/L (00689)	Iron, water, fltrd, ug/L (01046)	Mangan- ese, water, fltrd, ug/L (01056)
APR													
17...	292	0.57	<0.04	7.83	0.049	<0.02	0.12	0.021	0.3	<0.1	0.3	E5	16.3
25...	--	0.46	0.04	8.79	0.057	E0.01	--	0.028	--	--	--	--	--
MAY													
05-06	251	1.4	<0.04	12.4	0.103	<0.02	0.60	0.177	2.4	<0.1	2.4	47	8.2
05...	--	2.3	0.13	9.43	0.107	E0.01	1.16	0.47	9.4	<0.1	9.3	36	13.7
05...	262	0.70	<0.04	12.7	0.120	<0.02	0.53	0.044	1.1	<0.1	1.0	45	18.4
05...	249	2.3	<0.04	11.1	0.110	<0.02	0.95	0.30	5.1	<0.1	5.1	47	10.0
06...	281	0.65	<0.04	11.8	0.134	<0.02	0.14	0.081	0.6	<0.1	0.6	25	4.2
06...	263	0.47	<0.04	11.8	0.089	<0.02	0.13	0.042	0.3	<0.1	0.3	E7	4.5
28...	319	0.55	<0.04	7.90	0.094	<0.02	0.09	0.039	0.4	<0.1	0.4	9	10.3
JUN													
12...	316	0.46	E0.04	5.69	0.119	<0.02	<0.02	0.050	0.6	0.1	0.5	26	15.7
JUN													
14-15	345	0.67	<0.04	11.7	0.098	<0.02	0.18	0.06	0.4	<0.1	0.4	19	3.3
14...	323	1.1	<0.04	12.6	0.068	<0.02	<0.02	0.141	1.9	0.3	1.6	48	11.1
14...	318	0.74	<0.04	12.8	0.039	E0.01	0.21	0.09	0.8	<0.1	0.8	12	4.4
14...	319	0.65	<0.04	12.7	0.138	<0.02	0.31	0.07	1.4	<0.1	1.4	13	8.9
15...	340	0.38	<0.04	11.7	0.041	<0.02	0.16	0.05	0.7	<0.1	0.7	E5	7.9
24...	336	0.34	<0.04	8.78	0.066	<0.02	0.06	0.020	0.3	<0.1	0.3	E5	5.1
JUL													
05-08	141	1.3	<0.04	5.68	0.120	0.06	0.29	0.31	1.8	<0.1	1.8	116	4.3
05...	153	3.5	E0.02	4.87	0.065	E0.02	2.52	0.94	25.8	0.4	25.4	115	5.9
05...	108	2.0	0.19	6.49	0.048	0.15	1.29	0.51	6.8	0.2	6.6	23	9.3
05...	103	1.7	<0.04	5.89	0.064	<0.02	0.53	0.38	2.5	<0.1	2.4	72	10.9
05...	132	1.5	E0.02	6.20	0.104	0.06	0.29	0.36	1.9	1.3	0.6	205	6.4
05...	151	1.3	<0.04	6.70	0.210	0.03	0.25	0.28	1.2	<0.1	1.2	39	2.5
05...	--	1.5	0.26	3.27	E0.007	0.03	--	0.31	--	--	--	--	--
07...	173	1.3	0.13	4.96	0.130	0.08	0.28	0.22	1.4	<0.1	1.4	69	6.2
08...	227	1.3	<0.04	4.96	0.188	0.03	0.18	0.196	1.1	<0.1	1.1	31	17.2
15...	304	0.46	<0.04	14.9	0.080	0.12	0.06	0.047	0.5	<0.1	0.5	19	26.2
SEP													
01...	154	0.88	<0.04	1.74	0.097	<0.02	0.51	0.22	1.5	0.2	1.3	116	12.6
SEP													
01-04	165	0.81	<0.04	1.86	0.027	<0.18	0.17	0.174	1.0	<0.1	1.0	126	3.2
01...	167	0.89	<0.04	1.73	0.077	<0.02	0.38	0.24	2.9	<0.1	2.9	99	7.0
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
01...	122	0.82	<0.04	0.62	0.016	<0.02	0.23	0.20	1.4	<0.1	1.4	114	6.8
01...	123	0.96	<0.04	0.65	0.065	<0.02	0.28	0.22	1.3	<0.1	1.3	211	6.2
01...	143	1.0	<0.04	0.87	0.064	<0.02	0.20	0.21	1.0	<0.1	1.0	183	7.5
02...	155	0.86	<0.04	1.32	0.050	<0.18	0.15	0.176	0.9	<0.1	0.9	142	3.5
02...	187	0.87	<0.04	1.88	0.059	<0.02	0.11	0.148	0.7	<0.1	0.7	109	2.6
04...	246	0.69	<0.04	2.92	0.013	0.04	0.12	0.096	0.5	<0.1	0.5	43	12.1

[(National Water-Quality Assessment Program), White River Basin, Miami River Basin Study Unit]—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	1-Naphthol, water, fltrd 0.7u GF ug/L (49295)	2,6-Diethyl-aniline water fltrd 0.7u GF ug/L (82660)	2-[(2-Et-6-Me-Ph)-amino]propan-1-ol, ug/L (61615)	2Chloro-2,6-'diethyl acet-anilide wat flt ug/L (61618)	CIAT, water, fltrd, ug/L (04040)	2-Ethyl-6-methyl-aniline water, fltrd, ug/L (61620)	3,4-Di-chloro-aniline water fltrd, ug/L (61625)	4Chloro 2methyl phenol, water, fltrd, ug/L (61633)	Aceto-chlor ESA, water, fltrd 0.7u GF ug/L (61029)	Aceto-chlor OA, water, fltrd 0.7u GF ug/L (61030)	Aceto-chlor, water, fltrd, ug/L (49260)	Ala-chlor ESA, water, fltrd 0.7u GF ug/L (50009)	Ala-chlor OA, water, fltrd 0.7u GF ug/L (61031)
APR 17...	<0.09	<0.006	<0.1	<0.005	E0.045	<0.004	0.005	E0.005	--	--	0.021	--	--
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY 05-06	<0.09	<0.006	<0.1	<0.005	E0.085	<0.004	<0.004	<0.006	0.23	0.10	0.023	0.10	<0.05
05...	<0.09	<0.006	<0.1	<0.005	E0.097	<0.004	<0.004	<0.006	0.16	0.07	0.043	<0.05	<0.05
05...	<0.09	<0.006	<0.1	<0.005	E0.095	<0.004	<0.004	<0.006	0.15	0.08	0.028	0.07	<0.05
05...	<0.09	<0.006	<0.1	<0.005	E0.093	<0.004	<0.004	<0.006	0.28	0.13	0.030	0.08	0.05
06...	<0.09	<0.006	<0.1	<0.005	E0.079	<0.004	<0.004	<0.006	0.22	0.07	0.007	0.08	<0.05
06...	<0.09	<0.006	<0.1	<0.005	E0.090	<0.004	<0.004	<0.006	0.13	<0.05	E0.005	0.06	<0.05
28...	<0.09	<0.006	<0.1	<0.005	E0.152	<0.004	<0.004	<0.006	<0.05	<0.05	0.051	<0.05	<0.05
JUN 12...	<0.09	<0.006	<0.1	<0.005	E0.116	<0.004	<0.004	<0.006	0.07	<0.05	0.042	<0.05	<0.05
JUN 14-15	<0.09	<0.006	<0.1	<0.005	E0.289	<0.004	<0.004	<0.006	0.48	0.45	0.049	<0.05	<0.05
14...	<0.09	<0.006	<0.1	<0.005	E0.450	<0.004	<0.004	<0.006	0.86	0.71	E0.080	<0.05	<0.05
14...	<0.09	<0.006	<0.1	<0.005	E0.281	<0.004	<0.004	<0.006	0.43	0.42	0.048	<0.05	<0.05
14...	<0.09	<0.006	<0.1	<0.005	E0.356	E0.002	<0.004	<0.006	0.84	0.66	0.062	0.05	<0.05
15...	<0.09	<0.006	<0.1	<0.005	E0.188	E0.002	<0.004	<0.006	0.42	0.23	0.020	<0.05	<0.05
24...	<0.09	<0.006	<0.1	<0.005	E0.104	<0.004	<0.004	<0.006	0.14	<0.05	<0.006	0.07	<0.05
JUL 05-08	<0.09	<0.006	<0.1	<0.005	E0.737	<0.004	<0.004	<0.006	1.94	1.51	0.224	0.07	0.05
05...	<0.09	<0.006	<0.1	<0.005	E0.517	<0.004	<0.004	<0.006	<0.05	<0.05	0.017	<0.05	<0.05
05...	<0.09	<0.006	<0.1	<0.005	E1.25	<0.004	<0.004	<0.006	0.50	0.36	0.066	<0.05	<0.05
05...	<0.09	<0.006	<0.1	<0.005	E1.19	<0.004	<0.004	<0.006	1.79	1.34	0.226	<0.05	<0.05
05...	<0.09	<0.006	<0.1	<0.005	E1.19	<0.004	<0.004	<0.006	2.14	1.60	0.257	<0.05	<0.05
05...	<0.09	<0.006	<0.1	<0.005	E0.789	<0.004	<0.004	<0.006	2.55	2.36	0.317	<0.05	0.06
05...	<0.09	<0.006	<0.1	<0.005	E1.46	<0.004	<0.004	<0.006	1.89	1.43	0.333	<0.05	0.05
07...	<0.09	<0.006	<0.1	<0.005	E0.914	<0.004	<0.004	<0.006	1.45	1.02	0.166	<0.05	0.05
08...	<0.09	<0.006	<0.1	<0.005	E0.639	<0.004	<0.004	<0.006	1.41	0.78	0.061	<0.05	0.07
15...	<0.09	<0.006	<0.1	<0.005	E0.204	E0.002	<0.004	<0.006	0.74	0.26	0.013	<0.05	<0.05
SEP 01...	<0.09	<0.006	<0.1	<0.005	E0.178	<0.004	<0.004	<0.006	0.32	0.14	0.010	0.08	<0.05
SEP 01-04	<0.09	<0.006	<0.1	<0.005	E0.174	<0.004	<0.004	<0.006	0.73	0.21	0.008	<0.05	<0.05
01...	<0.09	<0.006	<0.1	<0.005	E0.149	<0.004	<0.004	<0.006	0.22	0.09	E0.004	0.06	<0.05
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
01...	<0.09	<0.006	<0.1	<0.005	E0.161	<0.004	<0.004	<0.006	0.58	0.21	0.012	<0.05	<0.05
01...	<0.09	<0.006	<0.1	<0.005	E0.152	<0.004	<0.004	<0.006	0.65	0.26	0.010	<0.05	<0.05
01...	<0.09	<0.006	<0.1	<0.005	E0.171	<0.004	<0.004	<0.006	0.74	0.29	0.010	<0.05	<0.05
02...	<0.09	<0.006	<0.1	<0.005	E0.147	<0.004	<0.004	<0.006	0.89	0.30	0.011	<0.05	<0.05
02...	<0.09	<0.006	<0.1	<0.005	E0.148	<0.004	<0.004	<0.006	0.93	0.25	0.008	<0.05	<0.05
04...	<0.09	<0.006	<0.1	<0.005	E0.135	<0.004	<0.004	<0.006	0.45	0.05	E0.006	0.09	<0.05

[(National Water-Quality Assessment Program), White River Basin, Miami River Basin Study Unit]—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Ala-chlor, water, fltrd, ug/L (46342)	Atra-zine, water, fltrd, ug/L (39632)	Azin-phos-methyl oxon, water, fltrd, ug/L (61635)	Azin-phos-methyl, water, fltrd, 0.7u GF ug/L (82686)	Ben-flur-alin, water, fltrd, 0.7u GF ug/L (82673)	Car-baryl, water, fltrd, 0.7u GF ug/L (82680)	Chlor-pyrifos oxon, water, fltrd, ug/L (61636)	Chlor-pyrifos water, fltrd, ug/L (38933)	cis-Per-methrin water fltrd, 0.7u GF ug/L (82687)	Cyflu-thrin, water, fltrd, ug/L (61585)	Cyper-methrin water, fltrd, ug/L (61586)	DCPA, water fltrd, 0.7u GF ug/L (82682)	Desulf-inyl fipronil, water, fltrd, ug/L (62170)
APR													
17...	<0.004	0.132	<0.02	<0.050	<0.010	<0.041	<0.06	<0.005	<0.006	<0.008	<0.009	<0.003	<0.004
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
05-06	<0.004	0.337	<0.02	<0.050	<0.010	<0.041	<0.06	E0.004	<0.006	<0.008	<0.009	<0.003	<0.004
05...	E0.003	0.218	<0.02	<0.050	<0.010	<0.041	<0.06	E0.004	<0.006	<0.008	<0.009	<0.003	<0.004
05...	<0.004	0.425	<0.02	<0.050	<0.010	<0.041	<0.06	0.005	<0.006	<0.008	<0.009	<0.003	<0.004
05...	<0.004	0.319	<0.02	<0.050	<0.010	<0.041	<0.06	0.007	<0.006	<0.008	<0.009	<0.003	<0.004
06...	<0.004	0.464	<0.02	<0.050	<0.010	<0.041	<0.06	E0.002	<0.006	<0.008	<0.009	<0.003	<0.004
06...	<0.004	0.328	<0.02	<0.050	<0.010	<0.041	<0.06	E0.002	<0.006	<0.008	<0.009	<0.003	<0.004
28...	<0.005	1.94	<0.02	<0.050	<0.010	<0.041	<0.06	E0.004	<0.006	<0.008	<0.009	<0.003	<0.004
JUN													
12...	<0.007	0.587	<0.02	<0.050	<0.010	<0.041	<0.06	<0.005	<0.006	<0.008	<0.009	<0.003	<0.004
JUN													
14-15	<0.004	0.978	<0.02	<0.050	<0.010	<0.041	<0.06	<0.005	<0.006	<0.008	<0.009	<0.003	<0.004
14...	<0.004	1.21	<0.02	<0.050	<0.010	E0.013	<0.06	<0.005	<0.006	<0.008	<0.009	<0.003	<0.004
14...	<0.004	0.944	<0.02	<0.050	<0.010	<0.041	<0.06	E0.003	<0.006	<0.008	<0.009	<0.003	<0.004
14...	<0.004	0.982	<0.02	<0.050	<0.010	<0.041	<0.06	<0.005	<0.006	<0.008	<0.009	<0.003	<0.004
15...	<0.004	0.561	<0.02	<0.050	<0.010	<0.041	<0.06	<0.005	<0.006	<0.008	<0.009	<0.003	<0.004
24...	<0.004	0.314	<0.02	<0.050	<0.010	<0.041	<0.06	<0.005	<0.006	<0.008	<0.009	<0.003	<0.004
JUL													
05-08	0.008	6.24	<0.02	<0.050	<0.010	E0.010	<0.06	0.030	<0.006	<0.008	<0.009	<0.003	<0.004
05...	0.009	14.4	<0.02	<0.050	<0.010	<0.041	<0.06	<0.005	<0.006	<0.008	<0.009	<0.003	<0.004
05...	<0.004	9.26	<0.02	<0.050	<0.010	<0.041	<0.06	0.057	<0.006	<0.008	<0.009	<0.003	<0.004
05...	<0.004	7.81	<0.02	<0.050	<0.010	<0.041	<0.06	0.047	<0.006	<0.008	<0.009	<0.003	<0.004
05...	0.009	5.35	<0.02	<0.050	<0.010	<0.041	<0.06	0.044	<0.006	<0.008	<0.009	<0.003	<0.004
05...	<0.008	4.37	<0.12	<0.050	<0.010	<0.041	<0.06	0.024	<0.006	<0.008	<0.009	<0.003	<0.004
05...	<0.004	7.48	<0.02	<0.050	<0.010	E0.016	<0.06	0.065	<0.006	<0.008	<0.009	<0.003	<0.004
07...	<0.004	7.15	<0.02	<0.050	<0.010	E0.011	<0.06	0.011	<0.006	<0.008	<0.009	<0.003	<0.004
08...	<0.004	2.42	<0.02	<0.050	<0.010	E0.008	<0.06	0.007	<0.006	<0.008	<0.009	<0.003	<0.004
15...	<0.004	0.613	<0.02	<0.050	<0.010	<0.041	<0.06	<0.005	<0.006	<0.008	<0.009	<0.003	<0.004
SEP													
01...	<0.004	0.290	<0.02	<0.050	<0.010	<0.041	<0.06	E0.003	<0.006	<0.008	<0.009	<0.003	<0.004
SEP													
01-04	<0.004	0.273	<0.03	<0.050	<0.010	<0.041	<0.06	<0.005	<0.006	<0.008	<0.009	<0.003	<0.004
01...	<0.004	0.294	<0.02	<0.050	<0.010	<0.041	<0.06	<0.005	<0.006	<0.008	<0.009	<0.003	<0.004
01...	--	--	--	--	--	<1	--	<0.5	--	--	--	--	--
01...	<0.004	0.213	<0.02	<0.050	<0.010	<0.041	<0.06	E0.004	<0.006	<0.008	<0.009	<0.003	<0.004
01...	<0.004	0.197	<0.03	<0.050	<0.010	<0.041	<0.06	0.006	<0.006	<0.008	<0.009	<0.003	<0.004
01...	<0.004	0.209	<0.03	<0.050	<0.010	<0.041	<0.06	E0.005	<0.006	<0.008	<0.009	<0.003	<0.004
02...	<0.004	0.252	<0.03	<0.050	<0.010	<0.041	<0.06	E0.004	<0.006	<0.008	<0.009	<0.003	<0.004
02...	<0.004	0.298	<0.03	<0.050	<0.010	<0.041	<0.06	E0.004	<0.006	<0.008	<0.009	<0.003	<0.004
04...	<0.004	0.748	<0.03	<0.050	<0.010	<0.041	<0.06	<0.005	<0.006	<0.008	<0.009	<0.003	<0.004

[(National Water-Quality Assessment Program), White River Basin, Miami River Basin Study Unit]—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Diaz- inon oxon, water, fltrd, ug/L (61638)	Diazi- non, water, fltrd, ug/L (39572)	Diel- drin, water, fltrd, ug/L (39381)	Dimeth- enamid ESA, water, fltrd, ug/L (61951)	Dimeth- enamid OA, water, fltrd, ug/L (62482)	Dimeth- oate, water, fltrd 0.7u GF ug/L (82662)	Ethion monoxon water, fltrd, ug/L (61644)	Ethion, water, fltrd, ug/L (82346)	Fenami- phos sulfone water, fltrd, ug/L (61645)	Fenami- phos sulf- oxide, water, fltrd, ug/L (61646)	Fenami- phos, water, fltrd, ug/L (61591)	Desulf- inyl- fipron- il amide, wat flt ug/L (62169)	Fipron- il sulfide water, fltrd, ug/L (62167)
APR													
17...	<0.04	<0.005	<0.005	--	--	<0.006	<0.03	<0.004	<0.008	<0.03	<0.03	<0.009	<0.005
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
05-06	<0.01	<0.005	<0.005	<0.05	<0.05	<0.006	<0.03	<0.004	<0.008	<0.03	<0.03	<0.009	<0.005
05...	<0.01	E0.002	<0.005	<0.05	<0.05	<0.006	<0.03	<0.004	<0.008	<0.03	<0.03	<0.009	<0.005
05...	<0.01	<0.005	<0.005	<0.05	<0.05	<0.006	<0.03	<0.004	<0.008	<0.03	<0.03	<0.009	<0.005
05...	<0.01	<0.005	<0.005	<0.05	<0.05	<0.006	<0.03	<0.004	<0.008	<0.03	<0.03	<0.009	<0.005
06...	<0.01	<0.005	<0.005	<0.05	<0.05	<0.006	<0.03	<0.004	<0.008	<0.03	<0.03	<0.009	<0.005
06...	<0.01	<0.005	<0.005	<0.05	<0.05	<0.006	<0.03	<0.004	<0.008	<0.03	<0.03	<0.009	<0.005
28...	<0.01	<0.005	<0.005	<0.05	<0.05	<0.006	<0.03	<0.004	<0.008	<0.03	<0.03	<0.009	<0.005
JUN													
12...	<0.01	<0.005	<0.005	<0.05	<0.05	<0.006	<0.03	<0.006	<0.008	<0.03	<0.03	<0.009	<0.005
JUN													
14-15	<0.01	<0.005	<0.005	<0.05	<0.05	<0.006	<0.03	<0.004	<0.008	<0.03	<0.03	<0.009	<0.005
14...	<0.01	<0.005	<0.005	<0.05	<0.05	<0.006	<0.03	<0.004	<0.008	<0.03	<0.03	<0.009	<0.005
14...	<0.01	<0.005	<0.005	<0.05	<0.05	<0.006	<0.03	<0.004	<0.008	<0.03	<0.03	<0.009	<0.005
14...	<0.01	<0.005	<0.005	0.05	<0.05	<0.006	<0.03	<0.004	<0.008	<0.03	<0.03	<0.009	<0.005
15...	<0.01	<0.005	<0.005	<0.05	<0.05	<0.006	<0.03	<0.004	<0.008	<0.03	<0.03	<0.009	<0.005
24...	<0.01	<0.005	<0.005	<0.05	<0.05	<0.006	<0.03	<0.004	<0.031	<0.03	<0.03	<0.031	<0.005
JUL													
05-08	<0.01	<0.005	<0.005	<0.05	<0.05	<0.006	<0.03	<0.004	<0.008	<0.03	<0.03	<0.009	<0.005
05...	<0.01	<0.005	<0.005	<0.05	<0.05	<0.006	<0.03	<0.004	<0.008	<0.03	<0.03	<0.009	<0.005
05...	<0.01	<0.005	<0.005	<0.05	<0.05	<0.006	<0.03	<0.004	<0.008	<0.03	<0.03	<0.009	<0.005
05...	<0.01	<0.005	<0.005	<0.05	<0.05	<0.006	<0.03	<0.004	<0.008	<0.03	<0.03	<0.009	<0.005
05...	<0.01	<0.005	<0.005	<0.05	<0.05	<0.006	<0.03	<0.004	<0.008	<0.12	<0.03	<0.009	<0.005
05...	<0.01	<0.005	<0.005	<0.05	<0.05	<0.006	<0.03	<0.004	<0.008	<0.03	<0.03	<0.009	<0.005
07...	<0.01	<0.005	<0.005	0.07	<0.05	<0.006	<0.03	<0.004	<0.008	<0.03	<0.03	<0.009	<0.005
08...	<0.01	<0.005	<0.005	0.35	0.14	<0.006	<0.03	<0.004	<0.008	<0.03	<0.03	<0.009	<0.005
15...	<0.01	<0.005	<0.005	0.14	0.06	<0.006	<0.03	<0.004	<0.008	<0.03	<0.03	<0.009	<0.005
SEP													
01...	<0.01	0.006	<0.005	<0.05	<0.05	<0.006	<0.03	<0.004	<0.008	<0.03	<0.03	<0.009	<0.005
SEP													
01-04	<0.01	<0.005	<0.005	0.06	<0.05	<0.006	<0.03	<0.004	<0.008	<0.03	<0.03	<0.009	<0.005
01...	<0.01	E0.004	<0.005	0.05	<0.05	<0.006	<0.03	<0.004	<0.008	<0.03	<0.03	<0.009	<0.005
01...	--	<0.5	--	--	--	--	--	--	--	--	--	--	--
01...	<0.01	E0.004	<0.005	<0.05	<0.05	<0.006	<0.03	<0.004	<0.008	<0.03	<0.03	<0.009	<0.005
01...	<0.01	<0.005	<0.005	<0.05	<0.05	<0.006	<0.03	<0.004	<0.008	<0.03	<0.03	<0.009	<0.005
01...	<0.01	E0.004	<0.005	<0.05	<0.05	<0.006	<0.03	<0.004	<0.008	<0.03	<0.03	<0.009	<0.005
02...	<0.01	<0.005	<0.005	0.06	<0.05	<0.006	<0.03	<0.004	<0.008	<0.03	<0.03	<0.009	<0.005
02...	<0.01	<0.005	<0.005	0.09	<0.05	<0.006	<0.03	<0.004	<0.008	<0.03	<0.03	<0.009	<0.005
04...	<0.01	<0.005	<0.005	0.09	<0.05	<0.006	<0.03	<0.004	<0.008	<0.03	<0.03	<0.009	<0.005

[(National Water-Quality Assessment Program), White River Basin, Miami River Basin Study Unit]—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Fipronil sulfone water, fltrd, ug/L (62168)	Fipronil, water, fltrd, ug/L (62166)	Flufenacet ESA, water, fltrd, ug/L (61952)	Flufenacet OA, water, fltrd, ug/L (62483)	Fonofos oxon, water, fltrd, ug/L (61649)	Fonofos water, fltrd, ug/L (04095)	Hexazinone, water, fltrd, ug/L (04025)	Iprodione, water, fltrd, ug/L (61593)	Isofenphos, water, fltrd, ug/L (61594)	Malaoxon, water, fltrd, ug/L (61652)	Malathion, water, fltrd, ug/L (39532)	Metaxyl, water, fltrd, ug/L (61596)	Methiathion water, fltrd, ug/L (61598)
APR													
17...	<0.005	<0.007	--	--	<0.002	<0.003	--	<1	<0.003	<0.008	<0.027	<0.011	<0.006
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
05-06	<0.005	<0.007	<0.05	<0.05	<0.002	<0.003	--	<1	<0.003	<0.008	<0.027	<0.005	<0.006
05...	<0.005	<0.007	<0.05	<0.05	<0.002	<0.003	--	<1	<0.003	<0.008	<0.027	<0.005	<0.006
05...	<0.005	<0.007	<0.05	<0.05	<0.002	<0.003	--	<1	<0.003	<0.008	<0.027	<0.006	<0.006
05...	<0.005	<0.007	<0.05	<0.05	<0.002	<0.003	--	<1	<0.003	<0.008	<0.027	<0.009	<0.006
06...	<0.005	<0.007	<0.05	<0.05	<0.002	<0.003	--	<1	<0.003	<0.008	<0.027	<0.005	<0.006
06...	<0.005	<0.007	<0.05	<0.05	<0.002	<0.003	--	<1	<0.003	<0.008	<0.027	<0.005	<0.006
28...	<0.005	<0.007	<0.05	<0.05	<0.002	<0.003	<0.013	<1	<0.003	<0.008	<0.027	<0.005	<0.006
JUN													
12...	<0.005	<0.007	<0.05	<0.05	<0.002	<0.003	<0.013	<1	<0.003	<0.008	<0.027	<0.005	<0.006
JUN													
14-15	<0.005	<0.007	<0.05	<0.05	<0.002	<0.003	<0.013	<1	<0.003	<0.008	<0.027	<0.005	<0.006
14...	<0.005	<0.007	<0.05	<0.05	<0.002	<0.003	<0.013	<1	<0.003	<0.008	<0.027	<0.005	<0.006
14...	<0.005	<0.007	<0.05	<0.05	<0.002	<0.003	<0.013	<1	<0.003	<0.008	<0.027	<0.005	<0.006
14...	<0.005	<0.007	<0.05	<0.05	<0.002	<0.003	<0.013	<1	<0.003	<0.008	<0.027	<0.005	<0.006
15...	<0.005	<0.007	<0.05	<0.05	<0.002	<0.003	<0.013	<1	<0.003	<0.008	<0.027	<0.005	<0.006
24...	<0.005	<0.007	<0.05	<0.05	<0.002	<0.003	<0.013	<1	<0.003	<0.008	<0.027	<0.005	<0.006
JUL													
05-08	<0.005	<0.007	<0.05	<0.05	<0.002	<0.003	<0.013	<1	<0.003	<0.008	<0.027	<0.005	<0.006
05...	<0.005	<0.007	<0.05	<0.05	<0.002	<0.003	<0.013	<1	<0.003	<0.008	<0.027	<0.005	<0.006
05...	<0.005	<0.007	<0.05	<0.05	<0.002	<0.003	<0.013	<1	<0.003	<0.008	<0.027	<0.005	<0.006
05...	<0.005	<0.007	<0.05	<0.05	<0.002	<0.003	<0.013	<1	<0.003	<0.008	<0.027	<0.005	<0.006
05...	<0.005	<0.007	<0.05	<0.05	<0.002	<0.003	<0.013	<1	<0.003	<0.008	<0.027	<0.005	<0.006
05...	<0.005	<0.007	<0.05	<0.05	<0.002	<0.003	<0.013	<1	<0.003	<0.008	<0.027	<0.005	<0.006
05...	<0.005	<0.007	<0.05	<0.05	<0.002	<0.003	<0.013	<1	<0.003	<0.008	<0.027	<0.005	<0.006
07...	<0.005	<0.007	<0.05	<0.05	<0.002	<0.003	<0.013	<1	<0.003	<0.008	<0.027	<0.005	<0.006
08...	<0.005	<0.007	<0.05	<0.05	<0.002	<0.003	<0.013	<1	<0.003	<0.008	<0.027	<0.005	<0.006
15...	<0.005	<0.007	<0.05	<0.05	<0.002	<0.003	<0.013	<1	<0.003	<0.008	<0.027	<0.005	<0.006
SEP													
01...	<0.005	<0.007	<0.05	<0.05	<0.002	<0.003	<0.013	<1	<0.003	<0.008	<0.027	<0.005	<0.006
SEP													
01-04	<0.005	<0.007	<0.05	<0.05	<0.002	<0.003	<0.013	<1	<0.003	<0.008	<0.027	<0.005	<0.006
01...	<0.005	<0.007	<0.05	<0.05	<0.002	<0.003	<0.013	<1	<0.003	<0.008	<0.027	<0.005	<0.006
01...	--	--	--	--	--	--	--	--	--	--	--	--	--
01...	<0.005	<0.007	<0.05	<0.05	<0.002	<0.003	<0.013	<1	<0.003	<0.008	<0.027	<0.005	<0.006
01...	<0.005	<0.007	<0.05	<0.05	<0.002	<0.003	<0.013	<1	<0.003	<0.008	<0.027	<0.005	<0.006
01...	<0.005	<0.007	<0.05	<0.05	<0.002	<0.003	<0.013	<1	<0.003	<0.008	<0.027	<0.005	<0.006
02...	<0.005	<0.007	<0.05	<0.05	<0.002	<0.003	<0.013	<1	<0.003	<0.008	<0.027	<0.005	<0.006
02...	<0.005	<0.007	<0.05	<0.05	<0.002	<0.003	<0.013	<1	<0.003	<0.008	<0.027	<0.005	<0.006
04...	<0.005	<0.007	<0.05	<0.05	<0.002	<0.003	<0.013	<1	<0.003	<0.008	<0.027	<0.005	<0.006

[(National Water-Quality Assessment Program), White River Basin, Miami River Basin Study Unit]—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Methyl para- oxon, water, fltrd, ug/L (61664)	Methyl para- thion, water, fltrd 0.7u GF ug/L (82667)	Metola- chlor ESA, water, fltrd 0.7u GF ug/L (61043)	Metola- chlor OA, water, fltrd 0.7u GF ug/L (61044)	Metola- chlor, water, fltrd, ug/L (39415)	Metri- buzin, water, fltrd, ug/L (82630)	Myclo- butanil water, fltrd, ug/L (61599)	Pendi- meth- alin, water, fltrd 0.7u GF ug/L (82683)	Phorate oxon, water, fltrd, ug/L (61666)	Phorate water fltrd 0.7u GF ug/L (82664)	Phosmet oxon, water, fltrd, ug/L (61668)	Phosmet water, fltrd, ug/L (61601)	Prome- ton, water, fltrd, ug/L (04037)
APR													
17...	<0.03	<0.006	--	--	0.029	<0.006	<0.008	<0.022	<0.10	<0.011	<0.06	<0.008	E0.01
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY													
05-06	<0.03	<0.006	0.31	0.14	0.093	<0.006	<0.008	E0.019	<0.10	<0.011	<0.06	<0.008	M
05...	<0.03	<0.006	0.17	0.06	0.023	<0.006	<0.008	<0.022	<0.10	<0.011	<0.06	<0.008	E0.01
05...	<0.03	<0.006	0.27	0.12	0.150	<0.006	<0.008	E0.016	<0.10	<0.011	<0.06	<0.008	M
05...	<0.03	<0.006	0.29	0.15	0.093	<0.006	<0.008	E0.017	<0.10	<0.011	<0.06	<0.008	M
06...	<0.03	<0.006	0.37	0.15	0.114	<0.006	<0.008	E0.015	<0.10	<0.011	<0.06	<0.008	<0.01
06...	<0.03	<0.006	0.31	0.10	0.074	<0.006	<0.008	E0.011	<0.10	<0.011	<0.06	<0.008	<0.01
28...	<0.03	<0.006	0.14	<0.05	0.051	<0.006	<0.008	<0.022	<0.10	<0.011	<0.06	<0.008	<0.01
JUN													
12...	<0.03	<0.006	0.22	<0.05	0.035	<0.006	<0.008	<0.022	<0.10	<0.011	<0.06	<0.008	E0.01
JUN													
14-15	<0.03	<0.006	0.51	0.26	0.081	<0.006	<0.008	<0.022	<0.10	<0.011	<0.06	<0.008	<0.01
14...	<0.03	<0.006	0.49	0.23	0.146	<0.006	<0.008	<0.022	<0.10	<0.011	<0.06	<0.008	<0.01
14...	<0.03	<0.006	0.67	0.32	0.116	<0.006	<0.008	<0.022	<0.10	<0.011	<0.06	<0.008	E0.01
14...	<0.03	<0.006	0.56	0.28	0.084	<0.006	<0.008	<0.022	<0.10	<0.011	<0.06	<0.008	<0.01
15...	<0.03	<0.006	0.35	0.13	0.044	<0.006	<0.008	<0.022	<0.10	<0.011	<0.06	<0.008	<0.01
24...	<0.03	<0.006	0.28	0.05	E0.013	<0.006	<0.008	<0.022	<0.10	<0.011	<0.06	<0.008	<0.01
JUL													
05-08	<0.03	<0.006	0.73	0.73	0.702	<0.006	<0.008	<0.022	<0.10	<0.011	<0.06	<0.008	<0.01
05...	<0.03	<0.006	0.24	0.18	0.298	<0.006	<0.008	<0.022	<0.10	<0.011	<0.06	<0.008	<0.01
05...	<0.03	<0.006	1.21	1.66	2.32	<0.006	<0.008	<0.022	<0.10	<0.011	<0.06	<0.008	<0.01
05...	<0.03	<0.006	0.88	1.07	1.22	<0.006	<0.008	<0.022	<0.10	<0.011	<0.06	<0.008	<0.01
05...	<0.03	<0.006	0.93	1.08	1.01	<0.006	<0.008	<0.022	<0.10	<0.011	<0.06	<0.008	<0.01
05...	<0.03	<0.006	0.65	0.64	0.366	<0.006	<0.008	<0.022	<0.10	<0.011	<0.06	<0.008	<0.01
05...	<0.03	<0.006	0.78	0.81	0.969	<0.006	<0.008	<0.022	<0.10	<0.011	<0.06	<0.008	<0.01
07...	<0.03	<0.006	0.49	0.43	0.558	<0.006	<0.008	<0.022	<0.10	<0.011	<0.06	<0.008	<0.01
08...	<0.03	<0.006	0.55	0.37	0.217	0.010	<0.008	<0.022	<0.10	<0.011	<0.06	<0.008	<0.01
15...	<0.03	<0.006	0.52	0.27	0.047	<0.006	<0.008	<0.022	<0.10	<0.011	<0.06	<0.008	M
SEP													
01...	<0.03	<0.006	0.91	0.49	0.059	<0.006	<0.008	<0.022	<0.10	<0.011	<0.06	<0.008	E0.02
SEP													
01-04	<0.03	<0.006	0.51	0.26	0.033	<0.006	<0.008	<0.022	<0.10	<0.011	<0.06	<0.008	E0.01
01...	<0.03	<0.006	0.69	0.35	0.047	<0.006	<0.008	<0.022	<0.10	<0.011	<0.06	<0.008	E0.02
01...	--	--	--	--	E0.1	--	--	--	--	--	--	--	<0.5
01...	<0.03	<0.006	0.57	0.31	0.058	<0.006	<0.008	<0.022	<0.10	<0.011	<0.06	<0.008	E0.01
01...	<0.03	<0.006	0.48	0.25	0.033	<0.006	<0.008	<0.022	<0.10	<0.011	<0.06	<0.008	E0.01
01...	<0.03	<0.006	0.51	0.26	0.029	<0.006	<0.008	<0.022	<0.10	<0.011	<0.06	<0.008	E0.01
02...	<0.03	<0.006	0.41	0.22	0.018	<0.006	<0.008	<0.022	<0.10	<0.011	<0.06	<0.008	E0.01
02...	<0.03	<0.006	0.40	0.20	0.018	<0.006	<0.008	<0.022	<0.10	<0.011	<0.06	<0.008	M
04...	<0.03	<0.006	0.54	0.24	0.033	<0.006	<0.008	<0.022	<0.10	<0.011	<0.06	<0.008	M

[(National Water-Quality Assessment Program), White River Basin, Miami River Basin Study Unit]—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Prometryn, water, fltrd, ug/L (04036)	Pronamide, water, fltrd, 0.7u GF ug/L (82676)	Simazine, water, fltrd, ug/L (04035)	Tebu-thiuron water fltrd, 0.7u GF ug/L (82670)	Terbufos oxon sulfone water, fltrd, ug/L (61674)	Terbufos, water, fltrd, 0.7u GF ug/L (82675)	Terbuthylazine, water, fltrd, ug/L (04022)	Tri-fluralin, water, fltrd, 0.7u GF ug/L (82661)	Di-chlorvos, water fltrd, ug/L (38775)	Suspended sediment concentration mg/L (80154)
APR										
17...	<0.005	<0.004	0.006	<0.02	<0.07	<0.02	<0.01	<0.009	<0.01	23
25...	--	--	--	--	--	--	--	--	--	--
MAY										
05-06	<0.005	<0.004	E0.004	<0.02	<0.07	<0.02	<0.01	<0.009	<0.01	84
05...	<0.005	<0.004	E0.004	<0.02	<0.07	<0.02	<0.01	<0.009	<0.01	256
05...	<0.005	<0.004	E0.004	<0.02	<0.07	<0.02	<0.01	<0.009	<0.01	186
05...	<0.005	<0.004	E0.004	<0.03	<0.07	<0.02	<0.01	<0.009	<0.01	234
06...	<0.005	<0.004	E0.003	<0.02	<0.07	<0.02	<0.01	<0.009	<0.01	30
06...	<0.005	<0.004	<0.005	<0.02	<0.07	<0.02	<0.01	<0.009	<0.01	15
28...	<0.005	<0.004	<0.015	<0.02	<0.07	<0.02	<0.01	<0.009	<0.01	21
JUN										
12...	<0.005	<0.004	0.006	<0.02	<0.07	<0.02	<0.01	<0.009	<0.01	17
JUN										
14-15	<0.005	<0.004	0.007	<0.02	<0.07	<0.02	<0.01	<0.009	<0.01	17
14...	<0.005	<0.004	0.007	<0.02	<0.07	<0.02	<0.01	<0.009	<0.01	63
14...	<0.005	<0.004	0.006	<0.02	<0.07	<0.02	<0.01	<0.009	<0.01	30
14...	<0.005	<0.004	0.006	<0.02	<0.07	<0.02	<0.01	<0.009	<0.01	30
15...	<0.005	<0.004	<0.005	<0.03	<0.07	<0.02	<0.01	<0.009	<0.01	26
24...	<0.005	<0.004	<0.005	<0.02	<0.07	<0.02	<0.01	<0.009	<0.01	16
JUL										
05-08	<0.005	<0.004	0.023	E0.03	<0.07	<0.02	<0.01	<0.009	<0.01	95
05...	<0.005	<0.004	0.043	<0.02	<0.07	<0.02	E0.01	<0.009	<0.01	758
05...	<0.005	<0.004	0.042	0.05	<0.07	<0.02	<0.01	<0.009	<0.01	283
05...	<0.005	<0.004	0.040	0.03	<0.07	<0.02	<0.01	<0.009	<0.01	--
05...	<0.005	<0.004	0.025	0.03	<0.07	<0.02	<0.01	<0.009	<0.01	96
05...	<0.005	<0.004	0.021	E0.03	<0.07	<0.02	<0.01	<0.009	<0.01	37
05...	<0.005	<0.004	0.047	0.04	<0.07	<0.02	E0.01	<0.009	<0.01	--
07...	<0.005	<0.004	0.034	<0.02	<0.07	<0.02	M	<0.009	<0.01	53
08...	<0.005	<0.004	0.028	0.02	<0.07	<0.02	<0.01	<0.009	<0.01	8
15...	<0.005	<0.004	0.006	<0.02	<0.07	<0.02	<0.01	<0.009	<0.01	10
SEP										
01...	<0.005	<0.004	0.005	E0.02	<0.07	<0.02	<0.01	<0.009	<0.01	27
SEP										
01-04	<0.005	<0.004	E0.004	0.02	<0.07	<0.02	<0.01	E0.005	<0.01	25
01...	<0.005	<0.004	<0.005	<0.02	<0.07	<0.02	<0.01	<0.009	<0.01	75
01...	--	--	--	--	--	--	--	--	<1.00	--
01...	<0.005	<0.004	E0.005	E0.03	<0.07	<0.02	<0.01	<0.009	<0.01	37
01...	<0.005	<0.004	E0.004	0.03	<0.07	<0.02	<0.01	<0.009	<0.01	27
01...	<0.005	<0.004	E0.005	0.04	<0.07	<0.02	<0.01	<0.009	<0.01	33
02...	<0.005	<0.004	0.005	0.02	<0.07	<0.02	<0.01	<0.009	<0.01	15
02...	<0.005	<0.004	E0.004	<0.03	<0.07	<0.02	<0.01	<0.009	<0.01	13
04...	<0.005	<0.004	0.006	<0.02	<0.07	<0.02	<0.01	<0.009	<0.01	15

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, (ACTON, IN quadrangle), 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 at mile 37.3 mi.

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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	7.9	8.8	529	e23	e47	175	47	38	20	37	540
2	3.8	7.4	8.8	494	e23	e47	136	50	35	20	34	1,090
3	3.8	6.5	8.3	316	e25	e50	111	57	36	19	33	1,430
4	6.0	7.1	9.3	171	e70	e54	99	60	36	19	34	895
5	6.8	8.1	7.7	122	e54	131	141	310	34	683	35	281
6	4.7	8.8	e7.4	96	e40	256	110	314	32	1,300	31	163
7	6.0	8.6	e7.2	81	e35	198	99	243	31	1,450	29	115
8	5.3	11	6.8	80	e32	238	100	279	30	1,020	27	84
9	4.9	8.4	e6.7	121	e28	644	93	206	29	1,000	25	67
10	4.7	62	6.6	155	e26	606	84	390	27	1,210	25	57
11	4.4	95	6.7	114	e24	380	76	763	27	1,300	24	49
12	4.4	66	6.9	e72	e23	287	70	682	40	915	25	42
13	4.6	41	7.1	e58	e22	434	63	415	67	412	23	37
14	3.8	26	8.7	e49	e21	581	58	216	114	247	23	35
15	4.1	19	9.4	e43	e20	577	55	183	208	185	22	33
16	4.0	16	11	e39	e20	374	54	144	161	226	21	30
17	3.8	14	12	e36	e19	283	62	113	97	204	20	28
18	4.0	12	24	e33	e19	217	62	96	71	144	19	26
19	6.1	11	163	e31	e18	181	54	84	58	114	17	24
20	4.2	9.9	420	e30	e18	189	52	75	48	97	16	23
21	3.7	9.5	339	e28	e19	242	58	67	41	140	16	22
22	3.8	10	164	e28	140	302	52	59	35	148	15	36
23	3.8	10	91	e26	257	221	47	55	32	115	14	42
24	3.9	9.6	62	e26	e190	158	44	51	29	87	14	52
25	7.4	9.5	53	e25	e110	134	57	48	27	72	13	40
26	10	9.6	42	e26	e79	190	78	46	25	59	12	37
27	12	10	33	e25	e64	194	62	42	25	54	12	141
28	6.2	9.8	28	e25	e56	151	53	41	24	57	14	319
29	9.1	9.6	26	e26	---	415	50	44	23	50	15	208
30	13	9.2	81	e25	---	426	48	41	21	45	15	131
31	9.0	---	300	e24	---	254	---	43	---	40	20	---
TOTAL	175.4	542.5	1,965.4	2,954	1,475	8,461	2,303	5,264	1,501	11,452	680	6,077
MEAN	5.66	18.1	63.4	95.3	52.7	273	76.8	170	50.0	369	21.9	203
MAX	13	95	420	529	257	644	175	763	208	1,450	37	1,430
MIN	3.7	6.5	6.6	24	18	47	44	41	21	19	12	22
CFSM	0.06	0.19	0.68	1.01	0.56	2.91	0.82	1.81	0.53	3.93	0.23	2.16
IN.	0.07	0.21	0.78	1.17	0.58	3.35	0.91	2.09	0.59	4.54	0.27	2.41

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2003, BY WATER YEAR (WY)

MEAN	42.7	88.0	120	124	159	173	157	138	97.9	71.9	40.4	32.4
MAX	329	441	352	345	439	413	299	549	469	369	306	314
(WY)	(2002)	(1994)	(1991)	(1969)	(1982)	(1978)	(1996)	(1996)	(1998)	(2003)	(1979)	(1989)
MIN	2.36	3.88	8.95	5.35	35.7	35.0	30.0	23.4	8.47	9.21	3.72	0.65
(WY)	(2000)	(2000)	(2000)	(1977)	(1978)	(1981)	(1971)	(1976)	(1988)	(1977)	(1999)	(1999)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

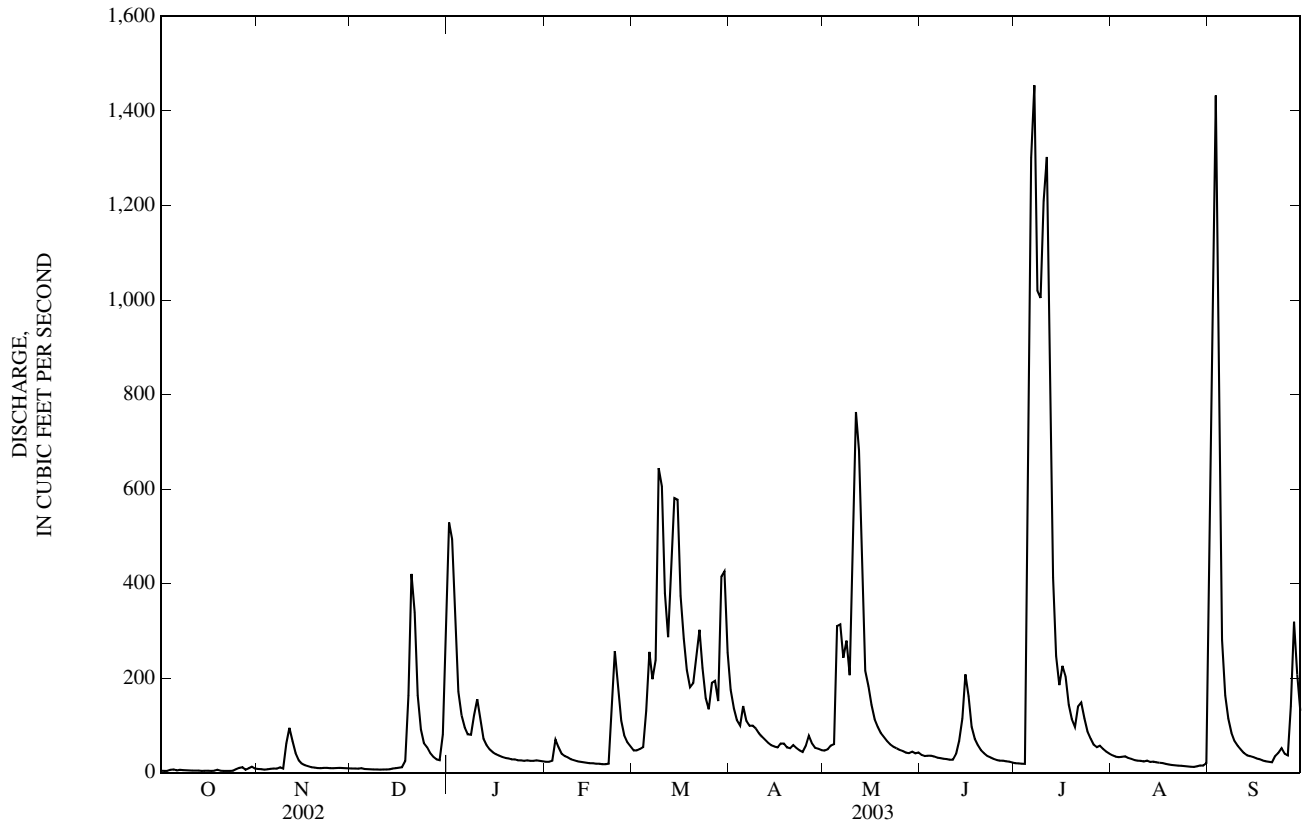
FOR 2003 WATER YEAR

WATER YEARS 1968 - 2003

ANNUAL TOTAL	38,246.9	42,850.3	
ANNUAL MEAN	105	117	103
HIGHEST ANNUAL MEAN			157
LOWEST ANNUAL MEAN			37.7
HIGHEST DAILY MEAN	1,550	May 14	1,450
LOWEST DAILY MEAN	3.7	Oct 21	3.7
ANNUAL SEVEN-DAY MINIMUM	4.1	Oct 12	4.1
MAXIMUM PEAK FLOW			1,590
MAXIMUM PEAK STAGE			8.82
ANNUAL RUNOFF (CFSM)	1.12		1.25
ANNUAL RUNOFF (INCHES)	15.15		16.98
10 PERCENT EXCEEDS	276		292
50 PERCENT EXCEEDS	41		41
90 PERCENT EXCEEDS	5.5		7.4
			2,340
			10.34
			1.10
			14.95
			244
			46
			8.4

e Estimated

03361650 SUGAR CREEK AT NEW PALESTINE, IN—Continued



03361650 SUGAR CREEK AT NEW PALESTINE, IN—Continued

[(National Water-Quality Assessment Program), White River Basin, Miami River Basin Study Unit]

WATER-QUALITY RECORDS

These data described in the following table were collected and analyzed as part of the National Water Quality Assessment Program (NAWQA) in the White River Basin, Miami River Basin (WHMI) study units. The objectives of the NAWQA program are to broadly characterize the water-quality of the Nation's streams and aquifers in relation to human and natural factors. This project is one of 42 river basin and aquifer assessment projects being implemented across the nation on a staggered timeline. During the second decade of sampling, 14 of these projects will be actively collecting data. The period of high-intensity data collection for the WHMI project is in water years 2001-2004.

Water quality data from four stream sites in Indiana and two stream sites in Ohio are being reported as part of the NAWQA study: Big Walnut Creek nr Roachdale, IN (03357330), Little Buck Creek nr Indianapolis, IN (03353637), Sugar Creek at Co. Rd. 400S at New Palestine, IN (394340085524601), White River at Hazleton, IN (03374100), Holes Creek at Huffman Park at Kettering, OH (393944084120700), Mad River at St. Paris Pike near Eagle City, OH (03267900). Additionally, continuous monitor data, water temperature, dissolved oxygen, specific conductance, and pH were collected for all sites except Sugar Creek at Co. Rd. 400S at New Palestine, IN (394340085524601), which were instead collected at Sugar Creek at New Palestine, IN (03361650).

These data can also be obtained electronically at <http://in.water.usgs.gov> or at <http://oh.water.usgs.gov>.

(-- , no data).

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEDIAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.0	7.3	8.2	---	7.2	6.6	8.1	8.0	8.1	7.8	8.0	7.6
2	8.0	7.3	8.2	---	7.2	---	8.2	7.9	8.1	7.7	8.0	7.4
3	8.0	7.3	8.2	---	---	---	8.2	8.0	8.0	---	8.0	7.5
4	7.9	7.3	8.1	---	---	---	8.2	8.0	8.2	8.1	8.1	7.7
5	7.9	---	8.1	---	7.1	---	8.0	7.7	8.2	7.5	8.1	7.8
6	7.9	---	8.1	7.0	7.1	---	8.2	7.9	8.2	7.4	8.1	7.9
7	8.0	8.1	8.1	7.0	7.1	---	8.1	7.9	8.2	7.5	8.1	8.0
8	8.1	8.1	8.2	7.0	7.0	---	8.1	8.0	8.1	7.6	8.1	8.0
9	8.2	8.0	8.1	7.1	7.1	---	8.1	8.0	8.1	7.4	8.1	8.0
10	8.2	7.8	---	7.1	7.1	---	8.2	---	8.1	7.4	8.1	8.0
11	8.1	---	8.2	7.0	7.1	---	8.2	---	8.0	7.5	8.1	8.0
12	7.9	---	8.1	7.0	6.9	---	8.2	---	7.9	7.6	8.1	8.0
13	7.9	8.0	8.2	7.0	6.9	---	8.1	---	7.8	7.6	8.0	8.0
14	7.9	8.0	8.3	7.0	---	---	8.1	---	7.7	7.7	8.0	8.0
15	7.9	8.0	8.2	7.0	---	---	8.2	7.7	7.9	7.7	8.0	8.0
16	7.9	8.0	8.2	7.0	---	---	8.2	7.7	7.8	7.8	7.9	8.1
17	7.9	8.1	8.1	6.8	---	---	8.1	7.8	7.8	7.8	8.0	8.1
18	7.9	8.1	8.0	7.0	---	---	8.1	7.8	7.8	7.8	8.0	8.1
19	7.8	8.1	7.8	7.2	6.9	---	8.1	7.8	7.8	7.8	8.1	8.1
20	7.8	8.1	---	7.1	6.9	---	8.1	7.8	7.8	7.8	8.1	8.1
21	7.8	8.1	---	7.0	6.9	---	8.1	8.0	8.0	7.8	8.1	8.1
22	7.7	8.1	---	7.0	6.7	---	8.2	8.1	8.0	7.9	8.1	8.0
23	7.7	8.2	---	---	6.5	---	8.2	8.1	8.0	8.0	8.1	8.0
24	7.7	---	---	---	6.5	---	8.2	8.1	8.1	8.0	8.1	8.1
25	7.6	---	---	---	6.4	8.0	8.0	8.1	8.0	8.0	8.1	8.0
26	7.5	---	---	---	6.3	8.0	8.1	8.1	8.0	8.0	8.0	8.0
27	7.5	---	---	---	6.6	8.0	8.1	8.2	8.0	8.0	8.0	7.8
28	7.5	---	---	---	6.5	8.0	8.1	8.1	7.9	7.9	8.0	7.8
29	7.4	---	---	---	---	7.8	8.0	8.0	7.9	8.0	8.0	7.8
30	---	---	---	7.1	---	7.8	8.0	8.0	7.8	8.0	7.9	7.9
31	---	---	---	7.2	---	7.8	---	8.0	---	8.0	7.9	---
MED	---	---	---	---	---	---	8.1	---	8.0	---	8.1	8.0

03361650 SUGAR CREEK AT NEW PALESTINE, IN—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11.7	10.2	14.8	---	---	---	12.2	9.7	10.1	8.9	9.1	7.8
2	10.6	10.6	15.2	---	---	---	11.4	8.8	10	9.2	8.9	7.0
3	9.9	10.5	15.4	---	---	---	11.2	10.6	9.0	e8.3	9.1	6.8
4	7.9	10.8	15.7	---	---	---	10.5	10.9	9.5	7.9	9.2	7.0
5	9.3	---	15.9	---	---	---	10.4	9.7	9.8	7.2	9.2	8.0
6	10.6	e13.8	16.0	---	---	---	13.1	8.4	9.0	6.4	9.5	8.4
7	10.7	14.7	16.1	---	---	---	13.4	7.2	9.1	6.2	9.5	8.6
8	11.9	13.9	16.3	---	---	---	13.5	7.5	8.2	6.5	9.6	8.6
9	10.7	11.7	16.2	---	---	---	14.6	7.5	8.7	6.7	9.6	8.5
10	9.4	9.1	e16.0	---	---	---	15.4	---	8.4	6.9	9.8	8.5
11	8.8	---	15.9	---	---	---	14.4	---	8.0	7.0	10.2	8.6
12	7.4	---	15.2	---	---	---	13.4	---	7.1	7.4	9.9	8.9
13	8.2	12.7	16.6	---	---	---	12.9	---	7.5	7.8	9.8	8.8
14	9.2	12.8	19.8	---	---	---	12.3	---	7.3	7.9	9.3	8.5
15	10.1	12.2	20.0	---	---	---	11.0	8.1	7.9	7.8	8.9	8.8
16	10.0	13.3	19.4	---	---	---	10.3	8.3	7.8	8.0	8.7	9.3
17	10.4	14.8	17.6	---	---	---	9.2	8.4	7.8	8.0	8.6	9.3
18	10.4	15.5	17.0	---	---	---	10.6	8.6	7.6	7.8	9.2	9.3
19	9.3	14.9	13.9	---	---	---	10.8	8.6	7.4	8.0	8.5	9.3
20	9.8	14.9	e14.3	---	---	---	9.7	8.7	7.9	7.6	7.8	9.9
21	10.0	13.6	---	---	---	---	9.8	9.3	8.4	7.4	7.7	10.2
22	10.1	14.9	---	---	---	---	12.2	9.1	8.5	7.7	7.2	9.0
23	10.2	16.3	---	---	---	---	13.3	9.2	8.4	8.0	7.4	9.2
24	10.3	---	---	---	---	e11.5	13.0	9.4	8.0	8.2	7.9	9.8
25	9.0	---	---	---	---	10.7	11.3	9.3	7.9	8.3	8.0	9.7
26	9.2	---	---	---	---	11.2	12.9	9.5	7.7	8.3	7.7	10.1
27	10.1	---	---	---	---	11.4	12.9	9.4	8.4	8.3	7.0	9.4
28	9.5	---	---	---	---	11.1	12.2	9.1	8.8	8.0	7.8	9.7
29	8.7	---	---	---	---	11.0	11.8	9.1	9.0	8.8	7.3	10.3
30	---	---	---	---	---	12.0	11.2	9.3	9.0	8.9	7.4	11.1
31	e9.8	---	---	---	---	12.7	---	8.5	---	8.9	7.7	---

e Estimated

TEMPERATURE, WATER, DEGREES CELSIUS
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19.7	7.1	1.2	---	0.0	2.7	9.8	19.5	15.2	23.2	22.7	20.8
2	20.7	5.8	1.7	---	0.1	e3.0	12.8	18.1	15.2	23.4	23.3	20.7
3	21.2	5.9	0.8	---	e0.1	---	14.9	16.4	14.7	e24.0	23.0	21.0
4	20.9	7.2	0.1	---	---	---	15.9	14.7	14.4	24.8	22.4	21.0
5	18.2	---	0.3	---	0.0	---	12.4	14.6	15.1	22.1	21.8	19.7
6	16.4	e6.7	0.1	3.4	0.2	---	8.5	16.2	16.1	22.9	21.9	19.2
7	15.0	6.6	0.2	2.5	0.5	---	8.0	16.6	17.3	24.3	22.5	19.2
8	13.3	7.6	0.4	3.4	0.0	---	8.0	16.3	17.9	24.7	22.5	19.5
9	13.4	9.4	0.1	4.5	0.3	---	6.6	16.8	18.1	23.5	22.1	20.2
10	13.9	11.9	e0.4	3.8	0.6	---	7.2	---	18.6	22.3	21.5	20.6
11	15.3	---	0.7	1.1	0.1	---	9.7	---	19.4	22.1	21.5	20.7
12	16.1	---	1.2	0.0	0.1	---	11.9	---	19.9	21.3	21.6	20.1
13	14.4	8.7	1.5	0.1	0.1	---	12.6	---	19.8	21.1	22.2	20.6
14	11.3	8.8	1.5	0.3	e0.1	---	13.9	e15.3	19.3	21.5	23.5	20.7
15	11.1	8.8	2.4	0.0	---	---	16.1	15.3	19.5	21.3	24.5	19.8
16	10.7	6.7	2.7	0.0	---	---	17.1	16.0	19.6	21.1	24.8	18.7
17	9.6	5.7	2.6	0.0	---	---	15.9	16.5	20.2	21.5	24.4	18.8
18	10.2	4.9	4.5	0.0	e0.1	---	15.2	16.9	21.1	22.0	22.8	18.8
19	11.6	6.7	7.0	0.0	0.2	---	16.5	17.6	21.2	22.1	22.2	18.3
20	9.9	7.0	e6.0	0.0	0.3	---	17.4	17.5	19.9	22.0	22.5	16.7
21	9.7	7.0	---	0.0	0.6	---	15.0	15.8	19.7	21.9	23.5	16.5
22	9.7	5.8	---	0.0	1.1	---	12.5	15.5	20.2	21.1	24.5	17.8
23	9.5	5.0	---	---	0.6	---	11.9	15.5	21.2	20.9	23.4	17.1
24	9.8	---	---	---	0.4	e11.8	12.2	15.4	22.0	20.9	22.2	16.7
25	9.2	---	---	---	0.1	11.8	11.5	15.6	22.9	21.1	22.6	16.8
26	9.7	---	---	---	0.4	10.9	12.2	15.8	23.2	21.6	23.8	15.2
27	10.0	---	---	---	0.8	11.2	14.0	16.9	21.6	22.4	24.2	16.0
28	10.2	---	---	---	1.8	12.1	15.2	16.7	21.3	22.0	24.2	15.1
29	8.8	---	---	---	---	9.3	17.0	16.8	22.2	21.2	24.1	13.9
30	---	---	---	0.0	---	7.3	18.5	16.7	23.0	21.5	23.1	13.0
31	e8.4	---	---	0.0	---	7.3	---	16.5	---	22.2	21.3	---

e Estimated

03361650 SUGAR CREEK AT NEW PALESTINE, IN—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	659	705	---	634	552	565	630	645	649	661	348
2	---	676	698	---	616	e571	583	635	646	646	662	247
3	---	680	699	---	e618	---	591	645	649	e645	663	213
4	624	674	703	---	---	---	600	636	661	648	650	293
5	631	---	704	---	592	---	584	537	662	355	640	412
6	---	e684	710	572	550	---	604	538	665	235	656	467
7	644	685	721	587	553	---	614	520	661	226	654	500
8	638	695	709	592	578	---	621	514	665	276	655	525
9	633	695	714	571	583	---	621	509	666	288	656	548
10	e635	607	e710	563	585	---	608	---	662	283	654	565
11	---	---	704	538	597	---	604	---	656	264	647	575
12	e632	---	695	556	608	---	600	---	636	340	651	603
13	e640	648	700	575	616	---	601	---	607	429	652	616
14	---	653	707	590	e612	---	603	e540	590	470	659	618
15	---	664	698	614	---	---	612	572	576	501	655	634
16	---	667	755	627	---	---	597	603	511	511	651	638
17	---	673	817	635	---	---	597	619	577	495	654	639
18	---	679	748	651	e629	---	616	622	601	534	652	639
19	e635	682	589	652	619	---	614	627	616	566	647	640
20	---	683	e535	648	616	---	615	641	627	586	644	646
21	---	688	---	641	682	---	620	648	635	569	639	652
22	---	685	---	645	658	---	624	652	643	577	640	611
23	---	691	---	---	485	---	611	650	653	620	638	617
24	---	---	---	---	479	e578	595	652	656	622	638	634
25	e630	---	---	---	477	578	594	652	655	631	635	627
26	627	---	---	---	493	581	605	655	656	640	633	623
27	630	---	---	---	512	583	612	656	654	643	622	536
28	640	---	---	---	532	587	615	648	649	635	606	491
29	614	---	---	---	---	520	622	644	651	646	596	485
30	---	---	---	640	---	504	626	649	651	653	595	545
31	e642	---	---	638	---	526	---	644	---	658	589	---

e Estimated

394340085524601 SUGAR CREEK AT CO. RD. 400S AT NEW PALESTINE, IN—Continued

[(National Water-Quality Assessment Program), White River Basin, Miami River Basin Study Unit]

WATER-QUALITY RECORDS

These data described in the following table were collected and analyzed as part of the National Water Quality Assessment Program (NAWQA) in the White River Basin, Miami River Basin (WHMI) study units. The objectives of the NAWQA program are to broadly characterize the water-quality of the Nation's streams and aquifers in relation to human and natural factors. This project is one of 42 river basin and aquifer assessment projects being implemented across the nation on a staggered timeline. During the second decade of sampling, 14 of these projects will be actively collecting data. The period of high-intensity data collection for the WHMI project is in water years 2001-2004.

Water quality data from four stream sites in Indiana and two stream sites in Ohio are being reported as part of the NAWQA study: Big Walnut Creek nr Roachdale, IN (03357330), Little Buck Creek nr Indianapolis, IN (03353637), Sugar Creek at Co. Rd. 400S at New Palestine, IN (394340085524601), White River at Hazleton, IN (03374100), Holes Creek at Huffman Park at Kettering, OH (393944084120700), Mad River at St. Paris Pike near Eagle City, OH (03267900). Additionally, continuous monitor data, water temperature, dissolved oxygen, specific conductance, and pH were collected for all sites except Sugar Creek at Co. Rd. 400S at New Palestine, IN (394340085524601), which were instead collected at Sugar Creek at New Palestine, IN (03361650).

These data can also be obtained electronically at <http://in.water.usgs.gov> or at <http://oh.water.usgs.gov>.

(- - -, no data: <, concentration or value reported is less than that indicated: E, estimated value: K, value is estimated from a non-ideal colony count: M, presence verified, not quantified).

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt fxd end field, mg/L as CaCO3 (39036)
OCT													
09...	1310	4.9	747	11.6	8.2	640	18.0	14.0	79.1	29.1	2.24	15.7	230
NOV													
05...	1330	9.6	735	10.3	8.2	672	7.0	7.5	82.8	28.4	2.17	15.3	270
25...	1330	9.6	755	14.8	7.5	701	2.0	5.0	85.0	29.4	2.16	17.1	--
DEC													
16...	1100	11	745	15.3	8.4	727	2.0	2.5	86.1	31.5	1.68	29.1	260
JAN													
16...	1100	70	752	14.0	8.2	713	-5.0	0.0	89.2	29.6	1.33	13.6	250
FEB													
18...	1130	22	751	14.9	8.2	728	0.0	0.0	83.1	29.5	1.24	21.1	250
MAR													
11...	1200	347	750	14.0	7.8	426	9.0	2.0	51.3	15.6	1.46	7.44	140
APR													
01...	1140	174	734	13.6	8.1	569	25.0	9.5	72.0	23.1	1.34	10.7	220
15...	1130	55	736	9.3	8.3	627	28.0	16.0	78.4	29.2	1.40	13.7	--
MAY													
06...	1340	336	728	8.8	7.9	546	25.0	16.5	66.8	22.5	1.82	10.2	170
21...	1100	66	750	9.2	8.1	660	15.0	15.0	90.4	28.5	1.66	11.9	--
JUN													
04...	1400	36	733	9.4	8.2	670	14.5	14.5	90.7	30.9	1.84	15.2	280
24...	1300	29	737	8.7	8.1	664	30.0	22.5	86.8	29.8	1.83	11.7	--
JUL													
09...	1040	1,010	734	5.8	7.5	313	24.0	23.5	35.7	11.1	3.68	5.34	120
22...	1400	139	728	6.0	7.7	478	22.0	26.0	75.5	23.1	2.17	12.1	--
AUG													
04...	1320	33	739	7.9	8.1	652	29.0	22.5	81.3	25.8	1.61	12.6	250
19...	1150	17	739	8.1	8.1	650	28.0	22.0	84.8	30.2	2.01	12.6	--
SEP													
03...	1240	1,590	734	7.0	7.5	201	25.0	21.0	24.4	6.39	4.18	2.66	80

394340085524601 SUGAR CREEK AT CO. RD. 400S AT NEW PALESTINE, IN—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Alkalinity, wat flt inc tit mg/L as CaCO3 (39086)	Bicarbonate, wat flt incm. titr., field, mg/L (00453)	Carbonate, wat flt incm. titr., field, mg/L (00452)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate, water, fltrd, mg/L (00945)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)
OCT 09...	228	275	1	33.0	0.28	10.0	42.4	388	0.24	<0.04	<0.06	<0.008	<0.02
NOV 05...	274	E331	E1	33.0	0.23	6.53	45.7	403	0.27	<0.04	<0.06	<0.008	<0.02
NOV 25...	--	--	--	37.8	0.24	5.52	49.9	423	0.21	<0.04	1.04	0.010	<0.02
DEC 16...	255	E308	E1	60.3	0.26	0.85	47.4	444	0.20	<0.04	0.34	E0.007	<0.02
JAN 16...	244	296	<1	34.6	0.21	7.02	43.7	408	0.26	<0.04	4.42	0.011	<0.02
FEB 18...	257	312	<1	47.0	0.23	2.94	46.5	421	0.20	<0.04	2.08	0.020	<0.02
MAR 11...	136	E166	E0.0	21.4	0.15	5.95	20.1	234	0.72	0.05	4.87	0.137	<0.02
APR 01...	216	261	1	29.3	0.19	6.00	30.5	327	0.41	<0.04	5.06	0.012	<0.02
APR 15...	--	--	--	33.9	0.19	0.52	40.4	363	0.32	<0.04	2.32	0.024	<0.02
MAY 06...	172	210	<1	30.8	0.19	7.17	27.1	300	1.3	0.06	7.91	0.100	<0.02
MAY 21...	--	--	--	30.5	0.22	9.13	36.3	386	0.48	<0.04	4.06	0.082	<0.02
JUN 04...	279	341	<1	34.0	0.24	6.14	40.6	390	0.37	<0.04	1.82	0.033	<0.02
JUN 24...	--	--	--	30.0	0.23	9.07	35.6	368	0.41	<0.04	3.69	0.043	<0.02
JUL 09...	114	E139	<1	13.0	<0.17	9.04	11.4	194	0.85	<0.04	2.80	0.060	0.06
JUL 22...	--	--	--	28.8	0.20	10.7	28.1	347	0.70	<0.04	3.23	0.023	0.03
AUG 04...	253	308	<1	30.3	0.23	9.19	39.8	385	0.38	<0.04	1.26	E0.006	0.03
AUG 19...	--	--	--	29.3	0.28	8.68	41.8	389	0.29	<0.04	0.47	0.014	<0.18
SEP 03...	78	95	<1	6.21	<0.17	7.05	6.6	130	0.71	<0.04	0.25	0.085	0.06

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Particulate nitrogen, susp, water, mg/L (49570)	Phosphorus, water, unfltrd mg/L (00665)	Total carbon, suspnd sedimnt total, mg/L (00694)	Inorganic carbon, suspnd sedimnt total, mg/L (00688)	Organic carbon, suspnd sedimnt total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)	Iron, water, fltrd, ug/L (01046)	Manganese, water, fltrd, ug/L (01056)	1,4-Naphthoquinone, water, fltrd, ug/L (61611)	1-Naphthol, water, fltrd 0.7u GF ug/L (49295)	2-(4-t-Butylphenoxy)cyclohexanol wat flt ug/L (61637)	2,5-Dichloroaniline water, fltrd, ug/L (61614)	2,6-Diethyl-aniline water fltrd 0.7u GF ug/L (82660)
OCT 09...	0.04	0.066	0.3	<0.1	0.3	3.6	15	23.1	<0.05	<0.09	<0.01	<0.03	<0.006
NOV 05...	0.10	0.049	0.6	<0.1	0.6	4.1	41	16.7	M	<0.09	<0.01	<0.03	<0.006
NOV 25...	0.12	0.038	0.9	<0.1	0.9	--	17	23.5	<0.05	<0.09	<0.01	<0.03	<0.006
DEC 16...	0.04	0.023	0.4	<0.1	0.4	3.9	14	26.1	<0.05	<0.09	<0.01	<0.03	<0.006
JAN 16...	<0.02	0.025	0.2	<0.1	0.1	3.4	E5	32.2	<0.05	<0.09	<0.01	<0.03	<0.006
FEB 18...	0.04	0.016	0.2	<0.1	0.2	2.5	26	38.7	<0.05	<0.09	<0.01	<0.03	<0.006
MAR 11...	0.28	0.161	1.8	<0.1	1.8	5.5	73	13.8	<0.05	<0.09	<0.01	<0.03	<0.006
APR 01...	0.15	0.060	0.9	<0.1	0.9	4.6	21	23.1	<0.05	<0.09	<0.01	<0.03	<0.006
APR 15...	0.14	0.038	0.9	<0.1	0.9	--	E5	38.3	<0.05	<0.09	<0.01	<0.03	<0.006
MAY 06...	0.49	0.138	3.0	<0.1	3.0	4.8	17	12.5	<0.05	<0.09	<0.01	<0.03	<0.006
MAY 21...	0.16	0.081	1.5	<0.1	1.5	--	<10	17.5	<0.05	<0.09	<0.01	<0.03	<0.006
JUN 04...	0.10	0.052	0.6	<0.1	0.6	2.4	13	18.4	<0.05	<0.09	<0.01	<0.03	<0.006
JUN 24...	0.12	0.070	1.0	<0.1	1.0	--	E7	12.8	<0.05	<0.09	<0.01	<0.03	<0.006
JUL 09...	0.24	0.21	1.6	<0.1	1.6	8.0	92	4.7	--	<0.09	<0.01	<0.03	<0.006
JUL 22...	0.23	0.125	1.8	<0.1	1.8	--	21	7.1	<0.05	<0.09	<0.01	<0.03	<0.006
AUG 04...	0.08	0.074	0.6	<0.1	0.6	2.8	E6	9.0	<0.05	<0.09	<0.01	<0.03	<0.006
AUG 19...	0.10	0.072	0.6	0.1	0.5	--	12	14.2	<0.05	<0.09	<0.01	<0.03	<0.006
SEP 03...	0.19	0.22	1.3	<0.1	1.2	6.4	201	4.7	<0.05	<0.09	<0.01	<0.03	<0.006

394340085524601 SUGAR CREEK AT CO. RD. 400S AT NEW PALESTINE, IN—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	2-[(2-Et-6-Me-Ph)-amino]propan-1-ol, ug/L (61615)	2Amino-N-isopropylbenzamide, wat flt ug/L (61617)	2Chloro-2,6'-diethylacetanilide, wat flt ug/L (61618)	CIAT, water, fltrd, ug/L (04040)	2-Ethyl-6-methylaniline, water, fltrd, ug/L (61620)	3-(Tri-fluoro-methyl)aniline, water, fltrd, ug/L (61630)	3,4-Di-chloro-aniline, water, fltrd, ug/L (61625)	3,5-Di-chloro-aniline, water, fltrd, ug/L (61627)	3-Phen-oxy-benzyl alcohol, water, fltrd, ug/L (61629)	4-(MeOH)-pendi-meth-alin, wat flt ug/L (61665)	4,4-Di'chloro-benzo-phen-one, wat flt ug/L (61631)	4Chloro 2methyl phenol, water, fltrd, ug/L (61633)	4Chloro-phenyl sulfone, water, fltrd, ug/L (61634)
OCT 09...	<0.1	<0.005	<0.005	E0.013	<0.004	<0.01	<0.004	<0.005	<0.05	<0.1	<0.003	<0.006	<0.03
NOV 05...	<0.1	<0.005	<0.005	<0.006	<0.004	<0.01	<0.004	<0.005	<0.05	--	<0.003	<0.006	<0.03
NOV 25...	<0.1	<0.005	<0.005	E0.026	<0.004	<0.01	<0.004	<0.005	<0.05	<0.1	<0.003	<0.006	<0.03
DEC 16...	<0.1	<0.005	<0.005	E0.012	<0.004	<0.01	<0.004	<0.005	<0.05	<0.1	<0.003	<0.006	<0.03
JAN 16...	<0.1	<0.005	<0.005	E0.040	<0.004	<0.01	<0.004	<0.005	<0.05	<0.1	<0.003	<0.006	<0.03
FEB 18...	<0.1	<0.005	<0.005	E0.020	<0.004	<0.01	<0.004	<0.005	<0.05	<0.1	<0.003	<0.006	<0.03
MAR 11...	<0.1	<0.005	<0.005	E0.047	<0.004	<0.01	<0.004	<0.005	<0.05	<0.1	<0.003	<0.006	<0.03
APR 01...	<0.1	<0.005	<0.005	E0.034	<0.004	<0.01	<0.004	<0.005	<0.05	--	<0.003	<0.006	<0.03
APR 15...	--	<0.005	<0.005	E0.018	<0.004	<0.01	<0.004	<0.005	--	--	<0.003	<0.006	<0.03
MAY 06...	<0.1	<0.005	<0.005	E0.268	<0.004	<0.01	<0.004	<0.005	<0.05	<0.1	<0.003	<0.006	<0.03
MAY 21...	<0.1	<0.005	<0.005	E0.136	<0.004	<0.01	<0.004	<0.005	<0.05	<0.1	<0.003	<0.006	<0.03
JUN 04...	<0.1	<0.005	<0.005	E0.108	<0.004	<0.01	<0.004	<0.005	<0.05	--	<0.003	<0.006	<0.03
JUN 24...	<0.1	<0.005	<0.005	E0.160	<0.004	<0.01	<0.004	<0.005	<0.05	<0.1	<0.016	<0.006	<0.03
JUL 09...	<0.1	<0.005	<0.005	E0.323	<0.004	<0.01	<0.004	<0.005	<0.05	<0.1	<0.003	<0.006	<0.03
JUL 22...	<0.1	<0.005	<0.005	E0.131	<0.004	<0.01	<0.004	<0.005	--	--	<0.003	<0.006	<0.03
AUG 04...	<0.1	<0.005	<0.005	E0.041	<0.004	<0.01	<0.004	<0.005	--	--	<0.003	<0.006	<0.03
AUG 19...	<0.1	<0.005	<0.005	E0.018	<0.004	<0.01	<0.004	<0.005	--	--	<0.003	<0.006	<0.03
SEP 03...	<0.1	<0.005	<0.005	E0.060	<0.004	<0.01	<0.004	<0.005	--	--	<0.003	<0.006	<0.03

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Aceto-chlor ESA, water, fltrd 0.7u GF ug/L (61029)	Aceto-chlor OA, water, fltrd 0.7u GF ug/L (61030)	Aceto-chlor, water, fltrd, ug/L (49260)	Ala-chlor ESA, water, fltrd 0.7u GF ug/L (50009)	Ala-chlor OA, water, fltrd 0.7u GF ug/L (61031)	Ala-chlor, water, fltrd, ug/L (46342)	alpha-HCH, water, fltrd, ug/L (34253)	Amino-methyl-phosphonic acid, wat flt ug/L (62649)	Atra-zine, water, fltrd, ug/L (39632)	Azin-phos-methyl oxon, water, fltrd, ug/L (61635)	Azin-phos-methyl, water, fltrd 0.7u GF ug/L (82686)	Ben-flur-alin, water, fltrd 0.7u GF ug/L (82673)	beta-Endo-sulfan, water, fltrd, ug/L (34357)
OCT 09...	0.07	0.07	0.009	0.10	<0.05	<0.004	<0.005	0.4	0.275	<0.02	<0.050	<0.010	<0.01
NOV 05...	<0.05	<0.05	<0.006	0.09	<0.05	<0.004	<0.005	<0.1	<0.007	<0.02	<0.050	<0.010	<0.01
NOV 25...	0.25	0.27	0.021	0.10	<0.05	<0.004	<0.005	<0.1	0.101	<0.02	<0.050	<0.010	<0.01
DEC 16...	0.07	0.06	<0.006	0.11	<0.05	<0.004	<0.005	<0.1	0.043	<0.02	<0.050	<0.010	<0.01
JAN 16...	0.21	0.11	E0.005	0.05	<0.05	<0.004	<0.005	<0.1	0.108	<0.02	<0.050	<0.010	<0.01
FEB 18...	<0.05	0.06	<0.006	0.05	<0.05	<0.004	<0.005	<0.1	0.055	<0.02	<0.050	<0.010	<0.01
MAR 11...	0.19	0.13	0.010	0.06	<0.05	<0.004	<0.005	0.3	0.152	<0.02	<0.050	<0.010	<0.01
APR 01...	0.17	0.11	E0.006	<0.05	<0.05	<0.004	<0.005	<0.1	0.096	<0.02	<0.050	<0.010	<0.01
APR 15...	0.06	<0.05	<0.006	0.05	<0.05	<0.004	<0.005	<0.1	0.064	<0.02	<0.050	<0.010	<0.01
MAY 06...	0.33	0.32	0.760	0.08	<0.05	<0.004	<0.005	0.1	8.98	<0.02	<0.050	<0.010	<0.01
MAY 21...	0.16	0.22	0.084	0.11	<0.05	<0.004	<0.005	<0.1	1.74	<0.03	<0.050	<0.010	<0.01
JUN 04...	0.10	0.06	0.063	0.08	<0.05	0.005	<0.005	<0.1	1.63	<0.02	<0.050	<0.010	<0.01
JUN 24...	0.51	0.44	0.063	0.09	0.07	0.030	<0.005	<0.1	1.01	<0.02	<0.050	<0.010	<0.01
JUL 09...	1.01	1.25	0.217	<0.05	<0.05	0.010	<0.005	0.5	2.83	<0.02	<0.050	<0.010	<0.01
JUL 22...	0.51	0.46	0.082	0.08	0.05	<0.004	<0.005	0.4	0.705	<0.03	<0.050	<0.010	<0.01
AUG 04...	0.18	0.12	<0.006	0.10	<0.05	<0.004	<0.005	0.2	0.224	<0.02	<0.050	<0.010	<0.01
AUG 19...	0.12	0.10	E0.004	0.10	<0.05	<0.004	<0.005	0.2	0.093	<0.02	<0.050	<0.010	<0.01
SEP 03...	0.21	0.27	0.028	<0.05	<0.05	0.006	<0.005	0.5	0.184	<0.02	<0.050	<0.010	<0.01

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WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Bifen- thrin, water, fltrd, ug/L (61580)	Butyl- ate, water, fltrd, ug/L (04028)	Car- baryl, water, fltrd 0.7u GF ug/L (82680)	Carbo- furan, water, fltrd 0.7u GF ug/L (82674)	Chlor- pyrifos oxon, water, fltrd, ug/L (61636)	Chlor- pyrifos water, fltrd, ug/L (38933)	cis- Per- methrin water fltrd 0.7u GF ug/L (82687)	cis- Propi- cona- zole, water, fltrd, ug/L (79846)	Cyana- zine, water, fltrd, ug/L (04041)	Cyclo- ate, water, fltrd, ug/L (04031)	Cyflu- thrin, water, fltrd, ug/L (61585)	Cyhalo- thrin, water, fltrd, ug/L (61595)	Cyper- methrin water, fltrd, ug/L (61586)
OCT 09...	<0.005	<0.002	<0.041	<0.020	<0.06	<0.005	<0.006	<0.008	E0.011	<0.005	<0.008	<0.009	<0.009
NOV 05...	<0.005	<0.002	<0.041	<0.020	<0.06	<0.005	<0.006	<0.008	<0.018	<0.005	<0.008	<0.009	<0.009
NOV 25...	<0.005	<0.002	<0.041	<0.020	<0.06	<0.005	<0.006	<0.008	<0.018	<0.005	<0.008	<0.009	<0.009
DEC 16...	<0.005	<0.002	<0.041	<0.020	<0.06	<0.005	<0.006	<0.008	<0.018	<0.005	<0.008	<0.009	<0.009
JAN 16...	<0.005	<0.002	<0.041	<0.020	<0.06	<0.005	<0.006	<0.008	<0.018	<0.005	<0.008	<0.009	<0.009
FEB 18...	<0.005	<0.002	<0.041	<0.020	<0.06	<0.005	<0.006	<0.008	<0.018	<0.005	<0.008	<0.009	<0.009
MAR 11...	<0.005	<0.002	<0.041	<0.020	<0.06	<0.005	<0.006	<0.008	<0.018	<0.005	<0.008	<0.009	<0.009
APR 01...	<0.005	<0.002	<0.041	<0.020	<0.06	<0.005	<0.006	<0.008	<0.018	<0.005	<0.008	<0.009	<0.009
APR 15...	<0.005	<0.002	<0.041	<0.020	<0.06	<0.005	<0.006	<0.008	<0.018	<0.005	<0.008	<0.009	<0.009
MAY 06...	<0.005	<0.002	<0.041	<0.020	<0.06	<0.005	<0.006	<0.008	<0.018	<0.005	<0.008	<0.009	<0.009
MAY 21...	<0.005	<0.002	<0.041	<0.020	<0.06	<0.005	<0.006	<0.008	<0.018	<0.005	<0.008	<0.009	<0.009
JUN 04...	<0.005	<0.002	<0.041	<0.020	<0.06	<0.005	<0.006	<0.008	0.020	<0.005	<0.008	<0.009	<0.009
JUN 24...	<0.005	<0.002	<0.041	<0.020	<0.02	<0.005	<0.006	<0.008	<0.018	<0.005	<0.016	<0.009	<0.016
JUL 09...	<0.005	<0.002	E0.013	<0.020	<0.06	0.007	<0.006	<0.008	0.046	<0.005	<0.008	<0.009	<0.009
JUL 22...	<0.005	<0.002	E0.081	<0.020	<0.06	<0.010	<0.006	<0.008	0.114	<0.005	<0.008	<0.009	<0.009
AUG 04...	<0.005	<0.002	<0.041	<0.020	<0.06	<0.005	<0.006	<0.008	<0.018	<0.005	<0.008	<0.009	<0.009
AUG 19...	<0.005	<0.002	<0.041	<0.020	<0.06	<0.005	<0.006	<0.008	<0.018	<0.005	<0.008	<0.009	<0.009
SEP 03...	<0.005	<0.002	E0.019	<0.020	<0.06	<0.005	<0.006	<0.008	E0.015	<0.005	<0.008	<0.009	<0.009

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	DCPA, water fltrd 0.7u GF ug/L (82682)	Desulf- inyl fipronil, water, fltrd, ug/L (62170)	Diazi- non, water, fltrd, ug/L (39572)	Dicro- tophos, water, fltrd, ug/L (38454)	Diel- drin, water, fltrd, ug/L (39381)	Dimeth- enamid ESA, water, fltrd, ug/L (61951)	Dimeth- enamid OA, water, fltrd, ug/L (62482)	Dimeth- oate, water, fltrd 0.7u GF ug/L (82662)	Disulf- oton sulfone water, fltrd, ug/L (61640)	Disulf- oton sulf- oxide, water, fltrd, ug/L (61641)	Disulf- oton water, fltrd 0.7u GF ug/L (82677)	e-Di- metho- morph, water, fltrd, ug/L (79844)	Endo- sulfan ether, water, fltrd, ug/L (61642)
OCT 09...	<0.003	<0.004	<0.005	<0.08	<0.005	<0.05	<0.05	<0.006	<0.02	<0.002	<0.02	<0.02	<0.004
NOV 05...	<0.003	<0.004	<0.005	<0.08	<0.005	<0.05	<0.05	<0.006	<0.02	<0.002	<0.02	<0.02	<0.004
NOV 25...	<0.003	<0.004	E0.006	<0.08	<0.005	<0.05	<0.05	<0.006	<0.02	<0.002	<0.02	<0.02	<0.004
DEC 16...	<0.003	<0.004	<0.005	<0.08	<0.005	<0.05	<0.05	<0.006	<0.02	<0.002	<0.02	<0.02	<0.004
JAN 16...	<0.003	<0.004	<0.005	<0.08	<0.005	<0.05	<0.05	<0.006	<0.02	<0.002	<0.02	<0.02	<0.004
FEB 18...	<0.003	<0.004	<0.005	<0.08	<0.005	<0.05	<0.05	<0.006	<0.02	<0.002	<0.02	<0.02	<0.004
MAR 11...	<0.003	<0.004	<0.005	<0.08	<0.005	<0.05	<0.05	<0.006	<0.02	<0.002	<0.02	<0.02	<0.004
APR 01...	<0.003	<0.004	<0.005	<0.08	<0.005	<0.05	<0.05	<0.006	<0.02	<0.002	<0.02	<0.02	<0.004
APR 15...	<0.003	<0.004	<0.005	<0.08	<0.005	<0.05	<0.05	<0.006	<0.02	<0.002	<0.02	<0.02	<0.004
MAY 06...	<0.003	<0.004	<0.005	<0.08	<0.005	<0.05	<0.05	<0.006	<0.02	<0.002	<0.02	<0.02	<0.004
MAY 21...	<0.003	<0.004	<0.005	<0.08	<0.005	0.06	<0.05	<0.006	<0.02	<0.002	<0.02	<0.02	<0.004
JUN 04...	<0.003	<0.004	<0.005	<0.08	<0.005	<0.05	<0.05	<0.006	<0.02	<0.002	<0.02	<0.02	<0.004
JUN 24...	<0.003	<0.004	<0.005	<0.08	<0.005	<0.05	<0.05	<0.006	<0.02	<0.002	<0.02	<0.02	<0.004
JUL 09...	<0.003	<0.004	0.005	<0.08	<0.005	0.18	0.09	<0.006	<0.02	<0.002	<0.02	<0.02	<0.004
JUL 22...	<0.003	<0.004	<0.005	<0.08	<0.005	0.13	0.07	<0.006	<0.02	<0.002	<0.02	<0.02	<0.004
AUG 04...	<0.003	<0.004	<0.005	<0.08	<0.005	0.07	<0.05	<0.006	<0.02	<0.002	<0.02	<0.02	<0.004
AUG 19...	<0.003	<0.004	<0.005	<0.08	<0.005	<0.05	<0.05	<0.006	<0.02	<0.002	<0.02	<0.02	<0.004
SEP 03...	<0.003	<0.004	<0.005	<0.08	<0.005	0.07	<0.05	<0.006	<0.02	<0.002	<0.02	<0.02	<0.004

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WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Endo- sulfan sulfate water, fltrd, ug/L (61590)	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethal- flur- alin, water, fltrd 0.7u GF ug/L (82663)	Ethion monoxon water, fltrd, ug/L (61644)	Ethion, water, fltrd, ug/L (82346)	Etho- prop, water, fltrd 0.7u GF ug/L (82672)	Fenami- phos sulfone water, fltrd, ug/L (61645)	Fenami- phos sulf- oxide, water, fltrd, ug/L (61646)	Fenami- phos, water, fltrd, ug/L (61591)	Fen- thion sulf- oxide, water, fltrd, ug/L (61647)	Fen- thion, water, fltrd, ug/L (38801)	Desulf- inyl- fipron- il amide, wat flt ug/L (62169)	Fipron- il sulfide water, fltrd, ug/L (62167)
OCT 09...	<0.006	<0.002	<0.009	<0.03	<0.004	<0.005	<0.008	<0.03	<0.03	<0.008	<0.02	<0.009	<0.005
NOV 05...	<0.006	<0.002	<0.009	<0.03	<0.004	<0.005	<0.008	<0.03	<0.03	<0.008	<0.02	<0.009	<0.005
NOV 25...	<0.006	<0.002	<0.009	<0.03	<0.004	<0.005	<0.008	<0.03	<0.03	<0.008	<0.02	<0.009	<0.005
DEC 16...	<0.006	<0.002	<0.009	<0.03	<0.004	<0.005	<0.008	<0.03	<0.03	<0.008	<0.02	<0.009	<0.005
JAN 16...	<0.006	<0.002	<0.009	<0.03	<0.004	<0.005	<0.008	<0.03	<0.03	<0.008	<0.02	<0.009	<0.005
FEB 18...	<0.006	<0.002	<0.009	<0.03	<0.004	<0.005	<0.008	<0.03	<0.03	<0.008	<0.02	<0.009	<0.005
MAR 11...	<0.006	<0.002	<0.009	<0.03	<0.004	<0.005	<0.008	<0.03	<0.03	<0.008	<0.02	<0.009	<0.005
APR 01...	<0.006	<0.002	<0.009	<0.03	<0.004	<0.005	<0.008	<0.03	<0.03	<0.008	<0.02	<0.009	<0.005
APR 15...	<0.006	<0.002	<0.009	<0.03	<0.004	<0.005	<0.008	<0.03	<0.03	<0.008	<0.02	<0.009	<0.005
MAY 06...	<0.006	<0.002	<0.009	<0.03	<0.004	<0.005	<0.008	<0.03	<0.03	<0.008	<0.02	<0.009	<0.005
MAY 21...	<0.006	<0.002	<0.009	<0.03	<0.004	<0.005	<0.031	<0.03	<0.03	<0.008	<0.02	<0.009	<0.005
JUN 04...	<0.006	<0.002	<0.009	<0.03	<0.004	<0.005	<0.008	<0.03	<0.03	<0.008	<0.02	<0.009	<0.005
JUN 24...	<0.006	<0.002	<0.009	<0.03	<0.004	<0.005	<0.008	<0.03	<0.03	<0.008	<0.02	<0.009	<0.005
JUL 09...	<0.006	<0.002	<0.009	<0.03	<0.004	<0.005	<0.008	<0.03	<0.03	<0.008	<0.02	<0.009	<0.005
JUL 22...	<0.006	<0.002	<0.009	<0.03	<0.004	<0.005	<0.008	<0.03	<0.03	<0.008	<0.02	<0.009	<0.005
AUG 04...	<0.006	<0.002	<0.009	<0.03	<0.004	<0.005	<0.008	<0.03	<0.03	<0.008	<0.02	<0.009	<0.005
AUG 19...	<0.006	<0.002	<0.009	<0.03	<0.004	<0.005	<0.008	<0.03	<0.03	<0.008	<0.02	<0.009	<0.005
SEP 03...	<0.006	<0.002	<0.009	<0.03	<0.004	<0.005	<0.008	<0.03	<0.03	<0.008	<0.02	<0.009	<0.005

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Fipron- il sulfone water, fltrd, ug/L (62168)	Fipron- il, water, fltrd, ug/L (62166)	Flufen- acet ESA, water, fltrd, ug/L (61952)	Flufen- acet OA, water, fltrd, ug/L (62483)	Flume- tralin, water, fltrd, ug/L (61592)	Fonofos oxon, water, fltrd, ug/L (61649)	Fonofos water, fltrd, ug/L (04095)	Glufos- inate, water, fltrd 0.7u GF ug/L (62721)	Glypho- sate, water, fltrd 0.7u GF ug/L (62722)	Hexa- zinone, water, fltrd, ug/L (04025)	Iprodi- one, water, fltrd, ug/L (61593)	Isofen- phos, water, fltrd, ug/L (61594)	Lindane water, fltrd, ug/L (39341)
OCT 09...	<0.005	<0.007	<0.05	<0.05	<0.004	<0.002	<0.003	<0.1	<0.1	<0.013	<1	<0.003	<0.004
NOV 05...	<0.005	<0.007	<0.05	<0.05	<0.004	<0.002	<0.003	<0.1	<0.1	<0.013	<1	<0.003	<0.004
NOV 25...	<0.005	<0.007	<0.05	<0.05	<0.004	<0.002	<0.003	<0.1	<0.1	<0.013	<1	<0.003	<0.004
DEC 16...	<0.005	<0.007	<0.05	<0.05	<0.004	<0.002	<0.003	<0.1	<0.1	<0.013	<1	<0.003	<0.004
JAN 16...	<0.005	<0.007	<0.05	<0.05	<0.004	<0.002	<0.003	<0.1	<0.1	<0.013	<1	<0.003	<0.004
FEB 18...	<0.005	<0.007	<0.05	<0.05	<0.004	<0.002	<0.003	<0.1	<0.1	<0.013	<1	<0.003	<0.004
MAR 11...	<0.005	<0.007	<0.05	<0.05	<0.004	<0.002	<0.003	<0.1	<0.1	<0.013	<1	<0.003	<0.004
APR 01...	<0.005	<0.007	<0.05	<0.05	<0.004	<0.002	<0.003	<0.1	<0.1	<0.013	<1	<0.003	<0.004
APR 15...	<0.005	<0.007	<0.05	<0.05	<0.004	<0.002	<0.003	<0.1	<0.1	<0.013	<1	<0.003	<0.004
MAY 06...	<0.005	E0.011	<0.05	<0.05	<0.004	<0.002	<0.003	<0.1	0.2	<0.013	<1	<0.003	<0.004
MAY 21...	<0.005	<0.007	<0.05	<0.05	<0.004	<0.002	<0.003	<0.1	<0.1	<0.013	<1	<0.003	<0.004
JUN 04...	<0.005	<0.007	<0.05	<0.05	<0.004	<0.002	<0.003	<0.1	<0.1	<0.013	<1	<0.003	<0.004
JUN 24...	<0.005	<0.007	<0.05	<0.05	<0.004	<0.002	<0.003	<0.1	<0.1	<0.013	<1	<0.003	<0.004
JUL 09...	<0.005	<0.007	<0.05	<0.05	<0.004	<0.002	<0.003	<0.1	0.8	<0.013	<1	<0.003	<0.004
JUL 22...	<0.005	<0.007	<0.05	<0.05	<0.004	<0.002	<0.003	<0.1	0.2	<0.013	<1	<0.003	<0.004
AUG 04...	<0.005	<0.007	<0.05	<0.05	<0.004	<0.002	<0.003	<0.1	0.1	<0.013	<1	<0.003	<0.004
AUG 19...	<0.005	<0.007	<0.05	<0.05	<0.004	<0.002	<0.003	<0.1	<0.1	<0.013	<1	<0.003	<0.004
SEP 03...	<0.005	E0.008	<0.05	<0.05	<0.004	<0.002	<0.003	<0.1	0.5	<0.013	<1	<0.003	<0.004

394340085524601 SUGAR CREEK AT CO. RD. 400S AT NEW PALESTINE, IN—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Linuron water fltrd 0.7u GF ug/L (82666)	Mala- oxon, water, fltrd, ug/L (61652)	Mala- thion, water, fltrd, ug/L (39532)	Meta- laxyl, water, fltrd, ug/L (61596)	Methi- althion water, fltrd, ug/L (61598)	c-Per- methric acid methyl ester, wat flt ug/L (79842)	Methyl para- oxon, water, fltrd, ug/L (61664)	Methyl para- thion, water, fltrd 0.7u GF ug/L (82667)	t-Per- methric acid methyl ester, wat flt ug/L (79843)	Metola- chlor ESA, water, fltrd 0.7u GF ug/L (61043)	Metola- chlor OA, water, fltrd 0.7u GF ug/L (61044)	Metola- chlor, water, fltrd, ug/L (39415)	Metri- buzin, water, fltrd, ug/L (82630)
OCT 09...	<0.035	<0.008	<0.027	<0.005	<0.006	<0.04	<0.03	<0.006	<0.03	0.15	0.09	0.025	<0.006
NOV 05...	<0.035	<0.008	<0.027	<0.005	<0.006	<0.04	<0.03	<0.006	<0.03	0.13	0.06	<0.013	<0.006
NOV 25...	<0.035	<0.008	<0.027	<0.005	<0.006	<0.04	<0.03	<0.006	<0.03	0.51	0.34	0.029	0.006
DEC 16...	<0.035	<0.008	<0.027	<0.005	<0.006	<0.04	<0.03	<0.006	<0.03	0.18	0.09	E0.009	<0.006
JAN 16...	<0.035	<0.008	<0.027	<0.005	<0.006	<0.04	<0.03	<0.006	<0.03	0.35	0.17	0.019	0.007
FEB 18...	<0.035	<0.008	<0.027	<0.005	<0.006	<0.04	<0.03	<0.006	<0.03	0.20	0.07	E0.009	<0.006
MAR 11...	<0.035	<0.008	<0.027	<0.005	<0.006	<0.04	<0.03	<0.006	<0.03	0.52	0.24	0.051	0.020
APR 01...	<0.035	<0.008	<0.027	<0.005	<0.006	<0.04	<0.03	<0.006	<0.03	0.51	0.21	0.025	0.007
APR 15...	<0.035	<0.008	<0.027	<0.005	<0.006	<0.04	<0.03	<0.006	<0.03	0.35	0.08	E0.011	<0.006
MAY 06...	<0.035	<0.008	<0.027	<0.005	<0.006	<0.04	<0.03	<0.006	<0.03	0.78	0.43	1.26	0.045
MAY 21...	<0.035	<0.008	<0.027	<0.005	<0.006	<0.04	<0.03	<0.006	<0.03	0.65	0.24	0.327	0.007
JUN 04...	<0.035	<0.008	<0.027	<0.005	<0.006	<0.04	<0.03	<0.006	<0.03	0.30	0.10	0.539	0.023
JUN 24...	<0.035	<0.008	E0.002	<0.005	<0.006	<0.04	<0.03	<0.006	<0.03	0.59	0.24	0.191	<0.006
JUL 09...	<0.035	<0.008	E0.005	<0.005	<0.006	<0.04	<0.03	<0.006	<0.03	1.39	1.02	1.21	0.048
JUL 22...	<0.035	<0.008	<0.027	<0.005	<0.006	<0.04	<0.03	<0.006	<0.03	0.94	0.59	0.542	0.051
AUG 04...	<0.035	<0.008	<0.027	<0.005	<0.006	<0.04	<0.03	<0.006	<0.03	0.44	0.18	0.061	<0.006
AUG 19...	<0.035	<0.008	<0.027	<0.005	<0.006	<0.04	<0.03	<0.006	<0.03	0.35	0.12	0.032	<0.006
SEP 03...	<0.035	<0.008	<0.027	<0.005	<0.006	<0.04	<0.03	<0.006	<0.03	0.64	0.38	0.211	0.018

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Moli- nate, water, fltrd 0.7u GF ug/L (82671)	Myclo- butanil water, fltrd, ug/L (61599)	Naprop- amide, water, fltrd 0.7u GF ug/L (82684)	O-Et-O- Me-S-Pr -phos- phoro- thioate wat flt ug/L (61660)	Oxy- fluor- fen, water, fltrd, ug/L (61600)	p,p'- DDE, water, fltrd, ug/L (34653)	Para- oxon, water, fltrd, ug/L (61663)	Para- thion, water, fltrd, ug/L (39542)	Peb- ulate, water, fltrd 0.7u GF ug/L (82669)	Pendi- meth- alin, water, fltrd 0.7u GF ug/L (82683)	Phorate oxon, water, fltrd, ug/L (61666)	Phorate water fltrd 0.7u GF ug/L (82664)	Phosmet oxon, water, fltrd, ug/L (61668)
OCT 09...	<0.002	<0.008	<0.007	<0.008	<0.007	<0.003	<0.008	<0.010	<0.004	<0.022	<0.10	<0.011	<0.06
NOV 05...	<0.002	<0.008	<0.007	<0.008	<0.007	<0.003	<0.008	<0.010	<0.004	<0.022	<0.10	<0.011	<0.06
NOV 25...	<0.002	<0.008	<0.007	<0.008	<0.007	<0.003	<0.008	<0.010	<0.004	<0.022	<0.10	<0.011	<0.06
DEC 16...	<0.002	<0.008	<0.007	<0.008	<0.007	<0.003	<0.008	<0.010	<0.004	<0.022	<0.10	<0.011	<0.06
JAN 16...	<0.002	<0.008	<0.007	<0.008	<0.007	<0.003	<0.008	<0.010	<0.004	<0.022	<0.10	<0.011	<0.06
FEB 18...	<0.002	<0.008	<0.007	<0.008	<0.007	<0.003	<0.008	<0.010	<0.004	<0.022	<0.10	<0.011	<0.06
MAR 11...	<0.002	<0.008	<0.007	<0.008	<0.007	<0.003	<0.008	<0.010	<0.004	<0.022	<0.10	<0.011	<0.06
APR 01...	<0.002	<0.008	<0.007	<0.008	<0.007	<0.003	<0.008	<0.010	<0.004	<0.022	<0.10	<0.011	<0.06
APR 15...	<0.002	<0.008	<0.007	<0.008	<0.007	<0.003	<0.008	<0.010	<0.004	<0.022	<0.10	<0.011	<0.06
MAY 06...	<0.002	<0.008	<0.007	<0.008	<0.007	<0.003	<0.008	<0.010	<0.004	<0.022	<0.10	<0.011	<0.06
MAY 21...	<0.002	<0.008	<0.007	<0.008	<0.007	<0.003	<0.008	<0.010	<0.004	<0.022	<0.10	<0.011	<0.06
JUN 04...	<0.002	<0.008	<0.007	<0.008	<0.007	<0.003	<0.008	<0.010	<0.004	<0.022	<0.10	<0.011	<0.06
JUN 24...	<0.002	<0.008	<0.007	<0.008	<0.007	<0.003	<0.016	<0.010	<0.004	<0.022	<0.10	<0.011	<0.06
JUL 09...	<0.002	<0.008	<0.007	<0.008	<0.007	<0.003	<0.008	<0.010	<0.004	<0.022	<0.10	<0.011	<0.06
JUL 22...	<0.002	<0.008	<0.007	<0.008	<0.007	<0.003	<0.008	<0.010	<0.004	<0.022	<0.10	<0.011	<0.06
AUG 04...	<0.002	<0.008	<0.007	<0.008	<0.007	<0.003	<0.008	<0.010	<0.004	<0.022	<0.10	<0.011	<0.06
AUG 19...	<0.002	<0.008	<0.007	<0.008	<0.007	<0.003	<0.008	<0.010	<0.004	<0.022	<0.10	<0.011	<0.06
SEP 03...	<0.002	<0.008	<0.007	<0.008	<0.007	<0.003	<0.008	<0.010	<0.004	<0.022	<0.10	<0.011	<0.06

394340085524601 SUGAR CREEK AT CO. RD. 400S AT NEW PALESTINE, IN—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Phosmet water, fltrd, ug/L (61601)	Phoste- bupirim water, fltrd, ug/L (61602)	Pro- fenofos water, fltrd, ug/L (61603)	Prome- ton, water, fltrd, ug/L (04037)	Prome- tryn, water, fltrd, ug/L (04036)	Pron- amide, water, fltrd 0.7u GF ug/L (82676)	Propa- chlor, water, fltrd, ug/L (04024)	Pro- panil, water, fltrd 0.7u GF ug/L (82679)	Propar- gite, water, fltrd 0.7u GF ug/L (82685)	Propet- amphos, water, fltrd, ug/L (61604)	Simaz- ine, water, fltrd, ug/L (04035)	Sulfo- tepp, water, fltrd, ug/L (61605)	Sulpro- fos, water, fltrd, ug/L (38716)
OCT 09...	<0.008	<0.005	<0.006	0.02	<0.005	<0.004	<0.010	<0.011	<0.02	<0.004	E0.005	<0.003	<0.02
NOV 05...	<0.008	<0.005	<0.006	<0.01	<0.005	<0.004	<0.010	<0.011	<0.02	<0.004	<0.005	<0.003	<0.02
NOV 25...	<0.008	<0.005	<0.006	E0.01	<0.005	<0.004	<0.010	<0.011	<0.02	<0.004	0.132	<0.003	<0.02
DEC 16...	<0.008	<0.005	<0.006	0.06	<0.005	<0.004	<0.010	<0.011	<0.02	<0.004	0.023	<0.003	<0.02
JAN 16...	<0.008	<0.005	<0.006	E0.01	<0.005	<0.004	<0.010	<0.011	<0.02	<0.004	0.029	<0.003	<0.02
FEB 18...	<0.008	<0.005	<0.006	M	<0.005	<0.004	<0.010	<0.011	<0.02	<0.004	0.017	<0.003	<0.02
MAR 11...	<0.008	<0.005	<0.006	E0.01	<0.005	<0.004	<0.010	<0.011	<0.02	<0.004	0.131	<0.003	<0.02
APR 01...	<0.008	<0.005	<0.006	<0.01	<0.005	<0.004	<0.010	<0.011	<0.02	<0.004	0.046	<0.003	<0.02
APR 15...	<0.008	<0.005	<0.006	<0.01	<0.005	<0.004	<0.010	<0.011	<0.02	<0.004	0.016	<0.003	<0.02
MAY 06...	<0.008	0.019	<0.006	0.03	<0.005	<0.004	<0.010	<0.011	<0.02	<0.004	0.346	<0.003	<0.02
MAY 21...	<0.008	<0.005	<0.006	E0.01	<0.005	<0.004	<0.010	<0.011	<0.02	<0.004	0.069	<0.003	<0.02
JUN 04...	<0.008	<0.005	<0.006	0.02	<0.005	<0.004	<0.010	<0.011	<0.02	<0.004	0.031	<0.003	<0.02
JUN 24...	<0.008	<0.005	<0.006	E0.01	<0.005	<0.004	<0.010	<0.011	<0.02	<0.004	0.019	<0.003	<0.02
JUL 09...	<0.008	0.010	<0.006	0.07	<0.005	<0.004	<0.010	<0.011	<0.02	<0.004	0.051	<0.003	<0.02
JUL 22...	<0.008	<0.005	<0.006	0.02	<0.005	<0.004	<0.010	<0.011	<0.02	<0.004	0.014	<0.003	<0.02
AUG 04...	<0.008	<0.005	<0.006	E0.01	<0.005	<0.004	<0.010	<0.011	<0.02	<0.004	0.008	<0.003	<0.02
AUG 19...	<0.008	<0.005	<0.006	E0.01	<0.005	<0.004	<0.010	<0.011	<0.02	<0.004	0.006	<0.003	<0.02
SEP 03...	<0.008	<0.005	<0.006	0.02	<0.005	<0.004	<0.010	<0.011	<0.02	<0.004	0.007	<0.003	<0.02

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Tebu- pirim- phos oxon, water, fltrd, ug/L (61669)	Tebu- thiuron water fltrd 0.7u GF ug/L (82670)	Teflu- thrin metab- olite R119365 wat flt ug/L (61671)	Teflu- thrin metab- olite R152913 wat flt ug/L (61672)	Teflu- thrin, water, fltrd, ug/L (61606)	Tem- phos, water, fltrd, ug/L (61607)	Terba- cil, water, fltrd 0.7u GF ug/L (82665)	Ter- bufos oxon sulfone water, fltrd, ug/L (61674)	Terbu- fos, water, fltrd 0.7u GF ug/L (82675)	Ter- buthyl- azine, water, fltrd, ug/L (04022)	Thio- bencarb water fltrd 0.7u GF ug/L (82681)	trans- Propi- cona- zole, water, fltrd, ug/L (79847)	Tri- allate, water, fltrd 0.7u GF ug/L (82678)
OCT 09...	<0.006	<0.02	<0.02	<0.01	<0.008	<0.3	<0.034	<0.07	<0.02	<0.01	<0.005	<0.01	<0.002
NOV 05...	<0.006	<0.02	<0.02	<0.01	<0.008	<0.3	<0.034	<0.07	<0.02	<0.01	<0.005	<0.01	<0.002
NOV 25...	<0.006	<0.02	<0.02	<0.01	<0.008	<0.3	<0.034	<0.07	<0.02	<0.01	<0.005	<0.01	<0.002
DEC 16...	<0.006	<0.02	<0.02	<0.01	<0.008	<0.3	<0.034	<0.07	<0.02	<0.01	<0.005	<0.01	<0.002
JAN 16...	<0.006	<0.02	<0.02	<0.01	<0.008	<0.3	<0.034	<0.07	<0.02	<0.01	<0.005	<0.01	<0.002
FEB 18...	<0.006	<0.02	<0.02	<0.01	<0.008	<0.3	<0.034	<0.07	<0.02	<0.01	<0.005	<0.01	<0.002
MAR 11...	<0.006	<0.02	<0.02	<0.01	<0.008	<0.4	<0.034	<0.07	<0.02	<0.01	<0.005	<0.01	<0.002
APR 01...	<0.006	<0.02	--	--	<0.008	<0.3	<0.034	<0.07	<0.02	<0.01	<0.005	<0.01	<0.002
APR 15...	<0.006	<0.02	--	--	<0.008	<0.3	<0.034	<0.07	<0.02	<0.01	<0.005	<0.01	<0.002
MAY 06...	E0.005	<0.02	--	--	<0.008	<0.3	<0.034	<0.07	<0.02	<0.01	<0.005	<0.01	<0.002
MAY 21...	<0.006	<0.02	--	--	<0.008	<0.3	<0.034	<0.07	<0.02	<0.01	<0.005	<0.01	<0.002
JUN 04...	<0.006	<0.02	--	--	<0.008	<0.3	<0.034	<0.07	<0.02	<0.01	<0.005	<0.01	<0.002
JUN 24...	<0.006	<0.02	--	--	<0.008	<0.3	<0.034	<0.07	<0.02	<0.01	<0.005	<0.01	<0.002
JUL 09...	<0.006	<0.02	--	--	<0.008	<0.3	<0.034	<0.07	<0.02	<0.01	<0.005	<0.01	<0.002
JUL 22...	<0.006	<0.02	--	--	<0.008	<0.3	<0.034	<0.07	<0.02	<0.01	<0.005	<0.01	<0.002
AUG 04...	<0.006	<0.02	--	--	<0.008	<0.3	<0.034	<0.07	<0.02	<0.01	<0.005	<0.01	<0.002
AUG 19...	<0.006	<0.02	--	--	<0.008	<0.3	<0.034	<0.07	<0.02	<0.01	<0.005	<0.01	<0.002
SEP 03...	<0.006	<0.02	--	--	<0.008	<0.3	<0.034	<0.07	<0.02	<0.01	<0.005	<0.01	<0.002

394340085524601 SUGAR CREEK AT CO. RD. 400S AT NEW PALESTINE, IN—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Tribu- phos, water, fltrd, ug/L (61610)	Tri- flur- alin, water, fltrd 0.7u GF ug/L (82661)	z-Di- metho- morph, water, fltrd, ug/L (79845)	Di- chlor- vos, water fltrd, ug/L (38775)	Suspnd. sedi- ment, sieve diametr percent <.063mm (70331)	Sus- pended sedi- ment concen- tration mg/L (80154)
OCT 09...	<0.004	<0.009	<0.05	<0.01	27	12
NOV 05...	<0.004	<0.009	<0.05	<0.01	31	9
25...	<0.004	<0.009	<0.05	<0.01	22	28
DEC 16...	<0.004	<0.009	<0.05	<0.01	35	23
JAN 16...	<0.004	<0.009	<0.05	<0.01	57	8
FEB 18...	<0.004	<0.009	<0.05	<0.01	78	3
MAR 11...	<0.004	<0.009	<0.05	<0.01	95	32
APR 01...	<0.004	<0.009	<0.05	<0.01	89	31
15...	<0.004	<0.009	<0.05	<0.01	89	9
MAY 06...	<0.004	<0.009	<0.05	<0.01	95	68
21...	<0.004	<0.009	<0.05	<0.01	77	75
JUN 04...	<0.004	<0.009	<0.05	<0.01	76	29
24...	<0.004	<0.009	<0.05	<0.01	77	35
JUL 09...	<0.004	<0.009	<0.05	<0.01	31	110
22...	<0.004	<0.009	<0.05	<0.01	92	38
AUG 04...	<0.004	<0.009	<0.05	<0.01	81	15
19...	<0.004	<0.009	<0.05	<0.01	93	6
SEP 03...	<0.004	<0.009	<0.05	<0.01	--	26

03361850 BUCK CREEK AT ACTON, IN

LOCATION.--Lat 39°39'25", long 85°57'27", in NW¼SE¼ sec.15, T.14 N., R.5 E., Marion County, Hydrologic Unit 05120204, (ACTON, IN quadrangle), 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 except for estimated daily discharges, which are poor. Low flow is affected by regulation.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	36	9.2	666	e16	e35	136	47	45	20	21	1,120
2	5.8	31	12	492	e16	e35	98	46	34	15	20	1,880
3	4.7	35	13	292	e40	e40	74	46	41	15	18	665
4	6.8	36	14	201	181	e50	64	41	42	18	36	282
5	17	52	7.5	160	e120	203	304	691	32	490	56	130
6	12	70	6.2	145	e70	294	150	422	30	823	36	81
7	13	57	5.8	146	e50	191	108	228	25	606	22	59
8	5.1	52	5.6	149	e37	327	99	168	23	309	23	46
9	7.7	54	5.3	179	e29	932	82	130	22	493	16	39
10	4.4	341	12	143	e24	420	67	512	25	731	14	31
11	3.2	409	14	98	e20	260	59	1,110	23	524	30	30
12	1.9	196	11	e66	e17	237	51	468	84	301	18	24
13	0.82	131	11	e50	e16	464	47	228	121	190	15	25
14	0.70	90	27	e42	e16	500	42	136	250	112	18	18
15	5.5	74	33	e36	e15	299	43	240	154	82	11	21
16	5.8	54	32	e30	e15	230	39	132	97	71	15	21
17	2.4	45	37	e26	e14	185	52	89	71	62	8.8	15
18	1.3	39	44	e24	e14	147	66	72	54	53	16	19
19	2.5	47	351	e23	e13	130	51	66	43	48	10	12
20	3.2	34	490	e21	e13	156	44	58	40	36	7.8	17
21	4.2	27	262	e20	e30	363	55	51	32	197	6.2	10
22	9.8	20	167	e20	403	306	50	45	27	205	5.8	33
23	9.9	24	117	e19	526	172	42	38	25	97	7.2	36
24	4.7	19	98	e19	269	121	36	35	27	67	4.5	22
25	13	23	94	e18	e160	105	61	32	25	47	8.4	23
26	46	15	72	e19	e100	206	132	35	24	42	5.2	23
27	21	14	54	e19	e64	153	75	29	22	33	7.3	113
28	14	13	50	e18	e47	118	55	33	24	47	7.8	86
29	60	10	54	e19	---	645	60	58	16	44	8.5	60
30	103	11	171	e18	---	337	51	41	15	34	32	43
31	68	---	508	e17	---	190	---	62	---	24	25	---
TOTAL	468.42	2,059	2,787.6	3,195	2,335	7,851	2,293	5,389	1,493	5,836	529.5	4,984
MEAN	15.1	68.6	89.9	103	83.4	253	76.4	174	49.8	188	17.1	166
MAX	103	409	508	666	526	932	304	1,110	250	823	56	1,880
MIN	0.70	10	5.3	17	13	35	36	29	15	15	4.5	10
CFSM	0.19	0.87	1.14	1.31	1.06	3.21	0.97	2.21	0.63	2.39	0.22	2.11
IN.	0.22	0.97	1.32	1.51	1.10	3.71	1.08	2.54	0.70	2.76	0.25	2.35

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2003, BY WATER YEAR (WY)

	38.7	93.9	111	112	134	157	137	123	85.7	69.3	35.0	27.2
MEAN	38.7	93.9	111	112	134	157	137	123	85.7	69.3	35.0	27.2
MAX	312	463	333	352	349	347	302	462	478	324	216	166
(WY)	(1987)	(1994)	(1991)	(1969)	(1971)	(1978)	(1996)	(1996)	(1998)	(1969)	(1979)	(2003)
MIN	2.96	5.90	8.11	4.09	18.8	27.8	18.5	17.4	6.04	5.97	2.83	1.24
(WY)	(1998)	(2000)	(1977)	(1977)	(1978)	(1969)	(1971)	(1976)	(1988)	(1991)	(1999)	(1999)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

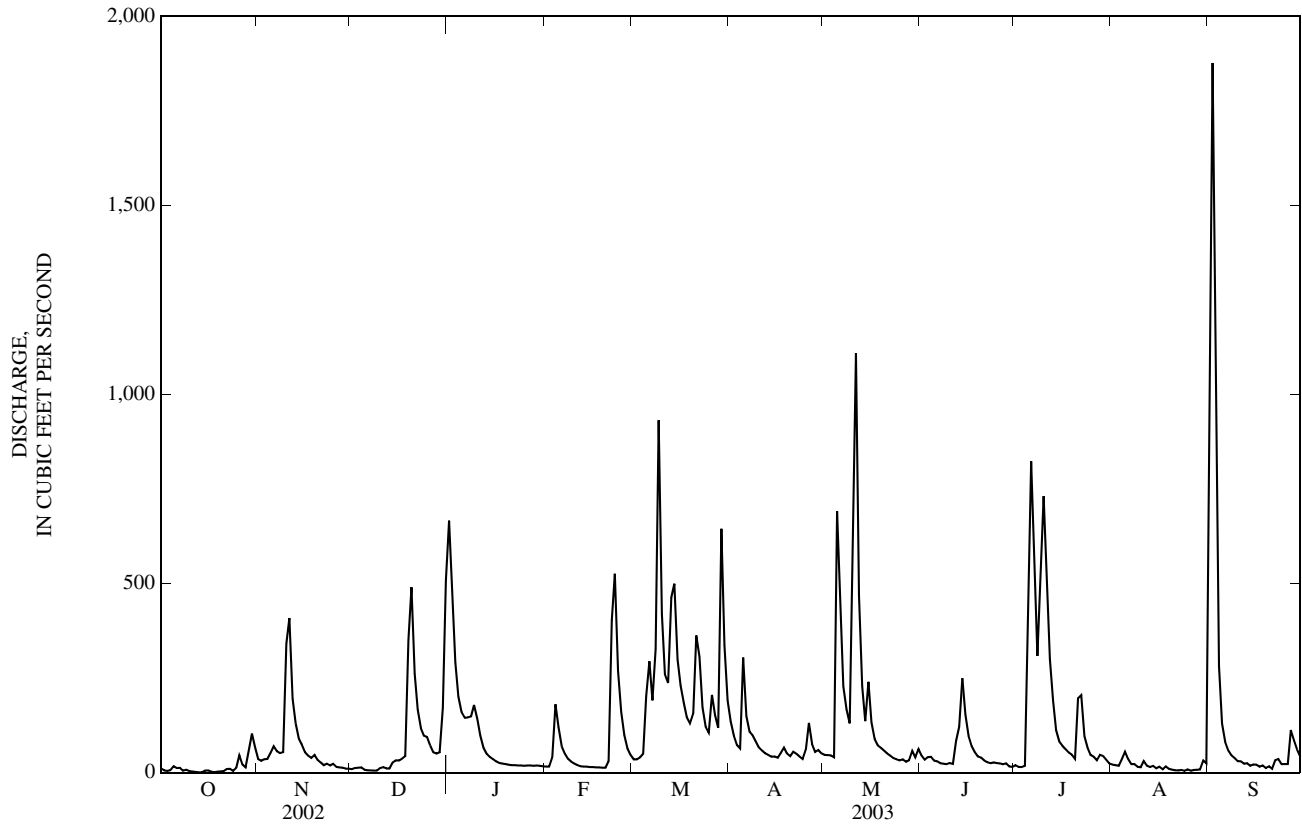
FOR 2003 WATER YEAR

WATER YEARS 1968 - 2003

ANNUAL TOTAL	40,159.10		39,220.52		93.4	
ANNUAL MEAN	110		107		146	
HIGHEST ANNUAL MEAN					2002	
LOWEST ANNUAL MEAN					1977	
HIGHEST DAILY MEAN	2,360	May 13	1,880	Sep 2	3,570	Nov 14, 1993
LOWEST DAILY MEAN	0.70	Oct 14	0.70	Oct 14	0.60	Oct 1, 1967
ANNUAL SEVEN-DAY MINIMUM	1.6	Sep 5	2.6	Oct 12	0.98	Sep 22, 1999
MAXIMUM PEAK FLOW			2,260	Sep 2	7,140	Jul 20, 1969
MAXIMUM PEAK STAGE			10.42	Sep 2	14.99	Jul 20, 1969
ANNUAL RUNOFF (CFSM)	1.40		1.36		1.19	
ANNUAL RUNOFF (INCHES)	18.96		18.52		16.11	
10 PERCENT EXCEEDS	281		296		206	
50 PERCENT EXCEEDS	37		41		33	
90 PERCENT EXCEEDS	4.5		9.9		5.8	

e Estimated

03361850 BUCK CREEK AT ACTON, IN—Continued



03362000 YOUNGS CREEK NEAR EDINBURGH, IN

LOCATION.--Lat 39°25'08", long 86°00'18", in SE 1/4 SW 1/4 sec.5, T.11 N., R.5 E., Johnson County, Hydrologic Unit 05120204, (FRANKLIN, IN quadrangle), on right bank at downstream side of County Road 400S bridge, 0.5 mi southwest of Amity, 2.0 mi upstream from mouth, and 5.0 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.

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 fair except those for March 26 to May 8 and estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.4	e40	20	809	31	125	131	75	68	28	49	551
2	7.1	e21	19	623	34	154	106	82	55	27	43	1,860
3	6.3	e17	18	363	52	165	92	66	59	27	38	892
4	e9.0	e16	17	261	223	164	84	58	64	29	35	285
5	e11	e15	17	218	e120	470	218	680	53	25	37	175
6	e12	e18	18	202	e90	487	161	500	46	60	33	112
7	e9.0	e19	18	192	e70	371	122	272	45	60	28	81
8	e8.6	e17	17	172	e60	449	102	221	42	40	26	67
9	e7.5	e17	17	164	e52	615	89	212	40	51	22	54
10	e6.4	e240	17	128	e45	325	81	379	36	1,090	36	46
11	5.3	526	18	97	e40	231	74	1,390	46	516	27	40
12	4.9	226	20	e70	e37	191	68	578	85	264	46	35
13	4.6	117	24	e62	e35	292	60	291	101	162	38	31
14	5.0	80	48	e56	e41	390	55	202	382	107	27	27
15	e5.9	63	68	e52	257	260	54	322	524	86	22	26
16	e5.5	52	66	e48	209	200	53	235	264	83	19	22
17	e5.2	45	55	e43	120	160	54	173	174	65	17	20
18	5.1	39	69	e40	97	135	55	172	120	71	16	18
19	7.6	35	567	e38	82	125	55	131	97	76	15	18
20	8.8	32	561	e35	127	131	60	113	80	54	13	17
21	e8.0	31	297	e33	222	165	81	99	69	250	12	16
22	e7.6	33	204	e32	686	164	80	86	60	591	11	32
23	7.4	33	133	e31	1,000	122	63	80	55	302	10	47
24	7.9	29	109	e30	405	105	55	73	49	190	9.2	27
25	e12	27	100	e30	265	96	88	65	46	119	8.5	20
26	e55	25	77	e30	211	99	266	59	42	89	8.3	19
27	e50	23	69	e29	168	89	149	55	41	73	8.0	280
28	e30	22	70	e29	137	84	105	52	36	98	8.2	197
29	e33	22	78	e29	---	334	94	120	33	104	11	114
30	e82	22	239	30	---	253	83	87	30	73	20	76
31	e72	---	497	30	---	169	---	77	---	58	20	---
TOTAL	508.1	1,902	3,547	4,006	4,916	7,120	2,838	7,005	2,842	4,868	713.2	5,205
MEAN	16.4	63.4	114	129	176	230	94.6	226	94.7	157	23.0	174
MAX	82	526	567	809	1,000	615	266	1,390	524	1,090	49	1,860
MIN	4.6	15	17	29	31	84	53	52	30	25	8.0	16
CFSM	0.15	0.59	1.07	1.21	1.64	2.15	0.88	2.11	0.89	1.47	0.22	1.62
IN.	0.18	0.66	1.23	1.39	1.71	2.48	0.99	2.44	0.99	1.69	0.25	1.81

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 2003, BY WATER YEAR (WY)

MEAN	31.7	84.0	119	154	174	208	184	156	101	72.8	29.1	26.7
MAX	359	593	470	837	441	498	516	606	463	492	231	228
(WY)	(2002)	(1994)	(1991)	(1950)	(1971)	(1963)	(1964)	(2002)	(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 2002 CALENDAR YEAR

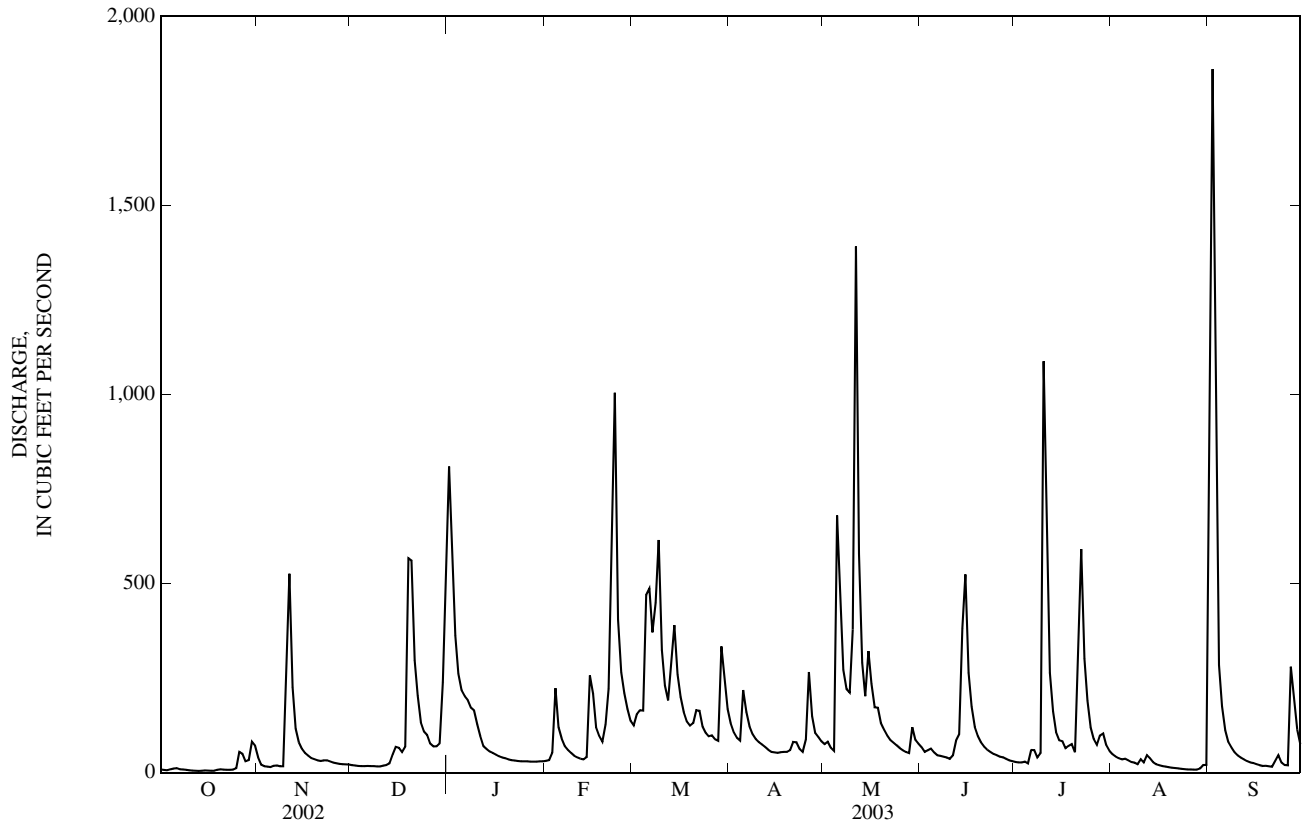
FOR 2003 WATER YEAR

WATER YEARS 1944 - 2003

ANNUAL TOTAL	58,301.1	45,470.3	
ANNUAL MEAN	160	125	111
HIGHEST ANNUAL MEAN			219
LOWEST ANNUAL MEAN			20.3
HIGHEST DAILY MEAN	3,250	1,860	6,260
LOWEST DAILY MEAN	4.6	4.6	0.50
ANNUAL SEVEN-DAY MINIMUM	4.8	5.2	0.73
MAXIMUM PEAK FLOW		2,310	10,700
MAXIMUM PEAK STAGE		8.76	13.40
ANNUAL RUNOFF (CFSM)	1.49	1.16	1.04
ANNUAL RUNOFF (INCHES)	20.27	15.81	14.14
10 PERCENT EXCEEDS	367	287	251
50 PERCENT EXCEEDS	52	60	38
90 PERCENT EXCEEDS	7.3	15	4.7

e Estimated

03362000 YOUNGS CREEK NEAR EDINBURGH, IN—Continued



03362500 SUGAR CREEK NEAR EDINBURGH, IN

LOCATION.--Lat 39°21'39", long 85°59'51", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.29, T.11 N., R.5 E., Johnson County, Hydrologic Unit 05120204, (EDINBURGH, IN quadrangle), 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 Edinburg".

REVISED RECORDS.--WSP 2109: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 646.23 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1952, nonrecording gage on downstream side of old highway bridge, 100 ft downstream at same datum.

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

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66	137	114	2,640	197	457	789	324	327	154	198	837
2	62	108	110	2,860	172	462	622	322	268	154	183	4,350
3	57	93	108	1,690	185	491	514	299	256	149	172	5,290
4	57	86	107	1,100	469	466	451	282	271	146	166	3,370
5	68	83	107	819	e550	1,000	795	1,560	253	193	178	1,430
6	75	93	103	696	e410	1,720	857	2,710	226	2,100	191	693
7	69	102	102	647	e310	1,320	609	1,430	218	2,490	166	490
8	60	97	99	613	e270	1,290	539	1,080	209	2,040	150	381
9	57	88	97	665	e240	2,930	482	979	200	1,420	142	310
10	54	210	95	649	e220	2,660	436	1,070	190	3,150	146	265
11	55	1,320	104	548	e210	1,550	394	4,270	196	3,130	142	231
12	52	741	107	e400	e197	1,120	361	4,450	250	2,250	155	211
13	49	444	108	e350	e190	1,220	326	1,930	499	1,360	146	188
14	47	318	124	e340	e200	2,380	300	1,090	1,300	781	133	177
15	48	250	163	e300	416	1,730	286	1,120	2,020	569	129	165
16	47	212	183	e280	463	1,320	282	1,000	1,140	489	120	159
17	50	184	185	e270	321	1,020	313	732	795	471	117	151
18	51	166	180	e260	296	833	412	642	564	421	111	140
19	52	154	715	e250	250	703	367	539	442	375	109	139
20	53	147	2,120	e245	275	731	321	475	367	309	104	132
21	52	140	1,500	e235	390	851	337	424	314	477	100	130
22	53	142	911	e230	1,000	1,200	361	378	274	1,400	96	146
23	50	139	606	e225	3,450	893	309	345	245	823	93	197
24	52	138	462	e220	1,740	675	278	317	226	563	90	184
25	68	132	410	e215	1,050	563	305	294	212	405	88	165
26	148	129	346	e213	750	580	706	277	200	319	87	158
27	138	122	295	e211	626	654	588	266	194	272	86	506
28	101	119	273	e209	512	572	434	248	181	285	86	819
29	115	117	271	e207	---	1,290	381	332	173	321	89	633
30	226	117	413	206	---	1,730	356	352	161	259	117	443
31	197	---	1,280	204	---	1,100	---	300	---	222	132	---
TOTAL	2,329	6,328	11,798	17,997	15,359	35,511	13,511	29,837	12,171	27,497	4,022	22,490
MEAN	75.1	211	381	581	549	1,146	450	962	406	887	130	750
MAX	226	1,320	2,120	2,860	3,450	2,930	857	4,450	2,020	3,150	198	5,290
MIN	47	83	95	204	172	457	278	248	161	146	86	130
CFSM	0.16	0.45	0.80	1.22	1.16	2.42	0.95	2.03	0.86	1.87	0.27	1.58
IN.	0.18	0.50	0.93	1.41	1.21	2.79	1.06	2.34	0.96	2.16	0.32	1.77

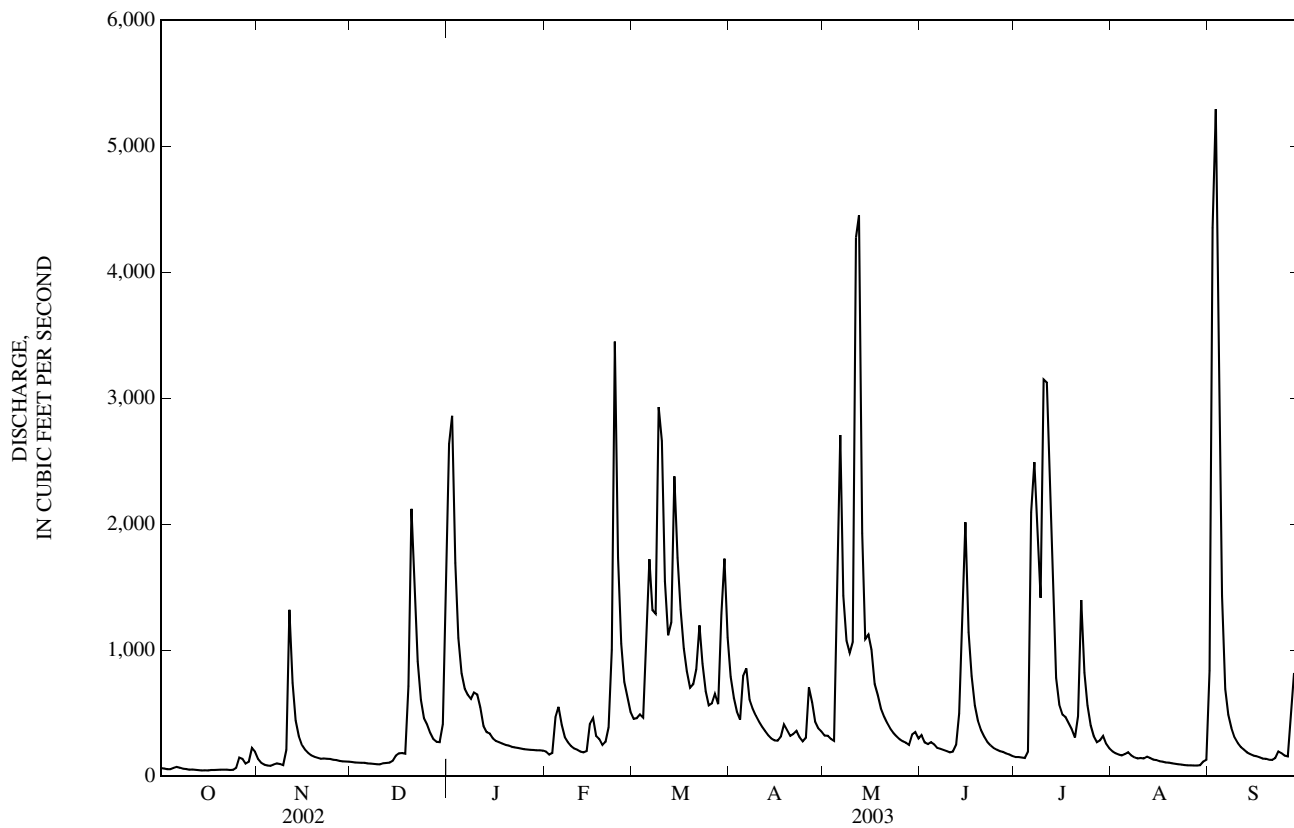
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 2003, BY WATER YEAR (WY)

MEAN	149	369	511	691	774	933	842	712	483	331	172	137
MAX	983	2,591	1,742	4,000	2,192	2,281	2,076	2,878	2,381	1,564	1,348	1,295
(WY)	(1987)	(1994)	(1991)	(1950)	(1950)	(1961)	(1964)	(1996)	(1998)	(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)

03362500 SUGAR CREEK NEAR EDINBURGH, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1943 - 2003	
ANNUAL TOTAL	218,530		198,850			
ANNUAL MEAN	599		545		507	
HIGHEST ANNUAL MEAN					849	1950
LOWEST ANNUAL MEAN					160	1954
HIGHEST DAILY MEAN	10,700	May 14	5,290	Sep 3	19,200	May 29, 1956
LOWEST DAILY MEAN	24	Sep 13	47	Oct 14	9.2	Sep 18, 1954
ANNUAL SEVEN-DAY MINIMUM	26	Sep 8	49	Oct 12	10	Sep 13, 1954
MAXIMUM PEAK FLOW			5,880	Sep 3	27,600	May 29, 1956
MAXIMUM PEAK STAGE			11.11	Sep 3	18.38	May 29, 1956
ANNUAL RUNOFF (CF5M)	1.26		1.15		1.07	
ANNUAL RUNOFF (INCHES)	17.15		15.61		14.53	
10 PERCENT EXCEEDS	1,270		1,320		1,150	
50 PERCENT EXCEEDS	207		277		213	
90 PERCENT EXCEEDS	52		93		46	

e Estimated



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, (WALDRON, IN quadrangle), on right bank 500 ft downstream from county road 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	26	32	1,590	e96	246	356	242	188	114	103	182
2	12	22	32	1,600	97	337	312	248	157	279	96	2,160
3	10	20	30	952	118	345	277	227	172	138	110	2,660
4	11	20	e26	593	268	339	258	211	185	105	444	2,260
5	11	e22	e25	445	363	1,370	406	1,520	164	1,580	436	631
6	14	25	e24	365	222	1,560	436	1,370	145	1,780	264	387
7	12	24	e23	314	183	1,080	370	783	139	908	169	281
8	11	e22	e24	305	221	1,140	359	578	138	718	133	216
9	11	21	e24	311	177	2,080	331	503	131	1,280	135	177
10	e11	61	e27	320	135	1,740	301	1,040	122	1,610	407	153
11	9.3	e110	32	249	e125	909	277	2,260	123	1,760	242	132
12	9.1	e380	33	235	e118	687	251	2,050	606	908	159	116
13	9.3	e140	35	271	e110	803	223	1,140	903	585	122	107
14	e11	72	45	204	e120	1,350	206	651	1,550	405	120	101
15	9.9	e62	51	e195	170	1,030	203	785	2,760	317	104	98
16	9.1	e52	56	e180	320	778	206	810	1,840	283	92	93
17	9.4	e43	61	e165	262	665	240	545	1,160	228	85	85
18	e9.0	e38	68	e158	166	556	261	438	644	200	80	79
19	11	e36	312	e152	109	479	224	361	453	181	73	74
20	12	e35	1,060	e148	139	462	220	341	338	158	64	72
21	e17	34	703	e140	116	579	241	335	268	261	58	69
22	e15	37	389	e130	899	767	228	273	223	413	53	95
23	14	37	258	e120	1,680	565	206	242	195	381	49	195
24	11	36	197	e118	1,080	448	193	219	172	249	44	182
25	18	36	184	e116	592	384	220	204	152	188	42	130
26	35	e36	145	e113	425	377	367	193	142	155	40	129
27	29	35	117	e108	339	376	296	181	138	135	38	816
28	e26	34	110	e104	276	344	259	178	123	156	39	911
29	e29	33	111	e104	---	430	252	206	111	150	50	500
30	e33	33	319	e102	---	509	242	186	101	128	77	324
31	32	---	856	e100	---	414	---	198	---	111	82	---
TOTAL	475.1	1,582	5,409	10,007	8,926	23,149	8,221	18,518	13,543	15,864	4,010	13,415
MEAN	15.3	52.7	174	323	319	747	274	597	451	512	129	447
MAX	35	380	1,060	1,600	1,680	2,080	436	2,260	2,760	1,780	444	2,660
MIN	9.0	20	23	100	96	246	193	178	101	105	38	69
CFSM	0.05	0.17	0.58	1.07	1.05	2.46	0.90	1.97	1.49	1.69	0.43	1.48
IN.	0.06	0.19	0.66	1.23	1.10	2.84	1.01	2.27	1.66	1.95	0.49	1.65

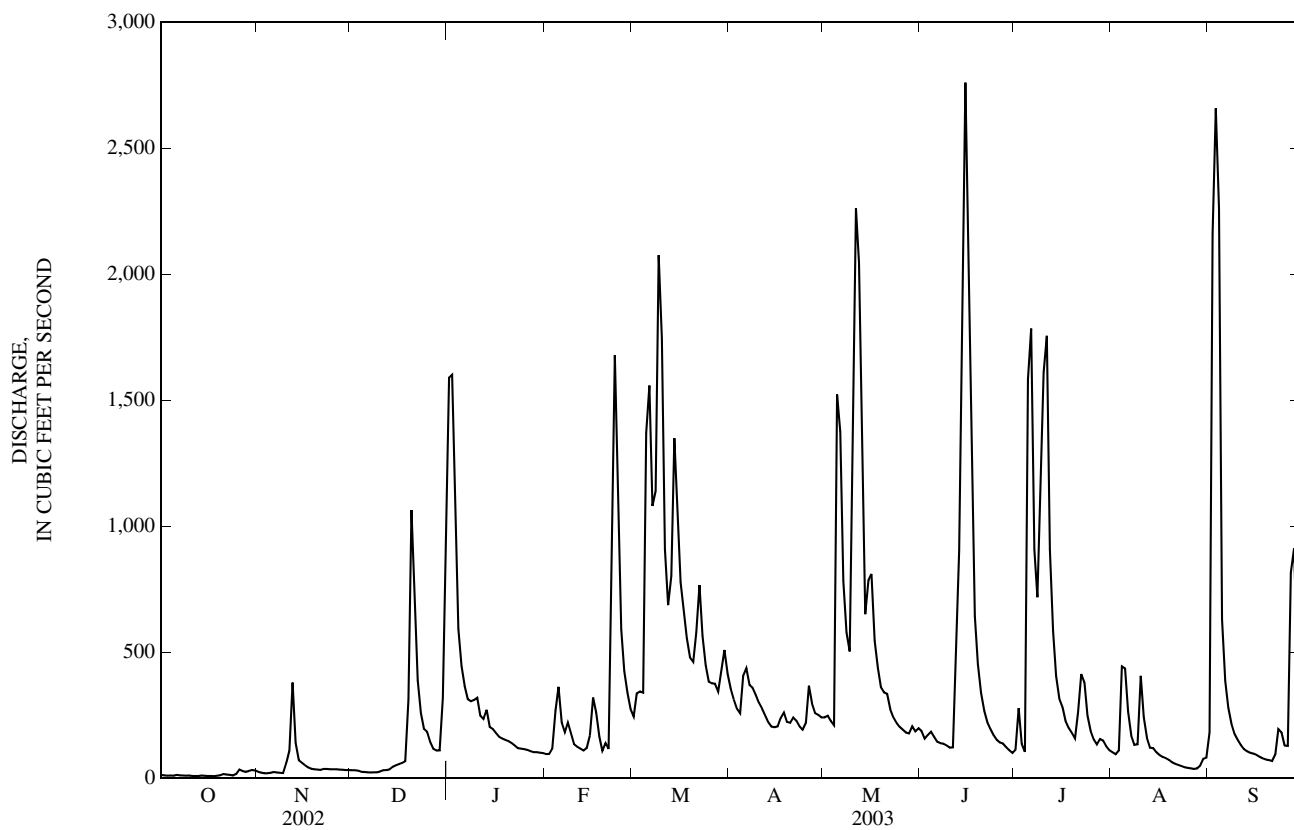
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2003, BY WATER YEAR (WY)

MEAN	89.8	212	345	484	514	584	585	464	300	192	90.6	70.4
MAX	600	1,342	1,567	3,450	1,808	1,605	1,576	1,968	1,502	915	716	447
(WY)	(2002)	(1994)	(1991)	(1937)	(1950)	(1961)	(2002)	(1996)	(1998)	(1979)	(1979)	(2003)
MIN	1.96	6.97	9.98	15.1	27.7	41.8	51.9	42.9	19.7	9.28	4.06	1.36
(WY)	(1964)	(2000)	(1964)	(1977)	(1935)	(1941)	(1941)	(1934)	(1934)	(1936)	(1988)	(1999)

03363500 FLATROCK RIVER AT ST. PAUL, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1931 - 2003	
ANNUAL TOTAL	152,819.7		123,119.1		327	
ANNUAL MEAN	419		337		642	
HIGHEST ANNUAL MEAN					1950	
LOWEST ANNUAL MEAN					1941	
HIGHEST DAILY MEAN	7,810	May 14	2,760	Jun 15	16,500	Jan 5, 1949
LOWEST DAILY MEAN	4.9	Sep 14	9.0	Oct 18	0.60	Aug 7, 1931
ANNUAL SEVEN-DAY MINIMUM	6.4	Sep 10	9.5	Oct 12	0.80	Oct 12, 1963
MAXIMUM PEAK FLOW			4,620	Jun 15	18,500	Jan 5, 1949
MAXIMUM PEAK STAGE			5.85	Jun 15	12.37	May 24, 1968
ANNUAL RUNOFF (CFSM)	1.38		1.11		1.08	
ANNUAL RUNOFF (INCHES)	18.76		15.12		14.64	
10 PERCENT EXCEEDS	1,000		905		754	
50 PERCENT EXCEEDS	139		181		135	
90 PERCENT EXCEEDS	11		25		16	

e Estimated



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, (COLUMBUS, IN quadrangle), 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 fair except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59	95	124	1,960	234	679	730	378	397	284	269	180
2	56	84	121	2,600	236	747	668	387	363	364	253	1,090
3	54	77	120	1,770	253	864	606	375	350	466	239	2,020
4	55	73	118	1,210	422	784	564	351	362	344	339	2,240
5	53	72	116	961	e540	1,350	587	1,130	354	376	576	1,220
6	52	71	113	831	e450	2,170	779	2,150	328	1,810	532	664
7	51	73	113	754	e360	1,740	702	1,510	308	1,380	384	508
8	49	74	113	704	e320	1,510	669	1,160	300	870	313	415
9	51	71	111	666	e312	2,010	633	1,050	293	949	273	353
10	50	90	110	646	e302	2,060	591	1,050	284	1,870	301	309
11	49	465	113	593	e288	1,470	551	3,100	285	1,830	426	277
12	49	603	116	e478	276	1,100	520	2,340	397	1,480	338	251
13	48	410	120	e430	253	1,040	483	1,720	1,430	958	276	231
14	47	297	134	e390	270	1,490	447	1,110	1,510	759	240	217
15	47	237	182	e370	323	1,440	424	971	2,710	633	230	208
16	46	203	206	e340	416	1,150	410	1,110	3,820	552	212	198
17	47	181	199	e320	349	1,020	429	915	1,720	492	197	188
18	47	167	205	e310	343	920	508	792	1,190	439	185	177
19	48	156	492	e290	318	839	468	706	918	399	176	169
20	47	147	1,610	e280	302	845	425	644	762	367	168	162
21	48	143	1,470	e270	341	854	468	635	647	370	160	157
22	47	140	951	e260	613	1,030	466	580	568	695	154	170
23	47	142	711	e254	2,960	950	418	530	509	703	148	188
24	48	143	577	e250	1,910	816	383	492	462	601	140	268
25	54	140	520	e243	1,270	743	390	462	420	466	134	254
26	58	136	465	e238	964	716	536	435	388	392	129	218
27	69	133	406	e230	835	695	576	409	368	345	126	385
28	74	130	375	e230	748	671	475	385	349	323	122	915
29	77	127	368	246	---	796	429	404	322	351	121	739
30	104	127	463	246	---	924	399	407	301	329	134	536
31	107	---	1,230	238	---	825	---	378	---	292	158	---
TOTAL	1,738	5,007	12,072	18,608	16,208	34,248	15,734	28,066	22,415	21,489	7,453	14,907
MEAN	56.1	167	389	600	579	1,105	524	905	747	693	240	497
MAX	107	603	1,610	2,600	2,960	2,170	779	3,100	3,820	1,870	576	2,240
MIN	46	71	110	230	234	671	383	351	284	284	121	157
CFSM	0.10	0.31	0.73	1.12	1.08	2.07	0.98	1.70	1.40	1.30	0.45	0.93
IN.	0.12	0.35	0.84	1.30	1.13	2.39	1.10	1.96	1.56	1.50	0.52	1.04

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2003, BY WATER YEAR (WY)

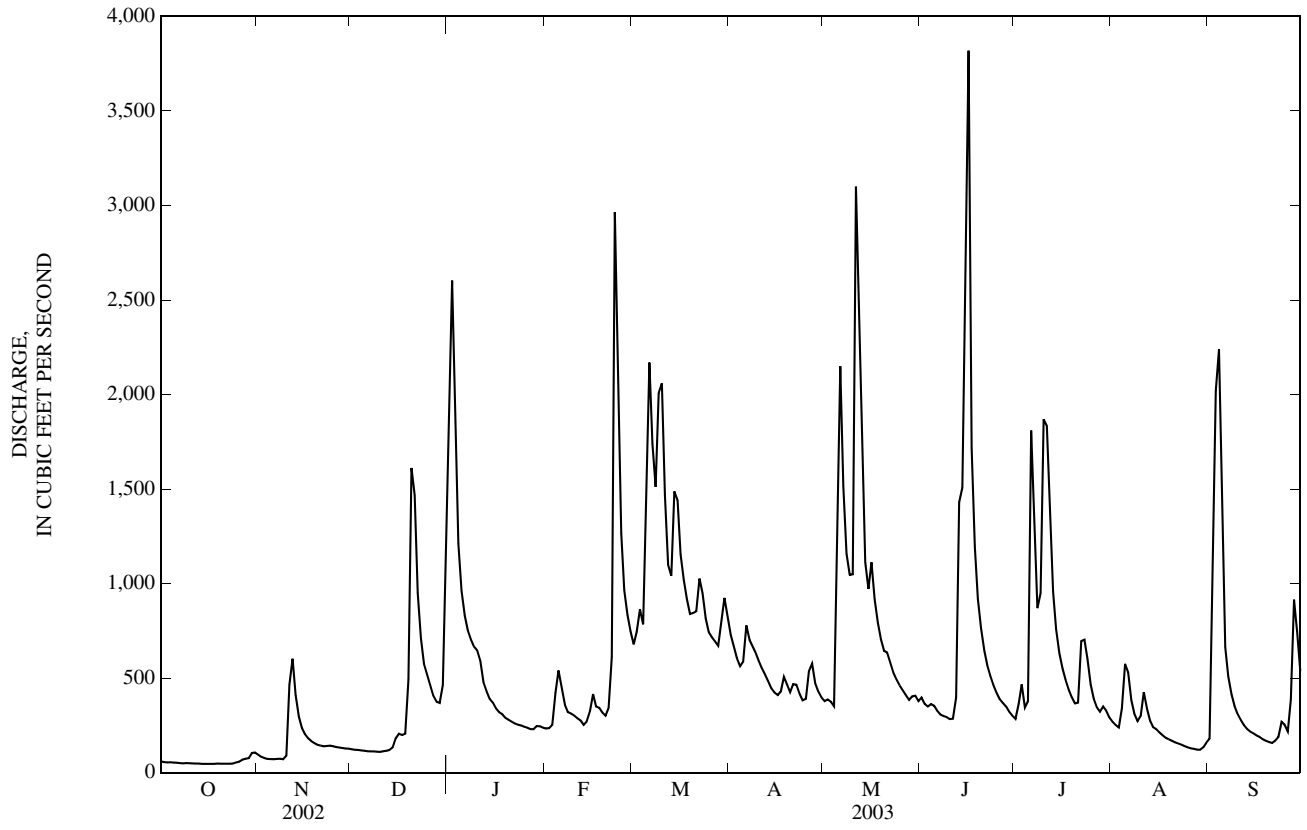
MEAN	186	428	679	719	913	956	1,012	943	612	401	243	155
MAX	912	2,336	2,092	1,827	2,524	2,223	2,301	3,871	2,728	1,556	1,296	837
(WY)	(1994)	(1994)	(1991)	(1969)	(1982)	(1978)	(1996)	(1996)	(1998)	(1979)	(1979)	(1989)
MIN	25.6	30.2	44.8	30.6	189	204	251	132	77.2	50.8	35.0	17.0
(WY)	(2000)	(2000)	(1977)	(1977)	(1992)	(1992)	(1976)	(1976)	(1988)	(1988)	(1988)	(1999)

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1968 - 2003
ANNUAL TOTAL	260,593	197,945	
ANNUAL MEAN	714	542	602
HIGHEST ANNUAL MEAN			949
LOWEST ANNUAL MEAN			271
HIGHEST DAILY MEAN	15,200	May 14	3,820
LOWEST DAILY MEAN	43	Sep 12	46
ANNUAL SEVEN-DAY MINIMUM	44	Sep 8	47
MAXIMUM PEAK FLOW			5,020
MAXIMUM PEAK STAGE			10.58
ANNUAL RUNOFF (CFSM)	1.34		1.02
ANNUAL RUNOFF (INCHES)	18.15		13.79
10 PERCENT EXCEEDS	1,470		1,210
50 PERCENT EXCEEDS	316		375
90 PERCENT EXCEEDS	51		81

e Estimated

03363900 FLATROCK RIVER AT COLUMBUS, IN—Continued



03364000 EAST FORK WHITE RIVER AT COLUMBUS, IN

LOCATION.--Lat 39°12'00", long 85°55'32", in NE¼NW¼ sec.25, T.9 N., R.5 E., Bartholomew County, Hydrologic Unit 05120205, (COLUMBUS, IN quadrangle), 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. 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 fair except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	308	522	424	6,890	716	1,960	2,850	1,290	1,300	793	1,030	893
2	288	430	412	8,910	716	1,990	2,440	1,280	1,230	850	949	6,550
3	277	384	403	6,670	761	2,190	2,140	1,280	1,150	983	901	11,000
4	279	362	397	4,220	1,340	2,080	1,950	1,220	1,160	815	1,060	12,000
5	288	368	395	3,150	1,930	3,460	2,070	4,170	1,150	774	1,380	9,010
6	290	370	388	2,670	1,740	6,040	2,840	7,770	1,070	5,590	1,320	3,230
7	293	382	380	2,390	1,470	5,440	2,430	5,580	981	7,770	1,080	2,310
8	270	386	372	2,190	1,180	4,630	2,210	4,230	959	7,240	922	1,870
9	260	361	373	2,100	1,110	6,490	2,080	3,840	926	5,070	818	1,590
10	253	464	366	2,250	1,080	8,760	1,940	3,630	889	10,400	805	1,380
11	249	2,080	376	2,080	990	6,140	1,800	8,870	893	10,500	1,020	1,230
12	241	2,330	383	1,710	903	4,130	1,700	11,300	1,650	9,650	943	1,090
13	234	1,600	407	1,500	800	3,860	1,590	10,400	2,790	5,620	879	986
14	228	1,220	503	1,470	858	5,990	1,470	5,350	4,100	3,510	774	912
15	225	994	620	1,280	1,270	6,300	1,390	3,770	9,280	2,830	715	845
16	221	847	751	e1,150	1,630	4,750	1,350	4,000	10,200	2,440	650	794
17	220	736	757	e1,040	1,270	3,860	1,450	3,210	5,030	2,160	598	746
18	220	664	755	e980	1,140	3,320	1,680	2,750	3,290	1,940	550	693
19	229	614	1,510	e900	1,050	2,900	1,590	2,360	2,540	1,750	524	655
20	230	575	4,450	e840	1,060	2,830	1,440	2,120	2,100	1,560	507	621
21	230	546	5,680	e790	1,250	2,950	1,520	1,970	1,790	1,580	475	594
22	233	532	3,810	e750	2,390	3,700	1,520	1,800	1,580	3,410	455	653
23	226	527	2,670	e720	8,670	3,420	1,370	1,670	1,420	3,150	451	740
24	224	527	2,060	e690	6,910	2,790	1,260	1,580	1,290	2,460	429	959
25	262	511	1,790	e660	4,230	2,450	1,410	1,480	1,190	1,920	408	884
26	351	496	1,580	e640	3,050	2,380	1,950	1,390	1,100	1,600	394	780
27	444	481	1,370	e620	2,550	2,440	1,990	1,320	1,040	1,390	386	1,150
28	404	461	1,220	e700	2,200	2,310	1,630	1,230	984	1,310	378	2,930
29	437	445	1,160	767	---	3,050	1,460	1,260	919	1,430	395	2,630
30	598	435	1,530	752	---	4,470	1,370	1,390	851	1,290	442	1,970
31	653	---	3,670	721	---	3,610	---	1,280	---	1,140	609	---
TOTAL	9,165	20,650	40,962	62,200	54,264	120,690	53,890	104,790	64,852	102,925	22,247	71,695
MEAN	296	688	1,321	2,006	1,938	3,893	1,796	3,380	2,162	3,320	718	2,390
MAX	653	2,330	5,680	8,910	8,670	8,760	2,850	11,300	10,200	10,500	1,380	12,000
MIN	220	361	366	620	716	1,960	1,260	1,220	851	774	378	594
CFSM	0.17	0.40	0.77	1.18	1.14	2.28	1.05	1.98	1.27	1.95	0.42	1.40
IN.	0.20	0.45	0.89	1.36	1.18	2.63	1.17	2.28	1.41	2.24	0.48	1.56

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 2003, BY WATER YEAR (WY)

MEAN	622	1,335	1,983	2,577	2,946	3,227	3,092	2,650	1,781	1,317	745	556
MAX	4,096	8,137	6,004	14,400	8,640	8,014	7,466	10,960	8,272	4,990	5,185	3,696
(WY)	(2002)	(1994)	(1967)	(1950)	(1950)	(1963)	(1964)	(1996)	(1998)	(1958)	(1979)	(1989)
MIN	104	172	191	163	342	829	852	532	325	161	136	101
(WY)	(1995)	(1955)	(1964)	(1977)	(1964)	(1954)	(1971)	(1976)	(1988)	(1954)	(1954)	(1954)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

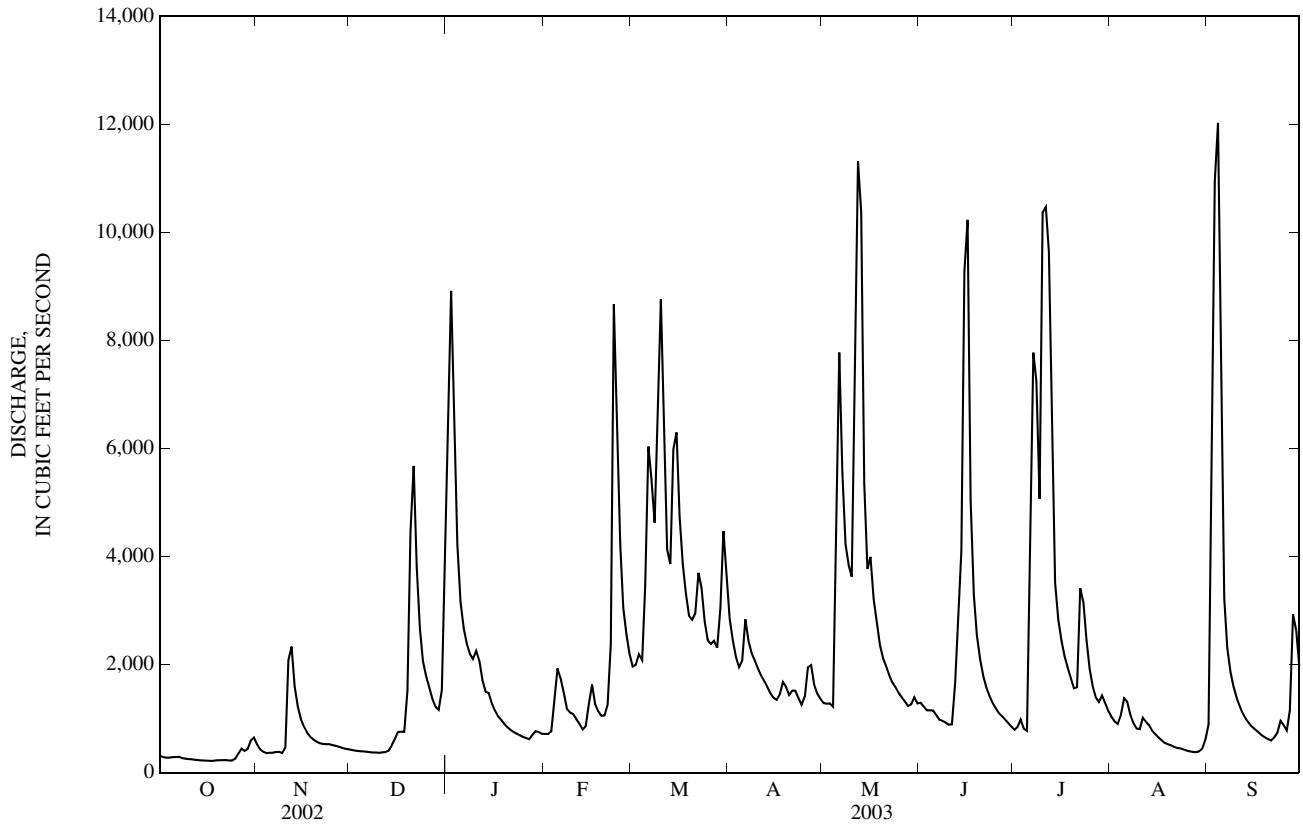
FOR 2003 WATER YEAR

WATER YEARS 1949 - 2003

ANNUAL TOTAL	838,511						728,330					
ANNUAL MEAN	2,297						1,995			1,897		
HIGHEST ANNUAL MEAN										3,304		1950
LOWEST ANNUAL MEAN										534		1954
HIGHEST DAILY MEAN	31,300						12,000		Sep 4	49,000		Mar 6, 1963
LOWEST DAILY MEAN	174						220		Oct 17	85		Sep 22, 1994
ANNUAL SEVEN-DAY MINIMUM	185						225		Oct 14	90		Sep 28, 1954
MAXIMUM PEAK FLOW							12,200		Sep 4	52,300		Mar 6, 1963
MAXIMUM PEAK STAGE							6.47		Sep 4	16.23		Mar 6, 1963
ANNUAL RUNOFF (CFSM)	1.35						1.17			1.11		
ANNUAL RUNOFF (INCHES)	18.27						15.87			15.10		
10 PERCENT EXCEEDS	5,090						4,530			4,270		
50 PERCENT EXCEEDS	1,190						1,270			981		
90 PERCENT EXCEEDS	259						381			250		

e Estimated

03364000 EAST FORK WHITE RIVER AT COLUMBUS, IN—Continued



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, (HARTSVILLE, IN quadrangle), 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 22.0.

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 fair except those below 1.0 ft³/s and estimated daily discharges, which are poor.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1913 reached an elevation of 702.4 ft above National Geodetic Vertical Datum of 1929, from floodmarks, upstream from bridge.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.19	5.4	6.7	1,220	e18	94	86	49	40	29	14	32
2	0.08	5.1	6.5	745	e21	250	74	50	34	30	12	420
3	0.00	e4.7	6.5	358	42	214	65	44	38	35	11	245
4	0.23	4.2	5.6	212	198	185	61	41	44	27	84	87
5	0.43	4.5	5.8	157	e90	880	84	1,080	39	24	60	47
6	0.31	5.4	5.7	131	e70	536	81	571	33	64	32	31
7	0.24	4.9	5.5	117	e50	371	73	268	31	37	22	23
8	0.21	4.2	e5.2	113	e42	366	72	176	31	29	17	19
9	0.19	4.1	4.8	100	e48	518	65	139	29	39	14	16
10	0.21	83	5.5	84	e39	235	60	359	27	258	194	14
11	0.20	450	6.4	67	e34	149	57	605	28	70	56	12
12	0.18	109	7.6	51	e33	122	52	254	47	52	32	11
13	0.18	45	11	e61	e32	151	47	146	821	37	23	9.5
14	0.10	27	29	e49	e31	252	43	109	1,190	29	18	9.2
15	0.03	19	46	e42	79	163	42	153	1,860	40	15	9.9
16	0.00	15	62	e37	77	129	41	121	1,430	45	13	9.3
17	0.00	12	58	e33	67	111	55	93	463	27	12	8.1
18	0.00	10	76	e29	55	96	75	83	255	24	9.9	7.1
19	0.14	9.2	411	e26	44	92	59	72	170	21	8.7	6.7
20	0.22	8.1	742	e23	46	91	54	68	122	18	8.0	6.5
21	0.22	7.7	295	e21	66	165	57	85	94	36	7.2	6.2
22	0.16	8.6	161	e20	842	193	57	70	78	103	6.6	12
23	0.17	9.2	106	e18	943	126	48	60	66	90	6.1	21
24	0.20	9.5	84	e17	335	100	43	54	57	48	5.6	22
25	0.70	9.3	80	e16	168	87	52	49	50	31	5.1	16
26	1.7	9.2	60	e17	129	112	98	46	46	24	4.7	12
27	2.1	8.4	49	e16	107	111	79	42	44	21	4.6	100
28	2.3	7.7	49	e17	90	94	61	40	38	21	4.3	113
29	6.6	7.5	55	e18	---	138	55	53	35	20	4.5	50
30	6.2	7.3	332	e17	---	122	50	45	31	19	5.7	30
31	5.5	---	641	e16	---	98	---	40	---	16	9.9	---
TOTAL	28.99	914.2	3,418.8	3,848	3,796	6,351	1,846	5,065	7,271	1,364	719.9	1,405.5
MEAN	0.94	30.5	110	124	136	205	61.5	163	242	44.0	23.2	46.9
MAX	6.6	450	742	1,220	943	880	98	1,080	1,860	258	194	420
MIN	0.00	4.1	4.8	16	18	87	41	40	27	16	4.3	6.2
CFSM	0.01	0.33	1.21	1.36	1.48	2.24	0.67	1.79	2.65	0.48	0.25	0.51
IN.	0.01	0.37	1.39	1.57	1.54	2.58	0.75	2.06	2.96	0.56	0.29	0.57

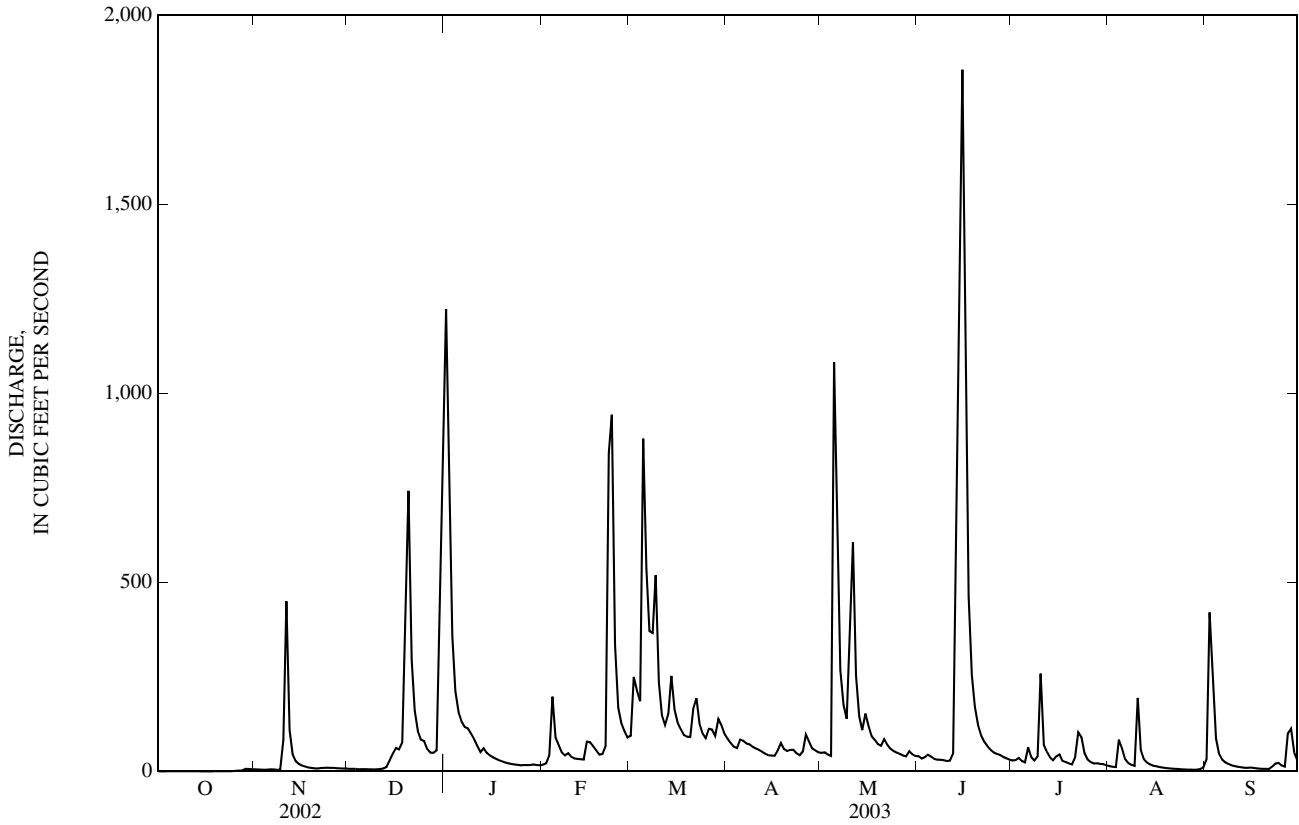
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 2003, BY WATER YEAR (WY)

MEAN	25.6	70.7	119	155	164	180	160	140	83.5	56.1	30.9	18.5
MAX	196	431	515	874	551	465	572	482	487	242	264	261
(WY)	(2002)	(1986)	(1991)	(1949)	(1950)	(1961)	(1996)	(1996)	(1998)	(1992)	(1995)	(1974)
MIN	0.000	0.000	0.13	1.47	7.17	21.1	17.7	10.9	1.16	0.000	0.000	0.000
(WY)	(1954)	(1954)	(1954)	(1977)	(1954)	(1954)	(1976)	(1976)	(1988)	(1954)	(1954)	(1953)

03364500 CLIFTY CREEK AT HARTSVILLE, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1949 - 2003	
ANNUAL TOTAL	44,816.45		36,028.39		99.9	
ANNUAL MEAN	123		98.7		197	
HIGHEST ANNUAL MEAN					1950	
LOWEST ANNUAL MEAN					1954	
HIGHEST DAILY MEAN	3,700	May 13	1,860	Jun 15	6,230	Apr 29, 1996
LOWEST DAILY MEAN	0.00	Sep 6	0.00	Oct 3	0.00	Oct 14, 1948
ANNUAL SEVEN-DAY MINIMUM	0.00	Sep 6	0.06	Oct 13	0.00	Sep 2, 1951
MAXIMUM PEAK FLOW			3,470	Jun 15	11,300	Jan 21, 1959
MAXIMUM PEAK STAGE			8.00	Jun 15	14.29	Jan 21, 1959
ANNUAL RUNOFF (CFSM)	1.34		1.08		1.09	
ANNUAL RUNOFF (INCHES)	18.24		14.66		14.86	
10 PERCENT EXCEEDS	294		213		220	
50 PERCENT EXCEEDS	38		41		32	
90 PERCENT EXCEEDS	0.19		4.7		0.85	

e Estimated



03365500 EAST FORK WHITE RIVER AT SEYMOUR, IN

LOCATION.--Lat 38°58'57", long 85°53'57", in NW¹/₄NE¹/₄ sec. 7, T.6 N., R.6 E., Jackson County, Hydrologic Unit 05120206, (SEYMOUR, IN quadrangle), 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 except for estimated daily discharges, which are poor.

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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	483	867	604	8,720	958	3,180	4,300	1,640	1,690	1,240	1,380	1,070
2	437	701	589	14,300	948	3,840	3,550	1,600	1,660	1,180	1,270	4,610
3	409	598	571	11,600	994	4,530	3,080	1,560	1,650	1,300	1,190	8,620
4	394	543	557	8,170	1,480	3,900	2,750	1,490	1,760	1,230	1,160	9,920
5	410	518	557	5,700	2,540	5,460	2,600	4,300	1,650	1,110	1,740	11,200
6	401	541	544	4,500	2,440	8,160	3,140	10,900	1,490	2,610	1,690	7,980
7	392	546	535	3,820	2,080	8,300	3,240	9,560	1,370	6,300	1,460	3,810
8	385	556	529	3,460	1,670	7,210	2,890	7,150	1,300	7,160	1,240	2,820
9	373	532	518	3,230	1,430	6,900	2,710	6,070	1,260	6,880	1,120	2,290
10	362	564	517	3,150	1,440	8,410	2,530	6,040	1,230	15,000	1,040	1,940
11	354	3,360	527	3,050	1,320	9,020	2,350	8,760	1,250	27,700	1,180	1,700
12	347	4,160	560	2,650	1,200	6,890	2,180	11,700	1,580	11,900	1,170	1,500
13	340	2,750	667	2,260	1,090	5,440	2,020	12,700	3,950	9,480	1,080	1,350
14	331	1,920	1,570	2,160	1,060	6,330	1,870	10,200	6,950	6,070	1,020	1,230
15	324	1,490	1,660	1,980	1,610	7,720	1,750	6,200	10,100	4,360	950	1,150
16	319	1,240	1,480	1,770	2,610	7,220	1,670	5,610	14,500	5,280	896	1,080
17	313	1,070	1,380	e1,600	2,070	5,880	1,880	5,090	19,700	3,780	838	1,020
18	308	962	1,290	e1,460	1,740	5,000	2,790	4,410	7,860	3,020	795	962
19	308	886	2,820	e1,350	1,530	4,330	2,310	3,780	4,950	2,640	751	910
20	311	820	7,660	e1,270	1,460	4,140	1,970	3,300	3,930	2,310	728	859
21	308	779	8,050	e1,200	1,870	4,290	2,260	3,430	3,160	2,090	700	819
22	308	758	6,090	e1,130	4,170	5,090	2,210	2,950	2,660	2,920	669	875
23	308	740	4,100	e1,040	13,000	5,170	1,910	2,600	2,320	4,070	641	907
24	307	738	3,030	e1,000	12,300	4,280	1,690	2,350	2,070	3,650	618	1,030
25	313	729	2,560	e950	e8,100	3,620	1,730	2,160	1,880	2,780	595	1,060
26	456	706	2,250	e910	e5,720	4,090	2,980	2,010	1,730	2,240	573	975
27	653	682	1,930	e900	e4,280	3,920	2,890	1,900	1,620	1,910	556	1,070
28	631	657	1,720	1,010	3,590	3,510	2,340	1,790	1,520	1,800	542	2,340
29	703	637	1,670	1,030	---	3,840	1,970	1,750	1,410	1,720	540	3,200
30	1,780	626	2,100	999	---	5,480	1,770	1,880	1,310	1,690	582	2,570
31	1,090	---	5,450	978	---	5,450	---	1,800	---	1,520	751	---
TOTAL	14,158	31,676	64,085	97,347	84,700	170,600	73,330	146,680	109,510	146,940	29,465	80,867
MEAN	457	1,056	2,067	3,140	3,025	5,503	2,444	4,732	3,650	4,740	950	2,696
MAX	1,780	4,160	8,050	14,300	13,000	9,020	4,300	12,700	19,700	27,700	1,740	11,200
MIN	307	518	517	900	948	3,180	1,670	1,490	1,230	1,110	540	819
CFSM	0.20	0.45	0.88	1.34	1.29	2.35	1.04	2.02	1.56	2.02	0.41	1.15
IN.	0.22	0.50	1.02	1.55	1.35	2.71	1.17	2.33	1.74	2.33	0.47	1.29

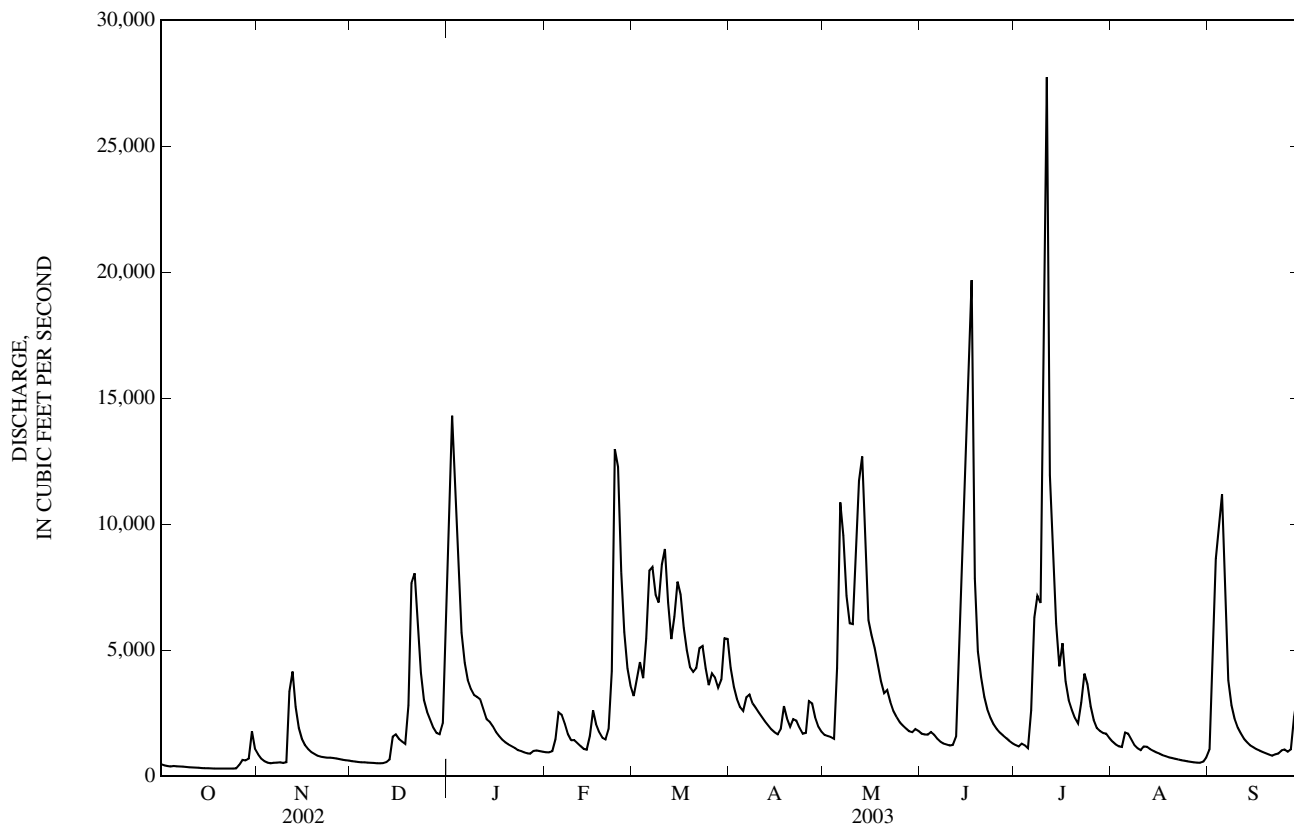
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2003, BY WATER YEAR (WY)

MEAN	808	1,616	2,601	3,764	3,946	4,546	4,365	3,620	2,377	1,637	955	674
MAX	6,426	11,570	9,245	19,560	12,290	10,690	9,523	17,020	12,630	6,040	8,795	4,244
(WY)	(2002)	(1994)	(1928)	(1950)	(1950)	(1963)	(2002)	(1996)	(1998)	(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)	(1931)	(1941)	(1941)	(1941)

03365500 EAST FORK WHITE RIVER AT SEYMOUR, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1928 - 2003	
ANNUAL TOTAL	1,318,682		1,049,358		2,569	
ANNUAL MEAN	3,613		2,875		4,870	
HIGHEST ANNUAL MEAN					287	
LOWEST ANNUAL MEAN					1941	
HIGHEST DAILY MEAN	46,300	May 14	27,700	Jul 11	63,500	Jan 6, 1949
LOWEST DAILY MEAN	274	Sep 14	307	Oct 24	86	Sep 28, 1941
ANNUAL SEVEN-DAY MINIMUM	288	Sep 9	308	Oct 18	93	Sep 25, 1941
MAXIMUM PEAK FLOW			39,900	Jul 11	78,500	Jan 5, 1949
MAXIMUM PEAK STAGE			17.95	Jul 11	19.67	Jan 5, 1949
ANNUAL RUNOFF (CFSM)	1.54		1.23		1.10	
ANNUAL RUNOFF (INCHES)	20.95		16.67		14.91	
10 PERCENT EXCEEDS	7,720		7,030		5,850	
50 PERCENT EXCEEDS	1,780		1,730		1,240	
90 PERCENT EXCEEDS	367		543		301	

e Estimated



03366200 HARBERTS CREEK NEAR MADISON, IN

LOCATION.--Lat 38°46'55", long 85°29'08", in SW¹/₄SE¹/₄ sec.14, T.4 N., R.9 E., Jefferson County, Hydrologic Unit 05120207, (CLIFTY FALLS, IN quadrangle), mounted on 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 October 2003 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 725.75 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except those below 1.0 ft³/s and estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.66	4.0	2.1	244	e0.95	33	6.2	4.0	2.1	0.68	2.7	86
2	0.44	3.5	1.9	42	e1.2	46	5.1	3.7	1.8	1.4	2.1	397
3	0.39	3.3	1.7	21	3.1	e22	4.4	3.2	6.2	1.1	1.6	91
4	0.85	2.9	1.5	13	11	e24	4.0	3.1	4.4	0.87	4.0	15
5	1.3	6.6	e1.4	10	4.7	38	6.3	282	2.8	0.57	4.9	7.0
6	0.79	12	e1.5	8.2	3.2	19	4.9	38	2.1	0.46	2.0	4.4
7	0.59	5.3	e1.6	6.5	2.5	11	13	17	2.0	0.62	1.4	3.2
8	0.53	4.2	e1.6	6.0	e2.1	8.5	11	11	2.0	5.2	1.2	2.5
9	0.48	4.1	e1.5	5.3	e2.0	7.0	6.9	11	1.9	8.9	3.3	1.9
10	0.54	162	e1.5	4.2	e1.9	5.1	5.4	370	1.9	33	2.0	1.5
11	0.87	72	25	3.1	e1.8	4.4	4.4	65	7.4	6.1	3.2	1.2
12	0.81	17	27	e2.5	e1.8	4.6	3.7	18	26	3.0	2.6	1.0
13	0.59	9.3	40	e2.3	e1.7	14	3.0	9.2	16	2.1	1.6	0.91
14	0.48	6.5	35	e2.0	e2.2	14	2.7	6.2	6.9	1.5	1.3	1.1
15	0.46	5.5	15	e1.9	62	8.7	2.4	5.1	5.6	4.0	1.0	1.2
16	0.45	5.0	9.8	e1.9	28	6.9	2.3	4.0	5.1	4.4	0.91	0.90
17	0.39	4.1	9.0	e1.7	15	5.9	67	23	3.8	2.2	0.80	0.75
18	0.31	3.3	13	e1.6	8.3	5.2	35	32	3.4	1.5	0.67	0.77
19	0.66	3.0	226	e1.6	7.8	8.7	11	9.5	2.8	1.2	0.58	0.79
20	1.1	2.7	108	e1.5	9.5	13	19	72	3.3	0.98	0.53	0.83
21	0.77	2.8	24	1.4	41	28	50	43	2.3	4.5	0.48	0.76
22	0.58	6.3	13	1.2	277	13	14	13	1.8	4.7	0.43	7.5
23	0.45	4.4	8.5	1.1	72	8.4	8.3	8.0	1.4	16	0.39	3.5
24	0.37	3.4	7.5	0.75	25	6.4	5.8	5.8	1.2	7.6	0.30	1.6
25	43	2.8	14	e0.72	14	5.6	12	4.7	0.97	3.5	0.30	0.99
26	16	2.5	8.6	e0.70	11	28	35	4.2	0.96	2.3	0.27	0.85
27	5.7	2.3	6.4	e0.68	9.1	12	11	3.4	1.2	1.7	3.0	24
28	3.9	2.2	6.0	e0.66	10	7.9	7.0	3.1	0.93	124	3.3	5.8
29	23	2.2	6.6	e1.1	---	24	5.8	3.1	0.80	15	1.1	3.4
30	12	2.4	56	e0.95	---	14	4.7	2.6	0.59	5.8	1.6	2.5
31	6.0	---	132	e0.85	---	8.1	---	2.4	---	3.6	1.6	---
TOTAL	124.46	367.6	806.7	390.41	629.85	454.4	371.3	1,080.3	119.65	268.48	51.16	669.85
MEAN	4.01	12.3	26.0	12.6	22.5	14.7	12.4	34.8	3.99	8.66	1.65	22.3
MAX	43	162	226	244	277	46	67	370	26	124	4.9	397
MIN	0.31	2.2	1.4	0.66	0.95	4.4	2.3	2.4	0.59	0.46	0.27	0.75
CFSM	0.43	1.32	2.80	1.35	2.42	1.57	1.33	3.74	0.43	0.93	0.18	2.40
IN.	0.50	1.47	3.22	1.56	2.52	1.82	1.48	4.32	0.48	1.07	0.20	2.68

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 2003, BY WATER YEAR (WY)

MEAN	4.31	12.6	19.1	18.6	21.6	24.6	23.8	18.9	8.55	4.00	4.30	3.61
MAX	32.4	48.6	64.1	57.5	51.9	52.0	84.5	76.1	51.3	14.7	28.2	22.3
(WY)	(2002)	(1980)	(1991)	(1982)	(1971)	(1975)	(1996)	(1996)	(1997)	(1993)	(1992)	(2003)
MIN	0.036	0.11	1.52	0.49	1.47	4.72	2.21	0.72	0.083	0.21	0.000	0.000
(WY)	(1998)	(2000)	(1977)	(1977)	(1992)	(1969)	(2001)	(1999)	(1988)	(1991)	(1999)	(1998)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

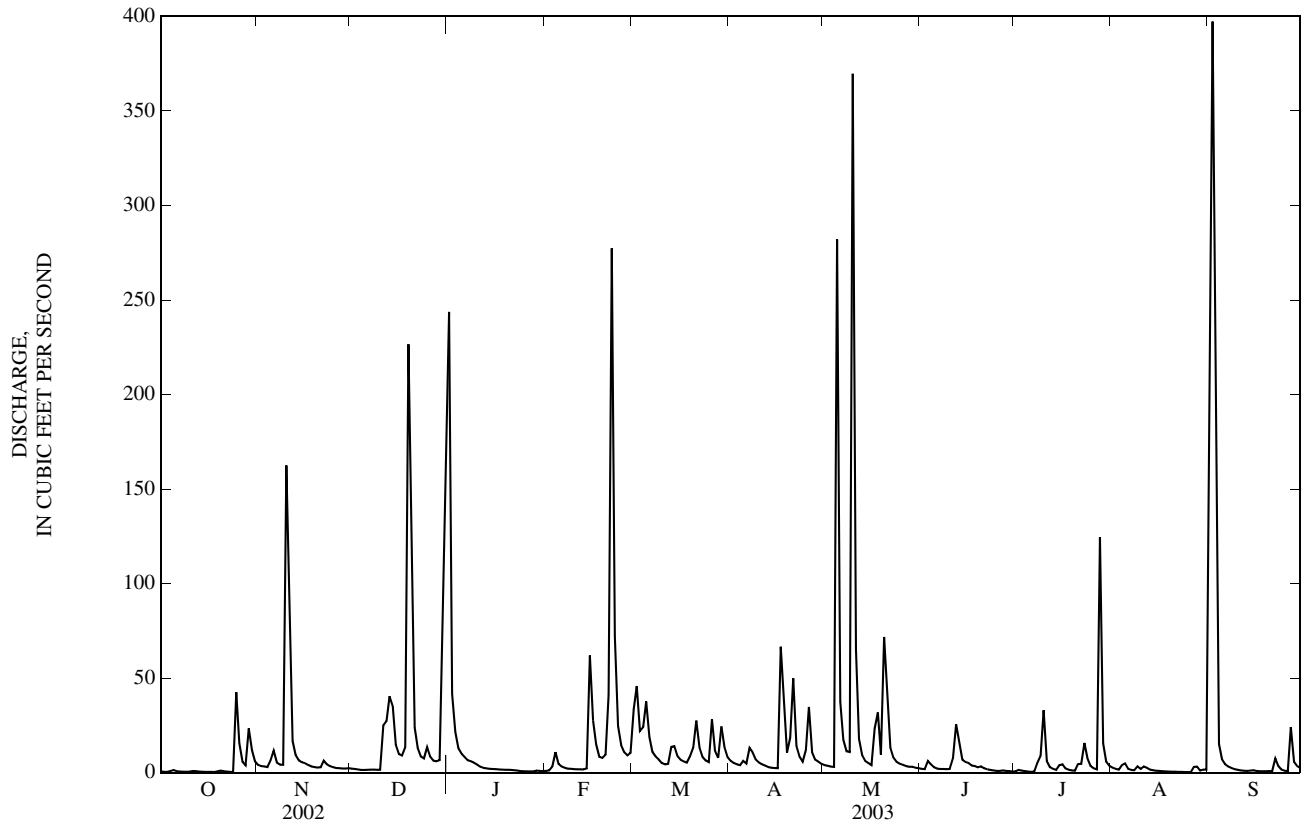
FOR 2003 WATER YEAR

WATER YEARS 1969 - 2003

ANNUAL TOTAL	6,273.91	5,334.16	
ANNUAL MEAN	17.2	14.6	13.6
HIGHEST ANNUAL MEAN			23.7
LOWEST ANNUAL MEAN			6.13
HIGHEST DAILY MEAN	573	Sep 27	397
LOWEST DAILY MEAN	0.00	Aug 2	0.27
ANNUAL SEVEN-DAY MINIMUM	0.00	Aug 2	0.39
MAXIMUM PEAK FLOW			1,540
MAXIMUM PEAK STAGE			7.48
ANNUAL RUNOFF (CFSM)	1.85	1.57	8.96
ANNUAL RUNOFF (INCHES)	25.07	21.31	19.87
10 PERCENT EXCEEDS	28	28	26
50 PERCENT EXCEEDS	2.9	3.7	2.5
90 PERCENT EXCEEDS	0.00	0.75	0.07

e Estimated

03366200 HARBERTS CREEK NEAR MADISON, IN—Continued



03366500 MUSCATATUCK RIVER NEAR DEPUTY, IN

LOCATION.--Lat 38°48'15", long 85°40'26", in SW¹/₄NE¹/₄ sec. 7, T.4 N., R.8 E., Jefferson County, Hydrologic Unit 05120207, (DEPUTY, IN quadrangle), on left bank approximately 100 ft downstream 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 fair except those for Aug. 1 - 20 and estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	170	55	5,780	e55	560	281	233	133	89	121	271
2	43	117	51	2,690	e55	1,260	238	210	120	96	98	4,340
3	32	91	48	925	133	900	208	193	184	114	84	6,480
4	28	80	45	548	216	568	189	187	278	113	88	788
5	25	82	45	404	239	821	216	6,820	223	83	921	289
6	23	217	48	344	e178	855	279	4,030	162	71	260	172
7	19	223	44	314	e110	463	279	876	135	68	133	119
8	17	153	46	279	e90	351	474	561	124	64	92	91
9	16	115	43	253	e88	304	332	496	126	340	73	74
10	15	881	45	227	e86	261	264	7,770	124	3,070	225	62
11	15	3,110	108	198	e84	223	225	3,960	454	1,290	265	53
12	15	771	525	166	e82	210	197	1,050	480	300	142	46
13	15	332	598	e140	e80	238	174	496	1,100	216	90	41
14	13	219	1,420	e125	131	416	157	352	417	159	67	48
15	12	169	663	e110	793	349	145	341	1,660	246	60	68
16	12	144	393	e95	945	278	135	315	2,680	571	57	54
17	11	127	300	e87	886	246	1,310	307	1,080	232	45	45
18	11	111	312	e76	474	225	1,610	763	366	153	37	37
19	12	99	1,730	e72	264	245	552	454	255	121	34	33
20	12	89	5,450	e67	269	387	356	732	283	104	29	30
21	11	83	1,290	e64	655	661	1,170	1,610	253	122	26	28
22	12	88	542	e64	4,640	723	602	544	180	221	23	119
23	11	102	371	e63	5,410	399	363	339	146	287	21	176
24	10	98	295	e62	1,210	301	270	262	125	295	19	135
25	74	90	368	e61	614	254	392	220	110	160	18	85
26	646	79	336	e60	445	418	2,490	200	100	116	17	60
27	234	73	270	e60	369	496	815	178	97	97	40	165
28	111	66	244	e59	343	322	406	159	93	3,820	58	142
29	342	62	244	e61	---	399	315	156	83	926	41	95
30	971	59	572	e56	---	608	275	148	77	250	140	77
31	304	---	1,890	e56	---	364	---	145	---	160	80	---
TOTAL	3,132	8,100	18,391	13,566	18,944	14,105	14,719	34,107	11,648	13,954	3,404	14,223
MEAN	101	270	593	438	677	455	491	1,100	388	450	110	474
MAX	971	3,110	5,450	5,780	5,410	1,260	2,490	7,770	2,680	3,820	921	6,480
MIN	10	59	43	56	55	210	135	145	77	64	17	28
CFSM	0.34	0.92	2.02	1.49	2.31	1.55	1.67	3.76	1.33	1.54	0.37	1.62
IN.	0.40	1.03	2.33	1.72	2.41	1.79	1.87	4.33	1.48	1.77	0.43	1.81

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 2003, BY WATER YEAR (WY)

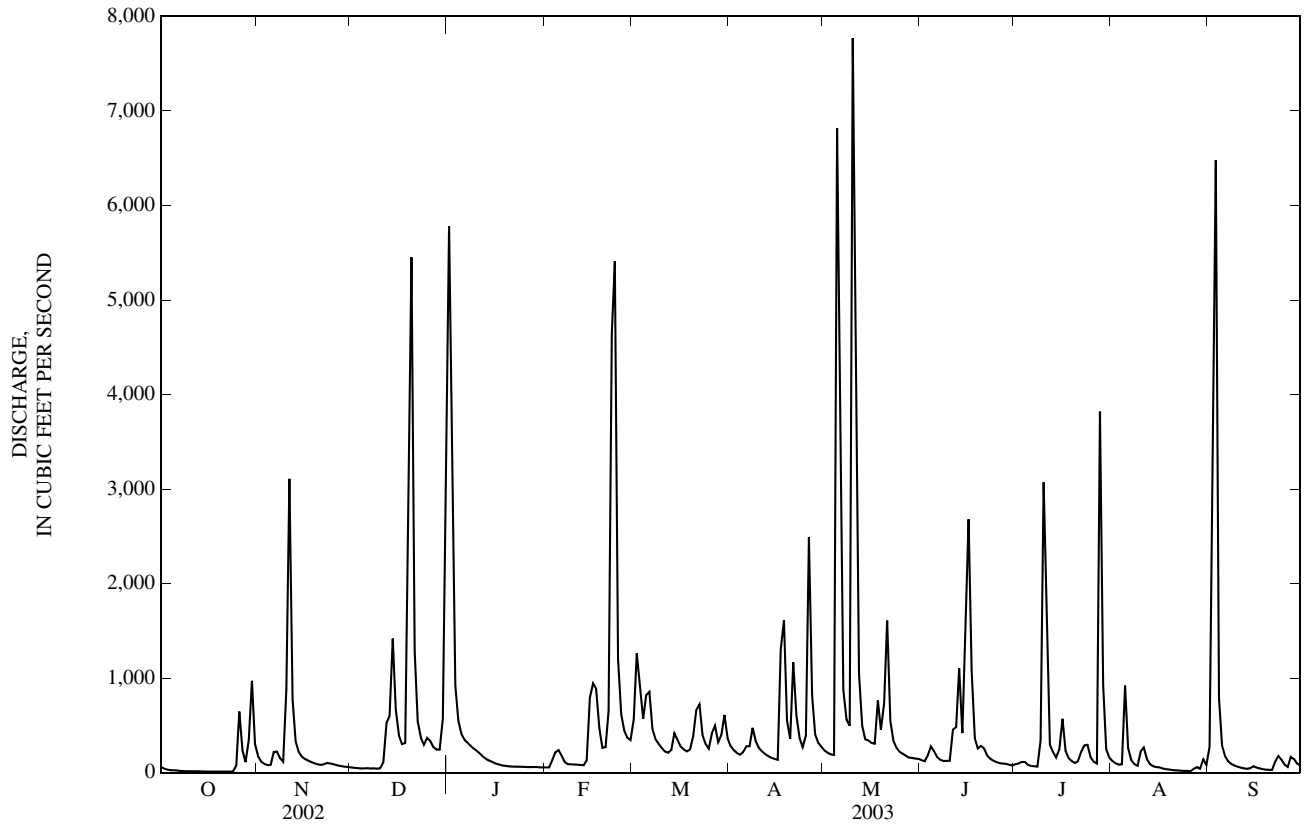
	MEAN	MAX	MIN	(WY)	MEAN	MAX	MIN	(WY)	MEAN	MAX	MIN	(WY)	MEAN	MAX	MIN	(WY)
	74.7	250	457	(1949)	605	639	708	(1950)	581	484	249	(1951)	157	94.0	66.9	(1952)
	912	1,438	1,723	(1953)	2,896	1,826	2,055	(1954)	1,957	1,967	1,552	(1955)	661	748	480	(1956)
	(2002)	(1980)	(1991)	(1950)	(1950)	(1950)	(1964)	(1996)	(1983)	(1997)	(1958)	(1992)	(1974)			
	0.000	0.15	0.21	(1954)	9.24	18.1	65.2	(2001)	23.8	9.46	0.42	0.000	0.000			
	(1954)	(1964)	(1964)	(1977)	(1954)	(1954)	(1954)	(2001)	(1976)	(1988)	(1954)	(1954)	(1954)			

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1949 - 2003	
ANNUAL TOTAL	190,768.5		168,293			
ANNUAL MEAN	523		461		363	
HIGHEST ANNUAL MEAN					687	
LOWEST ANNUAL MEAN					25.3	
HIGHEST DAILY MEAN	10,200	May 8	7,770	May 10	32,400	Jan 21, 1959
LOWEST DAILY MEAN	3.2	Sep 12	10	Oct 24	0.00	Oct 1, 1948
ANNUAL SEVEN-DAY MINIMUM	3.4	Sep 8	11	Oct 18	0.00	Oct 1, 1948
MAXIMUM PEAK FLOW			12,800	May 5	52,200	Jan 21, 1959
MAXIMUM PEAK STAGE			23.07	May 5	34.27	Jan 21, 1959
ANNUAL RUNOFF (CFSM)	1.78		1.57		1.24	
ANNUAL RUNOFF (INCHES)	24.22		21.37		16.82	
10 PERCENT EXCEEDS	1,270		908		758	
50 PERCENT EXCEEDS	170		176		80	
90 PERCENT EXCEEDS	6.2		41		3.6	

e Estimated

03366500 MUSCATATUCK RIVER NEAR DEPUTY, IN—Continued



03368000 BRUSH CREEK NEAR NEBRASKA, IN

LOCATION.--Lat 39°04'13", long 85°29'10" in NW¹/₄NE¹/₄ sec.11, T.7 N., R.9 E., Jennings County, Hydrologic Unit 05120207, (HOLTON, IN quadrangle), at upstream side of bridge on right bank on county road, 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). Prior to November 1988 at site 100 ft upstream at same datum.

REMARKS.--Records fair except for estimated daily discharges and those below 2.5 ft³/s, which are poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.10	2.3	1.6	210	2.1	47	6.8	5.0	2.7	1.6	0.90	54
2	0.08	1.9	1.6	29	3.5	57	5.7	5.4	2.4	1.6	0.81	16
3	0.06	1.9	1.5	14	6.9	24	5.1	5.5	19	1.6	0.79	2.6
4	0.08	1.8	1.3	8.3	16	36	4.8	5.0	7.8	1.4	9.3	1.1
5	0.15	2.3	1.5	7.3	e6.2	56	6.1	395	5.0	1.4	2.7	0.58
6	0.13	3.4	1.5	7.9	3.7	20	4.8	31	3.7	6.5	1.4	0.42
7	0.10	2.3	1.4	5.7	3.2	12	9.6	47	3.3	2.0	1.1	0.35
8	0.07	1.9	1.5	5.1	e2.4	10	7.9	36	3.0	1.9	0.99	0.31
9	0.05	1.8	1.4	4.5	e2.2	8.6	6.5	23	2.7	198	1.3	0.28
10	0.05	96	1.5	3.8	e2.2	6.4	5.7	117	2.4	977	0.96	0.26
11	0.05	33	6.0	3.0	e2.3	5.8	5.0	45	3.0	15	0.07	0.22
12	0.05	6.7	8.4	2.7	e2.4	5.6	4.4	15	7.3	9.1	0.04	0.21
13	0.05	4.2	43	2.6	2.5	15	3.9	9.5	7.2	5.3	0.03	0.20
14	0.04	3.3	31	2.5	2.8	11	3.7	7.4	44	3.8	0.02	0.20
15	0.04	2.9	9.3	e2.0	24	7.9	3.4	7.2	29	70	0.02	0.27
16	0.03	2.8	6.2	e2.0	12	6.9	3.2	5.9	78	27	0.01	0.25
17	0.03	2.4	4.9	e1.9	6.4	6.3	8.1	6.5	18	6.1	0.01	0.21
18	0.03	2.1	6.7	e1.8	4.4	5.7	7.9	7.2	8.5	4.1	0.01	0.18
19	0.15	2.1	210	e1.7	4.3	6.4	5.2	6.7	9.2	3.1	0.00	0.15
20	0.21	2.0	97	e1.6	8.6	7.1	10	26	7.4	2.5	0.00	0.13
21	0.19	2.0	12	e1.5	28	42	15	17	4.8	3.8	0.00	0.12
22	0.15	3.0	7.0	e1.4	401	14	7.5	7.7	3.8	3.0	0.00	1.8
23	0.12	2.6	4.8	e1.3	58	8.9	5.8	5.7	3.2	2.2	0.00	1.2
24	0.10	2.3	4.3	e1.2	19	7.2	4.9	4.7	2.8	1.9	0.00	0.47
25	8.2	2.1	6.5	e1.1	13	14	24	4.2	2.5	1.6	0.00	0.33
26	2.6	1.9	4.7	e1.1	9.9	53	77	4.0	2.5	1.3	0.00	0.29
27	0.63	1.8	4.0	e1.1	8.6	13	13	3.5	2.9	1.2	0.00	2.0
28	0.54	1.7	5.1	e1.1	9.3	8.9	8.2	3.3	2.2	1.5	0.00	0.84
29	89	1.7	8.1	e1.1	---	25	7.0	4.1	1.9	1.3	0.00	0.55
30	9.1	1.8	46	e1.2	---	12	5.7	3.3	1.7	1.0	0.00	0.43
31	3.5	---	101	e1.5	---	8.1	---	3.0	---	0.95	0.64	---
TOTAL	115.68	198.0	640.8	331.0	664.9	560.8	285.9	866.8	291.9	1,358.75	21.10	85.95
MEAN	3.73	6.60	20.7	10.7	23.7	18.1	9.53	28.0	9.73	43.8	0.68	2.87
MAX	89	96	210	210	401	57	77	395	78	977	9.3	54
MIN	0.03	1.7	1.3	1.1	2.1	5.6	3.2	3.0	1.7	0.95	0.00	0.12
CFSM	0.33	0.58	1.81	0.94	2.08	1.59	0.84	2.45	0.85	3.84	0.06	0.25
IN.	0.38	0.65	2.09	1.08	2.17	1.83	0.93	2.83	0.95	4.43	0.07	0.28

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 2003, BY WATER YEAR (WY)

	MEAN	MAX	MIN	(WY)	MEAN	MAX	MIN	(WY)	MEAN	MAX	MIN	(WY)	MEAN	MAX	MIN	(WY)	MEAN	MAX	MIN	(WY)																												
	3.82	58.5	0.000	(2002)	10.1	64.5	0.000	(1986)	17.9	86.9	0.000	(1991)	19.5	70.4	0.063	(1959)	22.1	51.8	1.44	(1971)	27.4	89.6	4.22	(1963)	25.6	79.9	2.12	(1976)	21.6	88.8	0.76	(2002)	9.81	45.6	0.12	(1997)	7.90	72.0	0.025	(1962)	4.47	41.9	0.000	(1978)	2.15	22.4	0.000	(2001)
				(1958)				(1964)				(1964)				(1977)				(1964)				(1969)							(1976)				(1965)				(1970)				(1964)					

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

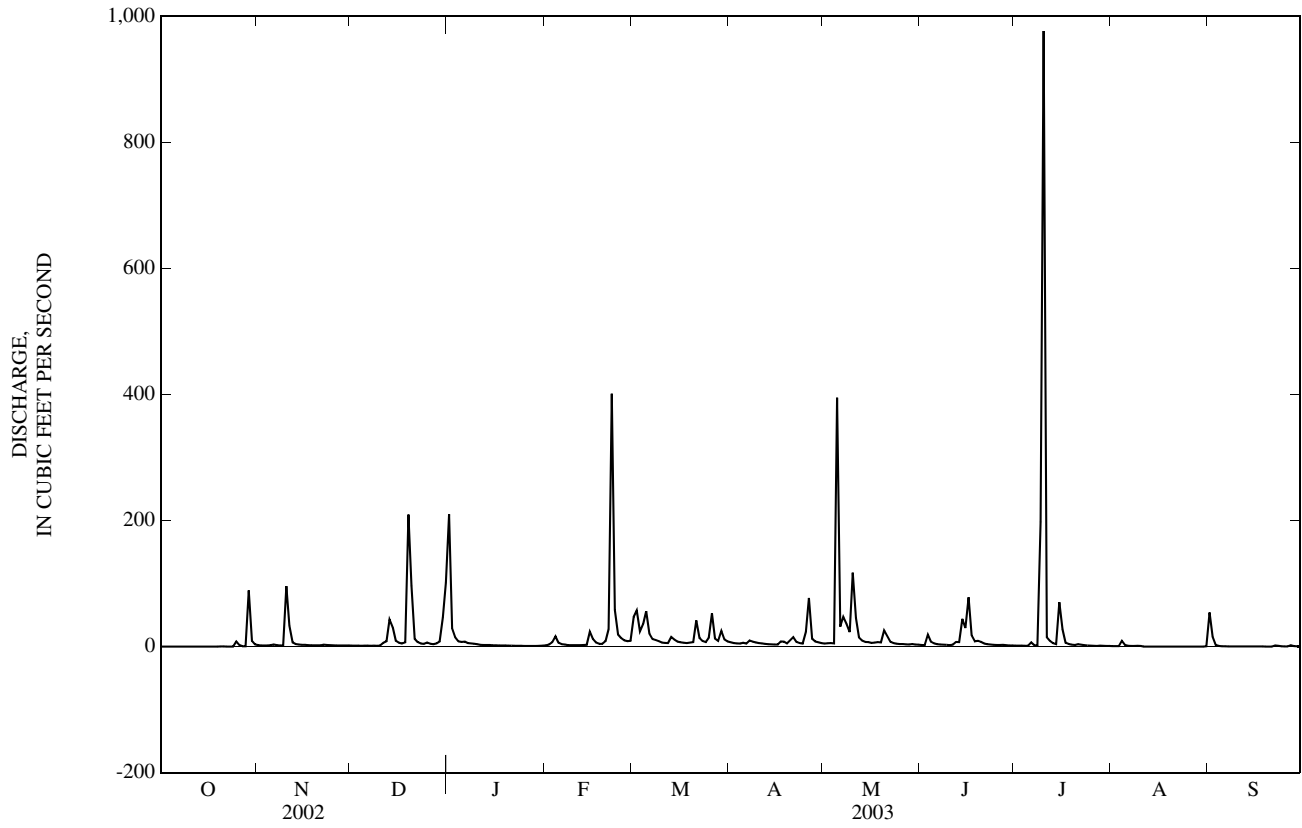
FOR 2003 WATER YEAR

WATER YEARS 1956 - 2003

ANNUAL TOTAL	8,203.85	5,421.58	
ANNUAL MEAN	22.5	14.9	14.3
HIGHEST ANNUAL MEAN			31.2
LOWEST ANNUAL MEAN			5.92
HIGHEST DAILY MEAN	710	May 8	977
LOWEST DAILY MEAN	0.00	Jul 28	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 28	0.00
MAXIMUM PEAK FLOW			6,830
MAXIMUM PEAK STAGE			12.61
ANNUAL RUNOFF (CFSM)	1.97		1.30
ANNUAL RUNOFF (INCHES)	26.77		17.69
10 PERCENT EXCEEDS	54		25
50 PERCENT EXCEEDS	2.9		3.2
90 PERCENT EXCEEDS	0.00		0.10

e Estimated

03368000 BRUSH CREEK NEAR NEBRASKA, IN—Continued



03369500 VERNON FORK MUSCATATUCK RIVER AT VERNON, IN

LOCATION.--Lat 38°58'34", long 85°37'13", in NW¹/₄SE¹/₄ sec.10, T.6 N., R.8 E., Jennings County, Hydrologic Unit 05120207, (VERNON, IN quadrangle), at left upstream side of bridge, 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. WDR IN-95-1: 1991-94 (M). WDR IN-99-1: 1991-94, 1998 (M).

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 fair except those for June 1 - 11 and estimated daily discharges, which are poor. 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	80	35	3,240	e48	407	183	140	65	52	36	324
2	8.7	55	34	1,080	47	975	162	132	62	38	33	1,370
3	6.8	42	32	480	79	621	142	136	132	34	32	338
4	7.5	39	30	287	326	434	130	115	203	31	473	95
5	9.0	42	32	219	e140	1,270	158	4,080	112	29	352	48
6	13	69	31	206	e100	700	147	1,040	87	40	116	31
7	12	70	31	183	e72	396	190	481	83	41	71	24
8	9.4	53	31	152	e58	332	249	605	67	34	55	19
9	8.7	44	30	137	e60	325	179	428	63	132	47	16
10	9.4	288	29	119	e59	220	151	2,430	55	11,300	87	14
11	9.4	1,530	52	e100	e58	133	134	1,540	97	789	62	12
12	9.1	261	169	e86	e56	116	121	540	152	359	46	11
13	10	139	286	e77	e52	150	109	322	345	211	41	11
14	8.9	97	837	e70	e56	315	100	234	600	142	35	11
15	8.1	76	302	e64	269	178	95	236	907	134	31	13
16	7.9	67	191	e62	331	144	86	220	1,310	1,000	29	17
17	9.3	60	135	e60	168	126	219	193	538	246	27	17
18	8.1	53	142	e58	129	115	283	278	263	157	25	14
19	15	49	1,420	e56	105	117	164	206	209	127	24	12
20	20	43	2,660	e56	123	162	163	357	214	108	22	11
21	14	38	516	e55	302	599	615	675	120	112	21	11
22	13	45	271	e54	3,520	392	268	279	91	143	21	43
23	13	52	184	e53	2,360	218	175	198	76	126	24	99
24	12	51	149	e52	612	168	122	159	67	106	26	57
25	64	43	179	e52	354	168	191	137	59	91	27	27
26	300	44	154	e51	278	685	1,330	125	52	86	29	18
27	94	44	123	e50	249	351	363	115	79	80	34	225
28	58	41	114	e50	225	237	211	106	84	131	44	113
29	778	39	154	e50	---	354	199	105	78	95	42	46
30	509	38	691	e49	---	321	163	108	73	60	49	29
31	142	---	1,180	e49	---	218	---	77	---	40	109	---
TOTAL	2,199.3	3,592	10,224	7,357	10,236	10,947	6,802	15,797	6,343	16,074	2,070	3,076
MEAN	70.9	120	330	237	366	353	227	510	211	519	66.8	103
MAX	778	1,530	2,660	3,240	3,520	1,270	1,330	4,080	1,310	11,300	473	1,370
MIN	6.8	38	29	49	47	115	86	77	52	29	21	11
CFSM	0.36	0.60	1.67	1.20	1.85	1.78	1.15	2.57	1.07	2.62	0.34	0.52
IN.	0.41	0.67	1.92	1.38	1.92	2.06	1.28	2.97	1.19	3.02	0.39	0.58

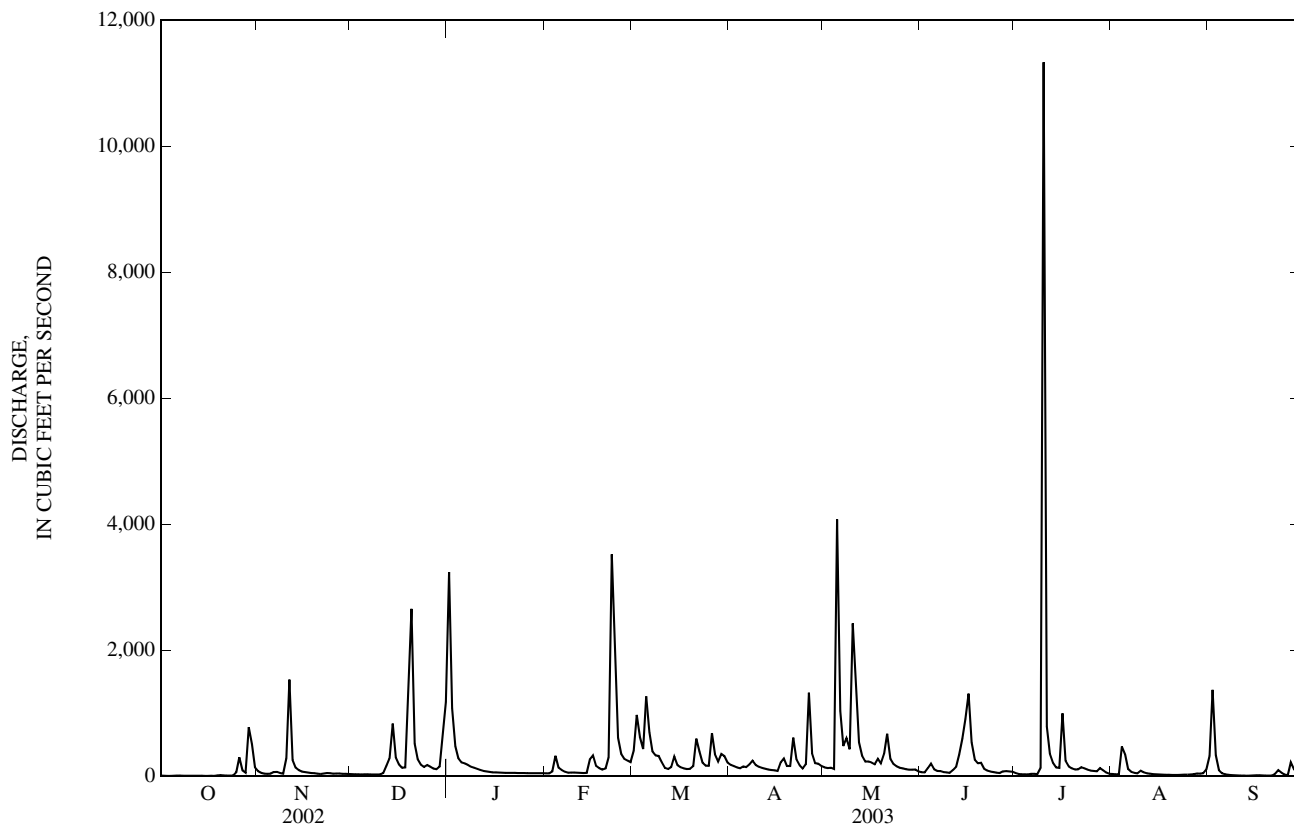
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2003, BY WATER YEAR (WY)

MEAN	50.1	142	262	348	387	464	414	313	170	106	65.6	37.6
MAX	771	986	962	2,049	1,188	1,798	1,402	1,440	963	581	639	284
(WY)	(2002)	(1986)	(1991)	(1950)	(1950)	(1945)	(1998)	(1968)	(1960)	(1962)	(1978)	(1974)
MIN	0.22	0.61	1.03	4.23	24.4	19.0	37.3	8.77	1.80	0.63	0.003	0.19
(WY)	(1941)	(1954)	(1944)	(1977)	(1964)	(1941)	(1941)	(1941)	(1988)	(1954)	(1940)	(1943)

03369500 VERNON FORK MUSCATATUCK RIVER AT VERNON, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1940 - 2003	
ANNUAL TOTAL	118,942.2		94,717.3			
ANNUAL MEAN	326		259		229	
HIGHEST ANNUAL MEAN					468	1950
LOWEST ANNUAL MEAN					32.8	1954
HIGHEST DAILY MEAN	8,640	May 13	11,300	Jul 10	31,900	Jan 21, 1959
LOWEST DAILY MEAN	2.3	Sep 12	6.8	Oct 3	0.00	Aug 2, 1940
ANNUAL SEVEN-DAY MINIMUM	2.5	Sep 8	8.8	Oct 12	0.00	Aug 2, 1940
MAXIMUM PEAK FLOW			26,600	Jul 10	56,800	Jan 21, 1959
MAXIMUM PEAK STAGE			25.59	Jul 10	32.83	Jan 21, 1959
ANNUAL RUNOFF (CF5M)	1.65		1.31		1.16	
ANNUAL RUNOFF (INCHES)	22.35		17.80		15.73	
10 PERCENT EXCEEDS	687		512		462	
50 PERCENT EXCEEDS	85		100		49	
90 PERCENT EXCEEDS	6.0		18		2.8	

e Estimated



03371500 EAST FORK WHITE RIVER NEAR BEDFORD, IN

LOCATION.--Lat 38°46'10", long 86°24'30", in SW¹/₄NE¹/₄ sec.21, T.4 N., R.1 E., Lawrence County, Hydrologic Unit 05120208, (BEDFORD EAST, IN quadrangle), on right downstream side of county road bridge, 0.4 mi upstream from Mill Creek, 2.9 mi downstream from Sugar Creek, 3.9 mi northeast of Mitchell, 7.8 mi southeast of Bedford, and at mile 153.3.

DRAINAGE AREA.--3,861 mi².

PERIOD OF RECORD.--May 1939 to current year (high-water records only October 1943 to September 1957).

REVISED RECORDS.--WSP 2109: Drainage area. WDR IN-73-1: 1972.

GAGE.--Water-stage recorder. Datum of gage is 473.59 ft above National Geodetic Vertical Datum of 1929. Prior to Feb. 6, 1940, nonrecording gage, and Feb. 6, 1940 to Sept. 24, 1957, water-stage recorder, at site 9.8 mi downstream at datum 4.39 ft lower.

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

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.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3,120	3,540	1,110	9,070	e1,700	12,700	8,110	7,130	3,010	2,190	5,450	1,330
2	2,310	2,680	1,070	11,800	e1,700	10,300	7,330	5,640	2,810	2,070	4,150	3,050
3	1,450	1,900	1,030	13,300	e1,680	9,430	6,130	4,270	2,960	2,120	2,910	5,070
4	1,050	1,500	1,010	16,200	e1,850	9,460	5,270	3,690	3,650	2,010	2,340	7,930
5	881	1,290	1,010	18,400	2,180	9,890	4,790	6,330	3,720	1,950	2,060	9,540
6	799	1,210	994	17,600	3,060	10,100	4,470	10,500	3,510	1,840	2,370	10,800
7	758	1,270	976	14,400	3,500	10,700	4,580	11,500	3,140	1,970	3,370	12,100
8	700	1,380	950	11,100	3,260	11,800	5,130	14,000	2,710	4,110	2,920	12,000
9	672	1,350	923	8,770	e2,850	11,900	5,160	16,600	2,460	5,910	2,310	8,170
10	652	1,380	910	6,680	e2,400	10,600	5,020	19,800	2,300	7,350	1,940	4,690
11	607	2,690	920	e5,300	e2,200	9,740	4,610	20,200	2,440	8,940	1,750	3,510
12	581	4,800	939	e4,400	e2,000	10,200	4,170	18,100	3,900	11,500	1,740	2,960
13	565	6,780	1,170	e3,900	e1,900	10,400	3,800	17,400	5,390	16,500	1,970	2,590
14	528	6,570	2,650	e3,500	e1,880	9,300	3,490	18,800	6,390	18,600	1,820	2,310
15	506	5,490	4,120	e3,100	e2,100	8,490	3,220	20,000	8,060	17,200	1,620	2,120
16	487	3,940	4,890	e2,800	4,100	9,120	3,010	19,100	9,560	13,700	1,510	1,980
17	470	2,830	4,480	e2,600	e5,100	9,660	2,880	15,400	12,100	10,600	1,370	1,850
18	452	2,300	3,620	e2,500	e5,050	9,010	3,810	12,200	15,400	9,190	1,260	1,720
19	460	2,010	3,760	e2,400	e4,300	7,780	6,010	10,400	17,600	6,810	1,160	1,610
20	457	1,800	6,820	e2,300	e3,750	7,220	6,570	8,980	15,600	4,880	1,070	1,510
21	452	1,650	8,750	e2,200	e3,400	7,130	6,630	7,800	10,900	4,030	1,010	1,450
22	452	1,550	10,100	e2,100	e5,900	7,240	6,080	7,350	7,130	4,650	966	1,440
23	446	1,460	11,200	e2,050	12,000	7,890	6,000	7,340	5,190	4,930	921	1,530
24	443	1,390	11,000	e2,000	12,600	8,220	5,370	6,570	4,220	5,640	873	1,690
25	486	1,370	9,780	e1,950	14,500	7,430	4,610	5,310	3,630	5,610	829	1,850
26	650	1,340	8,120	e1,900	18,200	6,460	7,620	4,420	3,190	4,780	795	1,830
27	994	1,310	6,450	e1,850	19,400	6,450	8,600	3,910	2,880	3,830	767	1,900
28	1,630	1,250	4,740	e1,800	16,300	7,000	8,470	3,560	2,650	3,670	766	1,990
29	1,800	1,200	3,790	e1,800	---	7,200	8,310	3,320	2,470	5,570	783	2,360
30	2,080	1,150	3,440	e1,750	---	7,110	7,950	3,120	2,320	5,910	967	3,400
31	3,170	---	4,080	e1,700	---	7,650	---	3,060	---	5,790	1,030	---
TOTAL	30,108	70,380	124,802	181,220	158,860	277,580	167,200	315,800	171,290	203,850	54,797	116,280
MEAN	971	2,346	4,026	5,846	5,674	8,954	5,573	10,190	5,710	6,576	1,768	3,876
MAX	3,170	6,780	11,200	18,400	19,400	12,700	8,600	20,200	17,600	18,600	5,450	12,100
MIN	443	1,150	910	1,700	1,680	6,450	2,880	3,060	2,300	1,840	766	1,330
CFSM	0.25	0.61	1.04	1.51	1.47	2.32	1.44	2.64	1.48	1.70	0.46	1.00
IN.	0.29	0.68	1.20	1.75	1.53	2.67	1.61	3.04	1.65	1.96	0.53	1.12

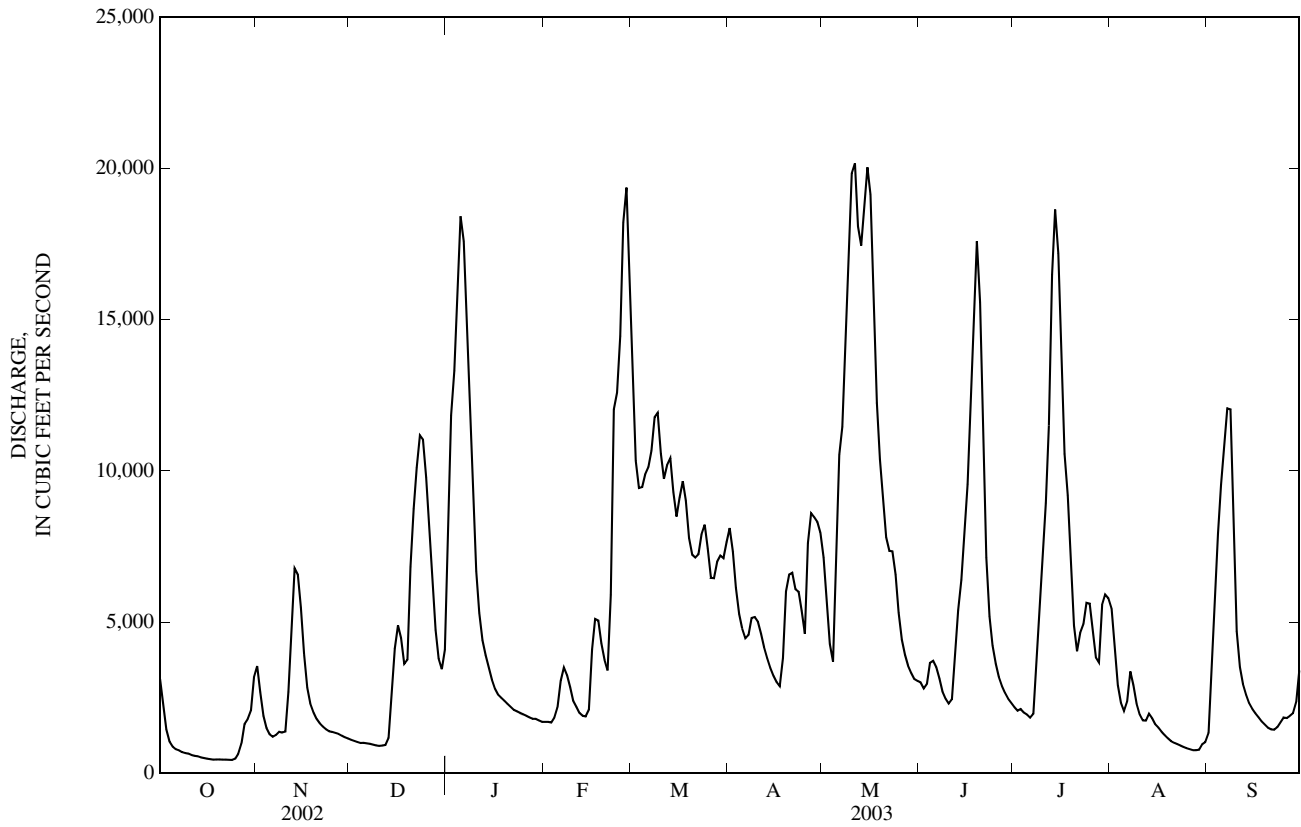
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2003, BY WATER YEAR (WY)

MEAN	1,222	2,427	4,581	4,971	6,425	8,007	7,458	6,780	3,967	2,573	1,812	1,163
MAX	8,436	15,520	18,290	15,010	15,610	18,710	15,180	30,650	16,310	9,649	11,280	5,234
(WY)	(2002)	(1994)	(2002)	(1991)	(1982)	(1964)	(1989)	(1997)	(1958)	(1979)	(1989)	(1989)
MIN	228	284	272	300	712	450	730	382	622	603	291	244
(WY)	(1941)	(2000)	(1964)	(1977)	(1941)	(1941)	(1941)	(1941)	(1988)	(1941)	(1941)	(1941)

03371500 EAST FORK WHITE RIVER NEAR BEDFORD, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1940 - 2003	
ANNUAL TOTAL	2,252,377		1,872,167		4,272	
ANNUAL MEAN	6,171		5,129		8,192	
HIGHEST ANNUAL MEAN					643	
LOWEST ANNUAL MEAN					1941	
HIGHEST DAILY MEAN	49,100	May 17	20,200	May 11	78,200	May 1, 1996
LOWEST DAILY MEAN	370	Sep 19	443	Oct 24	138	Sep 7, 1941
ANNUAL SEVEN-DAY MINIMUM	377	Sep 13	452	Oct 18	196	Sep 5, 1941
MAXIMUM PEAK FLOW			20,900	May 10	80,500	May 1, 1996
MAXIMUM PEAK STAGE			21.94	May 10	36.32	May 1, 1996
ANNUAL RUNOFF (CFSM)	1.60		1.33		1.11	
ANNUAL RUNOFF (INCHES)	21.70		18.04		15.03	
10 PERCENT EXCEEDS	16,200		11,600		10,500	
50 PERCENT EXCEEDS	3,320		3,510		2,200	
90 PERCENT EXCEEDS	554		972		485	

e Estimated



03371520 BACK CREEK AT LEESVILLE, IN

LOCATION.--Lat 38°50'48", long 86°18'06", in SW¹/₄SE¹/₄ sec.21, T.5 N., R.2 E., Lawrence County, Hydrologic Unit 05120208, (TUNNELTON, IN quadrangle), 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 miles upstream from mouth.

DRAINAGE AREA.--24.1 mi².

PERIOD OF RECORD.--October 1970 to October 2003 (discontinued).

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 fair except for estimated daily discharges and those below 1.0 ft³/s, 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.66	4.4	4.2	586	e1.5	37	40	21	5.1	2.2	6.3	65
2	0.60	3.2	4.1	168	e1.7	69	31	22	4.2	2.2	5.2	38
3	0.61	3.1	3.7	79	e3.1	56	25	16	48	1.8	4.6	11
4	0.77	3.1	3.5	41	e18	87	22	14	21	1.7	4.0	6.1
5	1.0	3.4	3.8	28	e8.0	370	41	855	13	1.4	3.5	3.9
6	0.86	6.5	4.0	21	e6.0	153	29	172	9.4	1.7	3.1	2.8
7	0.70	5.4	4.0	e13	e4.5	90	42	82	8.1	2.3	2.7	2.2
8	0.60	4.3	3.9	e7.1	e3.9	82	38	66	6.9	1.7	2.4	1.9
9	0.60	3.8	4.0	e5.2	e3.5	67	37	127	6.1	1.7	2.4	1.6
10	0.65	164	4.1	e3.9	e3.3	41	32	463	6.5	175	3.0	1.4
11	0.72	129	5.7	e3.1	e3.2	32	27	183	69	15	3.3	1.2
12	0.72	33	7.3	e2.6	e3.1	28	22	80	437	8.6	3.1	1.0
13	0.78	19	59	e2.2	e3.4	58	19	44	123	5.7	2.8	0.92
14	0.70	14	121	e1.8	e11	55	16	30	131	4.2	2.7	0.91
15	0.64	12	69	e1.5	e125	40	14	24	60	3.9	2.4	0.83
16	0.60	10	58	e1.5	e80	34	12	18	77	5.3	2.2	0.72
17	0.58	8.3	40	e1.5	e40	28	21	24	37	3.4	2.0	0.66
18	0.53	7.3	38	e1.3	e29	25	21	24	22	3.4	1.8	0.60
19	0.93	7.4	391	e1.2	e26	30	17	18	23	3.1	1.6	0.58
20	1.4	6.7	281	e1.1	e25	33	57	20	21	2.4	1.5	0.52
21	1.2	6.2	88	e1.0	e32	35	69	20	13	268	1.5	0.49
22	1.0	7.3	47	e0.96	874	31	37	16	10	138	1.3	1.4
23	1.0	6.3	29	e0.91	294	26	26	13	7.9	53	1.4	1.9
24	1.1	5.5	24	e0.88	94	23	21	10	6.3	26	1.3	1.4
25	4.5	5.0	e19	e0.87	53	25	125	8.7	5.0	15	1.2	1.1
26	8.0	4.4	e12	e3.6	38	68	184	7.8	4.6	11	1.1	1.0
27	2.8	4.1	e11	e3.3	30	44	67	6.6	4.4	8.4	1.0	5.2
28	2.5	3.8	e10	e2.0	26	38	42	5.7	3.4	34	0.95	2.9
29	116	3.6	e9.6	e2.4	---	239	32	7.2	2.9	17	3.0	2.0
30	21	4.1	77	e1.9	---	85	24	5.6	2.4	10	11	1.7
31	7.3	---	238	e1.7	---	53	---	6.1	---	7.7	53	---
TOTAL	181.05	498.2	1,673.9	989.52	1,840.2	2,082	1,190	2,409.7	1,188.2	834.8	137.35	160.93
MEAN	5.84	16.6	54.0	31.9	65.7	67.2	39.7	77.7	39.6	26.9	4.43	5.36
MAX	116	164	391	586	874	370	184	855	437	268	53	65
MIN	0.53	3.1	3.5	0.87	1.5	23	12	5.6	2.4	1.4	0.95	0.49
CFSM	0.24	0.69	2.24	1.32	2.73	2.79	1.65	3.23	1.64	1.12	0.18	0.22
IN.	0.28	0.77	2.58	1.53	2.84	3.21	1.84	3.72	1.83	1.29	0.21	0.25

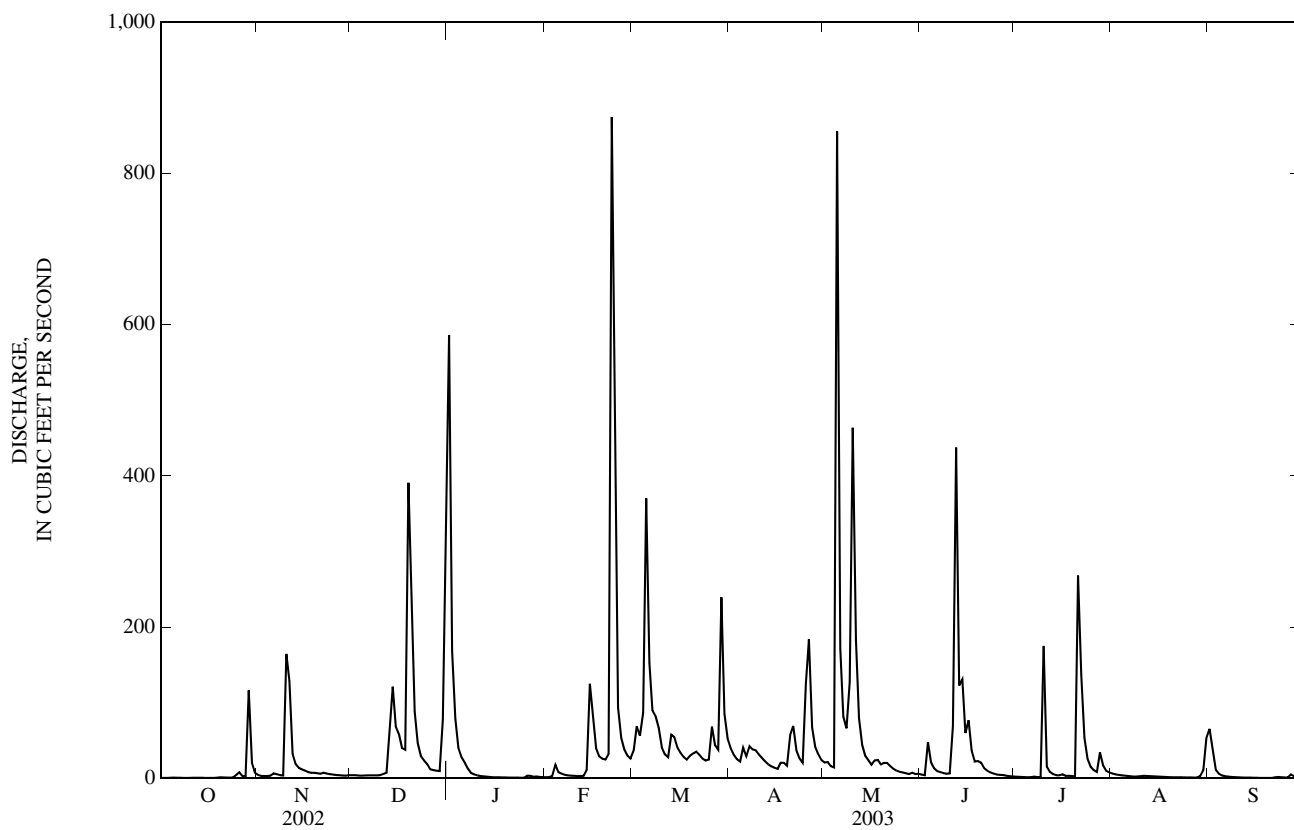
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1971 - 2003, BY WATER YEAR (WY)

MEAN	10.0	31.2	44.7	42.4	53.0	65.5	69.5	50.8	25.4	20.2	15.5	6.47
MAX	62.3	132	141	147	105	168	176	214	159	195	92.4	60.9
(WY)	(2002)	(1986)	(2002)	(1982)	(1979)	(1989)	(1972)	(2002)	(1997)	(1973)	(1979)	(1974)
MIN	0.000	0.008	1.71	0.98	5.78	9.74	6.84	2.70	0.25	0.014	0.037	0.000
(WY)	(1989)	(2000)	(2000)	(1977)	(1992)	(1981)	(2001)	(1988)	(1988)	(1991)	(1999)	(1988)

03371520 BACK CREEK AT LEESVILLE, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1971 - 2003	
ANNUAL TOTAL	20,922.68		13,185.85		36.1	
ANNUAL MEAN	57.3		36.1		74.2	
HIGHEST ANNUAL MEAN					14.4	
LOWEST ANNUAL MEAN					1987	
HIGHEST DAILY MEAN	1,670	May 13	874	Feb 22	5,000	Jul 21, 1973
LOWEST DAILY MEAN	0.00	Jul 29	0.49	Sep 21	0.00	Oct 4, 1970
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 29	0.63	Sep 15	0.00	Jul 12, 1975
MAXIMUM PEAK FLOW			2,530	Jul 21	15,300	Jul 21, 1973
MAXIMUM PEAK STAGE			7.12	Jul 21	14.00	Jul 21, 1973
ANNUAL RUNOFF (CFSM)	2.38		1.50		1.50	
ANNUAL RUNOFF (INCHES)	32.30		20.35		20.36	
10 PERCENT EXCEEDS	148		80		77	
50 PERCENT EXCEEDS	7.2		7.3		9.0	
90 PERCENT EXCEEDS	0.00		1.0		0.29	

e Estimated



03372500 SALT CREEK NEAR HARRODSBURG, IN—Continued

WATER-QUALITY RECORDS

INSTRUMENTATION.--Temperature recorder.

PERIOD OF RECORD.--

WATER TEMPERATURE.--August 1966 to September 1967; October 1968 to September 1976 and September 1988 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 28.9°C, July 10-11, 1973 and July 30, 1975; minimum, 0.7°C, Feb. 3-5, 1996.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 23.1°C, Oct. 1-2, minimum, 2.3°C, Jan. 23, 26, 30.

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	23.1	20.5	22.5	14.6	13.9	14.1	7.9	7.6	7.7	5.1	4.7	4.8
2	23.1	22.3	22.6	14.2	13.5	13.9	8.3	7.2	7.7	4.7	4.7	4.7
3	22.7	22.3	22.4	13.9	13.5	13.5	7.2	6.5	6.9	4.7	4.4	4.4
4	22.7	22.3	22.5	13.5	13.1	13.4	6.5	5.8	6.4	4.7	4.4	4.5
5	22.3	21.5	22.1	13.1	13.1	13.1	6.5	5.8	6.0	4.7	4.4	4.5
6	22.3	21.5	21.8	13.1	12.4	12.7	6.1	5.4	5.8	4.4	4.0	4.4
7	21.9	21.1	21.5	12.8	12.4	12.5	6.1	5.4	5.7	4.4	4.4	4.4
8	21.5	20.7	21.2	12.8	12.0	12.3	6.1	5.4	5.9	4.4	4.4	4.4
9	21.1	20.7	20.8	12.8	12.0	12.5	5.8	5.1	5.4	4.7	4.4	4.5
10	20.7	20.7	20.7	13.1	12.4	12.8	5.8	5.4	5.5	4.4	4.0	4.4
11	20.7	20.3	20.7	13.1	12.4	12.7	5.4	4.7	5.2	4.0	4.0	4.0
12	20.7	20.3	20.5	12.4	12.0	12.3	5.8	5.4	5.5	4.0	4.0	4.0
13	20.3	19.5	20.0	12.4	11.7	12.0	5.4	4.7	5.2	4.0	3.7	3.9
14	19.9	19.1	19.5	12.4	11.7	12.1	5.4	4.7	5.0	4.0	3.3	3.5
15	19.5	19.1	19.2	12.0	11.3	11.8	5.4	5.1	5.2	3.7	3.3	3.4
16	19.1	18.7	18.9	11.3	11.0	11.2	5.4	4.7	5.1	3.7	3.3	3.5
17	18.7	18.3	18.5	11.0	10.6	10.8	5.1	5.1	5.1	3.3	3.0	3.1
18	18.7	17.9	18.1	11.0	10.3	10.6	5.8	5.1	5.5	3.3	3.0	3.1
19	18.3	17.6	18.0	11.3	10.6	10.8	5.8	5.8	5.8	3.0	2.6	2.8
20	17.9	17.6	17.6	11.0	10.3	10.6	5.8	5.4	5.7	2.6	2.6	2.6
21	17.6	17.2	17.3	11.0	9.9	10.4	5.8	5.4	5.5	2.6	2.6	2.6
22	17.6	16.8	17.2	10.3	9.9	9.9	5.8	5.4	5.5	2.6	2.6	2.6
23	17.2	16.8	17.0	10.3	9.6	9.9	5.4	5.1	5.4	2.6	2.3	2.6
24	17.2	16.4	16.8	10.3	9.6	9.9	5.4	5.1	5.2	2.6	2.6	2.6
25	16.8	16.4	16.5	9.9	9.2	9.8	5.1	4.7	4.8	2.6	2.6	2.6
26	16.4	16.1	16.3	9.6	8.9	9.2	4.7	4.7	4.7	2.6	2.3	2.6
27	16.1	15.7	16.0	9.2	8.5	8.9	4.7	4.7	4.7	2.6	2.3	2.4
28	16.4	15.7	15.9	8.9	8.5	8.7	4.7	4.4	4.7	2.6	2.3	2.3
29	15.7	14.9	15.2	9.3	8.5	8.7	4.7	4.4	4.4	2.6	2.3	2.4
30	14.9	14.6	14.8	8.6	7.6	8.2	4.7	4.4	4.6	2.6	2.3	2.5
31	14.9	14.6	14.6	---	---	---	5.1	4.7	4.9	2.6	2.6	2.6
MONTH	23.1	14.6	18.9	14.6	7.6	11.3	8.3	4.4	5.5	5.1	2.3	3.4

03373500 EAST FORK WHITE RIVER AT SHOALS, IN

LOCATION.--Lat 38°40'02", long 86°47'32", in SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec.30, T.3 N., R.3 W., Martin County, Hydrologic Unit 05120208, (SHOALS, IN quadrangle), on upstream left bank, 30 ft upstream of Highway 50 bridge at Shoals, 1.0 mi upstream from Beaver Creek, 6.5 mi downstream from Indian Creek, and at mile 105.4.

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. WDR IN-91-1: Location.

GAGE.--Water-stage recorder. Datum of gage is 442.25 ft above National Geodetic Vertical Datum of 1929. Oct. 26, 1932 to Dec. 12, 1989 and Aug. 9, 1999 to present, at current site. Water-stage recorder, located 440 ft downstream of U.S. Highway bridge, Dec. 13, 1989 to Aug. 9, 1999. 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 reservoir.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3,390	3,790	1,320	11,600	2,190	17,900	10,200	9,440	5,160	4,000	6,890	1,570
2	3,110	3,600	1,270	16,900	2,150	15,000	10,100	8,630	5,040	3,870	5,890	2,950
3	2,300	2,770	1,230	15,900	2,080	13,200	8,790	7,070	5,070	3,770	4,320	4,960
4	1,620	2,110	1,190	16,500	2,200	12,700	7,500	5,790	5,590	3,680	3,330	6,820
5	1,270	1,740	1,170	18,300	2,590	14,000	7,110	8,790	5,930	3,270	2,750	9,110
6	1,110	1,580	1,150	19,400	2,820	15,700	6,380	16,600	5,710	2,810	2,490	10,600
7	987	1,510	1,140	18,200	3,500	14,900	5,830	15,700	5,010	2,530	3,000	11,900
8	905	1,550	1,120	15,000	3,670	14,900	6,300	16,100	4,130	2,740	3,540	12,900
9	840	1,610	1,100	11,800	3,370	15,700	6,470	18,900	3,490	4,910	3,070	11,600
10	805	1,690	1,080	9,520	3,050	15,000	6,300	25,200	3,200	8,400	2,560	7,100
11	775	3,690	1,090	7,720	2,780	13,200	5,970	28,500	3,310	11,600	2,250	4,520
12	742	4,930	1,100	6,780	2,650	12,700	5,360	25,800	4,700	11,200	2,070	3,550
13	711	6,190	1,210	6,250	2,530	13,400	4,700	21,900	8,340	14,000	2,120	3,040
14	678	7,050	2,460	5,750	2,420	13,700	4,290	20,200	8,450	17,500	2,270	2,680
15	653	6,400	4,640	5,290	2,760	12,200	3,970	20,400	11,600	18,400	2,110	2,410
16	635	5,190	5,530	5,010	4,750	11,600	3,700	20,700	11,300	17,200	1,960	2,210
17	617	3,880	5,550	4,740	5,950	12,200	3,570	19,700	13,500	13,800	1,840	2,070
18	603	3,010	4,860	4,370	6,450	12,300	3,730	16,600	16,100	11,100	1,690	1,960
19	635	2,560	5,930	3,990	6,100	11,300	5,070	13,500	18,000	9,350	1,570	1,830
20	636	2,260	10,900	3,780	5,580	10,400	6,790	11,400	18,900	7,030	1,470	1,720
21	635	2,050	11,600	3,280	5,440	9,700	7,710	9,860	16,500	5,770	1,390	1,620
22	618	1,900	11,300	2,770	8,260	9,560	7,490	8,890	11,700	e6,000	1,330	1,620
23	558	1,790	12,000	e2,400	18,100	9,850	6,760	9,200	8,150	e6,600	1,270	1,600
24	571	1,700	12,700	e2,050	18,400	10,400	6,350	9,220	6,610	e7,100	1,210	1,670
25	700	1,630	12,400	e2,000	16,400	10,200	5,970	8,300	5,760	e7,000	1,160	1,820
26	863	1,580	10,900	e1,950	17,500	9,390	8,660	7,060	5,230	e6,400	1,110	1,930
27	1,140	1,530	9,000	e1,900	19,800	8,620	11,100	6,340	4,850	e5,800	1,070	2,090
28	1,400	1,480	7,080	e1,910	20,300	8,880	10,600	5,970	4,540	e5,400	1,030	2,390
29	2,050	1,430	5,680	1,920	---	10,200	10,100	5,660	4,320	e5,800	1,040	2,380
30	3,120	1,370	5,020	2,120	---	10,900	9,830	5,420	4,150	e7,400	1,300	2,840
31	3,310	---	5,640	2,260	---	9,820	---	5,230	---	7,090	1,490	---
TOTAL	37,987	83,570	158,360	231,360	193,790	379,520	206,700	412,070	234,340	241,520	70,590	125,460
MEAN	1,225	2,786	5,108	7,463	6,921	12,240	6,890	13,290	7,811	7,791	2,277	4,182
MAX	3,390	7,050	12,700	19,400	20,300	17,900	11,100	28,500	18,900	18,400	6,890	12,900
MIN	558	1,370	1,080	1,900	2,080	8,620	3,570	5,230	3,200	2,530	1,030	1,570
CFSM	0.25	0.57	1.04	1.51	1.40	2.48	1.40	2.70	1.59	1.58	0.46	0.85
IN.	0.29	0.63	1.20	1.75	1.46	2.87	1.56	3.11	1.77	1.82	0.53	0.95

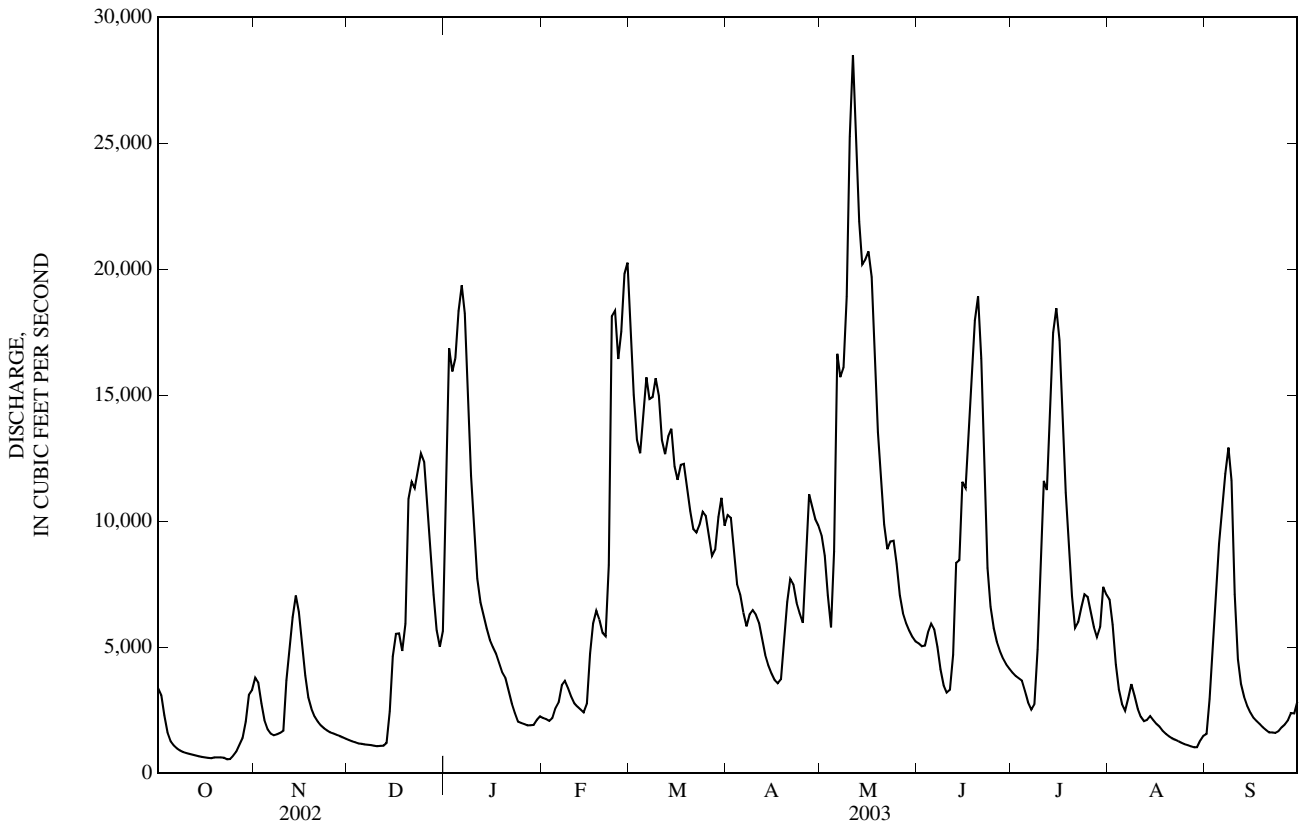
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1904 - 2003, BY WATER YEAR (WY)

MEAN	1,687	2,948	5,467	8,554	8,665	10,990	10,120	7,881	4,702	3,035	1,973	1,405
MAX	12,520	18,370	21,600	47,640	30,880	34,300	24,000	35,120	19,290	13,520	15,220	9,154
(WY)	(1911)	(1994)	(2002)	(1937)	(1950)	(1945)	(1913)	(1996)	(1997)	(1958)	(1979)	(1926)
MIN	262	293	305	432	589	562	1,029	529	696	365	265	233
(WY)	(1941)	(1955)	(1964)	(1931)	(1931)	(1941)	(1915)	(1941)	(1936)	(1954)	(1936)	(1954)

03373500 EAST FORK WHITE RIVER AT SHOALS, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1904 - 2003	
ANNUAL TOTAL	2,911,062		2,375,267		5,599	
ANNUAL MEAN	7,976		6,508		10,370	
HIGHEST ANNUAL MEAN					855	
LOWEST ANNUAL MEAN					1941	
HIGHEST DAILY MEAN	54,600	May 14	28,500	May 11	155,000	Mar 28, 1913
LOWEST DAILY MEAN	533	Sep 14	558	Oct 23	64	Oct 6, 1935
ANNUAL SEVEN-DAY MINIMUM	575	Sep 10	608	Oct 18	168	Oct 3, 1935
MAXIMUM PEAK FLOW			28,800	May 11	160,000	Mar 28, 1913
MAXIMUM PEAK STAGE			18.91	May 11	42.20	Mar 28, 1913
ANNUAL RUNOFF (CFSM)	1.62		1.32		1.14	
ANNUAL RUNOFF (INCHES)	21.98		17.93		15.44	
10 PERCENT EXCEEDS	19,900		15,000		14,600	
50 PERCENT EXCEEDS	4,930		5,020		2,680	
90 PERCENT EXCEEDS	738		1,200		532	

e Estimated



03373980 WHITE RIVER ABOVE PETERSBURG, IN

LOCATION.--Lat 38°31'42", long 87°15'12", in NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.12, T.1 N., R.8 W., Pike County, Hydrologic Unit 05120202, (MONROE CITY, IN quadrangle), on left bank 300 ft upstream from intake structure of Indianapolis Power and Light Company's generating plant, 1.5 mi downstream from East Fork White River, 2.2 mi upstream from State Highway 61, 2.9 mi northeast of Petersburg, and at mile 48.0.

DRAINAGE AREA.--11,123 mi².

PERIOD OF RECORD.--October 1976 to current year. Discharges below 1500 ft³/s only, published 1980 to 1993, and 1995 to current year.

GAGE.--Water-stage recorder. Datum of gage is 401.52 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Discharges below 1,500 ft³/s only, published. Records fair. For a complete record of White River in this vicinity use records of White River at Petersburg, IN (03374000), 2.3 mi downstream.

DISCHARGE, CUBIC FEET PER SECOND

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

(No daily discharges below 1,500 ft³/s)

03373980 WHITE RIVER ABOVE PETERSBURG, IN—Continued

WATER-QUALITY RECORDS

INSTRUMENTATION.--Temperature recorder.

PERIOD OF RECORD.--

WATER TEMPERATURE.--September 1988 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 33.3°C, July 30, 1999; minimum, -0.4°C, Dec. 16, 21, 1989; Jan. 1, 2, 1990; Jan. 15, 16, 18, 19, 1994.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 29.2°C, Aug. 22, minimum, 0.0°C, Jan. 19, 24, and 27.

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	22.7	21.9	22.3	10.9	10.3	10.6	4.7	3.7	4.2	5.8	5.6	5.7
2	23.1	22.1	22.6	10.3	9.6	9.9	4.5	3.5	4.0	6.5	5.7	6.0
3	23.5	22.6	23.0	9.8	9.2	9.4	4.2	3.5	3.8	6.5	6.1	6.4
4	23.1	21.9	22.7	9.2	9.0	9.1	3.5	2.5	3.0	6.1	5.4	5.7
5	22.1	20.8	21.4	9.2	8.8	9.0	2.7	2.0	2.4	5.4	4.4	5.0
6	21.1	19.9	20.5	9.2	8.7	9.0	2.3	1.5	1.9	4.4	3.5	3.9
7	19.9	18.6	19.3	9.3	8.1	8.7	2.6	1.6	2.1	3.5	3.3	3.4
8	18.9	17.8	18.3	10.0	8.8	9.3	3.5	2.6	3.0	3.7	3.2	3.4
9	---	---	---	11.0	9.7	10.3	3.0	2.2	2.7	3.8	3.5	3.6
10	18.0	17.7	17.9	13.0	11.0	12.0	3.0	2.7	2.9	3.7	3.4	3.5
11	18.4	17.7	18.0	12.6	12.1	12.4	3.3	2.7	3.0	3.4	3.0	3.2
12	19.1	18.4	18.7	12.2	10.9	11.5	4.0	3.3	3.6	3.0	2.6	2.8
13	18.5	16.8	17.7	10.9	10.3	10.7	4.0	3.4	3.8	2.8	2.4	2.6
14	16.8	15.3	16.1	11.5	10.8	11.1	3.6	3.2	3.4	2.6	2.2	2.5
15	16.3	15.2	15.7	11.4	11.0	11.3	3.4	2.8	3.1	2.2	1.6	1.9
16	15.6	14.4	15.1	11.0	10.2	10.7	4.0	3.2	3.5	1.9	1.5	1.7
17	15.0	14.2	14.5	10.2	9.0	9.6	4.8	4.0	4.4	1.5	0.9	1.1
18	14.9	13.4	14.2	9.0	8.3	8.6	5.7	4.8	5.1	0.9	0.2	0.4
19	14.8	14.4	14.7	8.9	8.3	8.6	7.0	5.7	6.4	0.4	0.0	0.2
20	14.5	13.5	14.0	9.0	8.2	8.6	6.9	6.6	6.7	0.8	0.3	0.5
21	14.9	13.3	14.1	8.8	8.4	8.6	7.3	6.5	6.8	1.0	0.4	0.7
22	15.1	13.1	14.1	8.4	7.7	8.0	7.5	7.2	7.4	0.8	0.1	0.4
23	14.8	13.5	14.2	7.7	7.0	7.4	7.2	6.5	6.8	0.2	0.0	0.1
24	14.7	13.4	14.0	7.8	6.9	7.4	6.5	5.5	6.0	0.1	0.0	0.0
25	14.3	13.7	14.0	7.5	6.8	7.3	5.5	4.5	5.0	0.6	0.1	0.3
26	13.7	13.4	13.5	6.8	6.2	6.5	4.5	3.9	4.1	0.4	0.1	0.2
27	13.4	13.0	13.1	6.2	5.7	6.0	3.9	3.5	3.6	0.2	0.0	0.1
28	13.4	12.7	13.0	6.0	5.4	5.7	3.6	3.2	3.4	0.9	0.1	0.5
29	13.2	11.7	12.5	6.0	4.9	5.5	3.7	3.1	3.4	0.8	0.6	0.7
30	11.7	11.2	11.4	6.0	4.7	5.5	4.8	3.6	4.2	1.3	0.5	0.8
31	11.2	10.9	11.0	---	---	---	---	---	---	1.1	0.9	0.9
MONTH	---	---	---	13.0	4.7	8.9	---	---	---	6.5	0.0	2.2

03373980 WHITE RIVER ABOVE PETERSBURG, IN—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	1.6	0.9	1.2	1.6	1.1	1.4	11.8	10.8	11.3	17.7	16.7	17.2
2	2.9	1.5	2.1	2.3	1.6	2.0	12.4	11.5	11.9	18.0	17.5	17.8
3	4.3	2.9	3.7	3.0	2.3	2.6	13.0	12.1	12.5	18.7	17.5	18.1
4	4.2	3.0	3.6	4.0	3.0	3.4	13.8	13.0	13.3	18.4	17.5	17.9
5	3.1	2.3	2.7	4.4	4.0	4.3	13.8	12.9	13.3	18.0	16.9	17.5
6	2.7	2.1	2.4	4.4	4.1	4.3	12.9	12.1	12.4	18.0	17.4	17.7
7	2.1	1.4	1.7	5.1	4.4	4.8	12.2	11.9	12.0	17.6	16.8	17.0
8	2.0	1.1	1.6	5.7	4.8	5.2	12.1	11.6	11.9	17.4	16.7	17.0
9	2.1	1.5	1.8	5.6	5.0	5.3	11.6	10.6	11.1	17.9	17.4	17.7
10	2.3	1.9	2.1	5.3	4.7	5.0	11.4	10.2	10.8	19.1	17.9	18.5
11	2.3	1.6	2.0	5.9	5.1	5.5	11.9	10.5	11.2	19.1	18.6	18.9
12	2.1	1.2	1.8	6.1	5.5	5.8	12.5	11.0	11.7	19.1	17.8	18.5
13	2.5	1.3	1.9	6.5	5.8	6.1	13.0	11.2	12.1	19.3	18.1	18.7
14	2.4	2.0	2.2	6.5	5.7	6.1	13.9	12.0	12.9	19.0	18.2	18.6
15	2.4	1.6	2.1	6.9	5.9	6.4	15.3	13.2	14.2	19.2	18.2	18.7
16	1.6	0.1	0.7	7.6	6.6	7.1	15.5	14.6	15.1	19.5	18.5	19.0
17	0.6	0.0	0.3	8.2	7.5	7.8	16.0	15.4	15.7	19.2	18.7	18.9
18	1.4	0.6	1.0	8.9	8.1	8.4	16.4	15.6	16.0	19.4	18.7	19.0
19	1.6	1.3	1.4	10.2	8.9	9.4	17.0	15.9	16.4	19.4	19.2	19.3
20	1.9	1.0	1.4	11.1	10.2	10.6	17.8	16.7	17.2	19.3	18.7	19.1
21	2.3	1.7	2.0	11.6	11.1	11.3	17.6	16.9	17.3	18.7	18.2	18.4
22	2.3	1.7	2.1	12.0	11.2	11.6	16.9	16.0	16.5	18.8	17.9	18.4
23	2.6	1.6	2.0	12.4	11.6	12.0	16.7	15.5	16.1	18.8	18.0	18.4
24	3.2	2.3	2.8	12.7	11.8	12.3	16.2	15.7	15.9	18.8	17.9	18.4
25	2.3	1.7	1.9	12.6	12.4	12.5	15.9	14.3	15.1	18.4	17.9	18.1
26	1.9	1.3	1.6	12.8	12.1	12.5	15.0	14.1	14.5	18.3	17.6	17.9
27	1.3	1.0	1.2	12.8	12.2	12.5	14.9	14.0	14.5	18.9	17.7	18.3
28	1.3	0.9	1.1	13.0	12.6	12.8	14.7	14.1	14.5	18.9	18.3	18.6
29	---	---	---	12.8	12.1	12.4	15.4	14.5	14.9	19.2	18.1	18.6
30	---	---	---	12.1	11.3	11.6	16.9	15.3	16.1	19.5	18.2	18.9
31	---	---	---	11.4	10.9	11.2	---	---	---	19.2	18.5	18.8
MONTH	4.3	0.0	1.9	13.0	1.1	7.9	17.8	10.2	13.9	19.5	16.7	18.3
	JUNE			JULY			AUGUST			SEPTEMBER		
1	19.2	17.8	18.5	25.8	24.8	25.2	26.2	25.2	25.7	26.5	25.8	26.0
2	18.8	18.2	18.5	26.2	24.8	25.5	25.8	25.3	25.6	25.8	24.3	25.0
3	18.3	17.7	17.9	27.2	25.4	26.2	26.1	24.8	25.4	24.3	23.8	24.1
4	18.1	17.3	17.7	27.8	26.1	26.9	26.5	25.1	25.8	24.5	23.9	24.2
5	19.1	17.4	18.2	28.3	26.8	27.5	26.6	25.4	26.0	23.9	23.1	23.4
6	18.7	18.1	18.4	28.4	27.1	27.8	26.2	25.5	25.9	23.1	22.6	22.9
7	19.6	18.1	18.8	28.9	27.3	28.0	26.5	24.9	25.7	22.8	22.3	22.5
8	19.6	18.7	19.1	28.8	27.7	28.2	26.9	25.4	26.1	22.7	22.1	22.4
9	20.4	18.7	19.6	27.7	26.7	27.1	27.0	25.8	26.3	22.9	22.1	22.6
10	20.1	19.3	19.6	27.1	26.6	26.7	26.8	25.8	26.3	23.2	22.3	22.8
11	19.9	19.5	19.6	27.0	26.1	26.7	26.6	25.7	26.2	23.6	22.8	23.1
12	20.7	19.8	20.2	26.1	25.0	25.3	26.3	24.8	25.6	23.4	22.9	23.2
13	20.9	20.4	20.6	25.6	24.7	25.1	25.8	25.0	25.4	23.9	23.1	23.5
14	20.8	20.1	20.5	25.5	24.6	25.0	26.6	25.1	25.9	24.1	23.5	23.8
15	20.9	20.5	20.6	25.7	25.0	25.3	27.8	26.2	26.9	23.8	22.9	23.4
16	21.1	20.5	20.8	26.3	25.5	25.8	28.4	26.7	27.5	23.7	22.5	23.1
17	22.1	20.9	21.5	26.4	25.7	26.0	28.7	27.2	27.9	23.4	22.3	23.0
18	22.2	21.7	21.9	26.2	25.5	25.7	28.3	26.9	27.6	23.6	22.2	22.9
19	22.2	21.5	21.9	25.9	25.1	25.5	28.0	26.2	27.1	23.1	21.6	22.3
20	23.1	22.2	22.7	26.1	25.3	25.7	28.1	26.2	27.1	21.9	20.7	21.3
21	23.3	22.7	23.0	25.9	25.3	25.6	28.7	26.7	27.6	21.2	20.3	20.9
22	22.9	22.2	22.6	25.7	24.9	25.3	29.2	27.5	28.3	21.5	20.6	21.0
23	23.4	22.3	22.8	---	---	---	29.0	27.3	28.1	21.4	20.3	20.9
24	24.1	22.6	23.4	24.9	24.2	24.6	28.5	26.6	27.5	21.4	20.0	20.7
25	25.0	23.3	24.2	24.6	23.8	24.2	28.5	26.5	27.5	21.5	20.6	21.0
26	24.6	23.9	24.3	24.8	23.9	24.3	28.7	26.7	27.7	20.8	19.9	20.3
27	24.9	23.1	24.0	25.6	24.2	24.9	29.1	27.4	28.2	20.3	19.7	20.0
28	24.8	23.3	24.1	25.4	25.0	25.2	29.1	27.2	28.2	19.7	18.4	19.0
29	25.5	23.8	24.6	25.8	24.6	25.1	28.5	27.4	28.0	18.4	17.5	17.8
30	25.8	24.4	25.1	25.9	24.7	25.3	27.8	26.6	27.0	17.5	16.9	17.1
31	---	---	---	26.0	24.9	25.4	26.7	25.7	26.3	---	---	---
MONTH	25.8	17.3	21.2	---	---	---	29.2	24.8	26.8	26.5	16.9	22.1

03374000 WHITE RIVER AT PETERSBURG, IN

LOCATION.--Lat 38°30'39", long 87°17'22", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.15, T.1 N., R.8 W., Pike County, Hydrologic Unit 05120202, (MONROE CITY, IN quadrangle), 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, 2.0 mi west of Arda. 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 fair. Flow partially regulated by upstream reservoir.

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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

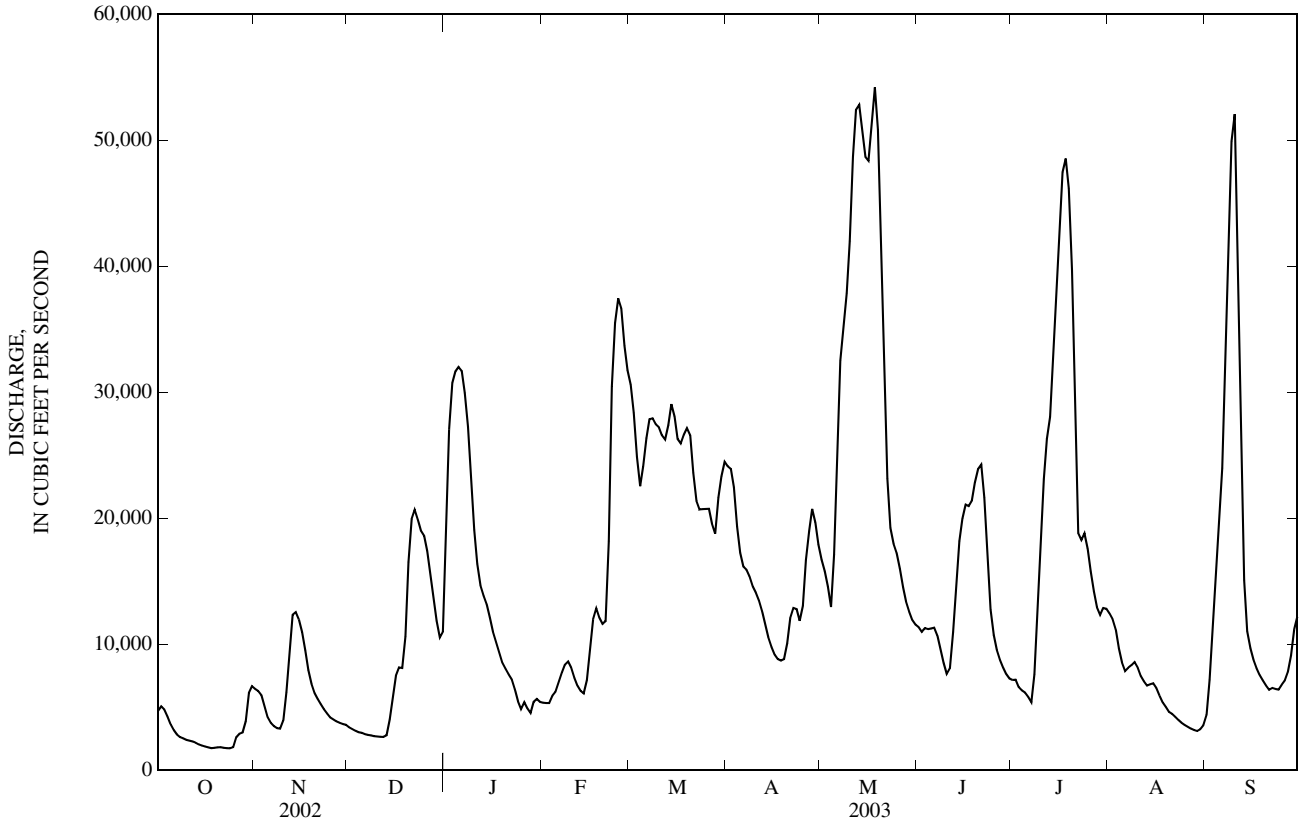
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4,720	6,460	3,430	19,000	5,370	30,600	24,100	16,700	11,400	7,170	12,400	4,390
2	5,070	6,300	3,280	27,100	5,340	28,400	23,900	15,800	11,000	7,200	12,000	7,180
3	4,830	5,960	3,150	30,700	5,340	24,900	22,500	14,600	11,300	6,610	11,200	12,000
4	4,270	5,080	3,030	31,600	5,920	22,500	19,300	13,000	11,200	6,350	9,680	16,800
5	3,640	4,210	2,980	32,000	6,230	24,100	17,300	17,100	11,300	6,180	8,530	20,300
6	3,200	3,780	2,880	31,700	6,980	26,300	16,200	26,200	11,300	5,830	7,880	24,000
7	2,840	3,520	2,810	29,900	7,750	27,800	15,900	32,500	10,700	5,400	8,140	29,600
8	2,640	3,350	2,770	27,300	8,380	27,900	15,400	35,300	9,590	7,610	8,340	38,700
9	2,540	3,310	2,710	23,000	8,640	27,500	14,600	37,900	8,500	12,300	8,590	49,900
10	2,420	3,970	2,690	19,100	8,160	27,200	14,100	42,000	7,660	17,500	8,140	52,100
11	2,360	6,190	2,660	16,400	7,350	26,600	13,500	48,700	8,110	23,100	7,480	43,800
12	2,290	9,270	2,650	14,700	6,730	26,200	12,600	52,400	11,000	26,300	7,060	28,100
13	2,190	12,300	2,780	13,800	6,300	27,400	11,600	52,800	14,500	28,000	6,720	15,100
14	2,060	12,600	4,040	13,200	6,100	29,100	10,600	50,800	18,200	32,200	6,830	11,000
15	1,970	12,000	5,690	12,100	7,160	28,100	9,790	48,700	20,000	37,500	6,910	9,690
16	1,890	11,000	7,530	11,000	9,570	26,300	9,180	48,400	21,100	42,900	6,520	8,800
17	1,820	9,520	8,160	10,200	12,000	25,900	8,830	51,300	21,000	47,500	5,910	8,100
18	1,760	7,970	8,120	9,350	12,900	26,600	8,700	54,200	21,400	48,500	5,390	7,560
19	1,790	6,870	10,600	8,530	12,100	27,200	8,820	50,800	22,800	46,200	5,030	7,130
20	1,830	6,130	16,500	8,070	11,600	26,600	10,100	42,900	23,900	39,700	4,640	6,730
21	1,840	5,650	19,900	7,610	11,800	23,600	12,100	31,800	24,300	27,400	4,480	6,390
22	1,790	5,260	20,700	7,210	18,200	21,400	12,900	23,200	21,600	18,800	4,250	6,530
23	1,760	4,850	19,900	6,430	30,400	20,700	12,800	19,200	16,600	18,300	4,000	6,450
24	1,750	4,500	19,000	5,470	35,500	20,700	11,900	18,000	12,800	18,800	3,780	6,410
25	1,840	4,200	18,600	4,850	37,400	20,700	13,000	17,200	10,700	17,600	3,600	6,770
26	2,620	4,030	17,400	5,400	36,700	20,700	16,700	16,000	9,570	15,800	3,440	7,120
27	2,900	3,880	15,600	4,920	33,700	19,600	19,000	14,500	8,760	14,200	3,310	7,780
28	3,000	3,760	13,700	4,550	31,700	18,800	20,700	13,400	8,140	12,900	3,200	9,110
29	3,890	3,680	11,800	5,430	---	21,600	19,700	12,600	7,640	12,300	3,120	11,200
30	6,150	3,610	10,500	5,650	---	23,300	17,900	11,900	7,290	12,900	3,260	12,200
31	6,670	---	11,000	5,430	---	24,500	---	11,600	---	12,800	3,560	---
TOTAL	90,340	183,210	276,560	451,700	395,320	772,800	443,720	941,500	413,360	635,850	197,390	480,940
MEAN	2,914	6,107	8,921	14,570	14,120	24,930	14,790	30,370	13,780	20,510	6,367	16,030
MAX	6,670	12,600	20,700	32,000	37,400	30,600	24,100	54,200	24,300	48,500	12,400	52,100
MIN	1,750	3,310	2,650	4,550	5,340	18,800	8,700	11,600	7,290	5,400	3,120	4,390
CFSM	0.26	0.55	0.80	1.31	1.27	2.24	1.33	2.73	1.24	1.84	0.57	1.44
IN.	0.30	0.61	0.92	1.51	1.32	2.58	1.48	3.15	1.38	2.13	0.66	1.61

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2003, BY WATER YEAR (WY)

MEAN	3,504	6,658	11,250	17,000	18,240	22,440	22,020	18,310	11,520	7,651	4,792	3,581
MAX	18,630	46,800	43,000	86,440	67,080	55,340	42,900	70,110	38,550	25,620	39,590	19,640
(WY)	(2002)	(1994)	(2002)	(1950)	(1950)	(1945)	(1944)	(1996)	(1998)	(1958)	(1979)	(1989)
MIN	653	884	861	981	1,388	1,597	3,767	1,597	1,950	1,118	870	878
(WY)	(1941)	(1954)	(1964)	(1977)	(1931)	(1941)	(1941)	(1941)	(1988)	(1954)	(1936)	(1936)

03374000 WHITE RIVER AT PETERSBURG, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1928 - 2003	
ANNUAL TOTAL	6,267,260		5,282,690		12,220	
ANNUAL MEAN	17,170		14,470		2,138	
HIGHEST ANNUAL MEAN					22,760	1950
LOWEST ANNUAL MEAN					2,138	1941
HIGHEST DAILY MEAN	117,000	May 14	54,200	May 18	182,000	Jan 22, 1937
LOWEST DAILY MEAN	1,410	Sep 14	1,750	Oct 24	573	Oct 1, 1941
ANNUAL SEVEN-DAY MINIMUM	1,500	Sep 11	1,790	Oct 18	598	Sep 26, 1941
MAXIMUM PEAK FLOW			54,500	May 18	183,000	Jan 22, 1937
MAXIMUM PEAK STAGE			21.70	May 18	28.30	Jan 22, 1937
ANNUAL RUNOFF (CFSM)	1.54		1.30		1.10	
ANNUAL RUNOFF (INCHES)	20.96		17.66		14.93	
10 PERCENT EXCEEDS	40,800		30,500		30,000	
50 PERCENT EXCEEDS	10,800		11,000		6,600	
90 PERCENT EXCEEDS	2,270		3,240		1,530	



03374100 WHITE RIVER AT HAZLETON, IN—Continued

[(National Water-Quality Assessment Program), White River Basin, Miami River Basin Study Unit]

WATER-QUALITY RECORDS

These data described in the following table were collected and analyzed as part of the National Water Quality Assessment Program (NAWQA) in the White River Basin, Miami River Basin (WHMI) study units. The objectives of the NAWQA program are to broadly characterize the water-quality of the Nation's streams and aquifers in relation to human and natural factors. This project is one of 42 river basin and aquifer assessment projects being implemented across the nation on a staggered timeline. During the second decade of sampling, 14 of these projects will be actively collecting data. The period of high-intensity data collection for the WHMI project is in water years 2001-2004.

Water quality data from four stream sites in Indiana and two stream sites in Ohio are being reported as part of the NAWQA study: Big Walnut Creek nr Roachdale, IN (03357330), Little Buck Creek nr Indianapolis, IN (03353637), Sugar Creek at Co. Rd. 400S at New Palestine, IN (394340085524601), White River at Hazleton, IN (03374100), Holes Creek at Huffman Park at Kettering, OH (393944084120700), Mad River at St. Paris Pike near Eagle City, OH (03267900). Additionally, continuous monitor data, water temperature, dissolved oxygen, specific conductance, and pH were collected for all sites except Sugar Creek at Co. Rd. 400S at New Palestine, IN (394340085524601), which were instead collected at Sugar Creek at New Palestine, IN (03361650).

These data can also be obtained electronically at <http://in.water.usgs.gov> or at <http://oh.water.usgs.gov>.

(- - -, no data; <, concentration or value reported is less than that indicated; E, estimated value; K, value is estimated from a non-ideal colony count; M, presence verified, not quantified).

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEDIAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	7.8	8.0	7.8	8.1	---	7.5	8.3
2	---	---	---	---	---	---	8.0	8.1	8.2	---	7.6	8.3
3	---	---	---	---	---	---	8.0	8.1	8.1	---	8.1	7.8
4	---	---	---	---	---	---	8.0	8.2	8.1	---	8.1	7.7
5	---	---	---	---	---	---	8.0	8.0	8.1	---	8.2	7.7
6	---	---	---	---	---	---	8.1	7.7	8.2	---	8.2	7.6
7	---	---	---	---	---	---	8.1	7.7	8.2	---	8.1	7.6
8	---	---	---	---	---	---	8.1	7.6	8.3	---	8.1	7.6
9	---	---	---	---	---	---	8.1	7.6	8.3	---	8.2	7.6
10	---	---	---	---	---	---	8.1	7.6	8.4	---	8.4	7.6
11	---	---	---	---	---	---	8.2	7.6	8.3	7.5	8.3	7.7
12	---	---	---	---	---	---	8.3	7.7	8.0	7.5	8.3	7.8
13	---	---	---	---	---	---	8.3	7.6	7.8	7.5	8.4	7.7
14	---	---	---	---	---	7.9	8.4	7.6	7.8	7.6	8.4	7.8
15	---	---	---	---	---	7.9	8.5	7.6	7.7	7.6	8.6	8.0
16	---	---	---	---	---	7.9	8.5	7.6	7.7	7.7	8.6	8.1
17	---	---	---	---	---	7.9	8.5	7.6	7.7	7.7	8.4	8.2
18	---	---	---	---	---	7.9	8.6	7.6	7.7	7.8	8.2	8.4
19	---	---	---	---	---	7.9	8.5	7.7	7.7	7.8	8.2	8.4
20	---	---	7.8	---	---	7.9	8.5	7.7	7.7	8.0	8.1	8.5
21	---	---	7.8	---	8.0	7.9	8.4	7.6	7.8	7.9	8.1	8.5
22	---	---	7.8	---	7.9	7.9	8.4	7.6	7.8	7.9	8.1	8.5
23	---	---	7.8	---	7.8	8.0	8.3	7.7	7.9	7.8	8.2	8.4
24	---	---	7.9	---	7.8	8.0	8.3	7.8	8.1	7.6	8.2	8.3
25	---	---	7.9	---	7.8	8.0	8.1	7.8	8.1	7.5	8.2	8.3
26	---	---	7.9	---	7.8	8.0	7.8	7.8	---	7.5	8.1	8.2
27	---	---	8.0	---	7.8	8.0	7.9	7.8	---	7.4	8.1	8.3
28	---	---	8.0	---	7.8	8.0	7.8	7.9	---	7.5	8.1	8.2
29	---	---	---	---	---	8.0	7.8	7.9	---	7.5	8.1	8.1
30	---	---	---	---	---	8.0	7.8	8.0	---	7.5	8.1	7.6
31	---	---	---	---	---	7.9	---	8.1	---	7.5	8.2	---
MED	---	---	---	---	---	---	8.1	7.7	---	---	8.2	8.1

03374100 WHITE RIVER AT HAZLETON, IN—Continued

DISSOLVED OXYGEN, WATER, UNFILTERED, MILLIGRAMS PER LITER
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	12.0	---	---	13.1	12.0	---	---	---	---	---
2	---	---	12.1	---	---	e12.9	12.2	10.7	---	---	---	---
3	---	---	12.2	---	---	---	e12.3	10.7	---	---	---	---
4	---	---	12.4	---	---	---	---	11.0	---	---	---	---
5	---	---	12.6	---	---	---	---	10.6	---	---	---	7.2
6	---	---	12.8	---	---	---	---	8.9	11.8	---	---	7.5
7	---	---	13.0	---	---	---	---	9.2	12.1	---	---	7.6
8	---	---	13.1	---	---	---	---	9.2	12.6	---	---	7.6
9	---	---	13.1	---	---	---	---	9.0	13.0	---	---	7.8
10	---	---	12.9	---	---	---	---	8.7	13.3	---	---	8.4
11	---	---	12.9	---	---	---	---	8.7	12.6	---	---	9.2
12	---	---	12.9	---	---	---	---	9.3	10.1	---	---	9.0
13	---	---	12.7	---	---	---	---	9.2	8.4	---	---	8.2
14	---	---	12.7	---	---	11.9	---	9.1	8.9	---	---	e8.7
15	---	---	13.0	---	---	11.8	---	9.4	7.9	---	---	---
16	---	---	13.4	---	---	11.8	---	9.7	8.0	---	---	---
17	---	---	13.5	---	---	11.6	---	9.7	8.1	---	---	---
18	---	---	13.3	---	---	11.5	12.5	9.8	8.1	---	---	---
19	---	---	12.2	---	---	11.2	12.9	10.1	8.0	---	---	---
20	---	---	10.5	---	---	10.8	12.4	10.3	8.0	---	---	---
21	---	---	10.3	---	12.9	10.5	11.4	10.4	8.1	---	14.5	---
22	---	---	10.5	---	12.7	10.5	11.0	9.8	8.7	---	13.9	---
23	---	---	10.6	---	12.6	10.6	10.8	9.2	9.4	---	13.5	---
24	---	---	10.8	---	12.6	10.6	11.0	9.7	10.3	---	14.6	---
25	---	---	11.3	---	12.6	10.7	10.6	9.9	11.6	---	15.2	---
26	---	---	11.7	---	12.8	10.9	9.7	10.1	e11.4	---	14.3	---
27	---	11.4	12.2	---	13.0	11.1	10.3	10.3	---	---	13.8	---
28	---	11.6	12.5	---	13.1	11.1	e10.7	10.4	---	---	12.9	---
29	---	11.7	---	---	---	11.1	---	---	---	---	11.4	---
30	---	11.7	---	---	---	11.1	---	---	---	---	8.9	---
31	---	---	---	---	---	11.6	---	---	---	---	---	---

e Estimated

03374100 WHITE RIVER AT HAZLETON, IN—Continued

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	5.8	---	---	2.0	11.3	18.1	19.1	---	26.8	27.8
2	---	---	5.6	---	---	e2.2	11.9	18.6	19.2	---	26.8	26.9
3	---	---	5.8	---	---	---	12.8	18.8	18.7	---	26.5	25.1
4	---	---	5.0	---	---	---	13.9	18.8	18.4	---	26.9	23.9
5	---	---	4.3	---	---	---	14.0	18.3	18.8	---	27.2	23.4
6	---	---	4.0	---	---	---	13.1	18.5	19.3	---	27.1	22.9
7	---	---	4.1	---	---	---	12.5	18.4	19.7	---	26.9	22.8
8	---	---	4.6	---	---	---	12.2	17.9	20.3	---	27.3	22.9
9	---	---	4.7	---	---	---	11.3	18.6	20.5	---	27.4	23.1
10	---	---	5.1	---	---	---	10.8	19.3	21.1	e27.4	27.5	23.5
11	---	---	5.1	---	---	---	11.4	19.6	21.0	26.5	27.5	23.9
12	---	---	5.7	---	---	---	12.4	18.9	21.3	26.1	27.3	24.1
13	---	---	6.2	---	---	e6.3	13.1	19.0	21.9	25.5	27.0	24.3
14	---	---	5.9	---	---	6.3	14.1	19.5	22.0	25.7	27.2	24.6
15	---	---	5.4	---	---	6.7	15.4	19.4	21.9	25.7	28.1	24.3
16	---	---	4.7	---	---	7.6	16.4	19.7	22.1	26.3	28.9	24.0
17	---	---	5.1	---	---	8.2	16.9	19.8	22.6	26.8	29.5	24.0
18	---	---	6.4	---	---	8.7	17.0	19.8	23.1	26.7	29.4	24.0
19	---	---	7.6	---	---	9.5	17.5	20.2	23.0	26.4	28.9	23.6
20	---	---	7.7	---	e2.7	10.9	18.2	20.2	23.0	26.6	28.8	22.6
21	---	---	7.4	---	2.9	11.9	18.0	19.3	23.6	26.7	29.3	22.2
22	---	---	7.4	---	2.9	12.3	17.4	19.0	23.7	26.2	30.0	22.1
23	---	---	7.1	---	2.0	12.5	17.0	19.2	23.8	26.0	29.8	22.0
24	---	---	6.4	---	2.1	12.8	16.6	19.3	24.5	25.2	29.2	21.8
25	---	---	5.2	---	2.0	13.0	15.9	19.0	25.3	25.1	29.0	22.1
26	---	e8.2	4.5	---	1.7	12.9	15.2	18.6	e25.7	25.2	29.4	21.5
27	---	7.7	4.0	---	1.7	12.9	15.4	19.1	---	25.7	29.9	21.2
28	---	7.5	3.8	---	1.8	13.2	15.4	19.6	---	26.3	30.0	19.9
29	---	7.2	---	---	---	12.6	15.9	19.7	---	26.1	29.8	18.7
30	---	7.1	---	---	---	11.8	16.9	19.9	---	26.2	29.0	17.7
31	---	---	---	---	---	11.2	---	19.7	---	26.5	28.1	---

e Estimated

03374100 WHITE RIVER AT HAZLETON, IN—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	669	---	---	352	---	386	520	---	515	628
2	---	---	674	---	---	e353	---	397	522	---	---	637
3	---	---	680	---	---	---	---	400	521	---	---	560
4	---	---	687	---	---	---	460	409	508	---	---	389
5	---	---	679	---	---	---	466	395	510	---	---	324
6	---	---	695	---	---	---	463	349	500	---	---	305
7	---	---	708	---	---	---	471	334	500	---	510	298
8	---	---	719	---	---	---	479	305	517	---	545	299
9	---	---	731	---	---	---	469	314	539	---	574	305
10	---	---	740	---	---	---	472	318	569	e335	563	316
11	---	---	748	---	---	---	486	305	588	341	553	347
12	---	---	756	---	---	---	502	293	571	322	539	388
13	---	---	757	---	---	e447	506	---	534	266	538	432
14	---	---	722	---	---	---	520	---	504	276	538	484
15	---	---	706	---	---	---	535	---	458	258	547	512
16	---	---	641	---	---	---	553	---	409	274	555	526
17	---	---	570	---	---	---	569	---	366	291	546	538
18	---	---	549	---	---	---	576	---	367	313	544	548
19	---	---	495	---	---	---	569	---	367	339	543	562
20	---	---	438	---	e489	---	558	---	359	362	553	572
21	---	---	390	---	507	---	541	---	352	399	558	579
22	---	---	387	---	455	---	529	---	372	425	570	578
23	---	---	406	---	342	---	476	474	402	463	573	588
24	---	---	411	---	339	---	437	492	433	406	572	590
25	---	---	418	---	317	---	433	500	457	412	557	593
26	---	e575	450	---	299	---	403	490	e474	419	552	585
27	---	589	447	---	309	---	406	484	---	453	554	618
28	---	609	438	---	329	---	382	493	---	478	569	564
29	---	632	---	---	---	---	385	503	---	491	581	543
30	---	650	---	---	---	---	376	510	---	502	605	467
31	---	---	---	---	---	---	---	515	---	517	623	---

e Estimated

03374100 WHITE RIVER AT HAZLETON, IN—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Instantaneous discharge, cfs (00061)	Barometric pressure, mm Hg (00025)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specif. conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, air, deg C (00020)	Temperature, water, deg C (00010)	Alkalinity, wat flt fxd end field, mg/L as CaCO3 (39036)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., mg/L (00453)	Carbonate, wat flt incrm. titr., mg/L (00452)	Chloride, water, fltrd, mg/L (00940)
OCT 15...	1500	1,950	751	M	8.0	650	28.0	17.5	170	163	E162	E8	52.4
NOV 12...	1340	9,680	762	8.0	7.8	528	8.0	13.0	130	133	160	0.0	31.2
NOV 26...	1430	4,020	764	11.1	7.9	590	3.0	8.5	--	--	--	--	--
DEC 19...	1410	11,200	744	13.8	8.1	482	9.0	8.0	130	127	153	0.0	27.9
JAN 23...	1340	6,200	777	13.6	8.2	608	<-5.0	0.5	190	187	225	1	33.7
FEB 20...	1400	11,600	765	14.1	8.0	509	6.0	2.5	140	142	E173	E0.0	36.0
MAR 13...	1430	27,400	758	12.6	8.1	464	8.0	6.5	130	132	161	0.0	36.4
APR 03...	1520	22,000	745	11.0	8.0	472	25.0	13.0	150	153	184	0.0	30.0
APR 17...	1430	8,810	742	12.5	8.6	580	23.0	17.0	--	--	--	--	--
MAY 01...	1350	16,600	741	9.0	7.8	390	19.0	18.5	120	119	144	0.0	20.0
MAY 22...	1310	22,700	753	7.1	7.8	470	24.5	19.0	--	--	--	--	--
JUN 05...	1350	11,300	751	9.3	8.2	516	24.0	19.0	170	168	205	<1	28.8
JUN 26...	1430	9,460	744	9.2	8.1	486	24.0	26.0	--	--	--	--	--
JUL 10...	1330	18,200	741	5.3	7.7	420	28.0	27.5	130	125	E152	<1	26.6
JUL 14...	1400	32,600	746	5.6	7.6	348	34.0	26.0	--	--	--	--	15.9
JUL 23...	1400	18,600	747	6.0	7.7	478	29.0	26.0	--	--	--	--	--
AUG 06...	1330	7,780	746	7.3	8.0	498	28.0	27.0	170	162	197	<1	27.5
AUG 20...	1330	4,600	746	14.2	8.4	568	24.0	29.0	--	--	--	--	--
SEP 04...	1330	17,100	748	5.2	7.5	385	25.0	24.0	110	110	E134	<1	23.9

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Sulfate water, fltrd, mg/L (00945)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water, fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Ortho-phosphate, water, fltrd, mg/L as P (00671)	Particulate nitrogen, susp, water, mg/L (49570)	Phosphorus, water, unfltrd mg/L (00665)	Total carbon, suspnd sediment total, mg/L (00694)	Inorganic carbon, suspnd sediment total, mg/L (00688)	Organic carbon, suspnd sediment total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)	2,6-Diethyl-aniline water, fltrd, 0.7u GF (82660)
OCT 15...	89.3	1.5	<0.04	0.66	0.013	<0.02	1.16	0.193	8.4	<0.1	8.4	5.0	<0.006
NOV 12...	72.0	1.4	E0.03	1.96	0.034	0.12	0.61	0.47	4.7	0.2	4.5	5.9	<0.006
NOV 26...	--	0.43	E0.02	2.03	E0.007	0.09	0.08	0.164	0.7	<0.1	0.7	--	<0.006
DEC 19...	48.7	0.76	<0.04	2.13	0.009	0.08	0.39	0.27	3.1	<0.1	3.1	5.0	<0.006
JAN 23...	58.1	0.37	0.05	2.78	0.008	0.08	0.12	0.125	0.3	<0.1	0.3	2.8	<0.006
FEB 20...	48.8	0.57	0.10	2.06	0.109	0.03	0.23	0.171	1.5	<0.1	1.5	3.4	<0.006
MAR 13...	33.8	0.78	<0.04	2.99	0.031	0.03	0.37	0.22	3.7	<0.1	3.7	4.1	<0.006
APR 03...	36.6	0.62	<0.04	2.77	0.020	0.04	0.32	0.164	2.6	<0.1	2.6	3.7	<0.006
APR 17...	--	1.0	<0.04	1.96	0.039	<0.02	--	0.147	--	--	--	--	<0.006
MAY 01...	35.1	0.86	<0.04	1.35	0.031	E0.01	0.69	0.21	4.3	0.1	4.2	6.1	<0.006
MAY 22...	--	0.87	<0.04	2.31	0.228	<0.02	--	0.22	--	--	--	--	<0.006
JUN 05...	46.3	0.86	<0.04	1.87	0.058	<0.02	0.28	0.176	2.1	<0.1	2.0	3.0	<0.006
JUN 26...	--	1.1	<0.04	2.02	0.070	<0.02	--	0.19	--	--	--	--	<0.006
JUL 10...	30.8	1.5	<0.04	2.20	0.084	<0.02	1.23	0.50	14.0	<0.1	13.9	5.1	<0.006
JUL 14...	19.2	1.0	E0.03	2.43	0.066	<0.25	0.35	0.29	3.9	0.2	3.8	--	<0.006
JUL 23...	--	1.0	<0.04	1.55	0.054	0.02	--	0.28	--	--	--	--	<0.006
AUG 06...	42.3	1.0	0.07	0.96	0.025	0.02	0.55	0.22	4.0	<0.1	4.0	4.0	<0.006
AUG 20...	--	1.4	<0.04	0.20	0.015	<0.02	--	0.164	--	--	--	--	<0.006
SEP 04...	33.2	1.7	<0.04	0.97	0.036	0.05	0.80	0.65	9.7	0.6	9.1	4.9	<0.006

03374100 WHITE RIVER AT HAZLETON, IN—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	CIAT, water, fltrd, ug/L (04040)	Aceto- chlor, water, fltrd, ug/L (49260)	Ala- chlor, water, fltrd, ug/L (46342)	alpha- HCH, water, fltrd, ug/L (34253)	Amino- methyl- phos- phonic acid, wat flt ug/L (62649)	Atra- zine, water, fltrd, ug/L (39632)	Azin- phos- methyl, water, fltrd 0.7u GF ug/L (82686)	Ben- flur- alin, water, fltrd 0.7u GF ug/L (82673)	Butyl- ate, water, fltrd, ug/L (04028)	Car- baryl, water, fltrd 0.7u GF ug/L (82680)	Carbo- furan, water, fltrd 0.7u GF ug/L (82674)	Chlor- pyrifos water, fltrd, ug/L (38933)	cis- Per- methrin water fltrd 0.7u GF ug/L (82687)
OCT 15...	E0.041	0.008	<0.004	<0.005	0.6	0.217	<0.050	<0.010	<0.002	<0.041	<0.020	<0.005	<0.006
NOV 12...	E0.048	0.028	0.007	<0.005	0.1	0.152	<0.050	<0.010	<0.002	E0.013	<0.020	<0.005	<0.006
26...	E0.067	0.007	<0.004	<0.005	0.1	0.252	<0.050	<0.010	<0.002	E0.009	<0.020	<0.005	<0.006
DEC 19...	E0.025	0.014	<0.004	<0.005	0.1	0.094	<0.050	<0.010	<0.002	<0.041	<0.020	<0.005	<0.006
JAN 23...	E0.044	E0.006	<0.004	<0.005	0.1	0.139	<0.050	<0.010	<0.002	<0.041	<0.020	<0.005	<0.006
FEB 20...	E0.027	<0.006	<0.004	<0.005	<0.1	0.078	<0.050	<0.010	<0.002	<0.041	<0.020	<0.005	<0.006
MAR 13...	E0.050	0.009	<0.004	<0.005	0.1	0.106	<0.050	<0.010	<0.002	<0.041	<0.020	<0.005	<0.006
APR 03...	E0.043	0.009	<0.004	<0.005	<0.1	0.085	<0.050	<0.010	<0.002	E0.007	<0.020	<0.005	<0.006
17...	E0.037	0.013	<0.004	<0.005	0.1	0.117	<0.050	<0.010	<0.002	<0.041	<0.020	<0.005	<0.006
MAY 01...	E0.103	0.193	0.010	<0.005	0.2	2.85	<0.050	<0.010	<0.002	E0.005	<0.020	<0.005	<0.006
22...	E0.305	0.415	0.038	<0.005	<0.1	4.71	<0.050	<0.010	<0.002	E0.006	<0.020	E0.004	<0.006
JUN 05...	E0.266	0.198	0.040	<0.005	0.1	3.21	<0.050	<0.010	<0.002	<0.041	<0.020	<0.005	<0.006
26...	E0.334	0.142	0.023	<0.005	0.2	2.66	<0.050	<0.010	<0.002	<0.041	<0.020	<0.005	<0.006
JUL 10...	E0.236	0.323	0.018	<0.005	0.3	2.48	<0.050	<0.010	<0.002	E0.007	<0.020	<0.005	<0.006
14...	E0.305	0.255	0.026	--	--	2.22	<0.050	<0.010	--	E0.007	--	E0.002	<0.006
23...	E0.203	0.089	0.015	<0.005	0.5	1.15	<0.050	<0.010	<0.002	<0.041	<0.020	<0.005	<0.006
AUG 06...	E0.092	0.039	0.008	<0.005	0.3	0.586	<0.050	<0.010	<0.002	<0.041	<0.020	<0.005	<0.006
20...	E0.059	0.015	<0.004	<0.005	0.3	0.355	<0.050	<0.010	<0.002	<0.041	<0.020	<0.005	<0.006
SEP 04...	E0.034	0.022	0.006	<0.005	0.2	0.238	<0.050	<0.010	<0.002	E0.004	<0.020	<0.005	<0.006

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Cyana- zine, water, fltrd, ug/L (04041)	DCPA, water fltrd 0.7u GF ug/L (82682)	Desulf- inyl fipro- nil, water, fltrd, ug/L (62170)	Diazi- non, water, fltrd, ug/L (39572)	Diel- drin, water, fltrd, ug/L (39381)	Disul- foton, water, fltrd 0.7u GF ug/L (82677)	EPTC, water, fltrd 0.7u GF ug/L (82668)	Ethal- flur- alin, water, fltrd 0.7u GF ug/L (82663)	Etho- prop, water, fltrd 0.7u GF ug/L (82672)	Desulf- inyl- fipro- nil amide, wat flt ug/L (62169)	Fipro- nil sulfide water, fltrd, ug/L (62167)	Fipro- nil sulfone water, fltrd, ug/L (62168)	Fipro- nil, water, fltrd, ug/L (62166)
OCT 15...	<0.018	<0.003	<0.004	E0.004	<0.005	<0.02	<0.002	<0.009	<0.005	<0.009	<0.005	<0.005	<0.007
NOV 12...	<0.018	<0.003	<0.004	0.005	<0.005	<0.02	<0.002	<0.009	<0.005	<0.009	E0.004	0.005	E0.008
26...	<0.018	<0.003	<0.004	E0.006	<0.005	<0.02	<0.002	<0.009	<0.005	<0.009	<0.005	<0.005	<0.007
DEC 19...	<0.018	<0.003	<0.004	<0.005	<0.005	<0.02	0.003	<0.009	<0.005	<0.009	<0.005	<0.005	E0.004
JAN 23...	<0.018	<0.003	<0.004	<0.005	<0.005	<0.02	<0.002	<0.009	<0.005	<0.009	<0.005	<0.005	<0.007
FEB 20...	<0.018	<0.003	<0.004	<0.005	<0.005	<0.02	<0.002	<0.009	<0.005	<0.009	<0.005	<0.005	<0.007
MAR 13...	<0.018	<0.003	<0.004	<0.005	<0.005	<0.02	<0.002	<0.009	<0.005	<0.009	<0.005	<0.005	<0.007
APR 03...	<0.018	<0.003	<0.004	E0.003	<0.005	<0.02	<0.002	<0.009	<0.005	<0.009	<0.005	<0.005	<0.007
17...	<0.018	<0.003	<0.004	<0.005	<0.005	<0.02	<0.002	<0.009	<0.005	<0.009	<0.005	<0.005	<0.007
MAY 01...	<0.018	<0.003	<0.004	0.005	<0.005	<0.02	<0.002	<0.009	<0.005	<0.009	<0.005	<0.005	<0.007
22...	E0.008	<0.003	<0.004	E0.005	<0.005	<0.02	<0.002	<0.009	<0.005	<0.009	<0.005	<0.005	E0.005
JUN 05...	<0.018	<0.003	<0.004	E0.005	<0.005	<0.02	<0.002	<0.009	<0.005	<0.009	<0.005	<0.005	E0.005
26...	<0.018	<0.003	<0.004	<0.005	<0.005	<0.02	<0.002	<0.009	<0.005	<0.009	<0.005	<0.005	<0.007
JUL 10...	<0.018	<0.003	<0.004	0.019	<0.005	<0.02	<0.002	<0.009	<0.005	<0.009	<0.005	<0.005	E0.013
14...	--	E0.001	<0.004	E0.009	<0.005	--	--	--	--	<0.009	<0.005	<0.006	E0.009
23...	<0.018	<0.003	<0.004	E0.005	<0.005	<0.02	<0.002	<0.009	<0.005	<0.009	<0.005	<0.005	E0.004
AUG 06...	<0.018	<0.003	<0.004	<0.005	<0.005	<0.02	<0.002	<0.009	<0.005	<0.009	<0.005	<0.005	<0.007
20...	<0.018	<0.003	<0.004	<0.005	<0.005	<0.02	<0.002	<0.009	<0.005	<0.009	<0.005	<0.005	<0.007
SEP 04...	<0.018	<0.003	<0.004	E0.004	<0.005	<0.02	<0.002	<0.009	<0.005	<0.009	<0.005	<0.005	<0.007

03374100 WHITE RIVER AT HAZLETON, IN—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Fonofos water, fltrd, ug/L (04095)	Glufo- sinate, water, fltrd 0.7u GF ug/L (62721)	Glypho- sate, water, fltrd 0.7u GF ug/L (62722)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (82666)	Mala- thion, water, fltrd, ug/L (39532)	Methyl para- thion, water, fltrd 0.7u GF ug/L (82667)	Metola- chlor, water, fltrd, ug/L (39415)	Metri- buzin, water, fltrd, ug/L (82630)	Moli- nate, water, fltrd 0.7u GF ug/L (82671)	Naprop- amide, water, fltrd 0.7u GF ug/L (82684)	p,p'- DDE, water, fltrd, ug/L (34653)	Para- thion, water, fltrd, ug/L (39542)
OCT 15...	<0.003	<0.1	<0.1	<0.004	<0.035	<0.027	<0.006	0.055	<0.006	<0.002	<0.007	<0.003	<0.010
NOV 12...	<0.003	<0.1	<0.1	<0.004	<0.035	<0.027	<0.006	0.070	0.040	<0.002	<0.007	<0.003	<0.010
26...	<0.003	<0.1	<0.1	<0.004	<0.035	<0.027	<0.006	0.052	<0.006	<0.002	<0.007	<0.003	<0.010
DEC 19...	<0.003	<0.1	<0.1	<0.004	<0.035	<0.027	<0.006	0.045	0.054	<0.002	E0.011	<0.003	<0.010
JAN 23...	<0.003	<0.1	<0.1	<0.004	<0.035	<0.027	<0.006	0.035	<0.006	<0.002	<0.007	<0.003	<0.010
FEB 20...	<0.003	<0.1	<0.1	<0.004	<0.035	<0.027	<0.006	0.020	<0.006	<0.002	<0.007	<0.003	<0.010
MAR 13...	<0.003	<0.1	<0.1	<0.004	<0.035	<0.027	<0.006	0.040	0.007	<0.002	<0.007	<0.003	<0.010
APR 03...	<0.003	<0.1	<0.1	<0.004	<0.035	<0.027	<0.006	0.043	<0.006	<0.002	<0.007	<0.003	<0.010
17...	<0.003	<0.1	<0.1	<0.004	<0.035	<0.027	<0.006	0.040	<0.006	<0.002	<0.007	<0.003	<0.010
MAY 01...	<0.003	<0.1	<0.1	<0.004	<0.035	<0.027	<0.006	0.503	0.013	<0.002	<0.007	<0.003	<0.010
22...	<0.003	<0.1	<0.1	<0.004	<0.035	<0.027	<0.006	1.04	0.016	<0.002	<0.007	<0.003	<0.010
JUN 05...	<0.003	<0.1	<0.1	<0.004	<0.035	<0.027	<0.006	0.594	0.010	<0.002	<0.007	<0.003	<0.010
26...	<0.003	<0.1	<0.1	<0.004	<0.035	<0.027	<0.006	0.511	0.007	<0.002	<0.007	<0.003	<0.010
JUL 10...	<0.003	<0.1	<0.1	<0.004	<0.035	E0.003	<0.006	0.679	0.011	<0.002	<0.007	<0.003	<0.010
14...	<0.003	--	--	--	--	<0.027	<0.006	0.716	0.019	--	--	--	--
23...	<0.003	<0.1	0.1	<0.004	<0.035	<0.027	<0.006	0.424	0.008	<0.002	<0.007	<0.003	<0.010
AUG 06...	<0.003	<0.1	<0.1	<0.004	<0.035	<0.027	<0.006	0.211	<0.006	<0.002	<0.007	<0.003	<0.010
20...	<0.003	<0.1	<0.1	<0.004	<0.035	<0.027	<0.006	0.108	<0.006	<0.002	<0.007	<0.003	<0.010
SEP 04...	<0.003	<0.1	<0.1	<0.004	<0.035	<0.027	<0.006	0.079	<0.006	<0.002	<0.007	<0.003	<0.010

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Peb- ulate, water, fltrd 0.7u GF ug/L (82669)	Pendi- meth- alin, water, fltrd 0.7u GF ug/L (82683)	Phorate water fltrd 0.7u GF ug/L (82664)	Prome- ton, water, fltrd, ug/L (04037)	Pron- amide, water, fltrd 0.7u GF ug/L (82676)	Propa- chlor, water, fltrd, ug/L (04024)	Pro- panil, water, fltrd 0.7u GF ug/L (82679)	Propar- gite, water, fltrd 0.7u GF ug/L (82685)	Sima- zine, water, fltrd, ug/L (04035)	Tebu- thiuron water, fltrd 0.7u GF ug/L (82670)	Terba- cil, water, fltrd 0.7u GF ug/L (82665)	Terbu- fos, water, fltrd 0.7u GF ug/L (82675)	Thio- bencarb water fltrd 0.7u GF ug/L (82681)
OCT 15...	<0.004	<0.022	<0.011	0.04	<0.004	<0.010	<0.011	<0.02	0.038	<0.02	<0.034	<0.02	<0.005
NOV 12...	<0.004	<0.022	<0.011	0.02	<0.004	<0.010	<0.011	<0.02	0.514	<0.02	<0.034	<0.02	<0.005
26...	<0.004	<0.022	<0.011	0.02	<0.004	<0.010	<0.011	<0.02	0.225	<0.02	<0.034	<0.02	<0.005
DEC 19...	<0.004	<0.022	<0.011	E0.01	<0.004	<0.010	<0.011	<0.02	1.06	<0.02	E0.016	<0.02	<0.005
JAN 23...	<0.004	<0.022	<0.011	E0.01	<0.004	<0.010	<0.011	<0.02	0.167	<0.02	<0.034	<0.02	<0.005
FEB 20...	<0.004	<0.022	<0.011	E0.01	<0.004	<0.010	<0.011	<0.02	0.179	<0.02	<0.034	<0.02	<0.005
MAR 13...	<0.004	<0.022	<0.011	<0.01	<0.004	<0.010	<0.011	<0.02	0.454	<0.02	<0.034	<0.02	<0.005
APR 03...	<0.004	<0.022	<0.011	E0.01	<0.004	<0.010	<0.011	<0.02	0.135	<0.02	<0.034	<0.02	<0.005
17...	<0.004	<0.022	<0.011	E0.01	<0.004	<0.010	<0.011	<0.02	0.097	<0.02	<0.034	<0.02	<0.005
MAY 01...	<0.004	<0.022	<0.011	0.03	<0.004	<0.010	<0.011	<0.02	0.388	<0.02	<0.034	<0.02	<0.005
22...	<0.004	<0.022	<0.011	0.02	<0.004	<0.010	<0.011	<0.02	0.367	E0.01	<0.034	<0.02	<0.005
JUN 05...	<0.004	<0.022	<0.011	0.04	<0.004	<0.010	<0.011	<0.02	0.211	E0.01	<0.034	<0.02	<0.005
26...	<0.004	<0.022	<0.011	0.02	<0.004	<0.010	<0.011	<0.02	0.293	<0.02	<0.034	<0.02	<0.005
JUL 10...	<0.004	<0.022	<0.011	0.06	<0.004	<0.010	<0.011	<0.02	0.117	<0.02	<0.034	<0.02	<0.005
14...	--	<0.022	<0.011	0.04	<0.004	--	--	--	0.172	<0.02	--	<0.02	--
23...	<0.004	<0.022	<0.011	0.04	<0.004	<0.010	<0.011	<0.02	0.105	<0.02	<0.034	<0.02	<0.005
AUG 06...	<0.004	<0.022	<0.011	0.03	<0.004	<0.010	<0.011	<0.02	0.058	<0.02	<0.034	<0.02	<0.005
20...	<0.004	<0.022	<0.011	0.03	<0.004	<0.010	<0.011	<0.02	0.044	<0.02	<0.034	<0.02	<0.005
SEP 04...	<0.004	<0.022	<0.011	0.04	<0.004	<0.010	<0.011	<0.02	0.038	<0.02	<0.034	<0.02	<0.005

03374100 WHITE RIVER AT HAZLETON, IN—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Tri- allate, water, fltrd 0.7u GF ug/L (82678)	Tri- flur- alin, water, fltrd 0.7u GF ug/L (82661)	Suspnd. sedi- ment, sieve diametr percent <.063mm (70331)	Sus- pended sedi- ment concen- tration mg/L (80154)
OCT				
15...	<0.002	<0.009	93	74
NOV				
12...	<0.002	<0.009	97	223
26...	<0.002	<0.009	88	37
DEC				
19...	<0.002	<0.009	90	189
JAN				
23...	<0.002	<0.009	76	18
FEB				
20...	<0.002	<0.009	93	67
MAR				
13...	<0.002	<0.009	90	163
APR				
03...	<0.002	<0.009	87	126
17...	<0.002	<0.009	95	66
MAY				
01...	<0.002	<0.009	92	130
22...	<0.002	<0.009	94	128
JUN				
05...	<0.002	<0.009	94	80
26...	<0.002	<0.009	43	202
JUL				
10...	<0.002	<0.009	97	505
14...	--	<0.009	87	207
23...	<0.002	<0.009	96	215
AUG				
06...	<0.002	<0.009	98	132
20...	<0.002	<0.009	95	77
SEP				
04...	<0.002	<0.009	--	601

03374455 PATOKA RIVER NEAR HARDINBURG, IN

LOCATION.--Lat 38°26'41", long 86°23'14", in NW¼SE¼ sec.10, T.1 S., R.1 E., Orange County, Hydrologic Unit 05120209, (VALEENE, IN quadrangle), on downstream edge of right 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 October 2003 (discontinued).

GAGE.--Water-stage recorder and partial concrete control. Datum of gage is 606.89 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e0.64	e3.0	e2.8	431	e3.1	35	28	18	5.2	0.64	e0.36	e0.00
2	e0.67	e3.1	e2.7	137	e3.3	64	21	14	4.5	0.58	e0.47	e0.21
3	e0.70	e6.0	e2.5	75	e4.3	55	17	11	8.5	0.44	e0.59	e0.16
4	e0.92	e6.2	e2.4	49	e30	56	15	8.9	8.2	0.35	e0.41	e0.16
5	e1.2	e9.5	e2.6	38	e19	81	21	233	5.8	0.32	e0.35	e0.19
6	e0.65	e20	e2.5	29	e10	54	17	96	4.3	0.34	e0.29	e0.13
7	e0.46	e5.8	e2.5	e24	e6.0	36	20	76	3.6	0.31	e0.38	e0.09
8	e0.51	e5.2	e2.7	e20	e4.7	29	21	46	2.9	0.31	e0.30	e0.09
9	e0.40	e4.7	e2.5	e17	e3.4	23	22	102	2.2	0.48	e0.23	e0.04
10	e0.63	e180	e2.6	e15	e4.4	18	21	149	1.9	7.0	e0.38	e0.03
11	e1.2	e139	e8.0	e13	e3.6	16	18	106	6.4	2.0	e0.70	e0.03
12	e1.0	e34	e15	e12	e3.0	20	15	49	121	0.83	e0.60	e0.02
13	e0.70	e14	e37	e10	e11	37	12	26	52	0.58	e0.71	e0.02
14	e0.62	e9.0	e58	e9.1	14	39	10	17	21	0.43	e0.70	e0.01
15	e0.95	e7.4	e29	e8.0	148	29	9.2	13	12	e0.40	e0.74	e0.01
16	e0.89	e6.2	e12	e7.1	79	23	8.5	10	8.2	e0.52	e0.53	e0.01
17	e0.76	e5.6	e8.9	e6.0	41	20	98	24	6.0	e0.45	e0.42	e0.01
18	e0.71	e5.1	e35	e5.0	27	18	83	106	4.4	e0.51	e0.37	e0.01
19	e0.95	e4.6	e210	e4.3	25	84	40	34	3.7	e0.22	e0.28	e0.00
20	e1.1	e4.3	e150	e4.0	42	79	27	69	3.0	e0.21	e0.18	e0.00
21	e0.84	e3.5	e48	e3.7	89	79	43	88	2.2	e0.29	e0.09	e0.00
22	e0.66	e3.8	e26	e3.2	542	53	27	38	1.9	e0.30	e0.06	e0.06
23	e0.62	e3.4	e16	e2.9	217	36	19	21	1.6	e0.33	e0.04	e0.13
24	e0.58	e3.2	e8.0	e2.5	97	27	15	14	1.3	e0.39	e0.03	e0.12
25	e13	e3.0	e12	e3.0	55	22	345	13	0.95	e0.50	e0.01	e0.07
26	e6.0	e3.0	e7.8	e2.6	40	41	232	14	0.90	e0.46	e0.01	e0.09
27	e2.3	e2.8	e7.1	e2.3	32	32	77	11	0.98	e0.39	e0.01	e0.11
28	e3.4	e3.0	e6.4	e2.7	26	25	39	8.2	0.79	e0.35	e0.00	e0.22
29	e31	e3.3	e6.1	e3.6	---	97	35	7.7	0.63	e0.60	e0.00	e0.11
30	e13	e2.9	e16	e3.2	---	56	26	6.3	0.55	e0.47	e0.00	e0.10
31	e4.8	---	e107	e2.8	---	36	---	6.1	---	e0.46	e0.00	---
TOTAL	91.86	504.6	849.1	946.0	1,579.8	1,320	1,381.7	1,435.2	296.60	21.46	9.24	2.23
MEAN	2.96	16.8	27.4	30.5	56.4	42.6	46.1	46.3	9.89	0.69	0.30	0.074
MAX	31	180	210	431	542	97	345	233	121	7.0	0.74	0.22
MIN	0.40	2.8	2.4	2.3	3.0	16	8.5	6.1	0.55	0.21	0.00	0.00
CFSM	0.23	1.31	2.14	2.38	4.41	3.33	3.60	3.62	0.77	0.05	0.02	0.01
IN.	0.27	1.47	2.47	2.75	4.59	3.84	4.02	4.17	0.86	0.06	0.03	0.01

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 2003, BY WATER YEAR (WY)

MEAN	3.67	18.4	32.6	34.0	40.2	49.4	50.3	38.4	18.4	8.96	5.22	3.79
MAX	28.0	77.3	109	107	89.6	134	133	158	108	89.6	35.8	34.4
(WY)	(2002)	(1980)	(1991)	(1982)	(1990)	(1997)	(1996)	(1996)	(1997)	(1979)	(1998)	(1996)
MIN	0.000	0.000	1.17	0.61	2.58	8.80	6.79	2.47	0.46	0.26	0.000	0.000
(WY)	(1998)	(2000)	(1981)	(1981)	(1992)	(1981)	(1976)	(2001)	(1988)	(1983)	(1991)	(1999)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

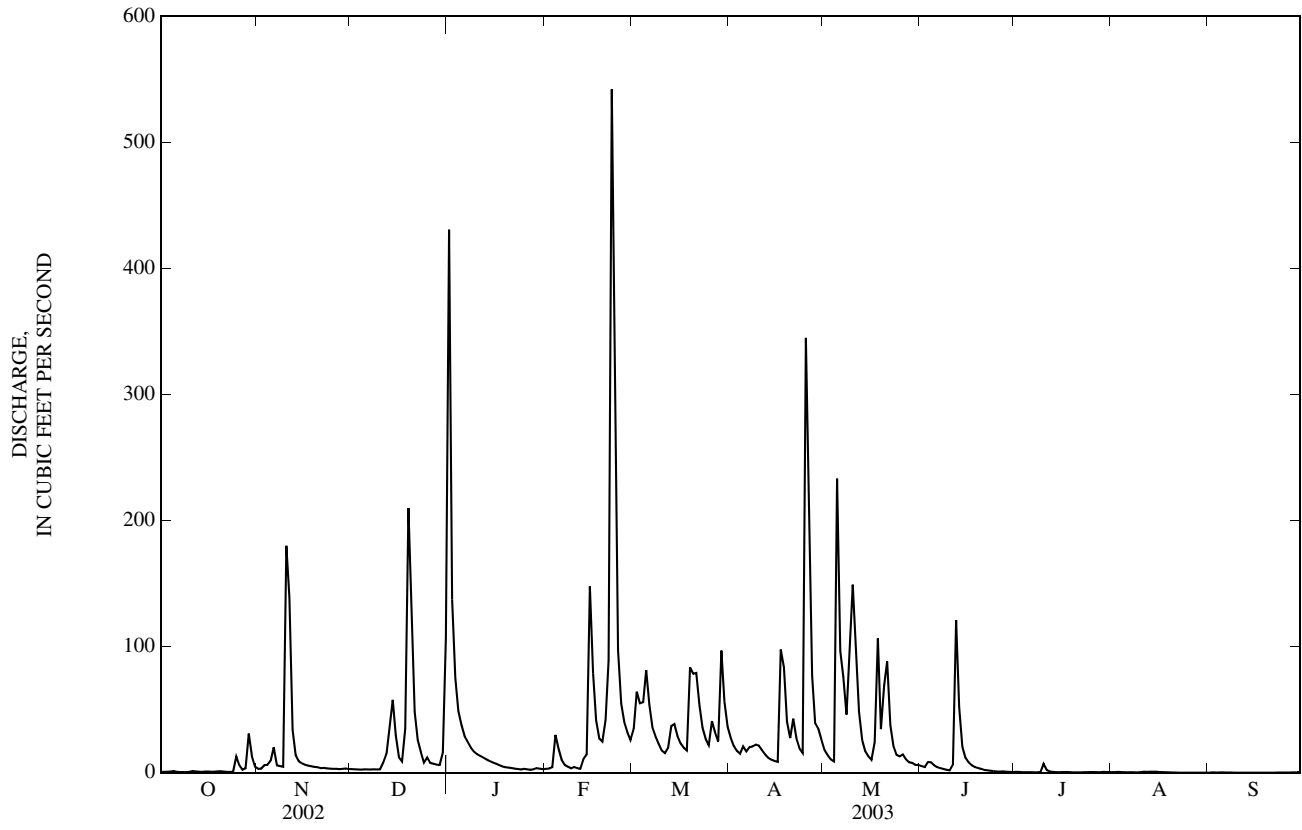
FOR 2003 WATER YEAR

WATER YEARS 1969 - 2003

ANNUAL TOTAL	10,553.18	8,437.79		
ANNUAL MEAN	28.9	23.1	25.2	
HIGHEST ANNUAL MEAN			47.3	1996
LOWEST ANNUAL MEAN			6.35	1992
HIGHEST DAILY MEAN	908	May 13	1,770	Jul 26, 1979
LOWEST DAILY MEAN	0.00	Aug 9	0.00	Oct 4, 1970
ANNUAL SEVEN-DAY MINIMUM	0.00	Sep 3	0.00	Sep 11, 1972
MAXIMUM PEAK FLOW			9,270	Jul 26, 1979
MAXIMUM PEAK STAGE			11.35	Jul 26, 1979
ANNUAL RUNOFF (CFSM)	2.26	1.81	1.97	
ANNUAL RUNOFF (INCHES)	30.67	24.52	26.74	
10 PERCENT EXCEEDS	68	57	53	
50 PERCENT EXCEEDS	6.2	4.8	5.1	
90 PERCENT EXCEEDS	0.03	0.15	0.24	

e Estimated

03374455 PATOKA RIVER NEAR HARDINSBURG, IN—Continued



WABASH RIVER BASIN

03374500 PATOKA RIVER NEAR CUZCO, IN

LOCATION.--Lat 38°26'31", long 86°42'51", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.11, T.1 S., R.3 W., Dubois County, Hydrologic Unit 05120209 (CUZCO, IN quadrangle), on right bank 30 ft upstream from bridge on Cuzco Road South, 0.7 mi downstream from Patoka Lake, 2.3 mi south of Cuzco, 4.5 mi upstream from Dillon Creek, and at mile 117.8.

DRAINAGE AREA.--170 mi².

PERIOD OF RECORD.--June 1961 to September 1981 (discharge). October 1981 to September 2001 (discharge provided by U.S. Army Corps of Engineers). October 2001 to current year (stage only).

GAGE.--Water-stage recorder. 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".

REMARKS.--Flow regulated by U.S. Army Corps of Engineers from Patoka Lake since February 1978.

COOPERATION.--Records of discharge provided by U.S. Army Corps of Engineers October 1981 to September 2001.

EXTREMES FOR PERIOD OF RECORD.--(October 2001 to current year) maximum gage height, 10.63 ft, Jan. 20, 21, 2002, minimum gage height, 2.12 ft, June 20, 2002. (June 1961 to September 1981) 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 gage height, 9.55 ft, Jan. 25; minimum gage height, 2.61 ft, July 23.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.39	3.47	5.78	4.52	5.30	5.64	7.18	3.57	3.61	3.58	3.67	4.33
2	3.40	3.53	5.78	4.27	5.25	5.62	7.12	3.49	3.63	3.56	3.67	3.71
3	3.40	3.52	5.78	4.23	4.18	5.62	6.33	3.47	3.63	3.56	3.67	3.68
4	3.41	3.51	---	4.21	4.14	5.63	5.04	3.52	3.62	3.56	3.67	3.65
5	3.41	3.53	---	4.20	4.13	5.61	4.16	3.66	3.60	3.56	3.67	4.33
6	3.41	3.49	---	6.19	4.13	7.31	4.17	3.52	3.59	3.56	3.67	4.33
7	3.40	3.49	---	7.98	4.12	7.29	4.17	3.54	3.58	3.56	3.67	4.33
8	3.40	3.49	---	7.93	4.12	7.33	4.17	3.95	3.58	3.67	3.66	4.32
9	3.40	3.50	---	7.84	4.11	7.27	4.17	6.34	3.57	3.62	3.66	4.32
10	3.40	3.95	---	7.81	4.11	7.23	4.16	3.80	3.67	3.63	3.66	4.31
11	3.40	3.56	5.76	7.76	4.11	8.37	4.16	3.75	4.31	3.58	3.66	4.32
12	3.39	4.34	5.75	7.73	4.11	8.41	4.15	3.68	3.95	3.57	3.66	4.31
13	3.40	4.31	5.83	7.87	4.11	8.47	4.15	3.65	3.63	3.56	3.65	4.31
14	3.41	4.30	5.78	7.87	4.22	8.42	4.15	3.64	3.60	3.56	3.65	4.32
15	3.40	4.30	5.77	8.34	4.21	8.37	4.15	3.65	3.58	3.63	3.65	4.32
16	3.41	4.29	5.75	8.32	4.15	8.33	3.41	3.64	3.57	3.56	3.65	4.31
17	3.41	4.29	5.76	8.28	5.01	8.30	3.55	4.66	3.56	3.56	3.65	4.31
18	3.41	5.19	5.82	8.65	5.00	8.29	3.47	3.68	3.58	3.56	3.65	4.31
19	3.42	5.17	4.61	8.60	5.03	7.36	3.44	3.65	3.58	3.55	3.65	4.31
20	3.41	5.17	4.25	8.57	5.08	7.23	4.09	3.78	3.57	3.55	3.65	4.31
21	3.41	5.85	4.21	9.47	4.39	7.18	3.55	3.67	3.57	3.59	3.65	4.32
22	3.41	5.83	4.20	9.48	7.09	7.27	3.49	3.64	3.56	3.56	3.65	4.32
23	3.42	5.82	5.74	9.44	3.61	7.20	3.47	3.63	3.56	3.59	3.65	4.32
24	3.42	5.81	5.74	9.52	3.52	7.24	3.46	3.62	3.56	3.60	3.65	4.32
25	3.47	5.80	5.73	9.47	3.49	7.18	4.65	3.64	3.56	3.63	3.64	4.32
26	3.44	5.80	8.03	9.42	5.01	7.25	3.56	3.63	3.57	3.68	3.64	4.33
27	3.44	5.79	8.03	9.36	5.00	7.17	3.50	3.62	3.56	3.68	3.64	4.32
28	3.45	5.78	8.00	9.45	5.61	7.22	3.48	3.62	3.56	3.68	3.64	4.33
29	3.49	5.78	7.97	9.41	---	7.08	3.47	3.62	3.56	3.68	3.65	4.32
30	3.45	5.79	7.99	7.32	---	---	3.46	3.61	3.56	3.67	3.64	4.33
31	3.45	---	7.22	5.36	---	7.24	---	3.61	---	3.67	3.64	---
MEAN	3.42	4.62	---	7.71	4.51	---	4.18	3.76	3.62	3.60	3.65	4.26
MAX	3.49	5.85	---	9.52	7.09	---	7.18	6.34	4.31	3.68	3.67	4.33
MIN	3.39	3.47	---	4.20	3.49	---	3.41	3.47	3.56	3.55	3.64	3.65

03374500 PATOKA RIVER NEAR CUZCO, IN—Continued

WATER-QUALITY RECORDS

INSTRUMENTATION.--Temperature recorder.

PERIOD OF RECORD.--

WATER TEMPERATURE.--October 1987 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Maximum, 32.6°C, July 31, 1999; minimum, 0.4°C, Jan. 18, 19, 1994, and Jan. 11, 1996.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum, 30.3°C, Aug. 21, minimum, 1.9°C, Feb. 16, 24.

TEMPERATURE, WATER, DEGREES CELSIUS
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	22.1	21.1	21.6	15.3	14.4	14.9	9.0	8.7	8.9	6.5	5.8	6.1
2	22.3	21.2	21.7	15.1	14.2	14.5	8.7	8.5	8.6	5.9	5.6	5.8
3	22.1	21.1	21.6	14.4	14.2	14.3	8.5	8.1	8.3	5.6	5.4	5.5
4	23.6	21.3	22.3	14.2	14.0	14.1	---	---	---	5.7	5.2	5.4
5	22.0	20.2	21.0	14.0	13.7	13.9	---	---	---	5.5	5.3	5.4
6	22.2	20.6	21.2	13.7	13.2	13.5	---	---	---	5.4	5.2	5.3
7	21.0	20.0	20.5	14.0	13.0	13.4	---	---	---	5.3	5.1	5.2
8	21.6	20.3	20.8	14.0	13.0	13.4	---	---	---	5.4	5.0	5.2
9	21.0	20.4	20.6	13.8	13.2	13.5	---	---	---	5.3	5.1	5.2
10	20.8	20.4	20.6	14.7	13.5	14.0	---	---	---	5.2	5.0	5.1
11	20.7	20.5	20.6	14.0	13.0	13.4	6.3	6.3	6.3	5.0	4.7	4.9
12	20.6	20.0	20.4	13.2	12.8	13.0	6.4	6.2	6.3	4.7	4.5	4.6
13	20.0	18.9	19.4	13.4	12.7	13.0	6.3	6.0	6.2	4.5	4.3	4.4
14	20.1	18.8	19.4	13.2	12.8	13.0	6.1	5.9	6.0	4.4	4.1	4.3
15	19.6	18.9	19.2	12.9	12.6	12.8	6.2	5.8	6.0	4.4	4.1	4.2
16	19.2	18.4	18.7	12.6	12.3	12.5	6.2	5.9	6.0	4.2	3.8	3.9
17	18.8	18.1	18.4	12.3	11.8	12.1	6.1	5.9	6.0	3.9	3.6	3.7
18	18.9	17.8	18.3	12.0	11.6	11.8	6.5	6.1	6.3	3.6	3.2	3.4
19	18.3	17.9	18.1	12.1	11.6	11.8	8.4	6.5	7.1	3.5	3.2	3.3
20	18.2	17.4	17.7	11.9	11.5	11.7	7.4	6.3	6.7	3.4	3.2	3.3
21	18.3	17.1	17.6	11.8	11.3	11.6	6.7	6.1	6.4	3.3	2.7	3.0
22	18.0	17.0	17.3	11.3	11.0	11.2	6.6	6.1	6.4	2.9	2.7	2.8
23	17.8	16.8	17.2	11.2	10.8	11.0	6.3	6.0	6.1	3.0	2.7	2.8
24	17.7	16.8	17.1	11.1	10.7	10.9	6.1	5.9	6.0	2.7	2.3	2.5
25	16.9	16.7	16.8	10.7	10.4	10.6	5.9	5.7	5.8	2.3	2.2	2.3
26	16.8	16.5	16.7	10.4	10.2	10.3	5.7	5.4	5.6	2.2	2.2	2.2
27	16.8	16.3	16.5	10.2	9.9	10.1	5.6	5.3	5.5	2.4	2.2	2.3
28	16.6	16.2	16.3	9.9	9.6	9.8	5.5	5.3	5.4	2.5	2.3	2.4
29	16.3	15.2	15.7	9.7	9.4	9.6	5.6	5.2	5.4	2.6	2.5	2.6
30	15.6	15.4	15.5	9.6	9.0	9.3	5.8	5.5	5.6	2.8	2.6	2.7
31	15.5	15.1	15.3	---	---	---	5.9	5.7	5.8	3.1	2.7	2.9
MONTH	23.6	15.1	18.8	15.3	9.0	12.3	---	---	---	6.5	2.2	4.0

WABASH RIVER BASIN

03374500 PATOKA RIVER NEAR CUZCO, IN—Continued

TEMPERATURE, WATER, DEGREES CELSIUS—CONTINUED
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	3.1	3.0	3.1	2.5	2.4	2.5	10.7	9.8	10.3	16.5	14.4	15.2
2	3.5	3.0	3.2	2.9	2.5	2.7	11.4	10.4	10.9	16.2	14.2	15.1
3	3.5	3.2	3.4	2.9	2.6	2.7	12.1	10.8	11.4	16.5	14.0	15.1
4	3.9	3.1	3.5	3.1	2.6	2.8	12.5	11.4	12.0	17.1	15.1	16.1
5	3.6	3.0	3.2	3.2	3.0	3.1	12.4	11.4	11.7	18.2	16.1	17.0
6	3.1	2.9	3.0	3.2	3.0	3.0	11.6	11.2	11.4	17.1	15.6	16.3
7	3.2	2.6	3.0	3.3	2.9	3.1	11.5	11.0	11.2	17.3	15.9	16.5
8	3.0	2.5	2.7	3.9	2.9	3.4	11.4	11.0	11.1	16.7	15.5	16.1
9	3.2	2.7	2.9	3.9	3.6	3.8	11.0	10.7	10.8	17.9	16.3	17.2
10	3.2	2.8	2.9	4.0	3.7	3.8	11.6	10.4	10.9	17.5	15.9	16.7
11	3.4	2.5	2.9	4.1	3.8	3.9	11.8	10.7	11.1	17.1	14.7	16.1
12	3.4	2.6	2.9	4.4	4.0	4.2	11.9	10.6	11.1	16.3	14.4	15.2
13	3.4	2.5	2.9	4.4	4.3	4.3	12.4	10.6	11.3	18.0	15.0	16.4
14	2.8	2.6	2.8	5.0	4.3	4.6	13.0	11.3	12.1	18.4	16.3	17.3
15	2.8	2.5	2.7	5.3	4.6	4.9	12.7	11.4	12.1	18.2	17.1	17.4
16	2.5	2.0	2.2	5.9	5.0	5.3	14.8	11.9	13.3	18.4	16.8	17.5
17	2.4	2.1	2.2	5.8	5.1	5.5	15.8	14.2	14.8	19.1	17.2	18.2
18	2.4	2.3	2.4	6.1	5.6	5.8	14.2	13.0	13.6	19.1	18.2	18.7
19	2.5	2.3	2.4	7.9	5.9	6.8	15.6	13.0	14.2	19.3	17.8	18.7
20	2.7	2.3	2.4	7.6	6.6	7.2	16.3	14.0	15.1	17.9	16.4	17.6
21	3.1	2.5	2.7	7.5	5.8	6.4	15.1	12.9	13.7	18.2	16.1	17.3
22	3.3	2.2	2.8	7.3	5.9	6.5	13.6	12.1	12.7	19.0	17.2	17.9
23	4.0	2.2	2.9	7.3	6.8	7.1	15.4	12.1	13.6	18.6	16.9	17.6
24	3.4	1.9	2.6	7.8	7.1	7.4	15.7	13.9	14.8	18.8	16.6	17.6
25	3.4	2.1	2.6	8.5	7.3	7.7	15.3	13.3	14.4	17.7	17.2	17.4
26	2.5	2.1	2.3	8.1	7.1	7.7	16.3	13.4	14.7	18.8	17.4	17.8
27	2.4	2.2	2.3	9.8	7.7	8.5	16.3	13.9	14.9	18.6	17.0	17.6
28	2.6	2.3	2.4	11.3	9.7	10.5	16.1	13.8	14.7	19.0	16.9	17.7
29	---	---	---	10.4	9.4	9.8	16.1	14.0	14.9	20.0	16.7	18.1
30	---	---	---	---	---	---	16.2	14.4	15.2	20.7	18.2	19.4
31	---	---	---	10.0	9.0	9.6	---	---	---	19.8	18.0	19.1
MONTH	4.0	1.9	2.8	---	---	---	16.3	9.8	12.8	20.7	14.0	17.2
	JUNE			JULY			AUGUST			SEPTEMBER		
1	20.5	18.0	19.1	24.2	22.6	23.4	29.0	27.4	28.1	28.6	24.7	27.6
2	20.4	19.2	19.7	24.5	22.7	23.4	28.2	27.6	27.9	27.3	26.2	27.1
3	19.7	19.2	19.5	24.5	22.7	23.5	28.6	27.2	27.7	27.6	26.8	27.0
4	19.2	18.5	18.9	24.8	23.2	23.8	28.4	27.2	27.6	27.5	26.5	26.8
5	20.5	18.4	19.3	26.1	23.4	24.6	28.6	27.0	27.6	27.1	25.9	26.4
6	20.5	18.8	19.6	25.6	23.7	24.5	27.8	27.0	27.3	26.8	25.9	26.3
7	20.9	19.8	20.2	25.7	23.1	24.6	28.1	26.8	27.3	26.3	25.7	26.0
8	20.3	19.2	19.9	25.1	22.7	24.0	28.3	26.8	27.3	26.4	25.5	25.9
9	21.0	19.0	19.8	24.4	23.4	23.9	28.0	26.7	27.2	26.7	25.4	26.0
10	21.0	19.5	20.2	25.6	21.6	24.0	28.2	26.8	27.3	26.9	25.8	26.2
11	21.3	20.1	20.6	24.0	21.1	22.6	27.8	27.1	27.4	26.9	26.1	26.5
12	20.6	19.2	19.9	25.5	21.5	23.6	28.2	26.8	27.4	27.2	26.3	26.6
13	21.6	19.3	20.6	25.8	22.5	24.2	28.2	27.3	27.7	27.3	26.3	26.7
14	22.0	20.7	21.2	26.3	23.7	24.8	29.1	27.6	28.2	26.8	25.9	26.5
15	21.5	20.5	20.9	25.6	24.0	24.7	28.9	27.7	28.1	26.2	25.3	25.7
16	21.9	20.9	21.3	26.2	22.9	24.6	28.7	27.4	27.9	26.2	25.0	25.5
17	22.5	20.8	21.5	26.3	24.1	24.9	29.3	27.5	28.3	26.2	25.1	25.6
18	22.7	20.7	21.6	25.2	24.0	24.6	29.8	28.5	28.9	26.2	25.0	25.5
19	21.5	21.0	21.3	25.9	24.2	24.9	29.8	28.0	28.7	25.4	24.3	24.9
20	23.2	21.0	22.0	26.2	24.3	25.0	29.8	28.2	28.9	25.1	23.8	24.3
21	22.9	21.3	22.0	25.9	24.3	24.9	30.3	28.6	29.2	24.7	23.8	24.2
22	23.5	21.5	22.3	25.4	23.4	24.6	29.4	28.6	29.0	24.3	23.7	24.0
23	23.9	21.6	22.6	24.7	20.0	22.9	29.9	28.3	29.0	24.0	23.2	23.6
24	24.3	22.0	22.9	21.6	19.9	20.5	29.7	28.2	28.8	24.0	23.0	23.4
25	24.3	22.1	23.1	27.6	19.9	23.5	29.6	28.1	28.8	23.5	22.6	23.1
26	23.3	21.1	22.5	28.5	26.8	27.4	29.8	28.5	29.0	23.5	22.4	22.9
27	24.1	20.9	22.6	28.3	27.0	27.5	29.8	28.7	29.2	23.1	22.2	22.6
28	24.5	22.1	23.1	27.8	27.0	27.4	30.1	28.7	29.3	22.2	21.5	21.9
29	24.6	22.2	23.3	28.2	26.9	27.4	30.1	28.9	29.4	21.7	20.9	21.3
30	24.7	22.8	23.6	28.6	26.8	27.5	29.2	28.7	28.9	21.4	20.4	20.8
31	---	---	---	28.7	27.4	27.8	28.7	28.1	28.4	---	---	---
MONTH	24.7	18.0	21.2	28.7	19.9	24.7	30.3	26.7	28.3	28.6	20.4	25.0

03375500 PATOKA RIVER AT JASPER, IN

LOCATION.--Lat 38°24'49", long 86°52'36", in NW¹/₄SE¹/₄ sec.20, T.1 S., R.4 W., Dubois County, Hydrologic Unit 05120209, (JASPER, IN quadrangle), on left bank 0.3 mi upstream from unnamed outlet of Idlewild Lake, 1.2 mi downstream from county road 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 0.15 ft lower. Prior to Sept. 18, 1956, nonrecording gage at bridge 5.6 mi downstream at datum 0.15 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63	81	299	1,150	404	496	690	165	75	72	76	89
2	63	75	300	1,370	291	656	659	261	71	97	75	341
3	63	73	299	1,120	291	638	629	210	169	89	99	154
4	64	77	299	494	273	603	535	158	233	74	90	92
5	66	82	299	314	214	687	344	604	135	71	81	82
6	64	104	298	261	172	627	210	949	99	69	77	90
7	62	99	297	422	161	677	193	613	82	68	75	117
8	63	87	297	690	151	698	212	476	76	84	75	117
9	62	81	297	758	147	679	202	929	72	313	73	117
10	64	152	297	745	151	651	201	1,470	69	296	73	116
11	64	565	310	729	152	637	191	1,680	132	261	93	115
12	63	266	317	715	150	769	178	1,350	643	116	122	115
13	62	153	330	710	145	910	167	612	985	92	78	115
14	62	167	473	728	154	1,010	159	255	456	81	75	114
15	62	158	457	733	495	974	154	238	232	81	73	112
16	62	154	385	769	579	908	149	256	171	149	73	111
17	62	148	352	782	332	860	160	311	141	107	72	112
18	62	142	346	771	346	830	308	688	120	83	72	111
19	64	198	762	800	325	889	213	417	107	78	72	111
20	65	237	1,020	815	425	986	174	353	99	75	71	111
21	63	236	698	806	627	868	441	550	92	247	71	111
22	63	287	326	861	1,230	774	309	320	87	291	71	119
23	63	311	235	903	1,600	713	195	203	83	129	70	115
24	62	308	303	912	1,730	670	156	152	80	99	70	113
25	81	306	380	917	1,160	651	443	135	77	89	70	112
26	120	303	373	921	458	671	1,140	158	76	80	70	112
27	84	302	574	913	342	679	905	133	76	80	70	117
28	72	300	667	907	387	651	361	111	75	87	70	114
29	114	300	679	919	---	885	240	98	73	89	70	113
30	173	300	697	913	---	917	194	90	72	81	72	112
31	102	---	793	737	---	748	---	82	---	78	72	---
TOTAL	2,259	6,052	13,459	24,585	12,892	23,412	10,112	14,027	4,958	3,706	2,371	3,580
MEAN	72.9	202	434	793	460	755	337	452	165	120	76.5	119
MAX	173	565	1,020	1,370	1,730	1,010	1,140	1,680	985	313	122	341
MIN	62	73	235	261	145	496	149	82	69	68	70	82
CFSM	0.28	0.77	1.66	3.03	1.76	2.88	1.29	1.73	0.63	0.46	0.29	0.46
IN.	0.32	0.86	1.91	3.49	1.83	3.32	1.44	1.99	0.70	0.53	0.34	0.51

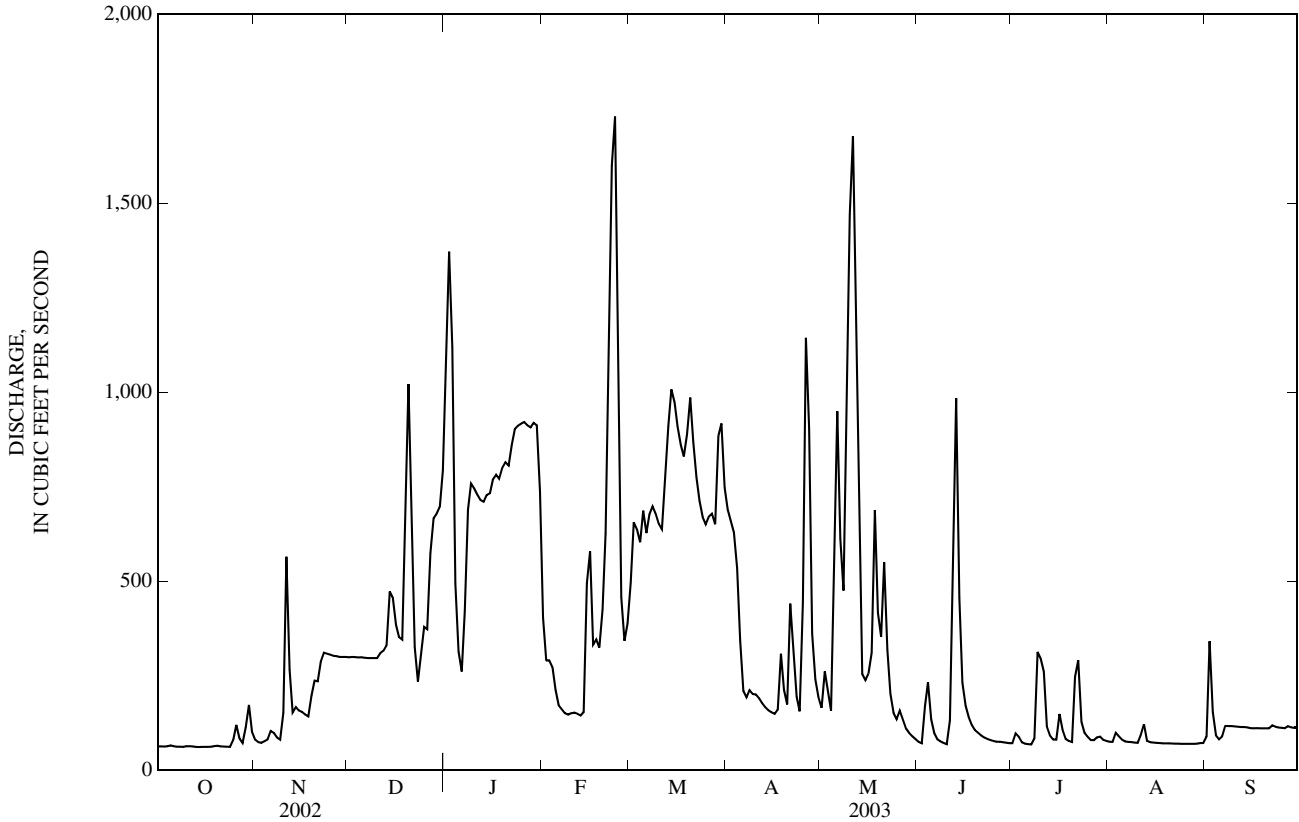
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 2003, BY WATER YEAR (WY)

MEAN	102	227	432	630	666	765	598	429	207	122	101	91.0
MAX	494	800	1,506	2,742	1,898	2,543	1,574	2,034	1,044	787	530	484
(WY)	(1980)	(1975)	(1952)	(1950)	(1950)	(1964)	(1972)	(1996)	(1996)	(1958)	(1977)	(1979)
MIN	0.000	0.000	0.17	17.5	27.7	144	54.1	29.8	8.66	0.074	0.000	0.000
(WY)	(1949)	(1954)	(1954)	(1964)	(1964)	(1992)	(2001)	(2001)	(1953)	(1954)	(1952)	(1953)

WABASH RIVER BASIN

03375500 PATOKA RIVER AT JASPER, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1949 - 2003	
ANNUAL TOTAL	167,210		121,413			
ANNUAL MEAN	458		333		363	
HIGHEST ANNUAL MEAN					673	1950
LOWEST ANNUAL MEAN					63.6	1954
HIGHEST DAILY MEAN	3,120	May 14	1,730	Feb 24	13,500	Mar 11, 1964
LOWEST DAILY MEAN	58	Sep 26	62	Oct 7	0.00	Oct 1, 1948
ANNUAL SEVEN-DAY MINIMUM	61	Sep 2	62	Oct 12	0.00	Oct 1, 1948
MAXIMUM PEAK FLOW			1,810	Feb 24	14,100	Mar 11, 1964
MAXIMUM PEAK STAGE			14.60	Feb 24	21.20	Mar 11, 1964
ANNUAL RUNOFF (CFSM)	1.75		1.27		1.38	
ANNUAL RUNOFF (INCHES)	23.74		17.24		18.81	
10 PERCENT EXCEEDS	1,080		821		1,050	
50 PERCENT EXCEEDS	271		173		134	
90 PERCENT EXCEEDS	63		71		7.8	



03376300 PATOKA RIVER AT WINSLOW, IN

LOCATION.--Lat 38°22'48", long 87°13'00", in SW¹/₄SW¹/₄ sec.32, T.1 S., R.7 W., Pike County, Hydrologic Unit 05120209, (WINSLOW, IN quadrangle), 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 fair. Flow regulated by Patoka Lake. Minor diversion by 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	96	270	375	1,940	877	3,440	1,310	987	230	118	122	112
2	80	149	369	2,040	717	2,880	1,220	774	195	115	116	117
3	75	112	364	2,010	523	2,480	1,090	691	404	112	110	279
4	76	e94	362	2,070	506	2,240	980	566	740	124	126	319
5	84	e90	364	2,160	547	2,110	868	1,350	635	125	133	174
6	106	e140	363	2,180	441	1,920	708	1,960	453	110	131	122
7	97	269	362	2,050	333	1,680	563	2,030	319	104	125	107
8	81	213	358	1,770	272	1,450	513	2,350	247	102	111	111
9	73	147	359	1,460	242	1,280	481	2,720	204	133	104	131
10	71	172	372	1,260	234	1,130	478	2,630	181	281	100	133
11	73	931	394	1,100	240	1,020	519	2,680	229	411	98	133
12	79	1,200	492	979	254	953	454	2,720	1,110	369	102	133
13	77	1,200	568	896	244	1,000	383	2,660	1,580	240	140	133
14	74	980	867	843	239	1,130	327	2,530	1,780	154	139	132
15	71	621	992	804	562	1,150	286	2,490	1,790	130	110	131
16	71	388	929	784	1,130	1,150	260	2,450	1,710	140	100	128
17	70	299	771	782	1,190	1,130	301	2,670	1,380	157	97	125
18	68	242	652	792	1,060	1,100	533	2,660	950	180	96	123
19	68	208	1,210	793	877	1,110	628	2,410	620	142	93	123
20	69	202	1,790	799	982	1,270	543	2,210	369	119	92	123
21	75	262	1,680	815	1,390	1,310	677	2,050	242	167	90	124
22	73	292	1,640	820	2,390	1,340	923	1,860	185	741	90	138
23	70	307	1,650	827	3,010	1,310	839	1,650	159	786	89	158
24	71	355	1,590	873	3,020	1,230	596	1,330	144	445	89	155
25	78	367	1,390	1,040	3,480	1,110	894	1,020	139	215	89	136
26	222	361	1,150	1,170	4,100	1,060	1,840	968	129	149	89	130
27	319	354	946	1,300	4,340	1,010	1,700	891	122	132	88	134
28	184	366	837	1,310	4,060	973	1,640	700	121	118	90	145
29	131	398	885	1,260	---	1,250	1,560	516	117	174	90	145
30	435	382	930	1,060	---	1,350	1,330	380	117	161	93	135
31	496	---	1,090	928	---	1,330	---	287	---	132	98	---
TOTAL	3,713	11,371	26,101	38,915	37,260	44,896	24,444	53,190	16,601	6,586	3,240	4,289
MEAN	120	379	842	1,255	1,331	1,448	815	1,716	553	212	105	143
MAX	496	1,200	1,790	2,180	4,340	3,440	1,840	2,720	1,790	786	140	319
MIN	68	90	358	782	234	953	260	287	117	102	88	107
CFSM	0.20	0.63	1.40	2.08	2.21	2.40	1.35	2.85	0.92	0.35	0.17	0.24
IN.	0.23	0.70	1.61	2.40	2.30	2.77	1.51	3.28	1.02	0.41	0.20	0.26

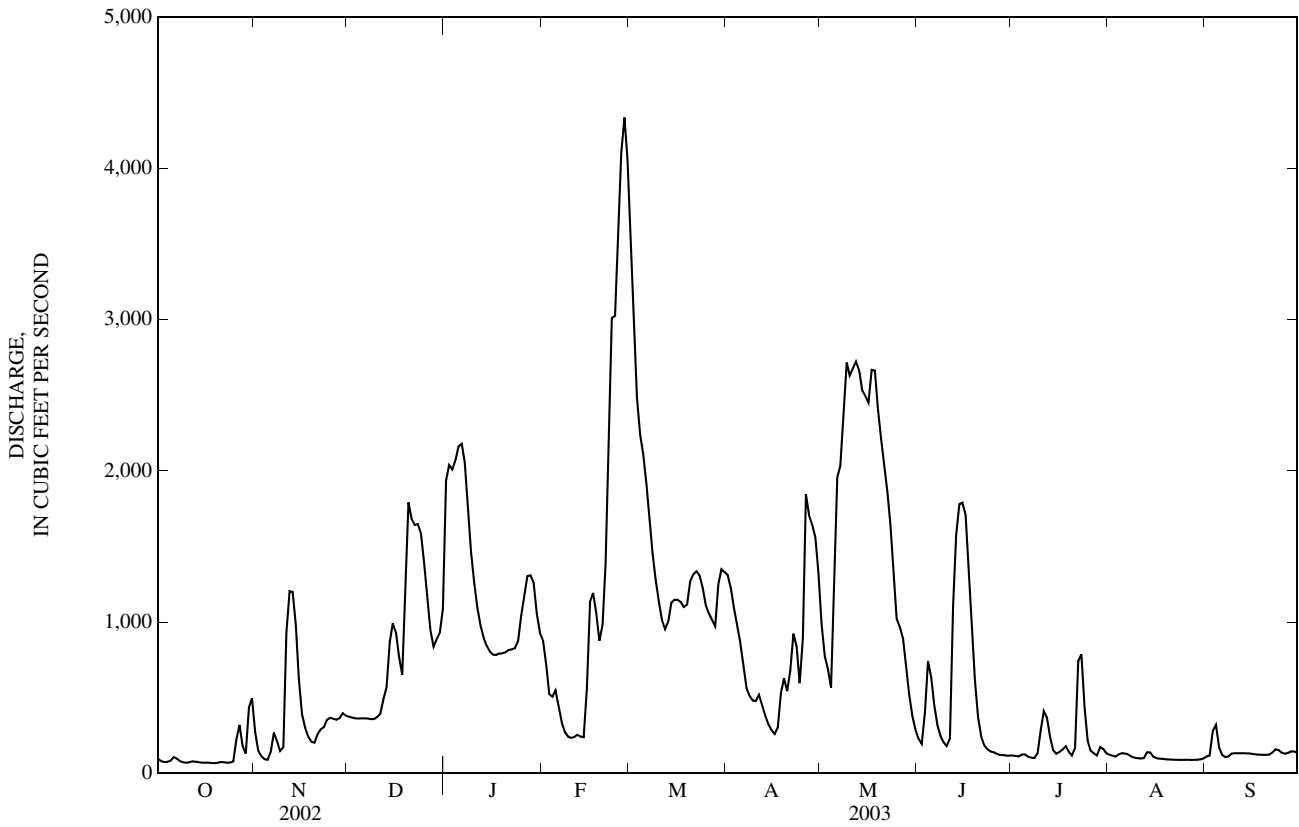
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 2003, BY WATER YEAR (WY)

MEAN	167	384	840	1,067	1,358	1,567	1,391	1,182	561	298	185	183
MAX	653	2,218	3,175	2,576	2,832	5,126	3,426	4,863	2,958	1,305	865	708
(WY)	(2002)	(1994)	(2002)	(1991)	(1991)	(1964)	(1972)	(1996)	(1996)	(1969)	(2000)	(1996)
MIN	2.84	6.83	13.8	56.3	45.5	428	131	85.7	13.4	13.5	7.46	0.94
(WY)	(1965)	(1964)	(1964)	(1964)	(1964)	(1969)	(2001)	(1988)	(1972)	(1966)	(1965)	(1972)

03376300 PATOKA RIVER AT WINSLOW, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1964 - 2003	
ANNUAL TOTAL	385,106		270,606			
ANNUAL MEAN	1,055		741		762	
HIGHEST ANNUAL MEAN					1,332	1997
LOWEST ANNUAL MEAN					224	1992
HIGHEST DAILY MEAN	8,620	May 15	4,340	Feb 27	15,200	Mar 13, 1964
LOWEST DAILY MEAN	62	Sep 12	68	Oct 18	0.50	Aug 5, 1964
ANNUAL SEVEN-DAY MINIMUM	63	Sep 7	70	Oct 14	0.61	Sep 8, 1972
MAXIMUM PEAK FLOW			4,410	Feb 27	15,500	Mar 13, 1964
MAXIMUM PEAK STAGE			23.39	Feb 27	28.84	Mar 13, 1964
ANNUAL RUNOFF (CFSM)	1.75		1.23		1.26	
ANNUAL RUNOFF (INCHES)	23.76		16.69		17.16	
10 PERCENT EXCEEDS	2,600		1,880		2,020	
50 PERCENT EXCEEDS	466		383		309	
90 PERCENT EXCEEDS	79		95		27	

e Estimated



03376350 SOUTH FORK PATOKA RIVER NEAR SPURGEON, IN

LOCATION.--Lat 38°17'49", long 87°15'37", in NW¼SW¼ sec. 36, T. 2 S., R. 8 W., Pike County, Hydrologic Unit 05120209, (OAKLAND CITY, IN quadrangle), on the left bank, 150 ft upstream of the bridge on State Road 61, 0.5 mi north of Enos Corner, and 3.1 mi north of Spurgeon, IN.

DRAINAGE AREA.--42.8 mi².

PERIOD OF RECORD.--October 1964 to October 1986. October 1998 to current year.

GAGE.--Water-stage recorder. Datum of gage is 420.88 ft above National Geodetic Vertical Datum of 1929 (Indiana Flood Control and Water Resources Commission bench mark).

REMARKS.--Records fair except for estimated daily discharges and those below 80 ft³/s, which are poor. Runoff affected by un-reclaimed surface mined lands.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.6	9.1	8.6	497	19	99	41	47	35	19	14	10
2	7.4	8.3	8.8	135	20	102	36	51	36	17	14	12
3	7.0	9.5	9.1	84	24	80	32	39	e125	16	14	12
4	13	12	8.6	55	31	82	31	40	e54	15	13	9.9
5	13	20	10	45	e20	99	31	1,060	e37	15	12	8.6
6	8.8	20	e9.8	36	e18	74	26	201	30	15	11	7.9
7	7.9	11	9.7	32	e17	55	42	414	27	14	10	7.6
8	7.2	10	9.8	31	e16	51	34	384	26	15	9.6	7.5
9	6.5	11	9.6	29	e15	44	35	464	24	18	9.2	7.3
10	8.2	172	10	25	e14	38	42	133	24	20	9.0	7.4
11	8.0	147	16	e24	e14	36	35	137	79	16	8.5	7.4
12	7.3	32	18	e23	e15	46	30	87	396	14	8.6	e7.2
13	6.9	20	50	e21	e16	67	27	68	103	13	8.6	e7.0
14	6.0	16	82	e21	28	56	26	59	119	13	8.4	e6.6
15	5.9	16	37	e20	125	48	25	125	56	13	8.8	e7.0
16	5.9	14	26	e20	e100	41	27	82	43	17	9.0	e6.8
17	6.0	13	26	e19	e90	39	72	507	38	13	8.5	e6.7
18	5.9	12	28	e19	e78	38	52	218	32	13	8.2	e6.6
19	7.6	14	420	e18	67	133	37	110	28	14	7.9	e6.4
20	7.9	13	180	e18	147	95	59	106	25	12	8.0	e6.7
21	7.2	15	75	e17	268	84	78	88	23	100	8.5	e6.5
22	6.9	13	50	e17	1,160	58	49	68	22	29	8.4	e6.8
23	6.8	11	38	e16	458	46	32	57	21	17	9.9	e8.0
24	6.2	11	36	e16	151	39	28	50	20	15	7.9	e8.8
25	47	10	42	e17	e90	37	374	121	20	14	8.1	e9.0
26	21	9.5	33	e17	e74	54	168	94	22	12	7.9	e6.0
27	10	9.3	30	e16	e66	42	82	65	23	11	8.0	e6.6
28	9.3	9.0	33	e17	e68	40	63	51	18	12	7.8	e7.6
29	42	9.2	36	e18	---	138	48	47	21	12	7.5	e8.4
30	18	9.3	50	e17	---	63	38	40	24	12	10	e8.8
31	11	---	147	e16	---	46	---	38	---	18	11	---
TOTAL	339.4	686.2	1,547.0	1,356	3,209	1,970	1,700	5,051	1,551	554	295.3	235.1
MEAN	10.9	22.9	49.9	43.7	115	63.5	56.7	163	51.7	17.9	9.53	7.84
MAX	47	172	420	497	1,160	138	374	1,060	396	100	14	12
MIN	5.9	8.3	8.6	16	14	36	25	38	18	11	7.5	6.0
CFSM	0.26	0.53	1.17	1.02	2.68	1.48	1.32	3.81	1.21	0.42	0.22	0.18
IN.	0.29	0.60	1.34	1.18	2.79	1.71	1.48	4.39	1.35	0.48	0.26	0.20

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2003, BY WATER YEAR (WY)

MEAN	15.9	38.4	61.3	59.1	82.8	93.1	86.9	72.8	43.8	31.3	23.0	17.1
MAX	39.0	136	164	186	229	188	223	263	227	283	127	72.7
(WY)	(2002)	(1986)	(2002)	(1982)	(1985)	(1975)	(1983)	(1983)	(1979)	(1979)	(1979)	(1982)
MIN	3.35	5.51	4.84	0.81	26.1	21.2	19.4	12.5	11.0	6.02	6.83	5.00
(WY)	(1965)	(2000)	(1977)	(1977)	(1978)	(1981)	(2001)	(1965)	(1972)	(1966)	(1999)	(1972)

SUMMARY STATISTICS

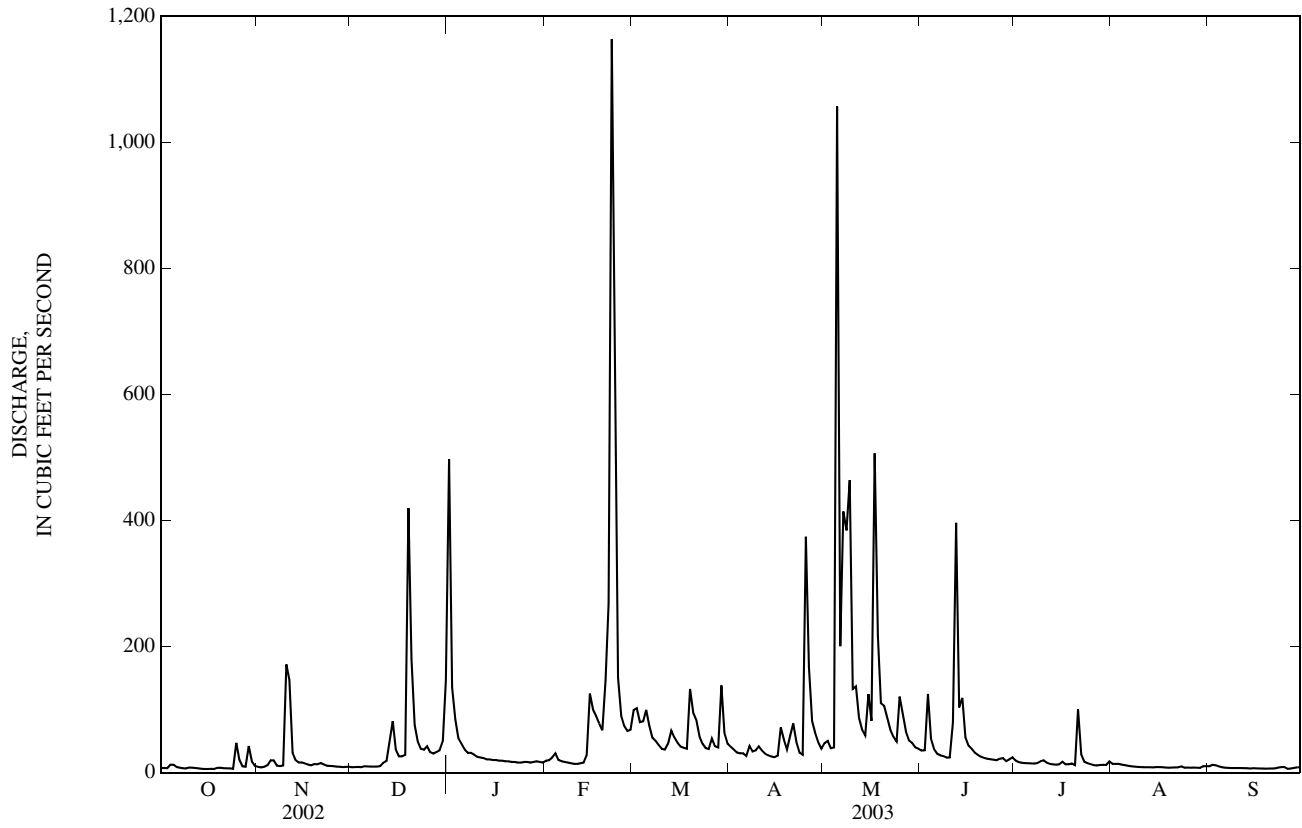
FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1965 - 2003

ANNUAL TOTAL	23,381.4	18,494.0	
ANNUAL MEAN	64.1	50.7	52.0
HIGHEST ANNUAL MEAN			118
LOWEST ANNUAL MEAN			25.3
HIGHEST DAILY MEAN	1,450	May 13	1,160
LOWEST DAILY MEAN	5.9	Oct 15	5.9
ANNUAL SEVEN-DAY MINIMUM	6.3	Oct 12	6.3
MAXIMUM PEAK FLOW			2,120
MAXIMUM PEAK STAGE			10.73
ANNUAL RUNOFF (CFSM)	1.50		1.18
ANNUAL RUNOFF (INCHES)	20.32		16.07
10 PERCENT EXCEEDS	139		100
50 PERCENT EXCEEDS	29		20
90 PERCENT EXCEEDS	7.5		7.6
			15.07
			16.49
			112
			22
			6.4

e Estimated



03376350 SOUTH FORK PATOKA RIVER NEAR SPURGEON, IN

Results for water-quality data collected for the South Fork Patoka River. The data were collected through a cooperative investigation with the Division of Reclamation of the Indiana Department of Natural Resources with oversight from the Patoka South Fork Watershed Steering Committee. The data show specific conductance and pH based upon measurements in the gage house with a continuous water-quality monitor. Data were collected every 15 minutes (referred to as instantaneous data) and these data were used to determine daily values. Data were collected during water years 1999 through 2002. Data were adjusted with respect to in-stream measurements following guidelines published in U.S. Geological Survey Water Resources Investigations Report 00-4252.

LOCATION.--Lat 38°17'49", long 87°15'37", in NW¹/₄ SW¹/₄ sec 36, T. 2 S., R. 8 W., Pike County, Hydrologic Unit 05120209, on the left bank, 150 ft upstream of the bridge on State Road 61, 0.5 mi north of Enos Corner and 3.1 mi north of Spurgeon, IN.

DRAINAGE AREA.--42.8 mi².

REMARKS.--Runoff affected by un-reclaimed surface mined lands.

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	3,580	3,330	2,750	808	1,850	---	1,680	3,270	1,590	3,310	3,600
2	---	---	3,240	2,240	1,100	1,960	---	2,000	2,240	1,260	3,360	---
3	---	3,360	3,110	1,440	1,310	2,050	---	2,220	2,450	1,670	3,400	3,490
4	---	3,390	3,230	1,910	1,490	2,230	---	2,520	2,750	1,940	3,400	3,520
5	---	3,540	3,200	2,170	1,630	2,250	---	2,270	2,270	2,220	3,410	3,550
6	---	3,550	3,230	2,270	1,810	1,270	---	1,060	2,560	---	3,420	3,570
7	---	3,540	1,950	2,300	1,220	1,630	---	1,530	2,540	---	3,440	3,590
8	---	3,550	2,270	2,330	1,400	1,780	---	---	2,700	2,340	3,370	3,640
9	---	3,590	2,510	1,760	1,540	775	---	---	2,850	---	3,420	3,710
10	---	3,160	2,670	2,120	1,640	1,280	---	---	---	2,570	3,440	---
11	---	3,080	2,790	2,270	1,700	1,540	---	2,320	3,060	2,700	3,450	3,730
12	---	3,250	2,820	2,140	1,110	1,710	---	2,410	3,120	2,760	3,450	---
13	---	3,350	2,860	1,060	1,410	1,870	---	2,540	3,040	2,880	3,490	---
14	---	3,410	2,900	1,290	1,610	1,660	---	2,680	3,040	2,940	3,510	3,710
15	---	3,420	2,890	1,540	1,690	1,300	---	2,760	---	2,980	3,530	3,720
16	---	3,420	3,030	1,640	1,720	1,020	---	2,880	3,140	3,000	3,540	3,720
17	---	3,470	3,000	1,470	1,580	1,140	---	2,940	3,230	3,020	3,550	3,720
18	---	3,520	3,030	1,080	1,700	1,510	---	2,770	3,290	2,970	3,570	3,720
19	---	3,510	3,010	1,460	1,770	1,700	---	2,840	3,290	3,050	3,580	3,720
20	---	3,140	3,030	1,590	1,920	1,810	---	2,980	3,300	3,100	3,610	3,700
21	---	3,170	2,030	1,240	2,000	1,960	---	3,070	3,320	3,140	3,610	3,680
22	3,270	3,290	1,460	741	2,060	2,130	---	2,950	3,340	3,140	3,620	3,700
23	3,350	3,350	1,920	797	1,950	1,350	---	3,000	3,310	3,170	3,620	3,700
24	3,410	3,380	---	1,160	1,790	1,280	2,930	2,990	3,130	3,110	3,620	3,710
25	3,450	3,310	2,210	1,360	1,860	---	3,050	3,120	3,170	3,130	3,630	3,710
26	3,450	2,440	2,320	1,510	2,110	---	2,450	3,190	3,040	3,180	3,640	3,700
27	---	2,900	2,360	1,580	2,090	---	1,510	3,280	2,900	3,240	3,630	3,700
28	3,510	3,090	2,390	1,660	1,500	---	752	3,330	1,570	3,260	3,610	3,690
29	3,530	3,190	2,370	1,770	---	---	990	3,340	1,740	3,220	3,600	3,650
30	3,550	3,200	2,460	1,880	---	---	1,390	3,290	2,200	3,220	3,600	3,640
31	3,560	---	2,550	1,210	---	---	---	3,200	---	3,280	3,600	---

MISCELLANEOUS WATER-QUALITY STATION ANALYSIS

03376350 SOUTH FORK PATOKA RIVER NEAR SPURGEON, IN—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3,660	3,620	3,660	2,980	---	1,380	2,540	2,960	---	2,340	3,010	1,950
2	3,660	3,570	3,710	3,000	---	1,520	2,330	2,960	---	2,490	3,080	2,110
3	3,690	3,570	3,680	1,560	---	1,640	---	2,980	---	2,560	3,150	2,180
4	3,700	3,600	3,620	---	---	1,680	2,140	2,910	---	2,600	---	2,320
5	3,700	3,650	3,550	1,910	---	1,790	2,280	2,870	---	2,440	3,060	2,420
6	3,680	3,670	---	2,370	---	1,870	2,380	2,930	---	2,480	2,720	2,490
7	3,690	3,680	3,540	2,560	---	1,980	2,450	2,990	---	2,570	2,000	2,530
8	3,630	3,750	3,560	2,610	---	2,170	1,450	2,990	---	2,660	1,360	2,620
9	3,170	---	---	2,710	---	2,240	1,750	3,020	---	2,730	---	2,580
10	3,050	3,990	2,920	2,830	---	2,280	1,960	---	2,990	2,790	---	2,530
11	3,240	4,000	3,000	3,050	---	2,160	2,090	---	2,960	2,810	2,180	2,530
12	3,310	---	2,790	3,130	---	1,940	---	3,080	3,220	2,750	2,350	1,620
13	3,310	4,120	2,380	3,150	---	2,050	2,290	3,030	2,820	2,760	2,500	1,840
14	3,260	4,150	2,230	3,390	---	2,130	2,470	3,100	3,040	2,790	2,630	2,090
15	3,300	---	2,230	3,460	---	2,220	2,460	3,170	3,140	---	2,720	2,260
16	3,340	---	2,360	3,490	---	1,490	2,570	3,200	3,140	2,910	2,800	2,390
17	3,380	---	2,680	3,650	---	1,300	2,490	3,230	1,090	2,950	2,890	---
18	3,420	---	2,850	3,680	---	1,520	2,540	3,240	1,240	2,950	2,020	2,540
19	3,430	3,700	2,920	---	---	1,340	2,510	3,220	1,470	2,270	2,500	2,600
20	3,470	3,590	2,840	---	---	1,070	2,560	3,250	1,720	2,570	2,740	2,640
21	3,500	3,550	2,820	---	---	1,360	2,570	3,280	1,670	2,950	2,880	2,530
22	3,500	3,560	3,020	---	---	1,580	2,800	3,300	1,830	3,080	2,990	2,610
23	3,500	3,570	3,050	---	---	1,760	2,790	2,950	2,020	3,160	2,260	2,640
24	3,530	3,700	2,960	---	---	1,910	2,670	2,880	2,070	3,250	909	2,530
25	3,540	3,580	3,220	---	---	---	2,570	3,090	2,190	3,300	1,400	1,520
26	3,540	3,630	3,160	---	---	---	2,650	3,160	2,100	3,340	1,670	1,310
27	3,530	3,660	3,180	---	---	---	2,730	3,090	1,590	3,360	805	1,690
28	3,520	3,640	3,180	---	---	---	2,790	3,110	1,690	3,100	1,260	1,910
29	3,540	---	3,110	---	---	---	2,880	3,160	1,950	2,860	1,510	2,090
30	3,570	3,680	3,030	---	---	2,380	2,930	3,230	2,180	2,780	1,660	2,180
31	3,590	---	3,000	---	---	2,510	---	---	---	3,010	1,820	---

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,330	---	2,060	2,500	1,360	1,560	2,250	2,930	2,710	3,270	2,850	3,310
2	2,400	3,130	2,130	2,580	1,490	1,660	2,310	2,980	2,810	3,340	2,910	3,320
3	2,500	3,120	2,190	2,660	1,720	1,740	1,830	3,060	2,910	3,350	2,990	3,340
4	2,570	3,110	2,200	2,730	1,680	1,440	1,820	3,090	2,950	3,320	3,070	3,330
5	2,610	3,130	2,190	2,780	1,620	1,240	1,930	3,130	2,960	3,360	3,120	3,370
6	2,620	3,140	2,210	2,830	1,670	1,460	2,010	3,180	3,000	3,440	3,170	3,390
7	2,730	3,140	2,260	2,900	1,860	1,570	2,080	3,260	3,080	3,440	3,180	3,380
8	2,790	3,010	2,330	2,920	1,710	1,650	---	3,340	3,130	3,430	3,200	2,990
9	2,820	2,870	2,430	2,940	1,220	1,710	2,240	3,310	3,170	2,430	3,260	---
10	2,860	1,880	2,410	2,880	1,060	1,860	---	3,360	3,210	2,730	3,310	---
11	2,880	1,520	1,600	2,860	1,290	1,930	2,300	3,390	3,300	2,950	3,340	---
12	2,860	1,700	1,050	2,840	1,390	1,960	2,340	3,450	3,330	3,080	3,350	2,890
13	2,890	1,880	1,270	2,810	---	1,580	2,460	3,460	3,360	3,200	3,360	2,990
14	2,950	1,890	1,260	2,800	1,290	---	2,510	3,480	3,400	3,220	3,380	2,990
15	3,020	1,750	1,330	2,830	862	1,560	2,360	3,520	3,440	3,250	3,380	3,040
16	3,000	1,990	773	2,130	713	1,290	2,390	3,540	3,460	3,290	3,390	3,180
17	2,950	2,150	1,030	1,620	737	1,530	2,470	3,560	3,500	3,370	3,390	3,200
18	2,970	2,230	1,240	1,660	788	1,670	2,530	3,580	3,530	3,380	3,350	3,230
19	3,000	2,330	1,380	1,550	776	1,770	2,580	3,570	3,540	3,380	3,060	3,050
20	3,000	2,450	1,590	1,700	1,090	1,830	2,610	3,510	3,600	3,390	3,350	2,820
21	3,030	2,520	1,740	1,900	1,530	---	2,660	3,300	3,650	3,500	3,500	2,950
22	3,050	2,580	---	1,900	1,560	1,990	2,720	2,970	3,640	3,500	3,410	3,090
23	3,070	2,610	1,880	1,930	1,650	2,040	2,740	2,810	3,540	3,280	3,370	3,160
24	3,060	2,620	1,950	1,920	1,660	2,110	2,630	2,770	3,300	3,220	3,060	3,180
25	3,070	1,350	2,030	2,060	964	2,160	2,730	2,620	3,010	3,170	2,800	3,070
26	3,110	1,310	2,100	2,120	1,230	2,240	2,810	2,520	2,940	3,250	2,890	3,160
27	3,150	1,570	2,160	2,020	1,350	2,290	2,860	2,550	3,050	3,270	3,000	3,290
28	3,100	1,680	2,230	2,100	1,430	2,300	2,860	2,620	3,180	3,050	3,160	3,310
29	3,090	1,780	2,290	2,050	---	2,310	2,900	2,630	3,220	3,050	3,200	3,330
30	3,070	1,940	2,350	1,050	---	2,320	2,960	2,610	3,240	2,560	3,260	3,340
31	3,120	---	2,420	1,220	---	2,300	---	2,630	---	2,770	3,360	---

03376350 SOUTH FORK PATOKA RIVER NEAR SPURGEON, IN—Continued

SPECIFIC CONDUCTANCE, WATER, UNFILTERED, MICROSIEMENS PER CENTIMETER AT 25 DEGREES CELSIUS
 WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
 DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3,370	2,420	1,090	---	---	---	943	---	2,840	3,110	3,490	3,520
2	3,380	2,480	1,310	---	---	---	1,180	---	2,820	3,140	3,530	3,520
3	3,390	2,560	1,430	---	---	---	1,460	---	---	3,170	3,510	3,520
4	3,410	2,670	1,540	---	---	---	1,700	---	---	3,180	3,510	3,520
5	3,330	2,670	---	---	---	---	1,850	---	2,910	3,210	3,510	3,550
6	3,200	2,800	---	---	---	---	1,960	---	2,940	3,230	3,520	3,550
7	3,240	2,840	---	---	---	---	2,060	---	2,960	3,250	3,570	3,560
8	3,340	2,820	---	---	---	---	2,170	---	2,990	3,260	3,600	3,560
9	3,400	2,840	---	---	---	---	2,260	---	3,030	3,280	3,620	3,570
10	3,390	2,870	---	---	---	---	2,330	---	3,050	3,310	3,630	3,560
11	3,140	2,920	---	---	---	---	2,380	---	3,080	3,330	3,630	3,590
12	2,200	2,910	---	---	---	---	2,320	---	3,090	3,350	3,620	3,590
13	2,420	2,930	---	---	---	---	2,020	---	3,010	3,360	3,600	3,590
14	1,670	2,960	---	---	---	---	1,690	---	2,970	3,370	3,520	3,620
15	1,570	2,970	---	---	---	---	1,400	---	2,980	3,380	3,520	3,630
16	1,950	2,980	---	---	---	---	1,300	---	2,990	3,380	3,550	3,640
17	2,040	3,010	---	---	---	---	1,220	---	2,990	3,390	3,560	3,630
18	2,200	3,000	---	---	---	---	---	---	2,990	3,390	3,560	3,600
19	2,330	3,030	---	---	---	---	---	---	2,990	3,370	3,550	3,550
20	2,430	2,960	---	---	---	---	---	---	2,950	3,360	3,530	3,320
21	2,530	2,950	---	---	---	---	---	---	2,890	3,350	3,530	3,250
22	2,600	3,000	---	---	---	---	---	2,750	2,850	3,350	3,520	3,160
23	---	3,100	---	---	---	---	---	2,780	2,830	3,370	3,550	3,100
24	---	3,050	---	---	---	---	---	2,840	2,840	3,370	3,550	3,170
25	1,060	2,030	---	---	---	---	---	2,850	2,880	3,380	3,570	3,270
26	1,300	1,960	---	---	---	---	---	2,850	2,930	3,390	3,590	3,350
27	1,590	1,400	---	---	---	---	---	2,860	2,980	3,390	3,600	3,410
28	1,810	1,040	---	---	---	---	---	2,880	3,030	3,400	3,600	3,460
29	2,000	793	---	---	---	1,270	---	2,890	3,060	3,420	3,590	3,500
30	2,150	829	---	---	---	750	---	2,890	3,090	3,440	3,560	3,530
31	2,360	---	---	---	---	830	---	---	---	3,450	3,550	---

MISCELLANEOUS WATER-QUALITY STATION ANALYSIS

03376350 SOUTH FORK PATOKA RIVER NEAR SPURGEON, IN—Continued

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS
WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEDIAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	7.0	7.0	7.0	6.4	6.7	---	6.8	7.3	6.4	7.2	6.9
2	---	---	6.9	6.9	6.5	6.8	---	6.8	6.8	6.4	7.2	---
3	---	6.4	6.9	6.7	6.6	6.7	---	6.9	7.0	6.5	7.0	7.2
4	---	6.6	6.7	6.8	6.6	6.7	---	7.2	7.1	6.7	7.3	7.1
5	---	7.2	6.6	6.8	6.7	6.7	---	6.7	6.7	6.8	7.3	7.1
6	---	7.2	6.6	6.8	6.8	6.5	---	6.6	7.0	6.8	7.1	7.1
7	---	7.1	6.3	6.8	6.4	6.7	---	7.0	6.9	---	7.3	7.1
8	---	7.1	6.6	6.8	6.6	6.6	---	---	7.0	6.8	7.1	7.0
9	---	7.1	6.8	6.8	6.6	6.2	---	---	7.1	---	7.3	6.9
10	---	7.2	6.8	6.8	6.6	6.5	---	---	---	6.8	7.2	---
11	---	7.1	6.8	7.0	6.4	6.5	---	7.0	7.1	6.9	7.3	7.0
12	---	7.2	6.8	6.6	6.2	6.4	---	7.0	7.2	6.9	7.3	---
13	---	7.2	6.6	6.2	6.6	6.4	---	7.0	6.8	6.9	7.2	---
14	---	7.2	6.6	6.6	6.7	6.4	---	7.1	7.0	6.9	7.4	7.1
15	---	7.2	7.0	6.8	6.7	6.3	---	7.1	---	6.9	7.3	7.1
16	---	7.1	6.9	6.7	6.6	6.2	---	7.2	6.9	7.0	7.2	7.2
17	---	7.1	6.8	6.6	6.3	6.1	---	7.2	7.1	7.0	7.2	7.1
18	---	7.2	6.8	6.3	6.6	6.2	---	7.0	7.1	6.9	7.2	7.1
19	---	7.1	6.7	6.7	6.7	6.3	---	7.2	7.0	7.0	7.2	7.0
20	---	6.7	6.5	6.7	6.8	6.2	---	7.2	7.0	7.0	7.2	7.0
21	---	6.8	6.6	6.4	6.8	6.2	---	7.3	7.1	7.0	7.3	6.9
22	7.0	7.0	6.8	6.3	6.8	6.2	---	7.3	7.1	6.9	7.2	7.0
23	7.0	7.0	7.0	6.6	6.8	6.0	---	7.3	7.0	7.0	7.2	7.0
24	7.0	7.0	---	6.7	6.6	6.4	7.2	7.2	6.7	7.0	7.2	7.0
25	7.0	7.1	6.9	6.6	6.7	---	7.1	7.2	7.0	7.0	7.2	7.0
26	7.0	6.4	7.0	6.6	6.7	---	6.8	7.3	7.1	7.1	7.0	7.0
27	---	6.9	6.9	6.6	6.7	---	6.8	7.3	6.8	7.1	6.6	7.0
28	7.0	7.0	6.9	6.6	6.5	---	6.7	7.3	6.5	7.0	6.8	7.0
29	7.0	7.0	6.8	6.8	---	---	6.6	7.3	6.7	7.0	6.9	6.9
30	7.0	7.0	6.8	6.8	---	---	6.8	7.3	6.8	7.3	7.0	6.9
31	7.0	---	7.0	6.5	---	---	---	7.2	---	7.3	7.0	---

PH, WATER, UNFILTERED, FIELD, STANDARD UNITS
WATER YEAR OCTOBER 1999 TO SEPTEMBER 2000
DAILY MEDIAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.0	6.9	7.0	6.8	---	6.6	7.2	7.1	7.3	7.2	7.1	6.5
2	6.9	6.9	6.9	6.7	---	6.6	6.9	7.1	7.2	7.3	7.2	6.5
3	7.0	6.8	6.9	6.7	---	6.8	---	7.2	7.2	7.3	7.2	6.6
4	7.0	6.9	6.7	---	---	6.6	6.7	7.1	7.2	7.3	---	6.6
5	7.0	6.8	6.8	6.6	---	6.7	6.9	7.2	7.2	7.1	7.2	6.6
6	6.9	6.8	---	6.6	---	6.7	6.9	7.2	7.3	7.3	7.0	6.6
7	7.0	6.6	7.0	6.6	---	6.8	6.9	7.2	7.2	7.3	6.7	6.6
8	6.9	6.8	7.0	6.6	---	6.8	6.8	7.2	7.3	7.3	6.3	6.5
9	6.6	---	---	6.6	---	6.6	6.9	7.3	7.5	7.3	---	6.5
10	6.6	7.2	6.0	6.6	---	6.7	6.9	7.0	7.6	7.4	---	6.4
11	6.9	7.1	6.6	6.8	---	6.9	7.0	7.0	7.2	7.3	7.0	6.3
12	6.9	---	6.5	6.7	---	6.7	---	7.1	7.6	7.3	7.0	6.0
13	7.0	7.1	6.0	6.6	---	6.8	7.1	7.0	7.2	7.4	7.1	6.1
14	7.2	7.2	6.1	6.6	---	6.9	6.9	7.3	7.6	7.3	7.1	6.1
15	7.2	7.2	6.3	6.9	---	6.9	7.1	7.2	7.5	---	7.1	6.2
16	7.0	7.2	6.4	6.8	---	6.8	7.1	7.3	7.6	7.3	7.2	6.2
17	7.1	7.5	6.6	6.9	---	6.9	6.9	7.3	6.8	7.3	7.2	---
18	7.2	7.4	6.8	6.6	---	7.0	7.0	7.4	7.0	7.3	6.6	6.1
19	7.2	7.0	6.8	6.7	---	6.9	7.1	7.3	7.0	7.0	7.0	6.1
20	7.2	6.4	6.6	6.3	---	6.9	7.1	7.4	7.1	7.2	7.1	6.1
21	7.1	6.7	6.7	6.3	---	7.1	7.0	7.4	7.0	7.2	7.1	5.9
22	7.1	6.9	6.8	6.2	---	7.2	7.2	7.4	7.1	7.2	7.0	6.0
23	7.0	6.9	6.8	6.2	---	7.3	7.2	7.0	7.2	7.2	6.9	6.0
24	7.2	7.0	6.8	---	---	7.3	7.0	7.3	6.9	7.2	6.4	5.9
25	7.1	7.0	6.8	---	---	7.3	7.0	7.4	7.1	7.2	6.5	6.0
26	6.9	7.0	6.7	---	---	7.1	7.1	7.5	7.2	7.3	6.6	6.3
27	6.9	7.0	6.8	---	---	7.1	7.2	7.2	6.9	7.2	6.3	6.4
28	6.9	7.0	6.9	---	---	7.2	7.1	7.5	7.0	7.1	6.4	6.5
29	7.0	---	6.8	---	---	---	7.2	7.5	7.2	7.1	6.4	6.5
30	6.9	7.0	6.7	---	---	7.2	7.2	7.5	7.2	6.7	6.5	6.6
31	6.9	---	6.7	---	---	7.2	---	7.6	---	7.1	6.6	---

03376350 SOUTH FORK PATOKA RIVER NEAR SPURGEON, IN—Continued

 PH, WATER, UNFILTERED, FIELD, STANDARD UNITS
 WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
 DAILY MEDIAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.6	---	7.0	6.4	6.8	6.8	7.0	7.4	7.6	7.3	7.2	7.4
2	6.6	6.7	7.0	6.4	6.8	6.9	7.0	7.4	7.6	7.3	7.2	7.3
3	6.6	6.7	7.0	6.4	6.9	6.8	6.7	7.4	7.6	7.3	7.2	7.3
4	6.6	6.7	7.1	6.5	6.9	6.8	6.9	7.5	7.5	7.2	7.2	7.3
5	6.6	6.6	7.1	6.5	6.9	6.9	7.0	7.6	7.5	7.2	7.3	7.3
6	6.6	6.7	7.1	6.5	6.9	6.8	7.0	7.5	7.4	7.3	7.2	7.3
7	6.6	6.6	7.1	6.5	6.9	6.8	7.0	7.6	7.3	7.3	7.3	7.3
8	6.7	6.7	7.1	6.6	6.7	6.9	---	7.6	7.4	7.3	7.4	7.4
9	6.6	6.7	7.1	6.6	6.6	6.9	7.0	7.7	7.4	6.7	7.4	---
10	6.7	6.8	7.1	6.6	6.8	6.8	---	7.7	7.4	6.9	7.4	---
11	6.8	6.8	7.1	6.6	6.9	6.9	6.9	7.7	7.3	7.0	7.4	---
12	6.8	6.8	6.7	6.6	6.9	6.9	6.9	7.8	7.3	7.2	7.4	7.3
13	6.8	6.8	6.7	6.6	---	6.9	7.0	7.8	7.3	7.2	7.3	7.3
14	6.8	6.8	6.6	6.6	6.7	---	7.0	7.7	7.3	7.1	7.3	7.3
15	6.8	7.1	6.7	6.6	6.6	6.8	6.9	7.6	7.2	7.0	7.2	7.4
16	6.7	7.1	6.5	6.8	6.6	6.7	7.0	7.6	7.3	7.0	7.2	7.4
17	6.7	7.1	6.6	6.9	6.6	6.7	7.0	7.6	7.2	7.2	7.2	7.3
18	6.6	7.1	6.6	6.9	6.6	6.8	7.0	7.5	7.2	7.1	7.2	7.2
19	6.7	7.1	6.7	6.8	6.7	6.8	7.1	7.6	7.2	7.0	6.6	7.3
20	6.7	7.1	6.6	6.9	6.7	6.8	7.2	7.6	7.3	7.0	7.1	7.3
21	6.8	7.1	6.4	6.9	6.7	---	7.2	7.7	7.3	7.0	7.2	7.2
22	6.7	7.1	---	6.9	6.8	6.9	7.2	7.7	7.3	7.1	7.2	7.1
23	6.7	7.1	6.4	7.0	6.9	6.9	7.3	7.7	7.2	7.1	7.2	7.2
24	6.7	7.1	6.3	7.0	6.9	6.9	7.0	7.7	7.2	7.1	7.2	7.2
25	6.7	6.6	6.3	7.0	6.8	6.9	7.1	7.8	7.2	7.2	6.9	7.3
26	6.7	6.6	6.3	7.0	6.8	6.9	7.1	7.7	7.2	7.3	7.0	7.3
27	6.7	6.8	6.4	7.0	6.8	7.0	7.2	7.7	7.3	7.3	7.2	7.3
28	6.8	6.8	6.4	7.0	6.8	7.0	7.3	7.7	7.3	7.3	7.2	7.3
29	6.8	6.9	6.4	7.0	---	7.0	7.4	7.6	7.3	7.2	7.2	7.3
30	6.8	7.0	6.4	6.6	---	7.0	7.4	7.5	7.3	7.3	7.2	7.2
31	6.7	---	6.4	6.7	---	7.0	---	7.6	---	7.2	7.4	---

 PH, WATER, UNFILTERED, FIELD, STANDARD UNITS
 WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
 DAILY MEDIAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.2	7.1	7.1	---	---	---	7.1	---	6.9	7.1	7.1	7.6
2	7.2	7.0	7.0	---	---	---	7.1	---	6.9	7.1	7.1	7.6
3	7.2	7.1	7.0	---	---	---	7.1	---	---	7.1	7.3	7.6
4	7.3	7.1	7.0	---	---	---	7.1	---	---	7.1	7.3	7.5
5	7.3	7.1	---	---	---	---	7.1	---	7.0	7.1	7.4	7.5
6	7.3	7.1	---	---	---	---	7.1	---	7.1	7.1	7.5	7.4
7	7.2	7.0	---	---	---	---	7.1	---	7.1	7.2	7.6	7.3
8	7.2	7.0	---	---	---	---	7.1	---	7.1	7.1	7.6	7.3
9	7.2	7.1	---	---	---	---	7.1	---	7.0	7.1	7.6	7.4
10	7.1	7.1	---	---	---	---	7.1	---	7.0	7.1	7.6	7.4
11	7.1	7.1	---	---	---	---	7.1	---	7.0	7.2	7.6	7.4
12	7.1	7.1	---	---	---	---	7.1	---	6.8	7.2	7.5	7.5
13	7.1	7.1	---	---	---	---	7.0	---	6.9	7.2	7.5	7.5
14	7.1	7.1	---	---	---	---	7.1	---	7.1	7.2	7.4	7.3
15	7.1	7.0	---	---	---	---	7.1	---	7.1	7.2	7.5	7.3
16	7.1	7.0	---	---	---	---	7.0	---	7.1	7.2	7.5	7.3
17	7.2	7.0	---	---	---	---	7.0	---	7.1	7.2	7.5	7.4
18	7.1	7.0	---	---	---	---	---	---	7.1	7.2	7.5	7.4
19	7.1	7.0	---	---	---	---	---	---	7.1	7.2	7.5	7.4
20	7.1	7.1	---	---	---	---	---	---	7.1	7.2	7.4	7.3
21	7.0	7.1	---	---	---	---	---	---	7.1	7.1	7.4	7.4
22	7.0	7.1	---	---	---	---	---	6.6	7.1	7.2	7.4	7.4
23	---	7.0	---	---	---	---	---	6.6	7.1	7.2	7.4	7.5
24	---	6.9	---	---	---	---	---	6.7	7.1	7.2	7.5	7.5
25	7.2	7.0	---	---	---	---	---	6.8	7.1	7.2	7.5	7.5
26	7.2	7.0	---	---	---	---	---	6.9	7.1	7.2	7.5	7.5
27	7.2	7.0	---	---	---	---	---	6.9	7.1	7.2	7.5	7.5
28	7.2	7.2	---	---	---	---	---	6.9	7.1	7.2	7.5	7.4
29	7.2	7.1	---	---	---	6.8	---	6.9	7.1	7.2	7.6	7.4
30	7.1	7.1	---	---	---	7.0	---	6.9	7.1	7.2	7.6	7.4
31	7.1	---	---	---	---	7.1	---	---	---	7.2	7.6	---

MISCELLANEOUS WATER-QUALITY STATION ANALYSIS

03376350 SOUTH FORK PATOKA RIVER NEAR SPURGEON, IN

Results for suspended-sediment data collected for the South Fork Patoka River. The data were collected through a cooperative investigation with the Division of Reclamation of the Indiana Department of Natural Resources with oversight from the Patoka South Fork Watershed Steering Committee. Samples were collected by a automated sampler located in the gage house. No data adjustments were made with respect to in-stream suspended-sediment data.

LOCATION.--Lat 38°17'49", long 87°15'37", in NW¹/₄ SW¹/₄ sec. 36, T.2 S., R.8 W, Pike County, Hydrologic Unit 05120209, on the left bank, 150 ft upstream of the bridge on State Road 61, 0.5 mi north of Enos Corner, and 3.1 mi north of Spurgeon, IN.

DRAINAGE AREA.--42.8 mi².

REMARKS.--Runoff affected by un-reclaimed surface mined lands.

[Date is in year-month-day; time is in military notation; mg/L, milligrams per liter]

Date	Time	SUSPENDED SEDIMENT (mg/L)	Date	Time	SUSPENDED SEDIMENT (mg/L)	Date	Time	SUSPENDED SEDIMENT (mg/L)
1998-10-21	0850	58	1999-01-26	0630	45	1999-04-12	1500	40
1998-10-21	0853	43	1999-01-26	1030	43	1999-04-13	1500	46
1998-10-21	0856	38	1999-01-26	1430	41	1999-04-14	1500	47
1998-11-04	1400	35	1999-02-25	1220	49	1999-04-15	1500	61
1998-12-21	1300	197	1999-02-25	1221	52	1999-04-16	1500	62
1998-12-22	1300	245	1999-02-25	1222	55	1999-04-17	1500	58
1999-01-21	1355	164	1999-02-25	1223	44	1999-04-23	1300	37
1999-01-21	1400	46	1999-02-25	1224	53	1999-04-24	1300	39
1999-01-21	1405	105	1999-02-25	1225	56	1999-04-25	1300	45
1999-01-21	1545	7.7	1999-02-25	1300	62	1999-04-26	1300	149
1999-01-21	1548	39	1999-02-26	1300	51	1999-04-27	1300	869
1999-01-21	1551	93	1999-02-27	1300	66	1999-04-28	1300	2380
1999-01-21	1700	48	1999-02-28	1300	70	1999-04-29	1300	142
1999-01-22	0500	130	1999-03-01	1300	56	1999-04-30	1300	99
1999-01-22	1200	330	1999-03-02	1300	48	1999-05-03	1300	49
1999-01-22	1230	308	1999-03-03	1300	58	1999-05-04	1300	47
1999-01-22	1235	350	1999-03-04	1300	49	1999-05-05	1300	62
1999-01-22	1240	343	1999-03-05	1300	55	1999-05-06	1300	111
1999-01-22	1245	303	1999-03-06	1300	118	1999-05-07	1300	173
1999-01-22	1250	292	1999-03-07	1300	74	1999-05-08	1300	35
1999-01-22	1255	240	1999-03-08	1300	53	1999-05-09	1300	36
1999-01-22	1300	228	1999-03-09	1300	265	1999-05-10	1300	42
1999-01-22	1305	236	1999-03-10	1300	175	1999-05-11	1300	33
1999-01-22	1310	290	1999-03-11	1300	52	1999-05-12	1130	31
1999-01-22	1315	133	1999-03-12	1300	49	1999-05-12	1405	28
1999-01-22	1320	234	1999-03-13	1300	53	1999-05-13	0800	24
1999-01-22	1430	326	1999-03-14	1300	88	1999-05-14	0800	24
1999-01-22	1500	414	1999-03-15	1300	29	1999-05-15	0800	31
1999-01-22	1530	522	1999-03-16	1300	57	1999-05-16	0800	63
1999-01-22	1600	600	1999-03-17	1300	108	1999-05-17	0800	56
1999-01-22	1630	1360	1999-03-18	1300	56	1999-05-18	0800	50
1999-01-22	1700	2210	1999-03-19	1300	44	1999-05-19	0800	36
1999-01-22	1730	2590	1999-03-20	1300	24	1999-05-20	0800	37
1999-01-22	1800	3080	1999-03-25	1411	62	1999-05-21	0800	211
1999-01-22	1830	3290	1999-03-25	1414	19	1999-05-22	0800	58
1999-01-22	2230	2540	1999-03-25	1417	40	1999-05-23	0800	49
1999-01-23	0230	1230	1999-03-25	1420	32	1999-05-24	0800	30
1999-01-23	0630	653	1999-03-25	1500	42	1999-05-25	0800	46
1999-01-23	1030	374	1999-03-26	1500	44	1999-05-26	0800	61
1999-01-23	1430	283	1999-03-27	1500	46	1999-05-27	0800	48
1999-01-23	1830	185	1999-03-28	1500	48	1999-05-28	0800	69
1999-01-23	2230	148	1999-03-29	1500	49	1999-05-29	0800	62
1999-01-24	0230	97	1999-03-30	1500	61	1999-05-30	0800	49
1999-01-24	0630	83	1999-03-31	1500	50	1999-05-31	0800	37
1999-01-24	1030	69	1999-04-01	1500	54	1999-06-01	0800	46
1999-01-24	1430	63	1999-04-02	1500	52	1999-06-02	0800	851
1999-01-24	1830	61	1999-04-03	1500	173	1999-06-02	1140	137
1999-01-24	2230	58	1999-04-04	1500	83	1999-06-02	1155	127
1999-01-25	0230	56	1999-04-05	1500	43	1999-06-02	1210	109
1999-01-25	0630	51	1999-04-06	1500	71	1999-06-02	1225	107
1999-01-25	1030	51	1999-04-07	1500	49	1999-06-02	1305	89
1999-01-25	1430	50	1999-04-08	1500	45	1999-06-03	0605	26
1999-01-25	1830	46	1999-04-09	1500	76	1999-06-04	0605	32
1999-01-25	2230	50	1999-04-10	1500	45	1999-06-05	0650	99
1999-01-26	0230	48	1999-04-11	1500	43	1999-06-06	0605	63

MISCELLANEOUS WATER-QUALITY STATION ANALYSIS--Continued

03376350 SOUTH FORK PATOKA RIVER NEAR SPURGEON, IN

Results for suspended-sediment data collected for the South Fork Patoka River. The data were collected through a cooperative investigation with the Division of Reclamation of the Indiana Department of Natural Resources with oversight from the Patoka South Fork Watershed Steering Committee. Samples were collected by a automated sampler located in the gage house. No data adjustments were made with respect to in-stream suspended-sediment data.

LOCATION.--Lat 38°17'49", long 87°15'37", in NW¹/₄ SW¹/₄ sec. 36, T.2 S., R.8 W, Pike County, Hydrologic Unit 05120209, on the left bank, 150 ft upstream of the bridge on State Road 61, 0.5 mi north of Enos Corner, and 3.1 mi north of Spurgeon, IN.

DRAINAGE AREA.--42.8 mi².

REMARKS.--Runoff affected by un-reclaimed surface mined lands.

[Date is in year-month-day; time is in military notation; mg/L, milligrams per liter]

Date	Time	SUSPENDED SEDIMENT (mg/L)	Date	Time	SUSPENDED SEDIMENT (mg/L)	Date	Time	SUSPENDED SEDIMENT (mg/L)
1999-06-07	0605	46	1999-10-08	1220	21	1999-12-12	1200	79
1999-06-08	0605	53	1999-10-10	0020	120	1999-12-13	1200	41
1999-06-09	0605	21	1999-10-11	1220	33	1999-12-14	1200	43
1999-06-10	0605	45	1999-10-13	0020	31	1999-12-15	1200	37
1999-06-11	0605	30	1999-10-15	0037	27	1999-12-16	1200	35
1999-06-12	0605	33	1999-10-16	1237	23	1999-12-17	1200	37
1999-06-13	0605	49	1999-10-18	0037	18	1999-12-18	1200	32
1999-06-14	0605	43	1999-10-19	1237	25	1999-12-19	1200	35
1999-06-15	0605	37	1999-10-21	0037	23	1999-12-20	1200	50
1999-06-16	0705	42	1999-10-22	1237	24	1999-12-21	1200	32
1999-06-17	0705	60	1999-10-24	0037	19	1999-12-22	1200	32
1999-06-18	0705	40	1999-10-25	1237	52	1999-12-23	1200	38
1999-06-19	0705	55	1999-10-27	0037	26	1999-12-24	1200	35
1999-06-20	0705	60	1999-10-28	1237	19	1999-12-25	1200	49
1999-06-21	0705	48	1999-10-30	0037	17	1999-12-26	1200	35
1999-06-22	0705	48	1999-10-31	1237	18	1999-12-27	1200	40
1999-06-23	0705	58	1999-11-02	0037	11	1999-12-28	1200	62
1999-06-24	0705	47	1999-11-03	1237	40	1999-12-29	1200	54
1999-06-25	0705	20	1999-11-05	0037	72	1999-12-30	1200	35
1999-06-26	0705	42	1999-11-06	1237	37	2000-01-04	1519	58
1999-06-27	0705	44	1999-11-08	0037	25	2000-01-05	1200	63
1999-06-28	0705	50	1999-11-09	1200	7.0	2000-01-06	1200	57
1999-06-29	0705	101	1999-11-10	1200	16	2000-01-07	1200	68
1999-06-30	0705	63	1999-11-11	1200	6.6	2000-01-08	1200	70
1999-07-01	0705	118	1999-11-12	1200	10	2000-01-09	1200	67
1999-07-02	0705	165	1999-11-13	1200	39	2000-01-10	1200	54
1999-07-03	0705	202	1999-11-14	1200	24	2000-01-11	1200	41
1999-07-04	0705	41	1999-11-15	1200	24	2000-01-12	1200	47
1999-07-05	0705	31	1999-11-16	1200	36	2000-01-13	1200	55
1999-07-06	0705	14	1999-11-17	1200	28	2000-01-14	1200	57
1999-07-07	0705	14	1999-11-18	1200	36	2000-01-15	1200	54
1999-08-26	1250	46	1999-11-18	1855	24	2000-01-16	1200	51
1999-08-27	1250	45	1999-11-19	1855	38	2000-01-17	1200	44
1999-08-28	1250	25	1999-11-20	1855	44	2000-01-18	1200	68
1999-08-29	1250	43	1999-11-21	1855	27	2000-01-19	1200	55
1999-09-08	1220	26	1999-11-22	1855	27	2000-01-20	1200	58
1999-09-10	0020	23	1999-11-23	1855	29	2000-01-21	1200	76
1999-09-11	1220	36	1999-11-24	1855	24	2000-01-22	1200	63
1999-09-13	0020	32	1999-11-25	1855	36	2000-01-23	1200	52
1999-09-14	1220	32	1999-11-26	1855	52	2000-01-24	1200	50
1999-09-16	0020	60	1999-11-27	1855	61	2000-01-25	1200	71
1999-09-17	1220	24	1999-11-28	1855	43	2000-01-26	1200	67
1999-09-19	0020	35	1999-11-29	1855	68	2000-01-27	1200	83
1999-09-20	1220	41	1999-11-30	1855	49	2000-01-28	1200	87
1999-09-22	0020	21	1999-12-01	1855	68	2000-01-29	1200	78
1999-09-23	1220	28	1999-12-02	1855	44	2000-01-30	1200	54
1999-09-25	0020	19	1999-12-03	1855	55	2000-01-31	1200	52
1999-09-26	1220	38	1999-12-04	1855	47	2000-02-01	1200	77
1999-09-28	0020	18	1999-12-05	1855	38	2000-02-02	1200	68
1999-09-29	1220	19	1999-12-06	1350	33	2000-02-03	1200	74
1999-10-01	0020	20	1999-12-07	1200	61	2000-02-04	1200	67
1999-10-02	1220	16	1999-12-08	1200	47	2000-02-05	1200	63
1999-10-04	0020	14	1999-12-09	1200	40	2000-02-06	1200	69
1999-10-05	1220	18	1999-12-10	1200	112	2000-02-07	1200	55
1999-10-07	0020	21	1999-12-11	1200	42	2000-02-08	1200	89

MISCELLANEOUS WATER-QUALITY STATION ANALYSIS--Continued

03376350 SOUTH FORK PATOKA RIVER NEAR SPURGEON, IN

Results for suspended-sediment data collected for the South Fork Patoka River. The data were collected through a cooperative investigation with the Division of Reclamation of the Indiana Department of Natural Resources with oversight from the Patoka South Fork Watershed Steering Committee. Samples were collected by a automated sampler located in the gage house. No data adjustments were made with respect to in-stream suspended-sediment data.

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DRAINAGE AREA.--42.8 mi².

REMARKS.--Runoff affected by un-reclaimed surface mined lands.

[Date is in year-month-day; time is in military notation; mg/L, milligrams per liter]

Date	Time	SUSPENDED SEDIMENT (mg/L)	Date	Time	SUSPENDED SEDIMENT (mg/L)	Date	Time	SUSPENDED SEDIMENT (mg/L)
2000-02-09	1200	74	2000-04-16	0700	37	2000-06-16	1800	5.3
2000-02-10	1200	69	2000-04-17	0700	50	2000-06-17	1800	126
2000-02-11	1200	62	2000-04-18	0700	39	2000-06-18	1800	36
2000-02-12	1200	51	2000-04-19	0700	42	2000-06-19	1800	3.4
2000-02-13	1200	71	2000-04-20	0700	38	2000-06-20	1800	18
2000-02-14	1200	171	2000-04-21	0700	32	2000-06-21	1800	9.4
2000-02-15	1200	51	2000-04-22	0700	54	2000-06-22	1800	20
2000-02-16	1200	40	2000-04-29	0700	44	2000-06-23	1800	14
2000-02-17	1200	45	2000-04-30	0700	42	2000-06-24	1800	28
2000-02-29	1500	1230	2000-05-01	0700	40	2000-06-25	1800	19
2000-03-01	1500	83	2000-05-02	0700	46	2000-06-26	1800	131
2000-03-02	1500	46	2000-05-03	0700	43	2000-06-27	1800	46
2000-03-03	1500	52	2000-05-04	0700	42	2000-06-28	1800	31
2000-03-04	1500	51	2000-05-05	0700	32	2000-06-29	1800	19
2000-03-05	1500	47	2000-05-06	0700	30	2000-06-30	1800	20
2000-03-06	1500	50	2000-05-07	0700	31	2000-07-01	1800	24
2000-03-07	1500	52	2000-05-08	0700	43	2000-07-02	1800	22
2000-03-08	1500	44	2000-05-09	0700	26	2000-07-03	1800	22
2000-03-10	1200	41	2000-05-10	0700	47	2000-07-04	1800	12
2000-03-11	1200	54	2000-05-11	0700	24	2000-07-05	1800	19
2000-03-12	1200	54	2000-05-12	1200	18	2000-07-06	1800	17
2000-03-13	1200	50	2000-05-13	1200	26	2000-07-07	1800	11
2000-03-14	1200	48	2000-05-14	1200	15	2000-07-08	1800	9.1
2000-03-15	1200	41	2000-05-15	1200	27	2000-07-09	1800	9.7
2000-03-16	1200	568	2000-05-16	1200	32	2000-07-10	1800	12
2000-03-17	1200	595	2000-05-17	1200	33	2000-07-11	1800	21
2000-03-18	1200	48	2000-05-18	1200	33	2000-07-12	1800	15
2000-03-19	1200	202	2000-05-19	1200	19	2000-07-13	1800	12
2000-03-20	1200	70	2000-05-20	1200	33	2000-07-14	1800	9.8
2000-03-21	1200	26	2000-05-21	1200	48	2000-07-15	1800	21
2000-03-22	1200	40	2000-05-22	1200	40	2000-07-16	1800	16
2000-03-23	1200	36	2000-05-23	1200	38	2000-07-17	1800	21
2000-03-24	1200	40	2000-05-24	1200	39	2000-07-18	1800	21
2000-03-25	1200	42	2000-05-25	1200	34	2000-07-19	1300	26
2000-03-26	1200	37	2000-05-26	1200	47	2000-07-20	1200	24
2000-03-27	1200	44	2000-05-27	1200	20	2000-07-21	1200	20
2000-03-28	1200	45	2000-05-28	1200	31	2000-07-22	1200	18
2000-03-29	1200	31	2000-05-29	1200	47	2000-07-23	1200	34
2000-03-30	0700	29	2000-05-30	1200	14	2000-07-24	1200	53
2000-03-31	0700	28	2000-05-31	1200	30	2000-07-25	1200	33
2000-04-01	0700	38	2000-06-01	1200	23	2000-07-26	1200	22
2000-04-02	0700	34	2000-06-02	1200	40	2000-07-27	1200	38
2000-04-03	0700	40	2000-06-03	1200	343	2000-07-28	1200	42
2000-04-04	0700	43	2000-06-04	1200	20	2000-07-29	1200	19
2000-04-05	0700	41	2000-06-05	1200	37	2000-07-30	1200	14
2000-04-06	0700	43	2000-06-06	1200	18	2000-07-31	1200	11
2000-04-07	0700	45	2000-06-07	1200	23	2000-08-01	1200	9.0
2000-04-08	0700	84	2000-06-08	1200	15	2000-08-02	1200	6.8
2000-04-09	0700	37	2000-06-09	1200	26	2000-08-03	1200	19
2000-04-10	0700	22	2000-06-10	1800	53	2000-08-04	1200	18
2000-04-11	0700	36	2000-06-11	1800	25	2000-08-05	1200	7.1
2000-04-12	0700	40	2000-06-12	1800	15	2000-08-06	1200	11
2000-04-13	0700	33	2000-06-13	1800	2.4	2000-08-07	1200	411
2000-04-14	0700	37	2000-06-14	1800	26	2000-08-08	1200	122
2000-04-15	0700	39	2000-06-15	1800	44	2000-08-08	1710	264

MISCELLANEOUS WATER-QUALITY STATION ANALYSIS--Continued

03376350 SOUTH FORK PATOKA RIVER NEAR SPURGEON, IN

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REMARKS.--Runoff affected by un-reclaimed surface mined lands.

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Date	Time	SUSPENDED SEDIMENT (mg/L)	Date	Time	SUSPENDED SEDIMENT (mg/L)	Date	Time	SUSPENDED SEDIMENT (mg/L)
2000-08-08	1810	136	2000-08-24	1530	65	2000-10-04	1600	40
2000-08-08	1910	99	2000-08-24	1630	54	2000-10-05	1600	24
2000-08-08	2010	80	2000-08-25	1630	32	2000-10-06	1600	28
2000-08-08	2110	59	2000-08-26	1630	5.9	2000-10-07	1600	49
2000-08-08	2210	50	2000-08-27	1630	255	2000-10-08	1600	37
2000-08-08	2310	51	2000-08-28	1630	42	2000-10-09	1600	49
2000-08-09	0010	48	2000-08-29	1630	12	2000-10-10	1600	45
2000-08-09	0110	32	2000-08-30	1630	13	2000-10-11	1600	62
2000-08-09	0210	49	2000-08-31	1630	16	2000-10-12	1600	57
2000-08-09	0310	24	2000-09-01	1630	17	2000-10-13	1600	52
2000-08-09	0410	23	2000-09-02	1630	16	2000-10-14	1600	38
2000-08-09	0510	19	2000-09-03	1630	13	2000-10-15	1600	43
2000-08-09	0610	24	2000-09-04	1630	18	2000-10-16	1600	25
2000-08-09	0710	20	2000-09-05	1630	12	2000-10-17	1600	39
2000-08-09	0810	22	2000-09-06	1630	28	2000-10-18	1600	30
2000-08-09	1200	18	2000-09-07	1630	30	2000-10-19	1600	24
2000-08-10	1200	10	2000-09-08	1630	17	2000-10-20	1600	19
2000-08-11	1200	12	2000-09-09	1630	25	2000-10-21	1600	28
2000-08-12	1200	15	2000-09-10	1630	25	2000-10-22	1600	26
2000-08-13	1200	10	2000-09-11	1630	33	2000-10-23	1600	11
2000-08-14	1200	13	2000-09-12	1630	42	2000-10-24	1600	5.8
2000-08-15	1200	13	2000-09-13	1630	18	2000-10-25	1600	14
2000-08-16	1200	14	2000-09-14	1630	18	2000-10-26	1600	26
2000-08-17	1200	12	2000-09-15	1630	21	2000-10-27	1600	20
2000-08-18	1800	10	2000-09-16	1630	22	2000-10-28	1600	19
2000-08-19	1800	25	2000-09-17	1630	23	2000-10-29	1600	16
2000-08-20	1800	41	2000-09-18	1630	21	2000-10-30	1600	19
2000-08-21	1800	56	2000-09-19	1630	22	2000-10-31	1600	23
2000-08-22	1800	18	2000-09-20	1630	29	2000-11-01	1600	21
2000-08-23	1200	79	2000-09-21	1630	25	2000-11-02	1600	13
2000-08-23	1300	362	2000-09-22	1630	17	2000-11-03	1600	15
2000-08-23	1400	377	2000-09-23	1630	24	2000-11-04	1600	36
2000-08-23	1500	318	2000-09-24	1630	28	2000-11-05	1600	19
2000-08-23	1600	186	2000-09-25	1100	781	2000-11-06	1600	29
2000-08-23	1700	122	2000-09-25	1130	868	2000-11-07	1600	17
2000-08-23	1800	91	2000-09-25	1200	960	2000-11-08	1600	18
2000-08-23	1900	72	2000-09-25	1230	765	2000-11-09	1200	53
2000-08-23	2000	56	2000-09-25	1240	770	2000-11-10	1200	47
2000-08-23	2100	50	2000-09-25	1250	639	2000-11-11	1200	41
2000-08-23	2200	54	2000-09-25	1300	566	2000-11-12	1200	44
2000-08-23	2300	68	2000-09-25	1415	314	2000-11-13	1200	51
2000-08-24	0000	502	2000-09-25	1420	239	2000-11-14	1200	25
2000-08-24	0100	948	2000-09-25	1425	225	2000-11-15	1200	21
2000-08-24	0200	622	2000-09-25	1430	202	2000-11-16	1200	27
2000-08-24	0300	506	2000-09-25	1435	186	2000-11-17	1200	25
2000-08-24	0400	859	2000-09-25	1440	189	2000-11-18	1200	31
2000-08-24	0500	551	2000-09-25	1600	105	2000-11-19	1200	41
2000-08-24	0600	489	2000-09-26	1600	13	2000-11-20	1200	40
2000-08-24	0830	203	2000-09-27	1600	22	2000-11-21	1200	52
2000-08-24	0930	177	2000-09-28	1600	36	2000-11-22	1200	52
2000-08-24	1030	141	2000-09-29	1600	34	2000-11-23	1200	82
2000-08-24	1130	142	2000-09-30	1600	24	2000-11-24	1200	61
2000-08-24	1230	121	2000-10-01	1600	23	2000-11-25	1200	75
2000-08-24	1330	92	2000-10-02	1600	22	2000-11-26	1200	41
2000-08-24	1430	78	2000-10-03	1600	23	2000-11-27	1200	32

MISCELLANEOUS WATER-QUALITY STATION ANALYSIS--Continued

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REMARKS.--Runoff affected by un-reclaimed surface mined lands.

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Date	Time	SUSPENDED SEDIMENT (mg/L)	Date	Time	SUSPENDED SEDIMENT (mg/L)	Date	Time	SUSPENDED SEDIMENT (mg/L)
2000-11-28	1200	33	2001-02-17	1200	56	2001-04-13	1200	31
2000-11-29	1200	30	2001-02-18	1200	37	2001-04-14	1200	33
2000-11-30	1200	34	2001-02-19	1200	49	2001-04-15	1200	75
2000-12-01	1200	52	2001-02-20	1200	34	2001-04-16	1200	36
2000-12-02	1200	38	2001-02-21	1200	36	2001-04-17	1200	41
2000-12-03	1200	40	2001-02-22	1200	36	2001-04-18	1200	41
2000-12-04	1200	42	2001-02-23	1200	36	2001-04-19	1200	36
2000-12-05	1200	46	2001-02-24	1200	56	2001-04-20	1200	34
2000-12-06	1200	63	2001-02-25	1200	133	2001-04-21	1200	25
2000-12-07	1200	39	2001-02-26	1200	85	2001-04-22	1200	35
2000-12-08	1200	46	2001-02-27	1200	22	2001-04-23	1200	24
2000-12-09	1200	56	2001-02-28	1200	67	2001-04-24	1200	37
2000-12-10	1200	49	2001-03-01	1200	46	2001-04-25	1200	35
2000-12-11	1200	108	2001-03-02	1200	60	2001-04-26	1200	43
2000-12-12	1200	88	2001-03-03	1200	62	2001-04-27	1200	29
2000-12-13	1200	38	2001-03-04	1200	201	2001-04-28	1200	20
2000-12-14	1200	46	2001-03-05	1200	84	2001-04-29	1200	36
2000-12-15	1200	43	2001-03-06	1200	61	2001-04-30	1200	41
2000-12-16	1200	233	2001-03-07	1200	54	2001-05-01	1200	19
2000-12-17	1200	61	2001-03-08	1200	57	2001-05-02	1800	28
2000-12-18	1200	41	2001-03-09	1200	60	2001-05-03	1800	36
2000-12-19	1200	37	2001-03-10	1200	44	2001-05-04	1800	50
2000-12-20	1200	40	2001-03-11	1200	65	2001-05-05	1800	39
2001-01-16	1200	44	2001-03-12	1200	71	2001-05-06	1800	14
2001-01-17	1200	65	2001-03-13	1200	77	2001-05-07	1800	40
2001-01-18	1200	53	2001-03-14	1200	38	2001-05-08	1800	75
2001-01-19	1200	52	2001-03-15	1200	48	2001-05-09	1800	132
2001-01-20	1200	49	2001-03-16	1200	78	2001-05-10	1800	49
2001-01-21	1200	65	2001-03-17	1200	41	2001-05-11	1800	414
2001-01-22	1200	53	2001-03-18	1200	38	2001-05-12	1800	80
2001-01-23	1200	82	2001-03-19	1200	40	2001-05-13	1800	45
2001-01-24	1200	46	2001-03-20	1200	41	2001-05-14	1800	52
2001-01-25	1200	60	2001-03-21	1200	45	2001-05-15	1800	44
2001-01-26	1200	39	2001-03-22	1200	41	2001-05-16	1800	30
2001-01-27	1200	34	2001-03-23	1200	43	2001-05-17	1800	30
2001-01-28	1200	53	2001-03-24	1200	45	2001-05-18	1800	59
2001-01-29	1200	44	2001-03-25	1200	43	2001-05-19	1800	29
2001-01-30	1200	95	2001-03-26	1200	51	2001-05-20	1800	26
2001-01-31	1200	52	2001-03-27	1200	48	2001-05-21	1800	49
2001-02-01	1200	40	2001-03-28	1200	50	2001-05-22	1800	22
2001-02-02	1200	31	2001-03-29	1200	46	2001-05-23	1800	24
2001-02-03	1200	51	2001-03-30	1200	39	2001-05-24	1800	32
2001-02-04	1200	44	2001-03-31	1200	38	2001-05-25	1800	25
2001-02-05	1200	39	2001-04-01	1200	42	2001-05-26	1800	28
2001-02-06	1200	43	2001-04-02	1200	43	2001-05-27	1800	26
2001-02-07	1200	41	2001-04-03	1200	133	2001-05-28	1800	18
2001-02-08	1200	47	2001-04-04	1200	45	2001-05-29	1800	18
2001-02-09	1200	52	2001-04-05	1200	33	2001-05-30	1800	17
2001-02-10	1200	177	2001-04-06	1200	24	2001-05-31	1800	28
2001-02-11	1200	40	2001-04-07	1200	27	2001-06-01	1800	15
2001-02-12	1200	48	2001-04-08	1200	25	2001-06-02	1800	16
2001-02-13	1200	47	2001-04-09	1200	28	2001-06-03	1800	17
2001-02-14	1200	52	2001-04-10	1200	27	2001-06-04	1800	16
2001-02-15	1200	687	2001-04-11	1200	30	2001-06-05	1800	14
2001-02-16	1200	72	2001-04-12	1200	36	2001-06-06	1800	17

MISCELLANEOUS WATER-QUALITY STATION ANALYSIS--Continued

03376350 SOUTH FORK PATOKA RIVER NEAR SPURGEON, IN

Results for suspended-sediment data collected for the South Fork Patoka River. The data were collected through a cooperative investigation with the Division of Reclamation of the Indiana Department of Natural Resources with oversight from the Patoka South Fork Watershed Steering Committee. Samples were collected by a automated sampler located in the gage house. No data adjustments were made with respect to in-stream suspended-sediment data.

LOCATION.--Lat 38°17'49", long 87°15'37", in NW¹/₄ SW¹/₄ sec. 36, T.2 S., R.8 W, Pike County, Hydrologic Unit 05120209, on the left bank, 150 ft upstream of the bridge on State Road 61, 0.5 mi north of Enos Corner, and 3.1 mi north of Spurgeon, IN.

DRAINAGE AREA.--42.8 mi².

REMARKS.--Runoff affected by un-reclaimed surface mined lands.

[Date is in year-month-day; time is in military notation; mg/L, milligrams per liter]

Date	Time	SUSPENDED SEDIMENT (mg/L)	Date	Time	SUSPENDED SEDIMENT (mg/L)	Date	Time	SUSPENDED SEDIMENT (mg/L)
2001-06-07	1800	28	2001-08-03	0600	94	2001-09-27	0800	11
2001-06-08	1800	32	2001-08-04	0600	12	2001-09-28	0800	11
2001-06-09	1800	11	2001-08-05	0600	17	2001-09-29	0800	21
2001-06-10	1800	11	2001-08-06	0600	9.7	2001-09-30	0800	16
2001-06-11	1800	24	2001-08-07	0600	9.6	2001-10-01	0800	22
2001-06-12	1800	12	2001-08-08	1800	2.2	2001-10-02	0800	17
2001-06-13	1800	15	2001-08-09	1800	7.8	2001-10-03	0800	28
2001-06-14	1800	8.2	2001-08-10	1800	4.4	2001-10-04	0800	14
2001-06-15	1800	10	2001-08-11	1800	12	2001-10-05	0800	33
2001-06-16	1800	8.9	2001-08-12	1800	6.1	2001-10-06	0800	58
2001-06-17	1800	25	2001-08-13	1800	14	2001-10-07	0800	25
2001-06-18	1800	64	2001-08-14	1800	3.3	2001-10-08	0800	35
2001-06-19	1800	8.3	2001-08-15	1800	3.6	2001-10-09	0800	47
2001-06-20	1800	20	2001-08-16	1800	2.2	2001-10-10	0800	46
2001-06-21	1800	137	2001-08-17	1800	2.5	2001-10-11	0800	29
2001-06-22	1800	49	2001-08-18	1800	7.7	2001-10-12	0800	46
2001-06-23	1800	12	2001-08-19	1800	17	2001-10-13	0800	14
2001-06-24	1800	20	2001-08-20	1800	11	2001-10-14	0800	130
2001-06-25	1800	13	2001-08-21	1800	4.1	2001-10-15	0800	73
2001-06-26	1800	18	2001-08-22	1800	0.9	2001-10-16	0800	35
2001-06-27	1800	17	2001-08-23	1800	1.2	2001-10-17	0800	22
2001-06-28	0600	24	2001-08-24	1800	181	2001-10-18	0800	24
2001-06-29	0600	8.3	2001-08-25	1800	77	2001-10-19	0800	34
2001-06-30	0600	12	2001-08-26	1800	10	2001-10-20	0800	30
2001-07-01	0600	13	2001-08-27	1800	7.2	2001-10-21	0800	25
2001-07-02	0600	7.8	2001-08-28	1800	6.8	2001-10-22	0800	11
2001-07-03	0600	11	2001-08-29	1800	9.3	2001-10-23	0800	15
2001-07-04	0600	9.0	2001-08-30	1800	18	2001-10-24	0800	184
2001-07-05	0600	6.4	2001-08-31	1800	31	2001-10-25	0800	59
2001-07-06	0600	7.1	2001-09-01	1800	29	2001-10-26	0800	31
2001-07-07	0600	5.2	2001-09-02	1800	18	2001-10-27	0800	19
2001-07-08	0600	2.7	2001-09-03	1800	36	2001-10-28	0800	20
2001-07-09	0600	156	2001-09-04	1800	38	2001-10-29	0800	22
2001-07-10	0600	51	2001-09-05	1800	32	2001-10-30	0800	41
2001-07-11	0600	14	2001-09-06	1800	9.3	2001-10-31	0800	35
2001-07-12	0600	15	2001-09-07	1800	231	2001-11-01	0800	24
2001-07-13	0600	13	2001-09-08	1800	68	2001-11-02	0800	20
2001-07-16	0600	51	2001-09-09	1800	51	2001-11-03	0800	12
2001-07-17	0600	45	2001-09-10	1800	26	2001-11-04	0800	16
2001-07-18	0600	43	2001-09-11	1800	17	2001-11-05	0800	15
2001-07-19	0600	35	2001-09-12	1800	24	2001-11-06	0800	4.5
2001-07-20	0600	55	2001-09-13	1800	25	2001-11-07	0800	12
2001-07-21	0600	15	2001-09-14	1800	9.6	2001-11-08	0800	17
2001-07-22	0600	23	2001-09-15	1800	44	2001-11-09	0800	10
2001-07-23	0600	25	2001-09-16	1800	15	2001-11-10	0800	16
2001-07-24	0600	9.9	2001-09-17	1800	19	2001-11-11	0800	38
2001-07-25	0600	18	2001-09-18	1800	13	2001-11-12	0800	46
2001-07-26	0600	16	2001-09-19	1800	47	2001-11-13	0800	16
2001-07-27	0600	67	2001-09-20	1800	21	2001-11-14	0800	41
2001-07-28	0600	25	2001-09-21	1800	17	2001-11-15	0800	30
2001-07-29	0600	36	2001-09-22	1800	17	2001-11-16	0800	47
2001-07-30	0600	46	2001-09-23	1800	17	2001-11-17	0800	18
2001-07-31	0600	23	2001-09-24	1800	20	2001-11-18	0800	32
2001-08-01	0600	26	2001-09-25	1800	14	2001-11-19	0800	34
2001-08-02	0600	30	2001-09-26	1330	18	2001-11-20	0800	21

MISCELLANEOUS WATER-QUALITY STATION ANALYSIS--Continued

03376350 SOUTH FORK PATOKA RIVER NEAR SPURGEON, IN

Results for suspended-sediment data collected for the South Fork Patoka River. The data were collected through a cooperative investigation with the Division of Reclamation of the Indiana Department of Natural Resources with oversight from the Patoka South Fork Watershed Steering Committee. Samples were collected by a automated sampler at located in the gage house. No data adjustments were made with respect to in-stream suspended-sediment data.

LOCATION.--Lat 38°17'49", long 87°15'37", in NW¹/₄ SW¹/₄ sec. 36, T.2 S., R.8 W, Pike County, Hydrologic Unit 05120209, on the left bank, 150 ft upstream of the bridge on State Road 61, 0.5 mi north of Enos Corner, and 3.1 mi north of Spurgeon, IN.

DRAINAGE AREA.--42.8 mi².

REMARKS.--Runoff affected by un-reclaimed surface mined lands.

[Date is in year-month-day; time is in military notation; mg/L, milligrams per liter]

Date	Time	SUSPENDED SEDIMENT (mg/L)	Date	Time	SUSPENDED SEDIMENT (mg/L)	Date	Time	SUSPENDED SEDIMENT (mg/L)
2001-11-20	0800	21	2002-01-14	0800	66	2002-05-05	1500	52
2001-11-21	0800	42	2002-01-15	0800	59	2002-05-06	1500	58
2001-11-22	0800	43	2002-01-16	0800	65	2002-05-07	1500	159
2001-11-23	0800	27	2002-01-17	0800	72	2002-05-08	1500	1655
2001-11-24	0800	15	2002-01-18	0800	81	2002-05-09	1500	214
2001-11-25	0800	30	2002-01-19	0800	61	2002-05-10	1500	65
2001-11-26	0800	32	2002-01-20	0800	71	2002-05-11	1500	52
2001-11-27	0800	199	2002-01-21	0800	48	2002-05-12	1500	60
2001-11-28	0800	143	2002-01-22	0800	59	2002-05-13	1500	184
2001-11-29	0800	144	2002-01-23	0800	63	2002-05-14	1500	229
2001-11-30	0800	63	2002-01-24	0800	724	2002-05-15	1500	89
2001-12-01	0800	86	2002-01-25	0800	107	2002-05-16	1500	82
2001-12-02	0800	40	2002-01-26	0800	56	2002-05-17	1500	84
2001-12-03	0800	34	2002-01-27	0800	49	2002-05-18	1500	86
2001-12-04	0800	40	2002-01-28	0800	51	2002-05-19	1500	86
2001-12-05	0800	36	2002-01-29	0800	44	2002-05-20	1500	81
2001-12-06	0800	34	2002-01-30	0800	63	2002-05-21	1300	74
2001-12-07	0800	52	2002-01-31	0800	33	2002-05-22	0600	94
2001-12-08	0800	40	2002-03-28	1500	53	2002-05-23	0600	91
2001-12-09	0800	38	2002-03-29	1500	555	2002-05-24	0600	89
2001-12-10	0800	37	2002-03-30	1500	720	2002-05-25	0600	95
2001-12-11	0800	36	2002-03-31	1500	79	2002-05-26	0600	84
2001-12-12	0800	44	2002-04-01	1500	56	2002-05-27	0600	79
2001-12-13	0800	55	2002-04-02	1500	60	2002-05-28	0600	77
2001-12-14	0800	125	2002-04-03	1500	55	2002-05-29	0600	76
2001-12-15	0800	53	2002-04-04	1500	57	2002-05-30	0600	80
2001-12-16	0800	41	2002-04-05	1500	59	2002-05-31	0600	86
2001-12-17	0800	380	2002-04-06	1500	59	2002-06-01	0600	87
2001-12-18	0800	44	2002-04-07	1500	64	2002-06-02	0600	98
2001-12-19	0800	79	2002-04-08	1500	64	2002-06-03	0600	88
2001-12-20	0800	64	2002-04-09	1500	73	2002-06-04	0600	87
2001-12-21	0800	39	2002-04-10	1500	61	2002-06-05	0600	87
2001-12-22	0800	49	2002-04-11	1500	58	2002-06-06	0600	94
2001-12-23	0800	92	2002-04-12	1500	52	2002-06-07	0600	81
2001-12-24	0800	62	2002-04-14	1500	1510	2002-06-08	0600	92
2001-12-25	0800	57	2002-04-15	1500	196	2002-06-09	0600	108
2001-12-26	0800	49	2002-04-16	1500	81	2002-06-10	0600	101
2001-12-27	0800	56	2002-04-17	1500	93	2002-06-11	0600	96
2001-12-28	0800	60	2002-04-18	1500	49	2002-06-12	0600	83
2001-12-29	0800	121	2002-04-19	1500	54	2002-06-13	0600	111
2001-12-30	0800	76	2002-04-20	1500	49	2002-06-14	0600	69
2001-12-31	0800	74	2002-04-21	1500	49	2002-06-15	0600	122
2002-01-01	0800	93	2002-04-22	1500	194	2002-06-16	0600	100
2002-01-02	0800	117	2002-04-23	1500	52	2002-06-17	0600	104
2002-01-03	0800	89	2002-04-24	1500	219	2002-06-18	0600	117
2002-01-04	0800	111	2002-04-25	1500	49	2002-06-19	0600	110
2002-01-05	0800	81	2002-04-26	1500	44	2002-06-20	0600	100
2002-01-06	0800	75	2002-04-27	1500	489	2002-06-21	0600	81
2002-01-07	0800	64	2002-04-28	1500	183	2002-06-22	0600	73
2002-01-08	0800	91	2002-04-29	1500	225	2002-06-23	0600	103
2002-01-09	0800	66	2002-04-30	1500	69	2002-06-24	0600	74
2002-01-10	0800	67	2002-05-01	1500	55	2002-06-25	0600	74
2002-01-11	0800	63	2002-05-02	1500	192	2002-06-26	0600	152
2002-01-12	0800	53	2002-05-03	1500	127	2002-06-27	0600	117
2002-01-13	0800	54	2002-05-04	1500	51	2002-06-28	0600	72

MISCELLANEOUS WATER-QUALITY STATION ANALYSIS--Continued

03376350 SOUTH FORK PATOKA RIVER NEAR SPURGEON, IN

Results for suspended-sediment data collected for the South Fork Patoka River. The data were collected through a cooperative investigation with the Division of Reclamation of the Indiana Department of Natural Resources with oversight from the Patoka South Fork Watershed Steering Committee. Samples were collected by a automated sampler located in the gage house. No data adjustments were made with respect to in-stream suspended-sediment data.

LOCATION.--Lat 38°17'49", long 87°15'37", in NW¹/₄ SW¹/₄ sec. 36, T.2 S., R.8 W, Pike County, Hydrologic Unit 05120209, on the left bank, 150 ft upstream of the bridge on State Road 61, 0.5 mi north of Enos Corner, and 3.1 mi north of Spurgeon, IN.

DRAINAGE AREA.--42.8 mi².

REMARKS.--Runoff affected by un-reclaimed surface mined lands.

[Date is in year-month-day; time is in military notation; mg/L, milligrams per liter]

Date	Time	SUSPENDED SEDIMENT (mg/L)	Date	Time	SUSPENDED SEDIMENT (mg/L)
2002-06-29	0600	86	2002-08-23	1800	7.2
2002-06-30	0600	54	2002-08-24	1800	44
2002-07-01	0600	82	2002-08-25	1800	22
2002-07-02	0600	66	2002-08-26	1800	3.3
2002-07-03	0600	26	2002-08-27	1800	53
2002-07-04	0600	40	2002-08-28	1800	7.1
2002-07-05	0600	54	2002-08-29	1800	13
2002-07-06	0600	45	2002-08-30	1800	33
2002-07-07	0600	59	2002-08-31	1800	45
2002-07-08	0600	31	2002-09-01	1800	12
2002-07-09	0600	43	2002-09-02	1800	38
2002-07-10	0600	64	2002-09-03	1800	8.7
2002-07-11	0600	61	2002-09-04	1800	16
2002-07-12	0600	85	2002-09-05	1800	56
2002-07-13	0600	75	2002-09-06	1800	426
2002-07-14	0600	46	2002-09-07	1800	80
2002-07-15	0600	59	2002-09-08	1800	21
2002-07-16	0600	56	2002-09-09	1800	32
2002-07-17	0600	60	2002-09-10	1800	26
2002-07-18	0600	39	2002-09-11	1800	17
2002-07-19	0600	57	2002-09-12	1800	102
2002-07-20	0600	38	2002-09-13	1800	23
2002-07-21	0600	31	2002-09-14	1800	30
2002-07-22	0600	33	2002-09-15	1800	24
2002-07-23	0600	20	2002-09-16	1800	151
2002-07-24	0600	19	2002-09-17	1800	45
2002-07-25	0600	27	2002-09-18	1800	34
2002-07-26	0600	14	2002-09-19	1800	13
2002-07-27	0600	36	2002-09-20	1800	208
2002-07-28	0600	69	2002-09-21	1800	38
2002-07-29	0600	15	2002-09-22	1800	62
2002-07-30	0600	12	2002-09-23	1800	48
2002-07-31	0600	13	2002-09-24	1800	52
2002-08-01	0600	41	2002-09-25	1800	54
2002-08-02	0600	38	2002-09-26	1800	34
2002-08-03	0600	21	2002-09-27	1800	83
2002-08-04	0600	16	2002-09-28	1800	94
2002-08-05	0600	15	2002-09-29	1800	57
2002-08-06	1800	1.0	2002-09-30	1800	64
2002-08-07	1800	2.5			
2002-08-08	1800	2.1			
2002-08-09	1800	2.0			
2002-08-10	1800	7.1			
2002-08-11	1800	10			
2002-08-12	1800	1.3			
2002-08-13	1800	2.1			
2002-08-14	1800	2.3			
2002-08-15	1800	10			
2002-08-16	1800	11			
2002-08-17	1800	4.3			
2002-08-18	1800	10			
2002-08-19	1800	5.9			
2002-08-20	1800	23			
2002-08-21	1800	9.1			
2002-08-22	1800	5.0			

03376500 PATOKA RIVER NEAR PRINCETON, IN

LOCATION.--Lat 38°23'25", long 87°32'55", in sec. 107, T.1 S., R.10 W., Gibson County, Hydrologic Unit 05120209, (PATOKA, IN quadrangle), 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. 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. Flow regulated by Patoka Lake.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	172	456	381	2,160	1,080	3,710	1,760	1,950	431	160	161	113
2	120	268	380	2,100	976	3,890	1,700	1,690	361	155	148	122
3	104	180	377	2,170	771	3,920	1,630	1,290	789	149	145	179
4	106	148	374	2,220	661	3,850	1,510	1,030	1,020	147	141	371
5	126	141	378	2,250	645	3,660	1,350	1,900	1,000	164	157	280
6	128	177	378	2,260	596	3,390	1,160	2,020	774	153	158	164
7	139	259	382	2,270	472	3,150	951	2,190	568	142	155	121
8	120	319	380	2,280	373	2,920	796	2,560	447	132	137	107
9	101	248	380	2,250	336	2,680	695	2,980	377	172	122	118
10	93	348	387	2,140	320	2,450	646	3,030	325	305	115	136
11	94	1,020	402	1,970	318	2,200	666	3,200	643	471	111	137
12	97	1,340	442	1,740	327	1,930	634	3,240	2,030	474	108	136
13	99	1,390	581	1,470	322	1,830	542	3,250	2,000	389	119	138
14	95	1,340	927	1,240	337	1,710	468	3,220	2,020	251	166	138
15	91	1,010	1,190	1,080	855	1,630	411	3,180	2,060	177	143	135
16	95	627	1,220	978	1,400	1,580	380	3,150	2,080	170	116	132
17	85	437	1,060	921	1,500	1,550	453	3,190	2,070	196	106	129
18	79	358	873	905	1,470	1,520	663	3,370	1,990	287	102	127
19	78	310	1,580	898	1,370	1,610	803	3,470	1,650	356	100	127
20	86	280	1,880	896	1,500	1,720	796	3,470	1,040	348	98	129
21	89	294	1,850	908	1,810	1,750	813	3,380	633	313	95	128
22	90	345	1,860	917	2,570	1,740	1,070	3,220	385	665	95	165
23	88	359	1,860	914	2,750	1,720	1,160	3,050	301	999	94	198
24	83	376	1,850	957	2,850	1,680	939	2,840	253	762	95	192
25	113	410	1,840	980	3,020	1,630	1,600	2,660	229	382	92	162
26	214	411	1,780	1,060	3,210	1,650	2,090	2,440	214	229	91	142
27	365	407	1,640	1,200	3,380	1,550	2,060	2,130	208	173	89	143
28	315	397	1,370	1,330	3,540	1,510	2,100	1,690	200	151	88	154
29	323	391	1,230	1,230	---	1,940	2,090	1,200	182	167	89	161
30	371	388	1,230	1,170	---	1,860	2,050	843	169	219	91	149
31	619	---	1,490	1,130	---	1,820	---	582	---	181	106	---
TOTAL	4,778	14,434	31,952	45,994	38,759	69,750	33,986	77,415	26,449	9,039	3,633	4,633
MEAN	154	481	1,031	1,484	1,384	2,250	1,133	2,497	882	292	117	154
MAX	619	1,390	1,880	2,280	3,540	3,920	2,100	3,470	2,080	999	166	371
MIN	78	141	374	896	318	1,510	380	582	169	132	88	107
CFSM	0.19	0.59	1.25	1.80	1.68	2.74	1.38	3.04	1.07	0.35	0.14	0.19
IN.	0.22	0.65	1.45	2.08	1.75	3.16	1.54	3.50	1.20	0.41	0.16	0.21

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 2003, BY WATER YEAR (WY)

	256	516	1,018	1,516	1,797	2,194	1,944	1,541	814	442	312	229
MEAN	256	516	1,018	1,516	1,797	2,194	1,944	1,541	814	442	312	229
MAX	2,573	2,978	4,232	8,365	5,570	8,531	4,664	6,810	4,322	3,075	3,915	1,125
(WY)	(1946)	(1994)	(2002)	(1937)	(1950)	(1945)	(1989)	(1961)	(1996)	(1958)	(1979)	(1979)
MIN	1.53	9.83	10.2	44.3	64.2	61.5	240	117	7.93	15.0	4.60	8.12
(WY)	(1943)	(1944)	(1944)	(1944)	(1964)	(1941)	(2001)	(1941)	(1936)	(1944)	(1936)	(1942)

SUMMARY STATISTICS

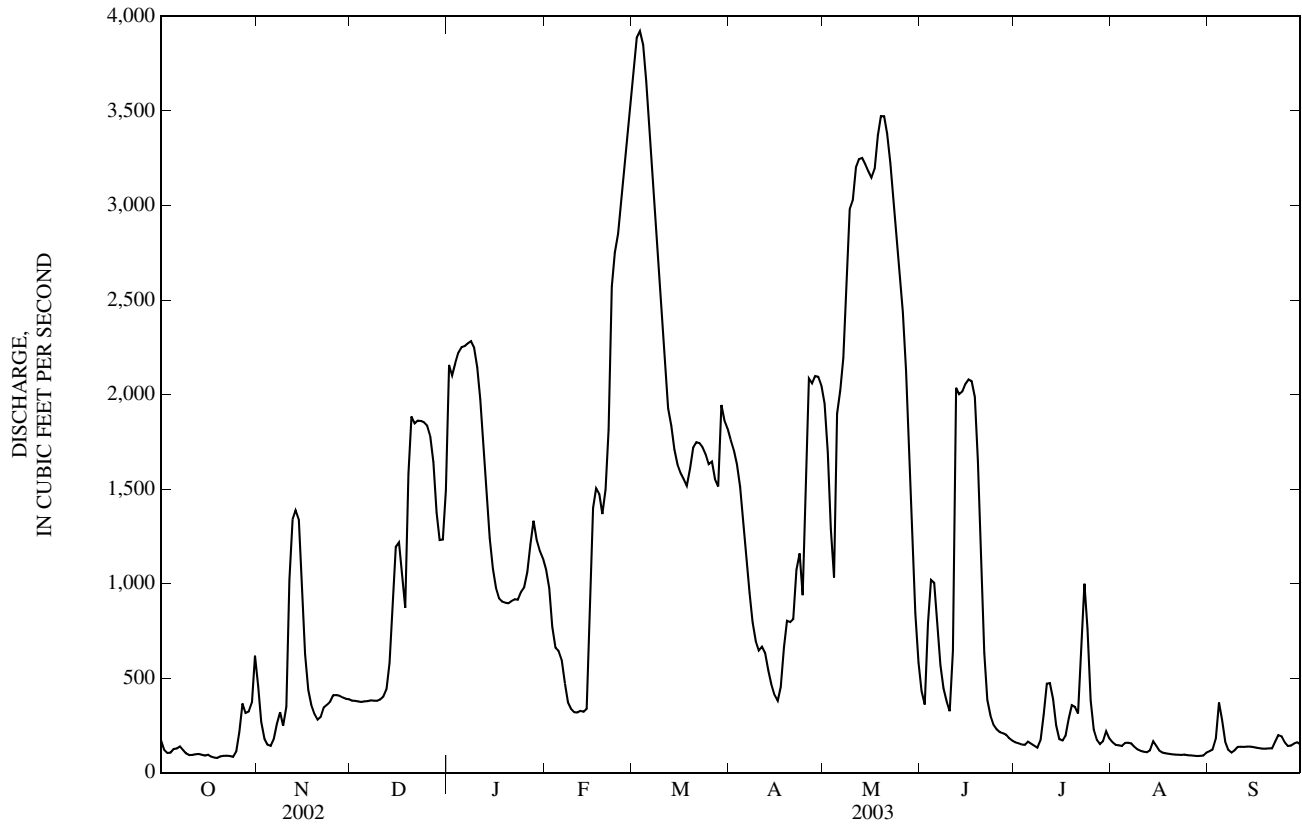
FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1935 - 2003

ANNUAL TOTAL	536,023	360,822	
ANNUAL MEAN	1,469	989	1,044
HIGHEST ANNUAL MEAN			2,080
LOWEST ANNUAL MEAN			151
HIGHEST DAILY MEAN	10,400	May 17	18,500
LOWEST DAILY MEAN	62	Sep 13	0.00
ANNUAL SEVEN-DAY MINIMUM	64	Sep 8	0.00
MAXIMUM PEAK FLOW			18,700
MAXIMUM PEAK STAGE			26.80
ANNUAL RUNOFF (CFSM)	1.79		1.27
ANNUAL RUNOFF (INCHES)	24.26		17.26
10 PERCENT EXCEEDS	3,660		2,840
50 PERCENT EXCEEDS	644		388
90 PERCENT EXCEEDS	108		30

03376500 PATOKA RIVER NEAR PRINCETON, IN—Continued



03377500 WABASH RIVER AT MOUNT CARMEL, IL

LOCATION.--Lat 38°24'07", long 87°45'10", in SE¹/₄NW¹/₄ sec.28, T.1 S., R.12 W., Wabash County, Illinois, Hydrologic Unit 05120113, (MOUNT CARMEL, IL-IN quadrangle), on right bank on downstream side of Southern Railway bridge at Mount Carmel, 0.2 mi downstream from Patoka River, 0.2 mi upstream of State Road 64 bridge, 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 except for estimated daily discharges, which are poor. 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, gage height, 33.0 ft, present site and datum.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7,140	11,100	8,290	26,000	10,300	44,000	36,500	27,500	27,000	13,400	42,600	15,600
2	7,970	10,700	8,060	33,600	9,990	43,400	36,700	25,200	26,500	13,100	37,500	25,200
3	8,190	10,400	7,590	37,400	9,910	41,900	38,600	23,400	26,900	12,900	33,300	38,200
4	8,200	9,920	7,340	40,600	10,100	39,000	36,900	21,400	27,300	12,300	30,300	47,300
5	7,750	9,140	7,300	44,300	10,500	39,000	32,200	28,500	26,000	11,700	27,700	53,800
6	7,110	8,440	7,130	46,400	11,200	41,400	28,800	43,300	24,200	11,300	25,700	57,100
7	6,600	8,010	6,980	46,200	13,000	41,000	26,600	51,400	22,600	10,800	25,700	60,000
8	6,300	7,910	6,700	44,200	14,300	41,600	26,100	58,700	20,900	17,600	26,000	62,600
9	6,120	7,760	6,420	40,300	15,100	41,500	28,400	67,100	19,000	29,800	25,300	66,400
10	6,030	8,830	6,220	34,300	15,400	40,200	30,000	72,000	17,300	39,100	24,100	70,600
11	5,940	10,800	6,320	28,700	14,700	41,100	30,000	76,900	17,400	50,400	23,100	75,700
12	5,850	12,200	6,400	25,700	13,500	44,100	28,800	83,600	25,900	57,400	22,300	76,100
13	5,780	15,700	6,580	24,200	12,600	46,700	26,500	89,400	31,300	61,100	21,100	66,200
14	5,670	19,000	7,620	22,800	12,000	48,800	24,000	94,000	33,600	63,600	20,000	42,100
15	5,590	18,900	8,810	22,300	12,600	49,100	21,600	96,700	36,200	68,800	19,100	30,900
16	5,500	18,100	10,100	21,200	16,400	49,700	19,600	98,100	40,400	81,600	18,300	26,700
17	5,410	17,300	11,500	19,100	18,500	49,800	18,200	98,900	44,400	95,500	17,400	24,200
18	5,370	15,800	11,900	17,700	20,100	50,200	17,200	99,700	46,100	107,000	16,600	22,100
19	5,360	14,100	15,400	16,300	20,100	51,900	16,800	101,000	46,400	114,000	15,800	20,000
20	5,280	12,600	22,500	14,500	19,600	54,500	16,800	100,000	44,800	116,000	14,900	17,700
21	5,260	11,600	25,500	e13,000	20,600	53,400	18,800	95,100	42,200	113,000	14,300	16,300
22	5,340	10,800	26,300	e12,400	29,900	49,000	20,500	84,500	40,200	101,000	13,900	15,900
23	5,530	10,100	26,300	e12,000	47,200	43,800	20,600	71,600	35,000	85,500	13,100	15,800
24	5,590	9,530	26,000	e11,500	52,700	40,500	20,000	60,000	27,700	77,600	12,200	15,400
25	6,020	9,200	27,100	e11,000	52,600	39,100	20,700	51,100	22,900	72,300	11,400	14,800
26	6,820	8,930	27,700	e11,000	50,800	39,300	28,900	44,300	20,000	66,900	10,900	14,800
27	6,790	8,700	25,900	e11,100	48,900	39,100	30,500	38,800	17,900	61,500	10,600	17,300
28	7,060	8,470	23,100	e10,700	46,200	36,500	31,000	34,900	16,200	56,700	10,100	23,600
29	7,930	8,520	20,500	10,500	---	36,300	31,200	31,900	14,900	52,800	9,730	31,100
30	10,600	8,410	18,700	10,900	---	37,000	30,400	29,600	13,900	50,000	9,590	36,600
31	10,900	---	18,500	10,700	---	36,800	---	27,900	---	47,200	9,990	---
TOTAL	205,000	340,970	444,760	730,600	628,800	1,349,700	792,900	1,926,500	855,100	1,771,900	612,610	1,100,100
MEAN	6,613	11,370	14,350	23,570	22,460	43,540	26,430	62,150	28,500	57,160	19,760	36,670
MAX	10,900	19,000	27,700	46,400	52,700	54,500	38,600	101,000	46,400	116,000	42,600	76,100
MIN	5,260	7,760	6,220	10,500	9,910	36,300	16,800	21,400	13,900	10,800	9,590	14,800
CFSM	0.23	0.40	0.50	0.82	0.78	1.52	0.92	2.17	1.00	2.00	0.69	1.28
IN.	0.27	0.44	0.58	0.95	0.82	1.75	1.03	2.50	1.11	2.30	0.80	1.43

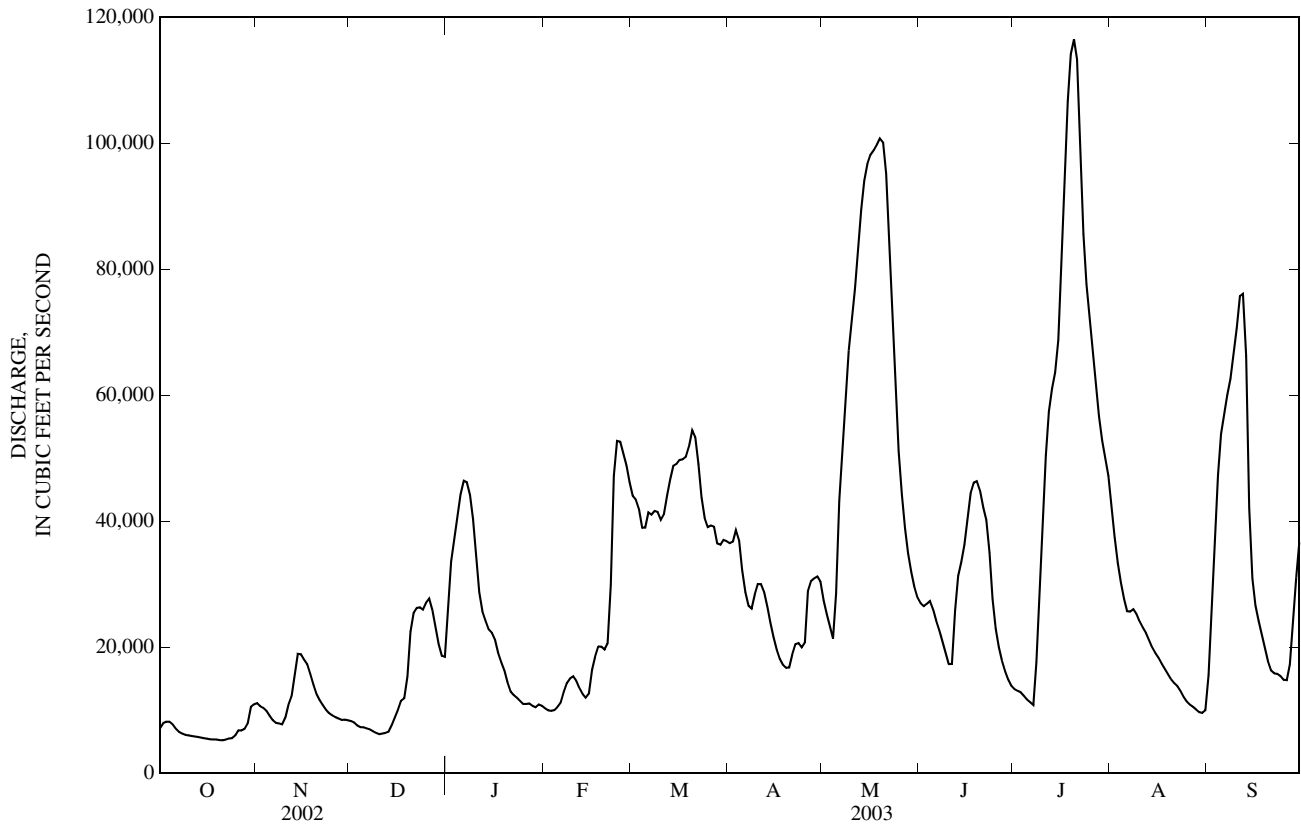
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 2003, BY WATER YEAR (WY)

MEAN	9,747	15,560	25,700	36,910	40,950	49,820	49,930	43,070	28,900	19,810	12,170	9,326
MAX	42,230	87,950	92,340	199,300	147,100	108,700	106,400	148,200	80,120	73,580	75,530	50,670
(WY)	(2002)	(1994)	(1986)	(1950)	(1950)	(1985)	(1938)	(2002)	(1998)	(1958)	(1979)	(1989)
MIN	2,465	2,632	2,266	2,861	3,758	4,815	11,900	5,805	5,035	3,366	2,372	2,572
(WY)	(1941)	(1931)	(1964)	(1977)	(1931)	(1941)	(1941)	(1934)	(1988)	(1936)	(1936)	(1940)

03377500 WABASH RIVER AT MOUNT CARMEL, IL—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1928 - 2003	
ANNUAL TOTAL	13,841,220		10,758,940		28,430	
ANNUAL MEAN	37,920		29,480		56,740	
HIGHEST ANNUAL MEAN					1950	
LOWEST ANNUAL MEAN					1941	
HIGHEST DAILY MEAN	236,000	May 17	116,000	Jul 20	302,000	May 25, 1943
LOWEST DAILY MEAN	5,130	Sep 17	5,260	Oct 21	1,650	Sep 27, 1941
ANNUAL SEVEN-DAY MINIMUM	5,180	Sep 13	5,360	Oct 16	1,700	Dec 19, 1963
MAXIMUM PEAK FLOW			117,000	Jul 20	305,000	May 25, 1943
MAXIMUM PEAK STAGE			24.85	Jul 20	31.75	Jan 7, 1991
ANNUAL RUNOFF (CFSM)	1.32		1.03		0.99	
ANNUAL RUNOFF (INCHES)	17.98		13.98		13.49	
10 PERCENT EXCEEDS	83,000		60,400		68,000	
50 PERCENT EXCEEDS	20,800		22,600		16,700	
90 PERCENT EXCEEDS	6,340		7,700		4,400	

e Estimated



03378500 WABASH RIVER AT NEW HARMONY, IN

LOCATION.--Lat 38°07'53", long 87°56'32" in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.35, T.4 S., R.14 W., Posey County, Hydrologic Unit 05120113, (NEW HARMONY, IN quadrangle), at bridge on State Highway 66 at New Harmony, at Indiana-Illinois state line, 2.3 mi downstream from (Wabash River including Black River, Hoggatt 1975), and at mile 53.1.

DRAINAGE AREA.--29,234 mi².

WATER STAGE RECORDS

PERIOD OF RECORD.--August 1988 to current year. Water discharge published October 1938 to September 1947.

GAGE.--Water-stage recorder. Datum of gage is 353.20 ft above National Geodetic Vertical Datum of 1929. (Prior to October 1992, erroneously published as 353.30 ft above National Geodetic Vertical Datum of 1929).

REMARKS.--Water-quality data collected (by USGS Kentucky district) October 1974 to 1986; 1999 to current year.

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, 17.72 ft, July 21; minimum gage height, 1.22 ft, Oct. 21, and 22.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.81	2.89	2.19	6.91	2.75	---	8.45	6.57	---	3.53	9.71	3.87
2	2.05	2.79	2.13	8.29	2.67	---	8.49	6.07	---	3.45	8.71	6.01
3	2.17	2.73	2.04	8.96	2.67	---	8.79	5.68	6.57	3.37	7.85	8.65
4	2.21	2.62	1.95	9.51	2.64	---	8.57	5.35	6.58	3.21	7.21	10.36
5	2.09	2.46	1.91	10.13	2.77	9.32	7.62	7.33	6.31	3.06	6.61	11.49
6	1.89	2.25	1.86	10.45	2.89	9.68	6.91	9.99	5.91	2.97	6.19	12.15
7	1.72	2.13	1.81	10.43	3.25	9.55	6.44	11.53	5.59	2.83	6.13	12.75
8	1.61	2.07	1.73	10.10	3.55	9.58	6.27	12.82	5.21	4.27	6.19	13.42
9	1.55	2.05	1.65	9.39	3.74	9.55	6.68	14.06	4.83	6.81	6.03	14.07
10	1.53	2.39	1.59	8.19	3.81	9.35	7.03	14.89	4.49	8.71	5.79	14.63
11	1.49	2.95	1.60	7.01	3.69	9.43	7.07	15.34	4.69	10.86	5.59	15.04
12	1.47	3.19	1.62	6.29	3.45	10.01	6.82	15.77	7.01	12.10	5.39	15.05
13	1.41	3.87	1.71	5.92	3.25	10.68	6.36	16.18	7.79	12.85	5.17	13.71
14	1.40	4.63	2.08	5.60	3.17	11.07	5.84	16.53	8.04	13.39	4.93	10.20
15	1.36	4.66	2.39	5.45	3.51	11.15	5.33	16.73	8.55	14.23	4.73	7.61
16	1.33	4.47	2.64	5.21	4.33	11.17	4.93	16.81	9.28	15.20	4.57	6.51
17	1.29	4.31	2.98	4.75	4.67	11.13	4.61	16.84	10.04	16.11	4.37	5.91
18	1.27	4.02	3.18	4.35	4.95	11.19	4.43	16.89	10.30	16.81	4.19	5.45
19	1.27	3.61	4.37	4.08	5.04	11.62	4.25	16.88	10.19	17.37	4.00	4.95
20	1.24	3.28	5.79	3.71	5.17	12.09	4.23	16.89	9.83	17.60	3.83	4.47
21	1.23	3.03	6.43	3.44	5.52	11.96	4.68	16.67	9.48	17.62	3.69	4.17
22	1.23	2.85	6.57	3.25	8.33	11.27	5.03	16.16	9.03	17.17	3.59	4.01
23	1.30	2.67	6.55	2.77	11.26	10.23	5.05	15.01	8.02	16.31	3.43	3.99
24	1.33	2.55	6.37	2.67	12.14	9.41	4.94	13.47	6.67	15.45	3.23	3.90
25	1.51	2.45	6.49	2.71	---	9.07	5.15	12.09	5.65	14.73	3.05	3.79
26	1.77	2.37	6.63	2.84	---	9.09	6.95	10.63	5.03	14.01	2.91	3.81
27	1.73	2.31	6.27	2.87	---	9.04	7.27	9.38	4.55	13.21	2.85	4.20
28	1.81	2.23	5.67	2.87	---	8.59	7.31	8.49	4.17	12.47	2.73	5.59
29	2.11	2.22	5.16	3.07	---	8.53	7.33	7.79	3.88	11.72	2.63	7.21
30	2.87	2.21	4.81	3.09	---	8.59	7.15	7.22	3.64	11.15	2.63	8.31
31	2.90	---	5.07	2.84	---	8.55	---	6.76	---	10.61	2.64	---
MEAN	1.68	2.94	3.65	5.71	---	---	6.33	12.35	---	11.07	4.86	8.18
MAX	2.90	4.66	6.63	10.45	---	---	8.79	16.89	---	17.62	9.71	15.05
MIN	1.23	2.05	1.59	2.67	---	---	4.23	5.35	---	2.83	2.63	3.79

03378500 WABASH RIVER AT NEW HARMONY, IN—Continued

(National Stream-Quality Accounting Network station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--

CHEMICAL ANALYSES.--October 1974 to 1986. Data collected for water years 1997 and 1998 were published in the Kentucky Water Resources Data reports, and are stored in the Indiana NWIS/QW data base. October 1999 to current year.

SEDIMENT DISCHARGE.--Partial record station--October 1974 to 1985.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE.--October 1974 to September 1980.

WATER TEMPERATURES.--October 1974 to September 1980.

REMARKS.--Water discharge obtained from station Wabash River at Mount Carmel, IL. (03377500). Water quality data obtained from USGS Kentucky district office.

(--, no data; Other QA, grab sample at center vertical (surface only); E, laboratory estimated value; M, presence of material verified but not quantified; <, numeric result is less than the value shown)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Time	Sample type	Instantaneous discharge, cfs (00061)	Turbidity, wat unfltrd Hach 2100AN NTU (99872)	UV absorbance, 254 nm, wat flt units /cm (50624)	UV absorbance, 280 nm, wat flt units /cm (61726)	Dissolved oxygen, mg/L (00300)	pH, water, unfltrd field, std units (00400)	Specific conductance, wat unfltrd uS/cm 25 degC (00095)	Temperature, water, deg C (00010)	Hardness, water, unfltrd mg/L as CaCO3 (00900)	Calcium water, fltrd, mg/L (00915)
NOV												
05...	1240	Environmental	9,100	41	0.096	0.072	10.4	8.2	584	10.0	230	62.0
DEC												
17...	1220	Environmental	11,500	30	0.087	0.066	12.4	7.8	704	6.0	300	78.6
17...	1228	Blank	--	--	--	--	--	--	--	--	--	0.05
FEB												
11...	1250	Environmental	14,700	27	0.074	0.055	14.2	8.2	679	3.0	270	70.6
11...	1258	Blank	--	--	0.001	0.001	--	--	--	--	--	--
25...	1240	Environmental	52,600	180	0.126	0.098	12.8	7.8	315	2.0	120	33.2
MAR												
11...	1150	Environmental	41,000	--	--	--	12.2	7.9	446	5.5	180	49.5
11...	1200	Replicate	--	--	--	--	--	--	--	--	180	49.4
25...	1140	Environmental	38,900	110	0.111	0.083	9.6	7.8	481	13.0	210	57.5
APR												
08...	1140	Environmental	26,000	56	0.095	0.070	9.8	7.9	533	12.5	240	63.8
22...	1210	Environmental	20,500	58	0.085	0.063	11.3	8.4	590	17.5	270	70.0
22...	1218	Blank	--	--	--	--	--	--	--	--	--	0.03
MAY												
05...	1230	Environmental	28,600	190	0.118	0.088	7.1	8.0	456	18.5	190	50.2
05...	1240	Replicate	--	190	0.119	0.089	--	--	--	--	130	32.8
19...	1230	Environmental	101,000	50	0.185	0.139	6.0	7.3	404	20.0	180	49.5
JUN												
04...	1320	Environmental	27,300	57	0.111	0.081	8.4	8.1	539	18.0	230	60.1
04...	1320	Blank	--	--	--	--	--	--	--	--	--	--
24...	1230	Environmental	27,700	E69	0.131	0.098	8.1	7.8	312	24.0	220	58.8
JUL												
15...	1250	Environmental	68,800	58	0.175	0.132	7.8	7.7	321	29.0	130	37.5
15...	1258	Blank	--	--	<0.004	<0.004	--	--	--	--	--	--
AUG												
12...	1200	Environmental	22,300	52	0.132	0.097	8.5	8.1	517	19.0	240	62.7
12...	1210	Other QA	--	48	0.134	0.099	--	--	--	--	240	62.7
SEP												
08...	1210	Environmental	62,600	77	0.173	0.129	7.7	7.7	323	28.5	140	38.3

03378500 WABASH RIVER AT NEW HARMONY, IN—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt inc tit field, mg/L as CaCO ₃ (39086)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Chloride, water, fltrd, mg/L (00940)	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate, fltrd, mg/L (00945)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia + org-N, water, fltrd, mg/L as N (00623)	Ammonia + org-N, water, unfltrd mg/L as N (00625)	Ammonia water, fltrd, mg/L as N (00608)
NOV 05...	19.4	4.02	26.5	173	211	34.1	0.22	5.34	70.5	348	0.32	0.73	<0.04
DEC 17...	25.4	3.41	35.2	194	237	42.8	0.26	5.52	97.8	443	0.29	0.57	<0.04
17...	<0.008	0.03	<0.09	--	--	0.27	<0.01	<0.13	0.03	--	--	--	0.029
FEB 11...	22.2	3.11	34.4	194	237	53.5	0.22	5.88	66.8	403	0.33	0.58	0.05
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	9.90	2.97	13.2	83	101	21.9	0.13	5.22	35.0	189	0.48	1.2	0.14
MAR 11...	14.3	2.46	18.5	124	151	30.6	0.14	6.34	43.6	260	--	--	--
11...	14.6	2.33	18.9	125	153	30.6	0.15	6.42	43.9	259	--	--	--
25...	17.2	2.82	16.5	140	171	26.3	0.17	6.20	45.6	286	0.43	1.0	E0.03
APR 08...	18.5	2.68	16.9	168	205	30.0	0.18	5.40	50.2	324	0.31	0.69	<0.04
22...	22.4	2.71	21.3	188	230	34.0	0.20	0.68	62.7	352	0.32	1.3	<0.04
22...	<0.008	<0.01	<0.09	--	--	<0.01	<0.01	<0.13	<0.01	--	--	--	<0.015
MAY 05...	16.5	3.31	15.6	140	171	26.0	0.18	4.06	49.8	276	0.36	1.6	<0.04
05...	10.8	2.04	9.95	138	169	25.5	0.18	2.77	49.7	277	0.37	1.6	E0.02
19...	13.9	4.41	8.80	125	152	17.9	0.18	7.68	28.5	244	0.62	0.90	<0.04
JUN 04...	18.5	2.83	14.9	176	214	26.4	0.22	5.30	50.1	318	0.34	1.1	<0.015
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	17.7	3.67	12.2	164	200	22.1	0.21	7.67	38.4	280	E0.43	E0.98	<0.04
JUL 15...	9.66	4.34	6.27	105	128	12.4	<0.17	6.81	18.1	196	0.46	0.99	<0.04
15...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 12...	19.9	4.11	16.7	176	214	25.4	0.23	5.88	41.8	311	0.37	1.1	<0.04
12...	19.8	4.02	16.7	--	--	25.1	0.23	5.76	41.9	300	0.39	1.1	<0.04
SEP 08...	11.9	4.42	7.32	113	137	13.4	0.20	7.86	21.2	210	0.46	1.1	<0.04

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Orthophosphate, water, fltrd, mg/L as P (00671)	Particulate nitrogen, susp, water, mg/L (49570)	Phosphorus, water, fltrd, mg/L (00666)	Phosphorus, water, unfltrd mg/L (00665)	Total carbon, suspnd sedimnt total, mg/L (00694)	Inorganic carbon, suspnd sedimnt total, mg/L (00688)	Organic carbon, suspnd sedimnt total, mg/L (00689)	Organic carbon, water, fltrd, mg/L (00681)	Pheophytin a, phytoplankton, ug/L (62360)	Chlorophyll a phytoplankton, fluoro, ug/L (70953)	Aluminum, water, fltrd, ug/L (01106)
NOV 05...	1.77	0.008	0.072	0.33	0.086	0.19	3.5	<0.1	3.5	3.7	24.5	19.1	--
DEC 17...	2.44	E0.006	0.104	0.24	0.119	0.19	2.0	<0.1	1.9	3.2	7.3	19.7	--
17...	<0.022	<0.002	<0.007	--	--	--	--	--	--	--	--	--	--
FEB 11...	2.93	0.016	0.096	0.19	0.110	0.19	1.7	<0.1	1.7	2.7	3.7	9.4	--
11...	--	--	--	<0.02	--	--	<0.1	<0.1	<0.1	0.5	--	--	--
25...	1.91	0.011	0.089	0.63	0.105	0.41	6.3	0.4	6.0	4.3	--	--	--
MAR 11...	--	--	--	--	--	--	--	--	--	--	4.5	5.7	--
11...	--	--	--	--	--	--	--	--	--	--	4.2	5.6	--
25...	3.57	0.028	0.072	0.52	0.086	0.29	5.3	0.1	5.2	3.8	10.1	14.3	--
APR 08...	3.48	0.015	0.057	0.35	0.072	0.17	3.1	<0.1	3.1	3.4	12.4	7.8	--
22...	2.36	0.009	0.011	0.77	0.025	0.21	5.4	<0.1	5.3	3.0	57.4	47.0	--
22...	<0.022	<0.002	<0.007	--	--	--	--	--	--	--	--	--	--
MAY 05...	1.65	0.014	0.038	0.92	0.050	--	7.5	0.1	7.4	3.9	33.5	31.5	--
05...	1.64	0.014	0.037	0.96	0.049	--	7.6	0.2	7.4	3.9	34.3	33.1	--
19...	4.68	0.074	0.076	0.27	0.097	0.21	2.3	<0.1	2.2	5.6	5.0	5.4	--
JUN 04...	3.33	0.010	0.060	0.63	0.079	0.23	5.3	<0.1	5.3	3.3	30.7	32.1	3
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	E4.45	E0.017	E0.074	0.62	E0.089	E0.26	5.8	0.7	5.0	4.0	16.6	27.3	--
JUL 15...	2.98	0.052	0.095	0.42	0.111	0.29	3.7	<0.1	3.7	5.0	13.4	12.7	--
15...	--	--	--	0.05	--	--	0.3	<0.1	0.3	E0.3	--	--	--
AUG 12...	1.71	0.009	0.083	0.46	0.097	0.24	3.5	<0.1	3.5	3.9	29.7	30.0	--
12...	1.72	0.012	0.082	0.45	0.100	0.21	3.4	0.6	2.8	4.1	--	--	--
SEP 08...	1.41	0.014	0.102	0.38	0.122	0.34	4.0	<0.1	3.9	5.0	13.3	10.6	--

03378500 WABASH RIVER AT NEW HARMONY, IN—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Anti- mony, water, fltrd, ug/L (01095)	Arsenic water, fltrd, ug/L (01000)	Barium, water, fltrd, ug/L (01005)	Beryll- ium, water, fltrd, ug/L (01010)	Boron, water, fltrd, ug/L (01020)	Cadmium water, fltrd, ug/L (01025)	Chrom- ium, water, fltrd, ug/L (01030)	Cobalt water, fltrd, ug/L (01035)	Copper, water, fltrd, ug/L (01040)	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Lithium water, fltrd, ug/L (01130)	Mangan- ese, water, fltrd, ug/L (01056)
NOV 05...	--	1.4	--	--	136	--	--	--	--	<10	--	4.8	--
DEC 17...	--	1.4	--	--	144	--	--	--	--	E7	--	5.9	--
17...	--	<0.3	--	--	<7	--	--	--	--	<10	--	<0.5	--
FEB 11...	--	1.2	--	--	111	--	--	--	--	E5	--	4.0	--
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	0.6	--	--	41	--	--	--	--	23	--	1.4	--
MAR 11...	--	0.7	--	--	43	--	--	--	--	11	--	1.8	--
11...	--	0.7	--	--	44	--	--	--	--	E10	--	1.8	--
25...	--	1.0	--	--	53	--	--	--	--	10	--	2.2	--
APR 08...	--	1.1	--	--	59	--	--	--	--	E7	--	2.5	--
22...	--	1.1	--	--	78	--	--	--	--	<10	--	3.0	--
22...	--	<0.3	--	--	<7	--	--	--	--	<10	--	<0.5	--
MAY 05...	--	0.9	--	--	70	--	--	--	--	<10	--	2.5	--
05...	--	0.6	--	--	44	--	--	--	--	E5	--	1.6	--
19...	--	1.3	--	--	45	--	--	--	--	E8	--	1.3	--
JUN 04...	<0.30	1.3	45	<0.06	71	E0.03	<0.8	0.28	2.0	<8	<0.08	2.4	2.9
04...	--	--	--	--	--	--	--	--	--	--	--	--	--
24...	--	1.4	--	--	58	--	--	--	--	<8	--	1.6	--
JUL 15...	--	1.4	--	--	44	--	--	--	--	13	--	1.0	--
15...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 12...	--	1.9	--	--	87	--	--	--	--	E5	--	2.3	--
12...	--	1.9	--	--	86	--	--	--	--	<8	--	2.3	--
SEP 08...	--	1.4	--	--	53	--	--	--	--	13	--	1.4	--

03378500 WABASH RIVER AT NEW HARMONY, IN—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Molybdenum, water, fltrd, ug/L (01060)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Strontium, water, fltrd, ug/L (01080)	Vanadium, water, fltrd, ug/L (01085)	Zinc, water, fltrd, ug/L (01090)	2,6-Diethyl-aniline water fltrd 0.7u GF (82660)	CIAT, water, fltrd, ug/L (04040)	Aceto-chlor, water, fltrd, ug/L (49260)	Ala-chlor, water, fltrd, ug/L (46342)	alpha-HCH, water, fltrd, ug/L (34253)	Atra-zine, water, fltrd, ug/L (39632)
NOV													
05...	--	--	0.6	--	231	1.4	--	<0.006	E0.063	0.025	<0.004	<0.005	0.205
DEC													
17...	--	--	1.1	--	254	1.3	--	<0.006	E0.034	0.142	<0.004	<0.005	0.267
17...	--	--	<0.5	--	<0.20	<0.1	--	--	--	--	--	--	--
FEB													
11...	--	--	1.0	--	248	3.0	--	<0.006	E0.034	0.008	<0.004	<0.005	0.092
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	--	--	0.5	--	102	0.9	--	<0.006	E0.035	0.017	<0.004	<0.005	0.099
MAR													
11...	--	--	0.6	--	146	0.7	--	--	--	--	--	--	--
11...	--	--	0.7	--	149	0.8	--	--	--	--	--	--	--
25...	--	--	0.9	--	178	2.0	--	<0.006	E0.045	0.012	0.005	<0.005	0.132
APR													
08...	--	--	1.0	--	209	2.9	--	<0.006	E0.040	0.010	E0.004	<0.005	0.158
22...	--	--	1.1	--	240	2.9	--	<0.006	E0.049	0.083	<0.004	<0.005	0.843
22...	--	--	<0.5	--	<0.20	E0.1	--	--	--	--	--	--	--
MAY													
05...	--	--	0.6	--	134	1.1	--	<0.006	E0.196	0.115	<0.004	<0.005	4.62
05...	--	--	E0.3	--	86.6	0.7	--	<0.006	E0.234	0.112	<0.004	<0.005	4.64
19...	--	--	0.7	--	138	1.1	--	<0.006	E0.624	2.12	0.072	<0.005	11.9
JUN													
04...	4.1	2.03	0.8	<0.20	210	1.3	M	<0.006	E0.311	0.728	0.046	<0.005	5.81
04...	--	--	--	--	--	--	--	<0.006	<0.006	<0.006	<0.004	<0.005	<0.007
24...	--	--	0.7	--	175	1.5	--	<0.006	E0.520	E0.462	E0.030	<0.005	E3.52
JUL													
15...	--	--	0.5	--	112	1.9	--	<0.006	E0.220	0.302	0.026	<0.005	1.89
15...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG													
12...	--	--	0.6	--	229	2.3	--	<0.006	E0.103	0.058	<0.004	<0.005	0.522
12...	--	--	0.7	--	225	2.3	--	--	--	--	--	--	--
SEP													
08...	--	--	E0.4	--	109	2.0	--	<0.006	E0.075	0.042	0.006	<0.005	0.293

03378500 WABASH RIVER AT NEW HARMONY, IN—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Azin- phos- methyl, water, fltrd 0.7u GF ug/L (82686)	Ben- flur- alin, water, fltrd 0.7u GF ug/L (82673)	Butyl- ate, water, fltrd, ug/L (04028)	Car- baryl, water, fltrd 0.7u GF ug/L (82680)	Carbo- furan, water, fltrd 0.7u GF ug/L (82674)	Chlor- pyrifos water, fltrd, ug/L (38933)	cis- Per- methrin water fltrd 0.7u GF ug/L (82687)	Cyana- zine, water, fltrd, ug/L (04041)	DCPA, water fltrd 0.7u GF ug/L (82682)	Diazi- non, water, fltrd, ug/L (39572)	Diel- drin, water, fltrd, ug/L (39381)	Disul- foton, water, fltrd 0.7u GF ug/L (82677)	EPTC, water, fltrd 0.7u GF ug/L (82668)
NOV 05...	<0.050	<0.010	<0.002	<0.041	<0.020	<0.005	<0.006	<0.018	<0.003	<0.005	<0.005	<0.02	<0.002
DEC 17...	<0.050	<0.010	<0.002	E0.017	<0.020	<0.005	<0.006	<0.018	<0.003	<0.006	<0.005	<0.02	<0.002
17...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 11...	<0.050	<0.010	<0.002	<0.041	<0.020	<0.005	<0.006	<0.018	<0.003	<0.005	<0.005	<0.02	<0.002
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	<0.050	<0.010	<0.002	<0.041	<0.020	<0.005	<0.006	<0.018	<0.003	<0.005	<0.005	<0.02	<0.002
MAR 11...	--	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	<0.050	<0.010	<0.002	<0.041	<0.020	<0.005	<0.006	<0.018	<0.003	<0.005	<0.005	<0.02	<0.002
APR 08...	<0.050	<0.010	<0.002	<0.041	<0.020	<0.005	<0.006	<0.018	<0.003	<0.005	<0.005	<0.02	<0.002
22...	<0.050	<0.010	<0.002	<0.041	<0.020	<0.005	<0.006	<0.018	<0.003	<0.005	<0.005	<0.02	<0.002
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY 05...	<0.050	<0.010	<0.002	<0.041	<0.020	<0.005	<0.006	<0.018	<0.003	<0.005	<0.005	<0.02	<0.002
05...	<0.050	<0.010	<0.002	<0.041	<0.020	<0.005	<0.006	<0.018	<0.003	<0.005	<0.005	<0.02	<0.002
19...	<0.050	<0.010	<0.002	<0.041	<0.020	<0.005	<0.006	<0.018	<0.003	<0.005	<0.005	<0.02	<0.002
JUN 04...	<0.050	<0.010	<0.002	<0.041	E0.030	0.005	<0.006	<0.018	<0.003	E0.004	<0.005	<0.02	<0.002
04...	<0.050	<0.010	<0.002	<0.041	<0.020	<0.005	<0.006	<0.018	<0.003	<0.005	<0.005	<0.02	<0.002
24...	<0.050	<0.010	<0.002	<0.041	E0.006	<0.005	<0.006	<0.018	<0.003	<0.005	<0.005	<0.02	<0.002
JUL 15...	<0.050	<0.010	<0.002	E0.002	E0.006	<0.005	<0.006	<0.018	<0.003	0.006	0.010	<0.02	<0.002
15...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 12...	<0.050	<0.010	<0.002	<0.041	<0.020	<0.005	<0.006	<0.018	<0.003	E0.002	<0.005	<0.02	<0.002
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 08...	<0.050	<0.010	<0.002	<0.041	<0.020	<0.005	<0.006	<0.018	<0.003	0.006	<0.005	<0.02	<0.002

03378500 WABASH RIVER AT NEW HARMONY, IN—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Ethal- flur- alin, water, fltrd 0.7u GF ug/L (82663)	Etho- prop, water, fltrd 0.7u GF ug/L (82672)	Fonofos water, fltrd, ug/L (04095)	Lindane water, fltrd, ug/L (39341)	Linuron water fltrd 0.7u GF ug/L (82666)	Mala- thion, water, fltrd, ug/L (39532)	Methyl para- thion, water, fltrd 0.7u GF ug/L (82667)	Metola- chlor, water, fltrd, ug/L (39415)	Metri- buzin, water, fltrd, ug/L (82630)	Moli- nate, water, fltrd 0.7u GF ug/L (82671)	Naprop- amide, water, fltrd 0.7u GF ug/L (82684)	p,p'- DDE, water, fltrd, ug/L (34653)	Para- thion, water, fltrd, ug/L (39542)
NOV 05...	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.006	0.103	0.006	<0.002	<0.007	<0.003	<0.010
DEC 17...	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.006	0.042	0.050	<0.002	<0.007	<0.003	<0.010
17...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 11...	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.006	0.037	<0.006	<0.002	<0.007	<0.003	<0.010
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.006	0.048	0.015	<0.002	<0.007	<0.003	<0.010
MAR 11...	--	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.006	0.145	0.013	<0.005	<0.007	<0.003	<0.010
APR 08...	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.006	0.052	<0.006	<0.002	<0.007	<0.003	<0.010
22...	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.006	0.121	<0.006	<0.002	<0.007	<0.003	<0.010
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY 05...	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.006	0.938	0.009	<0.002	<0.007	<0.003	<0.010
05...	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.006	0.937	<0.010	<0.002	<0.007	<0.003	<0.010
19...	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.006	2.80	0.035	<0.002	<0.007	<0.003	<0.010
JUN 04...	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.006	1.11	0.020	<0.002	<0.007	<0.003	<0.010
04...	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.006	<0.013	<0.006	<0.002	<0.020	<0.003	<0.010
24...	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.006	E1.22	E0.020	<0.002	<0.007	<0.003	<0.010
JUL 15...	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.006	0.749	0.015	<0.002	<0.007	<0.003	<0.010
15...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 12...	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.006	0.261	<0.006	<0.002	<0.007	<0.003	<0.010
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 08...	<0.009	<0.005	<0.003	<0.004	<0.035	<0.027	<0.006	0.168	<0.006	<0.002	<0.007	<0.003	<0.010

03378500 WABASH RIVER AT NEW HARMONY, IN—Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Peb- ulate, water, fltrd 0.7u GF ug/L (82669)	Pendi- meth- alin, water, fltrd 0.7u GF ug/L (82683)	Phorate water fltrd 0.7u GF ug/L (82664)	Prome- ton, water, fltrd, ug/L (04037)	Pron- amide, water, fltrd 0.7u GF ug/L (82676)	Pro- pa- chlor, water, fltrd, ug/L (04024)	Pro- panil, water, fltrd 0.7u GF ug/L (82679)	Propar- gite, water, fltrd 0.7u GF ug/L (82685)	Sima- zine, water, fltrd, ug/L (04035)	Tebu- thiuron water fltrd 0.7u GF ug/L (82670)	Terba- cil, water, fltrd 0.7u GF ug/L (82665)	Terbu- fos, water, fltrd 0.7u GF ug/L (82675)	Thio- bencarb water fltrd 0.7u GF ug/L (82681)
NOV 05...	<0.004	<0.022	<0.011	0.02	<0.004	<0.010	<0.011	<0.02	0.185	<0.02	<0.034	<0.02	<0.005
DEC 17...	<0.004	<0.022	<0.011	E0.01	<0.004	<0.010	<0.011	<0.02	0.841	<0.02	<0.034	<0.02	<0.005
17...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 11...	<0.004	<0.022	<0.011	<0.01	<0.004	<0.010	<0.011	<0.02	0.296	<0.02	<0.034	<0.02	<0.005
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	<0.004	<0.022	<0.011	<0.01	<0.004	<0.010	<0.011	<0.02	1.34	<0.02	<0.034	<0.02	<0.005
MAR 11...	--	--	--	--	--	--	--	--	--	--	--	--	--
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	<0.004	<0.022	<0.011	E0.01	<0.004	<0.010	<0.011	<0.02	0.304	<0.02	<0.034	<0.02	<0.005
APR 08...	<0.004	<0.022	<0.011	<0.01	<0.004	<0.010	<0.011	<0.02	0.144	<0.02	<0.034	<0.02	<0.005
22...	<0.004	<0.022	<0.011	0.02	<0.004	<0.010	<0.011	<0.02	0.250	<0.02	<0.034	<0.02	<0.005
22...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY 05...	<0.004	<0.022	<0.011	0.02	<0.004	<0.010	<0.011	<0.02	1.00	<0.02	<0.034	<0.02	<0.005
05...	<0.004	<0.022	<0.011	0.02	<0.004	<0.010	<0.011	<0.02	0.985	<0.02	<0.034	<0.02	<0.005
19...	<0.004	<0.022	<0.011	E0.02	<0.004	<0.010	<0.011	<0.02	0.837	<0.02	<0.034	<0.02	<0.005
JUN 04...	<0.004	<0.022	<0.011	0.02	<0.004	<0.010	<0.011	<0.02	0.336	<0.02	<0.034	<0.02	<0.005
04...	<0.004	<0.022	<0.011	<0.01	<0.004	<0.010	<0.011	<0.02	<0.005	<0.02	<0.034	<0.02	<0.005
24...	<0.004	<0.022	<0.011	E0.03	<0.004	<0.010	<0.011	<0.02	E0.334	<0.02	<0.034	<0.02	<0.005
JUL 15...	<0.004	<0.022	<0.011	0.04	<0.004	<0.010	<0.011	<0.02	0.085	<0.02	<0.034	<0.02	<0.005
15...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 12...	<0.004	<0.022	<0.011	0.04	<0.004	<0.010	<0.011	<0.02	0.044	<0.02	<0.034	<0.02	<0.005
12...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 08...	<0.004	<0.022	<0.011	0.02	<0.004	<0.010	<0.011	<0.02	0.026	<0.02	<0.034	<0.02	<0.005

WATER-QUALITY DATA, WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Date	Tri- allate, water, fltrd 0.7u GF ug/L (82678)	Tri- flur- alin, water, fltrd 0.7u GF ug/L (82661)	Uranium natural water, fltrd, ug/L (22703)	Suspnd. sedi- ment, sieve diametr percent <.063mm (70331)	Sus- pended sedi- ment concen- tration mg/L (80154)
NOV 05...	<0.002	<0.009	--	97	69
DEC 17...	<0.002	<0.009	--	99	41
17...	--	--	--	--	--
FEB 11...	<0.002	<0.009	--	97	48
11...	--	--	--	--	--
25...	<0.002	<0.009	--	92	370
MAR 11...	--	--	--	89	133
11...	--	--	--	89	135
25...	<0.002	<0.009	--	96	191
APR 08...	<0.002	<0.009	--	97	109
22...	<0.002	<0.009	--	97	113
22...	--	--	--	--	--
MAY 05...	<0.002	<0.009	--	99	431
05...	--	--	--	98	439
19...	<0.002	<0.009	--	84	96
JUN 04...	<0.002	<0.009	1.22	97	125
04...	<0.002	<0.009	--	--	--
24...	<0.002	<0.009	--	95	163
JUL 15...	<0.002	<0.009	--	89	172
15...	--	--	--	--	--
AUG 12...	<0.002	<0.009	--	99	101
12...	--	--	--	--	--
SEP 08...	<0.002	<0.009	--	89	207

03378550 BIG CREEK NEAR WADESVILLE, IN

LOCATION.--Lat 38°04'58", long 87°46'10", in SW¹/₄SW¹/₄ sec.16, T.5 S., R.12 W., Posey County, Hydrologic Unit 05120113, (WADESVILLE, IN quadrangle), on left bank at downstream side of bridge on State Highway 66, 0.6 mi northwest of Blairsville, 0.8 mi upstream from County Road 250 North, 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 good except for estimated daily discharges and those below 1.0 ft³/s, which are poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	4.0	2.4	1,760	13	331	86	63	42	12	2.1	2.2
2	1.1	2.6	2.2	501	14	333	67	125	37	12	6.7	6.0
3	0.91	2.1	2.1	230	19	166	55	51	512	11	16	5.6
4	25	2.8	2.0	132	58	130	47	94	136	11	8.1	4.0
5	36	14	2.3	105	24	119	45	1,500	91	9.0	5.7	3.3
6	6.7	33	2.6	81	20	95	35	415	73	7.4	5.5	2.6
7	2.9	8.8	2.7	68	19	79	69	443	63	5.9	3.5	2.2
8	1.8	4.9	3.2	68	16	74	49	347	52	5.3	2.3	1.8
9	1.4	3.6	3.9	58	17	59	43	186	43	4.9	2.0	1.6
10	1.5	374	3.9	40	20	46	53	120	43	7.7	1.9	1.6
11	1.5	408	5.7	29	21	46	44	157	233	10	1.8	1.4
12	1.6	33	13	e25	20	50	37	95	2,240	6.7	1.8	1.3
13	1.5	14	54	e20	18	67	30	72	573	5.4	1.7	1.1
14	1.1	9.3	201	e17	39	70	27	62	223	4.3	1.6	0.97
15	0.94	7.7	56	e15	301	61	26	59	125	3.6	1.5	0.89
16	0.78	6.6	27	e13	202	56	25	70	92	3.3	1.4	1.1
17	0.71	5.5	20	e12	107	52	134	147	74	3.3	1.1	1.3
18	0.64	4.4	22	e11	78	48	71	245	59	3.5	1.0	1.2
19	1.1	4.4	995	e10	166	392	46	109	49	4.0	0.99	1.0
20	1.3	4.3	484	e9.6	514	257	41	113	39	3.9	1.1	0.82
21	1.3	4.6	121	e9.0	868	147	60	103	32	50	1.1	0.77
22	1.4	4.0	75	e8.6	2,940	107	36	77	28	35	1.1	11
23	1.2	3.6	48	e8.2	1,970	86	28	62	25	8.4	1.0	13
24	0.95	3.4	49	e7.8	462	73	27	49	21	4.6	0.99	7.2
25	73	3.1	67	e7.7	211	65	75	135	20	3.7	0.99	3.1
26	78	3.0	51	e7.8	154	100	162	165	19	2.9	0.99	1.5
27	7.5	2.7	46	e8.2	130	80	57	85	20	2.5	0.99	0.96
28	3.3	2.7	53	e9.7	144	97	41	72	17	2.4	0.99	1.4
29	148	2.8	112	15	---	453	47	165	15	2.5	0.99	1.0
30	59	2.7	121	12	---	141	37	78	12	2.2	1.2	0.91
31	8.1	---	607	12	---	102	---	61	---	2.0	1.9	---
TOTAL	471.73	979.6	3,255.0	3,310.6	8,565	3,982	1,600	5,525	5,008	250.4	80.03	82.82
MEAN	15.2	32.7	105	107	306	128	53.3	178	167	8.08	2.58	2.76
MAX	148	408	995	1,760	2,940	453	162	1,500	2,240	50	16	13
MIN	0.64	2.1	2.0	7.7	13	46	25	49	12	2.0	0.99	0.77
CFSM	0.15	0.31	1.01	1.03	2.94	1.24	0.51	1.71	1.61	0.08	0.02	0.03
IN.	0.17	0.35	1.16	1.18	3.06	1.42	0.57	1.98	1.79	0.09	0.03	0.03

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2003, BY WATER YEAR (WY)

MEAN	24.7	83.2	138	141	191	212	195	163	93.3	70.4	42.4	26.0
MAX	228	513	710	559	727	581	702	742	347	264	341	233
(WY)	(2002)	(1986)	(1983)	(1982)	(1990)	(1975)	(1996)	(1990)	(1996)	(1992)	(1977)	(1982)
MIN	0.019	0.61	0.30	0.13	9.15	14.3	8.73	2.98	0.62	0.33	0.18	0.000
(WY)	(1969)	(2000)	(1966)	(1977)	(1992)	(1981)	(1981)	(1988)	(1988)	(1994)	(1988)	(1983)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

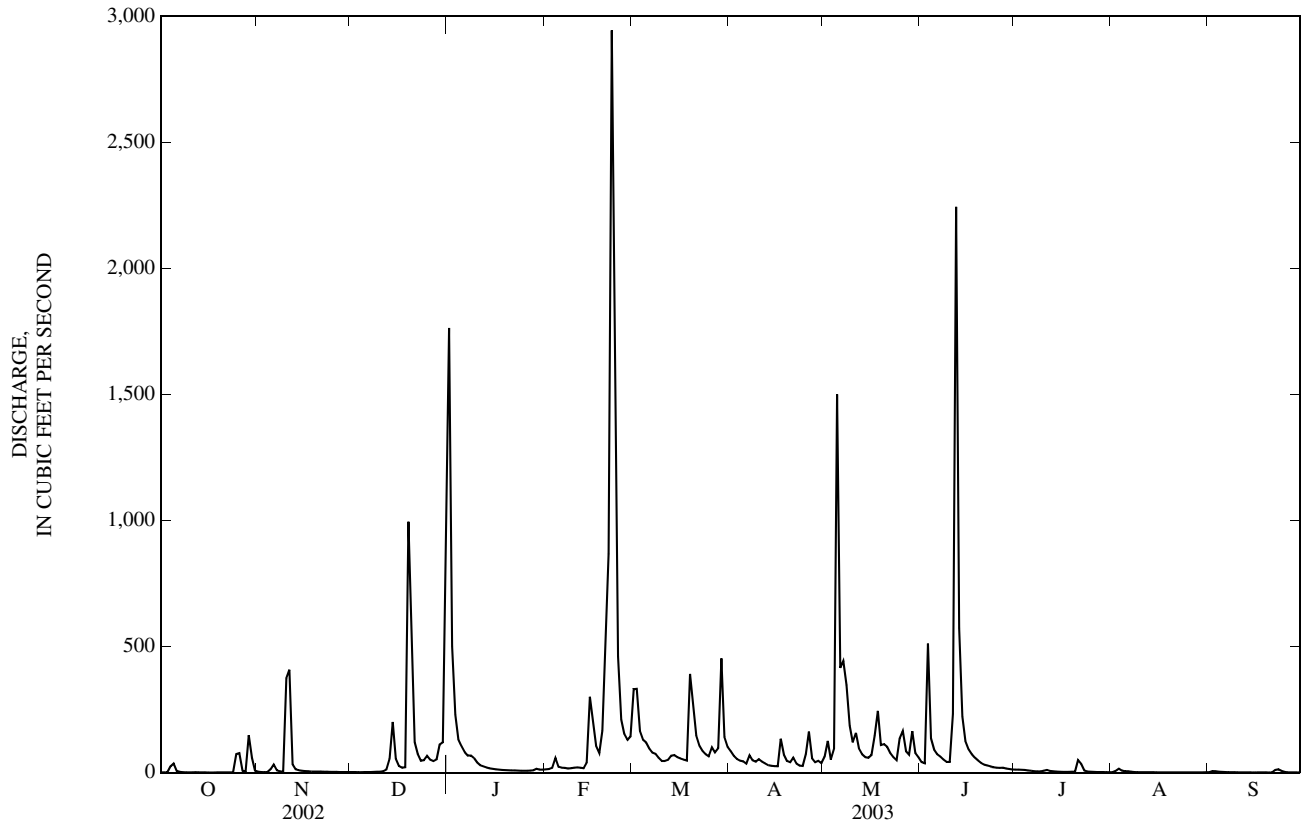
FOR 2003 WATER YEAR

WATER YEARS 1966 - 2003

ANNUAL TOTAL	46,051.16	33,110.18		
ANNUAL MEAN	126	90.7		115
HIGHEST ANNUAL MEAN				207
LOWEST ANNUAL MEAN				38.7
HIGHEST DAILY MEAN	4,090	May 13	2,940	Feb 22
LOWEST DAILY MEAN	0.10	Sep 11	0.64	Oct 18
ANNUAL SEVEN-DAY MINIMUM	0.17	Sep 6	0.94	Oct 14
MAXIMUM PEAK FLOW			4,860	Feb 22
MAXIMUM PEAK STAGE			18.52	Feb 22
ANNUAL RUNOFF (CFSM)	1.21		0.87	
ANNUAL RUNOFF (INCHES)	16.47		11.84	
10 PERCENT EXCEEDS	256		165	210
50 PERCENT EXCEEDS	25		20	17
90 PERCENT EXCEEDS	0.46		1.3	0.26

e Estimated

03378550 BIG CREEK NEAR WADESVILLE, IN—Continued



04092677 GRAND CALUMET RIVER AT INDUSTRIAL HWY AT GARY, IN

LOCATION.--Lat 41°36'29", long 87°23'39".in NW¹/₄NW¹/₄ sec.6, T.37 N., R.8W., Lake County, Hydrologic Unit 04040001, (HIGHLAND, IN quadrangle), on left bank, 30 feet upstream of U.S. 12 (Industrial Highway), 100 feet streamward of the centerline of Interstate 90, 2,000 feet downstream of Norfolk and Western railroad bridge, 6,000 feet southeast of Gary Airport terminal.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--October 1991 to September 1994, (gage heights only), October 1994 to current year.

GAGE.--Water-stage recorder and Acoustic Doppler Velocity Meter. Datum of gage is 580.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for estimated daily discharges, which are poor. Discharge is primarily from industrial and city effluent. Gage sensors were removed and gage temporarily shutdown from May 2, 2001 through December 5, 2001, due to bridge replacement.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	641	541	490	454	449	442	496	535	590	609	709	704
2	616	533	461	447	449	435	485	523	592	621	691	694
3	622	546	458	461	454	431	479	500	605	622	743	693
4	658	539	446	466	444	425	542	516	596	623	705	669
5	627	542	455	470	441	427	510	575	601	659	689	688
6	632	518	474	461	442	436	497	541	613	632	700	685
7	608	522	472	469	447	430	489	532	604	669	703	680
8	611	519	454	459	439	433	487	548	597	640	704	677
9	597	532	461	474	432	428	490	644	582	648	723	675
10	619	557	464	451	423	430	521	597	599	660	735	681
11	616	518	466	454	438	435	533	603	583	652	696	673
12	599	505	469	453	416	436	521	550	595	655	676	637
13	590	498	474	451	434	442	530	551	601	648	687	595
14	598	508	457	453	437	446	535	529	595	638	692	588
15	594	502	451	442	422	453	559	480	600	695	707	598
16	596	499	451	451	414	466	536	482	611	659	726	611
17	578	504	455	441	419	455	530	491	618	701	754	604
18	587	489	486	443	428	463	532	522	630	731	718	595
19	577	497	484	445	428	464	545	576	617	694	700	586
20	582	522	456	440	435	471	555	613	621	685	706	582
21	576	515	458	431	448	475	530	576	619	719	708	600
22	559	510	449	425	436	466	505	580	633	705	705	593
23	559	518	446	420	415	468	519	589	631	689	708	587
24	564	516	417	435	434	482	509	591	638	695	715	584
25	581	492	401	433	434	491	487	591	642	700	709	580
26	564	482	414	424	439	493	489	599	608	702	727	596
27	552	487	446	429	428	494	509	602	616	783	708	585
28	561	449	461	426	434	512	513	607	617	720	714	570
29	545	464	448	432	---	489	517	607	618	701	746	571
30	551	476	475	441	---	494	543	602	627	713	712	573
31	560	---	472	454	---	501	---	597	---	713	716	---
TOTAL	18,320	15,300	14,171	13,835	12,159	14,213	15,493	17,449	18,299	20,981	22,032	18,754
MEAN	591	510	457	446	434	458	516	563	610	677	711	625
MAX	658	557	490	474	454	512	559	644	642	783	754	704
MIN	545	449	401	420	414	425	479	480	582	609	676	570

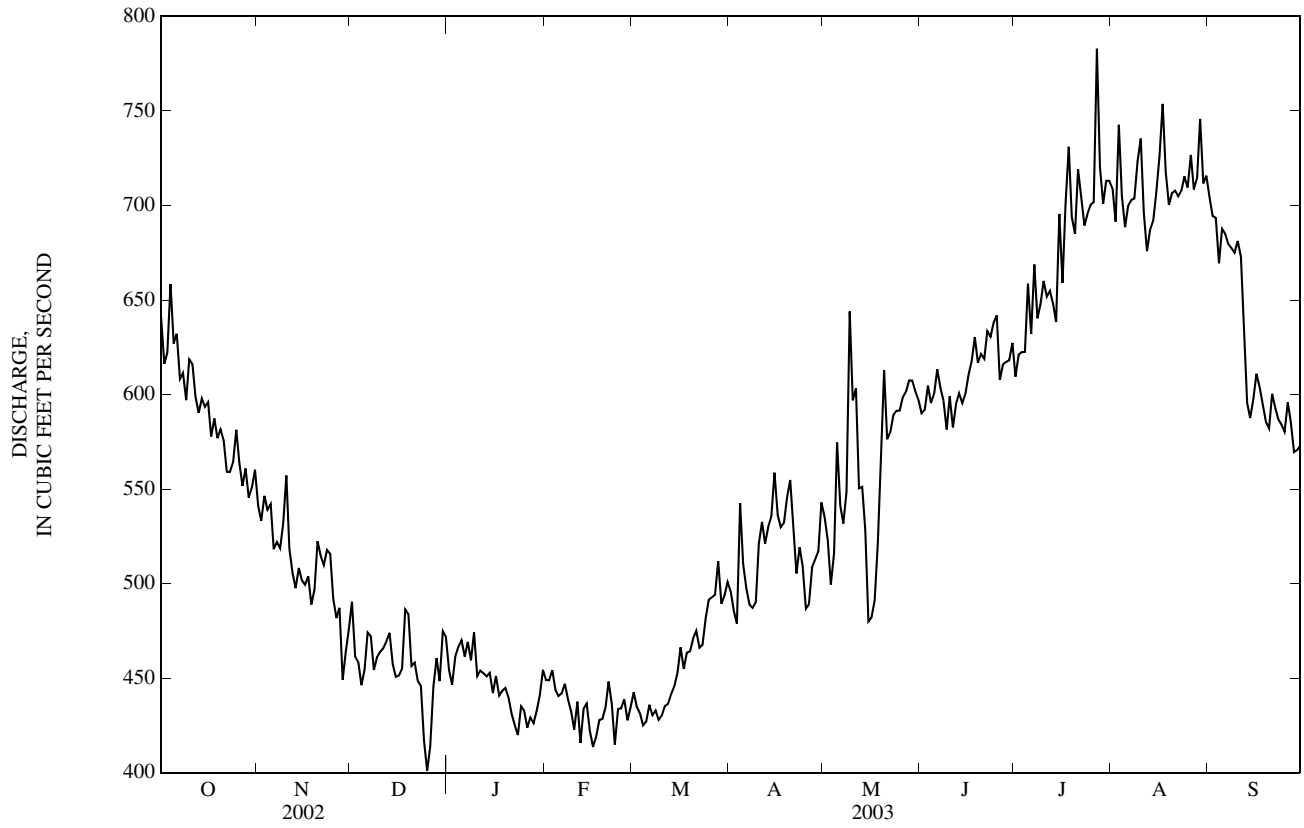
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2003, BY WATER YEAR (WY)

MEAN	504	485	468	461	478	490	507	518	545	546	546	538
MAX	591	510	523	515	534	548	579	608	662	711	711	625
(WY)	(2003)	(2003)	(2000)	(1999)	(1999)	(1999)	(1999)	(2002)	(2002)	(2002)	(2003)	(2002)
MIN	454	438	425	416	419	404	381	400	459	434	469	478
(WY)	(1995)	(1996)	(1996)	(2002)	(1996)	(1996)	(1996)	(1996)	(1995)	(1995)	(1995)	(1995)

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	WATER YEARS 1995 - 2003
ANNUAL TOTAL	204,168	201,006	
ANNUAL MEAN	559	551	507
HIGHEST ANNUAL MEAN			556 2002
LOWEST ANNUAL MEAN			444 1996
HIGHEST DAILY MEAN	759 Jul 5	783 Jul 27	783 Jul 27, 2003
LOWEST DAILY MEAN	337 Jan 13	401 Dec 25	305 Apr 27, 1996
ANNUAL SEVEN-DAY MINIMUM	369 Jan 12	424 Feb 12	361 Apr 25, 1996
MAXIMUM PEAK FLOW		1,130 Jul 27	1,130 Jul 27, 2003
MAXIMUM PEAK STAGE		3.36 Jul 27	4.81 Jun 13, 1994
10 PERCENT EXCEEDS	678	700	600
50 PERCENT EXCEEDS	559	541	500
90 PERCENT EXCEEDS	451	436	431

04092677 GRAND CALUMET RIVER AT INDUSTRIAL HWY AT GARY, IN—Continued



STREAMS TRIBUTARY TO LAKE MICHIGAN

04092750 INDIANA HARBOR CANAL AT EAST CHICAGO, IN

LOCATION.--Lat 41°38'57", long 87°28'07", in NE¼NE¼ sec.20, T.37N., R.9W., Lake County, Hydrologic Unit 04040001, (WHITING, IN quadrangle), on left bank at the site of the former Canal Street drawbridge, 3,200 ft east of U.S. Highway 20, 3,500 ft north of U.S. Highway 12, 4,300 ft south of 129th Street, and 1,000 ft west of the crossing of the centerlines of Cline Avenue and the Indiana Harbor Canal.

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--October 1991 to current year.

REVISED RECORDS.--WDR IN-96-1: Instantaneous peak flow date.

GAGE.--Water-stage recorder, Acoustic Doppler Velocity Meter. Datum of gage not established. Prior to Sept. 22, 2000, gage was located 0.8 mi downstream.

REMARKS.--Records fair. Positive discharges indicate flow towards Lake Michigan; negative discharges indicate flow away from Lake Michigan.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	518	548	524	534	482	411	460	813	484	421	646	804
2	567	523	436	521	532	481	486	596	446	427	554	637
3	634	496	514	556	592	531	504	451	559	402	697	551
4	710	513	532	528	511	437	883	457	527	543	719	616
5	681	519	519	440	494	523	758	728	468	725	558	598
6	527	526	570	526	410	488	554	500	471	641	569	538
7	559	537	463	543	508	423	583	540	492	797	518	480
8	473	496	441	505	434	583	569	553	460	740	596	502
9	429	475	489	487	466	547	500	899	445	663	531	527
10	452	509	434	538	447	461	417	751	469	568	529	549
11	470	526	440	480	510	475	439	701	560	498	569	545
12	515	485	484	555	520	507	421	543	513	479	528	524
13	578	466	488	415	474	576	439	408	548	446	531	478
14	467	512	521	489	470	489	489	443	475	445	437	507
15	454	537	463	504	542	430	511	501	439	812	532	572
16	568	407	538	428	526	381	537	431	419	550	472	527
17	503	354	520	505	443	332	581	377	434	732	578	465
18	505	420	660	483	483	411	573	435	466	927	513	470
19	464	482	624	486	420	487	575	452	541	590	528	501
20	515	454	530	474	417	528	615	565	465	494	493	470
21	425	455	517	472	344	552	537	492	418	793	513	488
22	479	607	508	471	350	481	502	531	347	687	576	548
23	529	520	512	478	546	391	442	533	398	650	580	530
24	504	549	479	525	502	413	463	474	496	534	587	572
25	460	492	478	504	474	531	420	482	469	526	581	524
26	430	467	481	446	422	447	411	447	485	636	735	590
27	437	498	539	525	436	493	345	486	399	938	604	577
28	531	517	509	467	393	610	404	466	465	882	557	520
29	490	496	469	539	---	561	456	561	510	621	702	505
30	476	474	529	507	---	459	684	550	435	586	613	534
31	473	---	532	500	---	479	---	703	---	584	624	---
TOTAL	15,823	14,860	15,743	15,431	13,148	14,918	15,558	16,869	14,103	19,337	17,770	16,249
MEAN	510	495	508	498	470	481	519	544	470	624	573	542
MAX	710	607	660	556	592	610	883	899	560	938	735	804
MIN	425	354	434	415	344	332	345	377	347	402	437	465

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2003, BY WATER YEAR (WY)

MEAN	587	591	622	621	627	644	620	638	599	582	591	571
MAX	752	916	1,094	963	843	1,111	922	1,016	724	761	759	759
(WY)	(1997)	(1997)	(1997)	(1997)	(1997)	(1999)	(1999)	(1999)	(1996)	(1996)	(1996)	(1996)
MIN	418	407	429	467	470	481	498	508	439	471	467	416
(WY)	(1998)	(1998)	(1998)	(1998)	(2003)	(2003)	(1998)	(1998)	(1998)	(1998)	(1998)	(1997)

SUMMARY STATISTICS

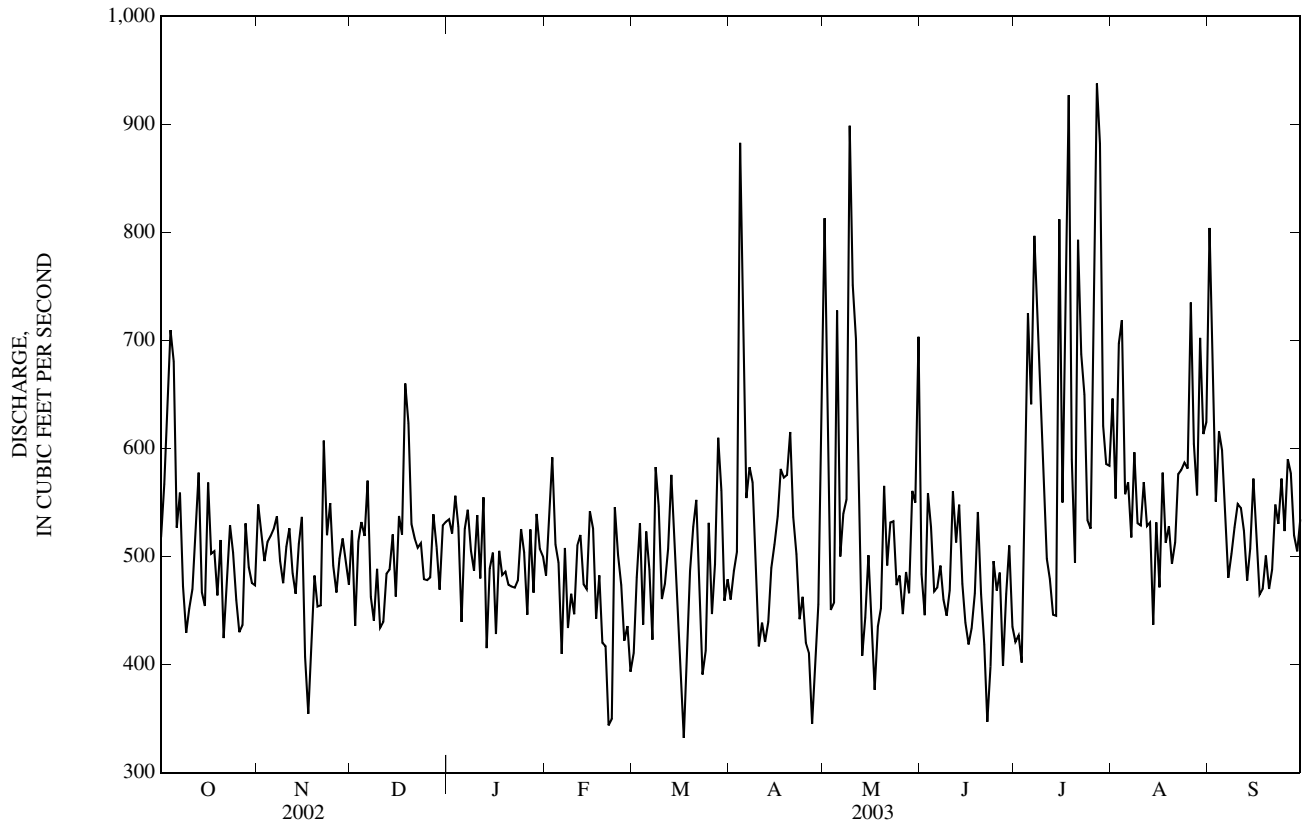
FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1994 - 2003

ANNUAL TOTAL	198,268	189,809	
ANNUAL MEAN	543	520	608
HIGHEST ANNUAL MEAN			727
LOWEST ANNUAL MEAN			462
HIGHEST DAILY MEAN	1,390	938	2,120
LOWEST DAILY MEAN	354	332	-641
ANNUAL SEVEN-DAY MINIMUM	438	420	-180
MAXIMUM PEAK FLOW		5,810	8,970
MAXIMUM PEAK STAGE		10.30	14.41
10 PERCENT EXCEEDS	658	622	767
50 PERCENT EXCEEDS	528	507	581
90 PERCENT EXCEEDS	445	429	445

04092750 INDIANA HARBOR CANAL AT EAST CHICAGO, IN—Continued



STREAMS TRIBUTARY TO LAKE MICHIGAN

04093000 DEEP RIVER AT LAKE GEORGE OUTLET AT HOBART, IN

LOCATION.--Lat 41°32'10", long 87°15'25", in NW¹/₄NW¹/₄ sec.32, T.36 N., R.7 W., Lake County, Hydrologic Unit 04040001, (GARY, IN quadrangle), on left bank at upstream side of bridge on Ridge Road in Hobart, 300 ft upstream from Duck Creek, and 400 ft downstream from Lake George Dam, 3.3 mi north of Ainsworth, IN.

DRAINAGE AREA.--124 mi².

PERIOD OF RECORD.--April 1947 to current year.

REVISED RECORDS.--WSP 1337: 1953. WSP 1507: 1956. WDR IN-72-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 588.17 ft above National Geodetic Vertical Datum of 1929 (levels by State of Indiana, Department of Natural Resources). Prior to July 29, 1952, nonrecording gage, and July 30, 1952, to July 20, 1955, water-stage recorder at site 400 ft upstream at datum 11.80 ft higher.

REMARKS.--Records fair. Flow subject to regulation by operation of Lake George Dam.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

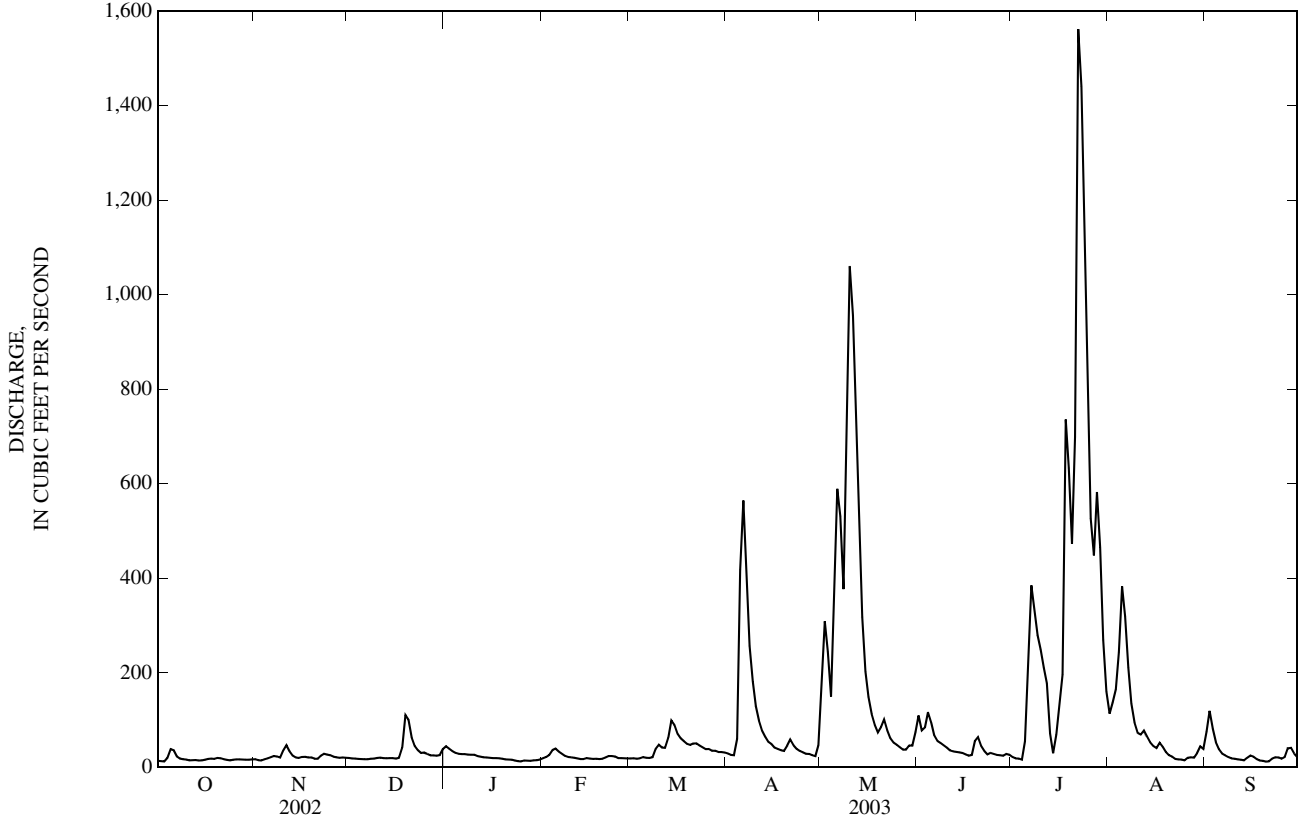
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	17	20	45	19	19	29	193	109	22	114	75
2	13	15	19	39	22	19	26	309	78	19	137	119
3	13	15	19	34	26	18	26	245	85	18	165	82
4	20	17	18	31	36	19	60	150	117	16	244	53
5	39	19	18	29	40	22	418	319	95	55	383	38
6	36	21	17	28	34	20	565	589	68	207	319	29
7	23	24	17	28	29	20	411	531	56	385	211	25
8	18	23	18	27	24	22	257	377	52	330	135	21
9	17	20	18	27	22	39	182	628	47	280	95	19
10	17	36	20	27	21	48	130	1,060	42	249	73	18
11	15	47	20	24	20	42	98	956	36	210	69	17
12	15	34	20	22	19	41	78	705	34	178	78	16
13	15	25	19	21	18	63	64	491	33	71	65	15
14	15	21	20	21	18	99	54	318	32	30	53	20
15	15	20	19	20	19	89	49	203	31	69	45	25
16	16	22	19	19	19	71	42	149	27	134	41	23
17	18	22	20	19	18	61	39	113	25	196	52	18
18	19	21	42	19	18	56	36	89	26	736	43	14
19	18	21	111	18	18	50	35	74	55	633	32	14
20	20	18	101	17	18	47	46	85	64	473	26	12
21	19	18	63	17	21	50	59	102	45	699	22	13
22	17	24	45	16	24	51	47	78	35	1,560	18	18
23	16	29	36	14	24	46	39	62	27	1,440	17	21
24	15	27	30	13	23	42	35	53	30	1,040	17	21
25	16	26	31	13	20	38	32	48	29	702	15	18
26	17	23	28	14	19	39	29	43	26	527	20	22
27	17	21	25	14	19	35	28	38	26	448	21	40
28	16	20	25	14	19	35	25	37	25	583	21	41
29	16	21	25	15	---	32	24	46	28	465	30	29
30	16	20	26	15	---	33	47	46	27	270	44	22
31	17	---	39	16	---	31	---	75	---	160	39	---
TOTAL	558	687	948	676	627	1,297	3,010	8,212	1,410	12,205	2,644	898
MEAN	18.0	22.9	30.6	21.8	22.4	41.8	100	265	47.0	394	85.3	29.9
MAX	39	47	111	45	40	99	565	1,060	117	1,560	383	119
MIN	13	15	17	13	18	18	24	37	25	16	15	12
CFSM	0.15	0.18	0.25	0.18	0.18	0.34	0.81	2.14	0.38	3.18	0.69	0.24
IN.	0.17	0.21	0.28	0.20	0.19	0.39	0.90	2.46	0.42	3.66	0.79	0.27

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 2003, BY WATER YEAR (WY)

	57.7	90.0	108	116	151	212	210	154	116	68.7	48.8	46.7
MEAN	57.7	90.0	108	116	151	212	210	154	116	68.7	48.8	46.7
MAX	433	499	393	475	456	688	477	454	557	394	427	312
(WY)	(1955)	(1986)	(1983)	(1993)	(1997)	(1979)	(1950)	(1970)	(1993)	(2003)	(1990)	(1993)
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)

04093000 DEEP RIVER AT LAKE GEORGE OUTLET AT HOBART, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1948 - 2003	
ANNUAL TOTAL	39,302.4		33,172		115	
ANNUAL MEAN	108		90.9		234	
HIGHEST ANNUAL MEAN					35.3	
LOWEST ANNUAL MEAN					1963	
HIGHEST DAILY MEAN	2,150	May 13	1,560	Jul 22	3,900	Nov 28, 1990
LOWEST DAILY MEAN	9.0	Sep 9	12	Sep 20	0.00	Nov 5, 1978
ANNUAL SEVEN-DAY MINIMUM	10	Sep 6	14	Jan 23	0.04	Aug 29, 1996
MAXIMUM PEAK FLOW			1,700	Jul 22	4,230	Nov 28, 1990
MAXIMUM PEAK STAGE			12.20	Jul 22	19.48	Oct 11, 1954
ANNUAL RUNOFF (CFSM)	0.87		0.73		0.92	
ANNUAL RUNOFF (INCHES)	11.79		9.95		12.57	
10 PERCENT EXCEEDS	279		224		272	
50 PERCENT EXCEEDS	33		28		48	
90 PERCENT EXCEEDS	14		17		14	



STREAMS TRIBUTARY TO LAKE MICHIGAN

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, (CHESTERTON, IN quadrangle), 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 fair except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	30	35	58	e39	e36	40	96	52	32	38	43
2	26	30	34	52	e40	e35	40	109	46	31	37	46
3	24	32	33	49	e41	e33	38	79	53	31	36	36
4	29	33	30	47	72	e35	63	66	57	30	52	32
5	34	35	35	46	e58	e36	298	139	51	36	45	30
6	27	37	32	46	e50	e37	269	179	47	38	39	29
7	25	39	36	46	e47	e38	111	99	46	92	36	29
8	24	40	34	46	e45	e39	95	172	44	120	34	28
9	24	38	32	47	e43	e40	83	308	42	103	34	30
10	24	53	32	47	e42	e39	74	609	41	78	33	27
11	24	53	32	40	e41	e41	65	281	41	61	32	28
12	24	42	32	e42	e41	e45	59	170	48	50	34	27
13	27	38	33	e41	e40	68	55	112	46	42	32	27
14	26	37	34	e40	e39	77	51	87	44	37	31	29
15	25	39	34	e41	e38	66	51	79	41	41	30	29
16	25	38	34	e41	e37	66	49	73	40	41	32	28
17	25	37	34	e40	e37	69	46	66	46	41	30	26
18	26	36	57	e40	e36	65	45	62	45	64	28	26
19	26	35	95	e41	e36	59	43	59	54	47	28	25
20	27	36	73	e41	e37	57	45	62	45	39	28	27
21	27	37	59	e40	e38	55	48	61	39	100	27	28
22	25	44	54	e39	e39	53	45	55	36	142	27	28
23	28	48	51	e38	e38	50	42	51	35	79	29	30
24	26	43	47	e37	e38	45	41	49	33	55	31	30
25	26	40	47	e37	e37	46	40	47	32	46	28	28
26	29	39	47	e38	e37	46	39	45	34	41	27	30
27	30	38	43	e40	e36	45	39	44	36	56	29	32
28	28	37	47	e39	e36	44	39	45	34	92	27	29
29	28	36	45	e38	---	48	38	50	34	63	29	31
30	31	36	48	e38	---	44	49	49	33	49	31	30
31	31	---	62	e39	---	41	---	58	---	42	29	---
TOTAL	825	1,156	1,341	1,314	1,158	1,498	2,040	3,461	1,275	1,819	1,003	898
MEAN	26.6	38.5	43.3	42.4	41.4	48.3	68.0	112	42.5	58.7	32.4	29.9
MAX	34	53	95	58	72	77	298	609	57	142	52	46
MIN	24	30	30	37	36	33	38	44	32	30	27	25
CFSM	0.40	0.58	0.65	0.64	0.62	0.73	1.03	1.69	0.64	0.89	0.49	0.45
IN.	0.46	0.65	0.75	0.74	0.65	0.84	1.15	1.94	0.72	1.02	0.56	0.50

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2003, BY WATER YEAR (WY)

MEAN	59.0	74.9	78.6	79.3	95.4	120	116	88.9	73.7	48.0	42.4	42.9
MAX	414	285	186	202	208	319	292	277	272	190	277	143
(WY)	(1955)	(1991)	(1966)	(1993)	(1997)	(1982)	(1947)	(1996)	(1993)	(1981)	(1990)	(1972)
MIN	22.3	27.4	24.5	27.0	30.9	48.3	44.6	33.5	25.6	22.2	23.1	21.4
(WY)	(1964)	(1954)	(1964)	(1977)	(1964)	(2003)	(1963)	(1958)	(1965)	(1988)	(1964)	(1953)

SUMMARY STATISTICS

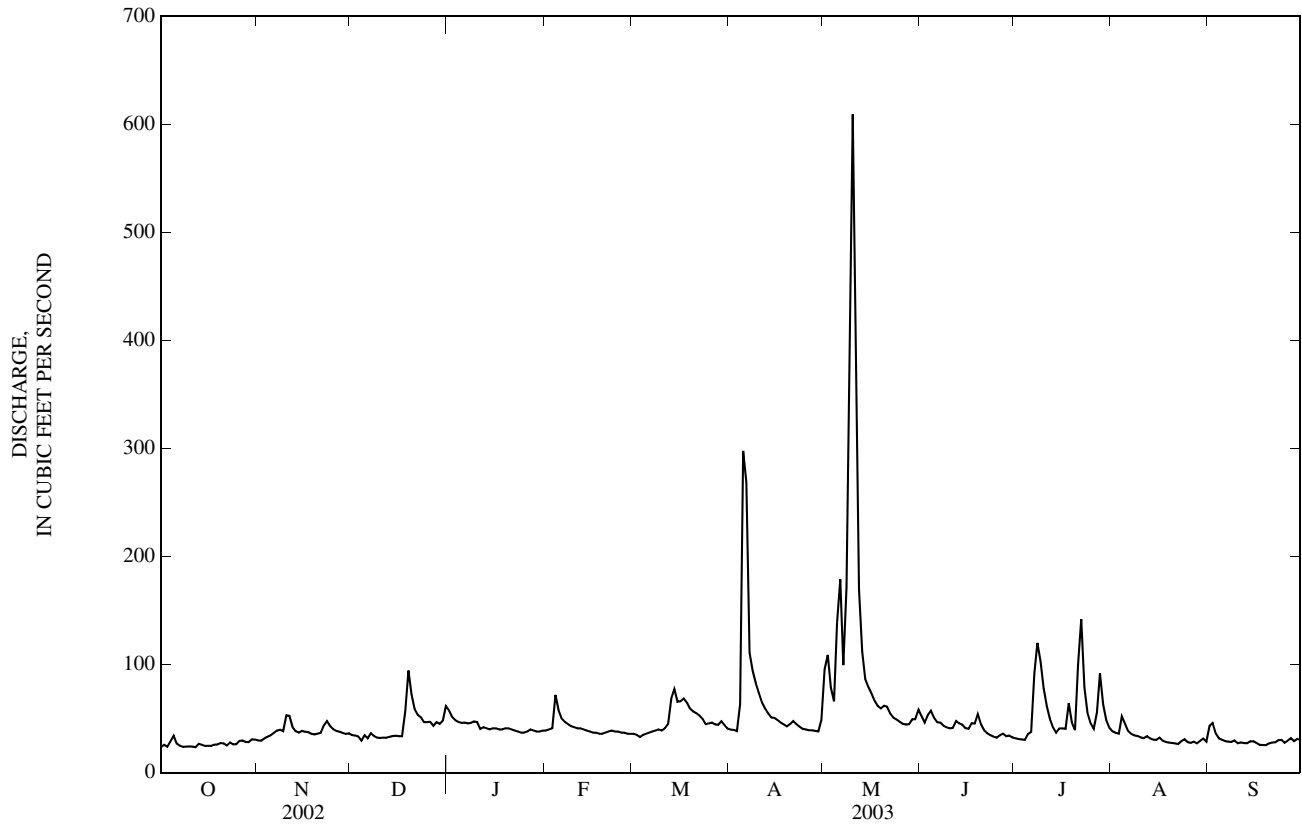
FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1946 - 2003

ANNUAL TOTAL	23,858	17,788		
ANNUAL MEAN	65.4	48.7	76.4	
HIGHEST ANNUAL MEAN			124	1991
LOWEST ANNUAL MEAN			36.5	1964
HIGHEST DAILY MEAN	908	May 13	3,040	Nov 28, 1990
LOWEST DAILY MEAN	21	Sep 24	17	Aug 24, 1965
ANNUAL SEVEN-DAY MINIMUM	22	Sep 24	19	Aug 20, 1965
MAXIMUM PEAK FLOW			793	May 10
MAXIMUM PEAK STAGE			7.86	May 10
ANNUAL RUNOFF (CFSM)	0.99	0.74		1.15
ANNUAL RUNOFF (INCHES)	13.41	10.00		15.69
10 PERCENT EXCEEDS	110	66	139	
50 PERCENT EXCEEDS	43	39	49	
90 PERCENT EXCEEDS	25	28	28	

04094000 LITTLE CALUMET RIVER AT PORTER, IN—Continued



STREAM TRIBUTARY TO LAKE MICHIGAN

04095090 BURNS DITCH AT PORTAGE, IN

LOCATION.--Lat 41°37'20", long 87°10'35", in NE¼NW¼ sec. 36, T.37 N., R.7 W., Porter County, Hydrologic Unit 04040001, (PORTAGE, IN quadrangle), on right bank at an industrial road bridge, 1,300 feet north of U.S. Highway 12, 0.7 mi south of the mouth, 1.2 mi west of the State Road 249 overpass over U.S. Highway 12, 2.4 mi east of County Line Road, 3.2 mi north of the intersection of Central Avenue and Willow Creek Road in Portage.

DRAINAGE AREA.--331 mi².

PERIOD OF RECORD.--February 2, 1995 to current year.

REVISED RECORDS.--WDR IN-01-1: 1998-2000 (M).

GAGE.--Water-stage recorder and Acoustic Doppler Velocity Meter. Datum of gage is 575 ft above National Geodetic Vertical Datum of 1929 from topographic map.

REMARKS.--Records poor. Peak stage and peak flow for the period of record probably occurred on May 10, 1996 during period of missing record.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e306	269	319	316	e316	e322	e304	742	513	248	694	e378
2	e294	272	261	362	e307	e315	309	969	500	273	641	e347
3	e306	301	323	363	341	e308	256	761	525	287	650	e332
4	333	288	276	364	421	e297	443	615	609	273	720	e360
5	446	270	321	339	e341	e294	1,360	1,130	539	408	846	382
6	311	303	e328	266	e329	e319	1,670	1,500	506	647	873	387
7	331	343	e298	e265	e345	e318	1,180	1,330	372	1,010	788	348
8	320	337	249	e254	e314	e329	945	1,470	356	1,000	706	347
9	294	324	e280	310	e327	e390	786	1,920	378	1,000	609	282
10	305	343	e289	288	e296	e334	659	2,780	376	905	562	336
11	303	389	314	e265	e287	e313	564	2,470	369	834	425	321
12	286	371	348	e288	e323	e315	468	2,000	362	690	385	321
13	318	348	262	e250	e283	439	484	1,480	365	611	415	315
14	283	242	e268	e287	e272	e382	e448	1,180	344	432	459	320
15	e317	210	211	e292	227	e344	e404	949	311	531	450	335
16	e303	191	316	e241	183	e359	348	815	312	512	432	297
17	332	236	357	e287	e232	e412	386	672	341	689	468	e302
18	335	250	437	e266	e308	472	369	602	363	1,670	458	e313
19	287	292	643	e252	e297	495	380	596	403	1,590	338	e309
20	295	294	625	e243	e319	470	449	623	462	1,250	352	e296
21	276	218	e558	237	e311	e437	412	596	363	1,530	360	308
22	265	323	e443	268	e287	e392	373	557	325	2,160	345	285
23	302	343	e358	270	317	e326	355	493	319	2,350	307	259
24	292	311	274	e318	301	e350	358	439	347	2,120	344	e317
25	290	287	270	e290	e311	e345	329	405	367	1,790	285	320
26	296	308	e280	217	e300	e335	318	354	317	1,410	342	e332
27	241	350	e315	e257	e315	e326	370	390	371	1,420	e326	421
28	271	334	e285	e281	e313	393	284	386	325	e1,440	e313	319
29	262	269	322	e297	---	325	255	461	280	1,400	e350	297
30	275	229	332	e316	---	e304	368	433	228	997	e339	209
31	279	---	325	e299	---	e311	---	422	---	809	e326	---
TOTAL	9,354	8,845	10,487	8,848	8,523	11,071	15,634	29,540	11,548	32,286	14,908	9,695
MEAN	302	295	338	285	304	357	521	953	385	1,041	481	323
MAX	446	389	643	364	421	495	1,670	2,780	609	2,350	873	421
MIN	241	191	211	217	183	294	255	354	228	248	285	209

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2003, BY WATER YEAR (WY)

MEAN	356	362	400	415	579	547	610	736	628	464	362	272
MAX	976	540	569	587	1,305	981	1,094	1,539	1,187	1,041	505	398
(WY)	(2002)	(2002)	(2002)	(1998)	(2001)	(2002)	(2002)	(2002)	(2000)	(2003)	(1995)	(1995)
MIN	107	144	179	231	255	321	358	288	237	214	205	147
(WY)	(1996)	(1999)	(1999)	(1996)	(1996)	(1996)	(1997)	(1999)	(1999)	(1997)	(1999)	(1997)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

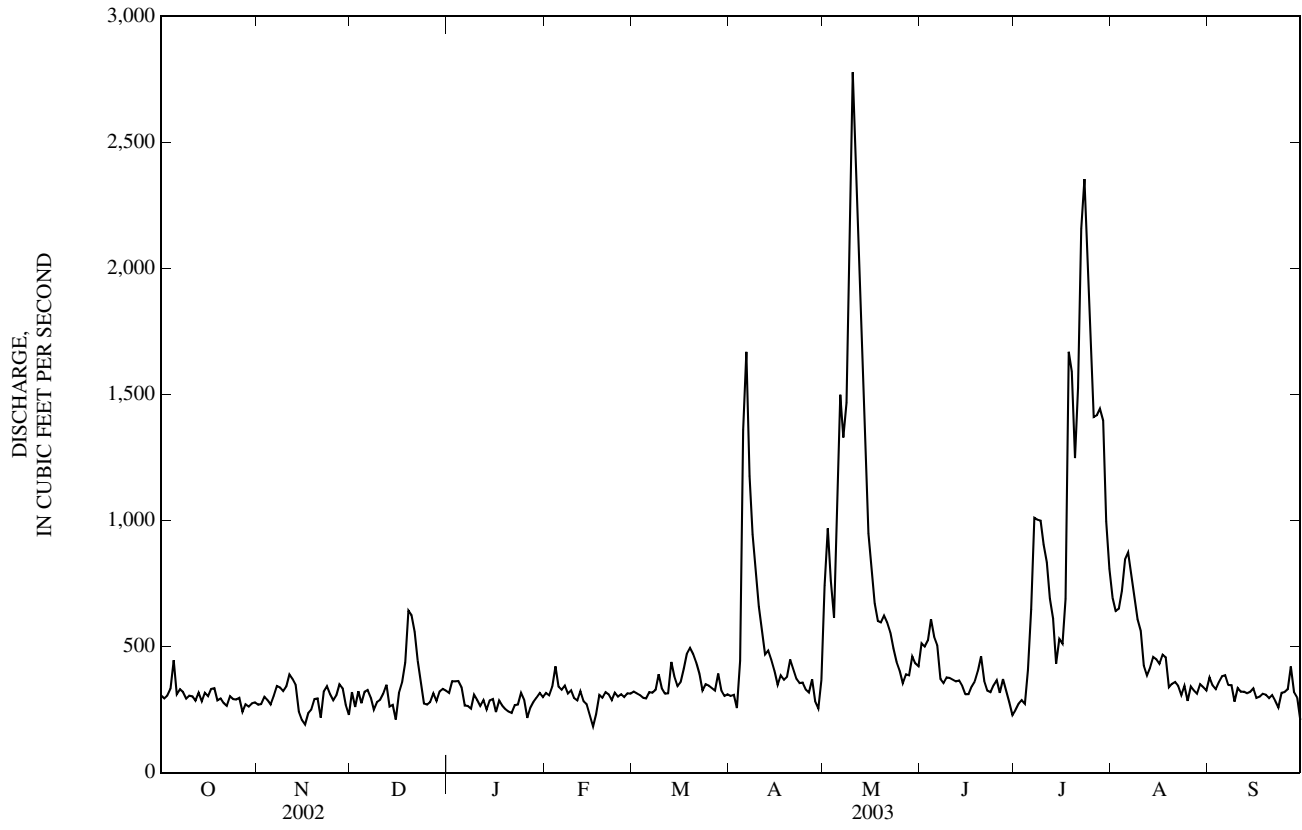
FOR 2003 WATER YEAR

WATER YEARS 1995 - 2003

ANNUAL TOTAL	220,750	170,739		
ANNUAL MEAN	605	468	477	
HIGHEST ANNUAL MEAN			702	2002
LOWEST ANNUAL MEAN			288	1999
HIGHEST DAILY MEAN	5,260	May 13	2,780	May 10, 1996
LOWEST DAILY MEAN	191	Nov 16	183	Feb 16, 1995
ANNUAL SEVEN-DAY MINIMUM	242	Nov 15	242	Nov 15, 1995
MAXIMUM PEAK FLOW			unknown	unknown
MAXIMUM PEAK STAGE			unknown	unknown
10 PERCENT EXCEEDS	1,140		823	819
50 PERCENT EXCEEDS	383		333	375
90 PERCENT EXCEEDS	280		268	190

e Estimated

STREAM TRIBUTARY TO LAKE MICHIGAN
04095090 BURNS DITCH AT PORTAGE, IN—Continued



STREAMS TRIBUTARY TO LAKE MICHIGAN

04095380 TRAIL CREEK AT MICHIGAN CITY HARBOR, IN

LOCATION.--Lat 41°43'22", long 86°54'15", sec. 29, T.38 N., R.4 W., LaPorte County, Hydrologic Unit 04040001, (MICHIGAN CITY WEST, IN quadrangle), on right bank in the northeast drawbridge tower, 2000 ft north of Michigan Street, 2,600 ft southeast of lake end of west breakwater, 0.5 mi southwest of Washington Park, 3000 ft downstream of U.S. Hwy 12 bridge in Michigan City.

DRAINAGE AREA.--59.1 mi².

PERIOD OF RECORD.--October 1994 to current year.

GAGE.--Water-stage recorder and Acoustic Velocity Meter. Datum of gage is 575 ft above National Geodetic Vertical Datum of 1929 from topographic map.

REMARKS.--Records poor. Positive discharges indicate flow towards Lake Michigan; negative discharges indicate flow away from Lake Michigan.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	55	48	e69	70	59	47	181	87	22	16	e123
2	35	48	48	e57	61	58	51	144	65	18	-0.07	e90
3	44	37	60	76	77	54	47	85	101	40	99	e67
4	67	51	48	63	142	35	159	83	82	51	78	e78
5	87	48	58	61	98	36	313	e293	71	64	e73	e74
6	31	62	66	74	67	59	131	160	61	84	e72	e60
7	66	60	43	66	95	57	107	112	57	123	e60	e48
8	46	41	45	58	66	63	97	111	75	138	e75	e53
9	65	47	52	64	87	89	85	457	75	97	e61	e59
10	60	89	50	71	63	67	61	297	47	65	e60	e62
11	43	47	44	50	53	55	63	214	60	79	e68	e61
12	50	48	59	70	84	55	52	142	70	59	e61	e57
13	53	57	49	56	60	74	49	97	62	40	e60	e47
14	39	42	70	69	38	72	65	85	54	53	e40	e54
15	54	38	46	73	27	56	57	96	57	41	e60	e68
16	44	38	79	e45	22	75	42	76	36	50	e48	e57
17	61	50	58	e63	37	58	35	69	63	35	e69	e44
18	54	41	126	e47	63	51	39	15	62	42	e55	e45
19	62	48	126	e55	50	52	42	-23	49	31	e58	e51
20	41	47	103	e49	56	69	84	59	63	66	e50	e45
21	43	45	e66	46	54	65	69	72	44	150	e54	e49
22	52	80	e59	e44	24	63	51	53	48	100	e67	e62
23	56	69	e69	e46	79	40	39	69	45	47	e69	e59
24	52	42	e52	67	54	64	47	63	41	50	e72	e68
25	56	43	e51	57	54	68	37	58	51	44	e69	e57
26	51	54	e54	54	42	55	50	66	69	24	e101	e72
27	47	e46	e73	56	53	51	55	72	65	35	e74	e70
28	42	41	e43	48	55	55	26	53	56	64	e63	e57
29	40	e37	e38	57	---	57	34	69	43	27	e95	e55
30	37	e30	e66	73	---	40	72	70	51	23	e77	e60
31	48	---	e68	56	---	45	---	161	---	8.0	e78	---
TOTAL	1,571	1,481	1,917	1,840	1,731	1,797	2,106	3,559	1,810	1,770.0	1,981.93	1,852
MEAN	50.7	49.4	61.8	59.4	61.8	58.0	70.2	115	60.3	57.1	63.9	61.7
MAX	87	89	126	76	142	89	313	457	101	150	101	123
MIN	31	30	38	44	22	35	26	-23	36	8.0	-0.07	44

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2003, BY WATER YEAR (WY)

MEAN	105	113	123	124	135	134	148	146	118	105	93.8	88.2
MAX	127	173	185	176	208	191	201	216	192	150	126	113
(WY)	(1998)	(1995)	(1997)	(1995)	(2001)	(2002)	(2002)	(2002)	(2000)	(1998)	(1995)	(2000)
MIN	50.7	49.4	61.8	59.4	61.8	58.0	70.2	111	60.3	57.1	63.9	61.7
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2001)	(2003)	(2003)	(2003)	(2003)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

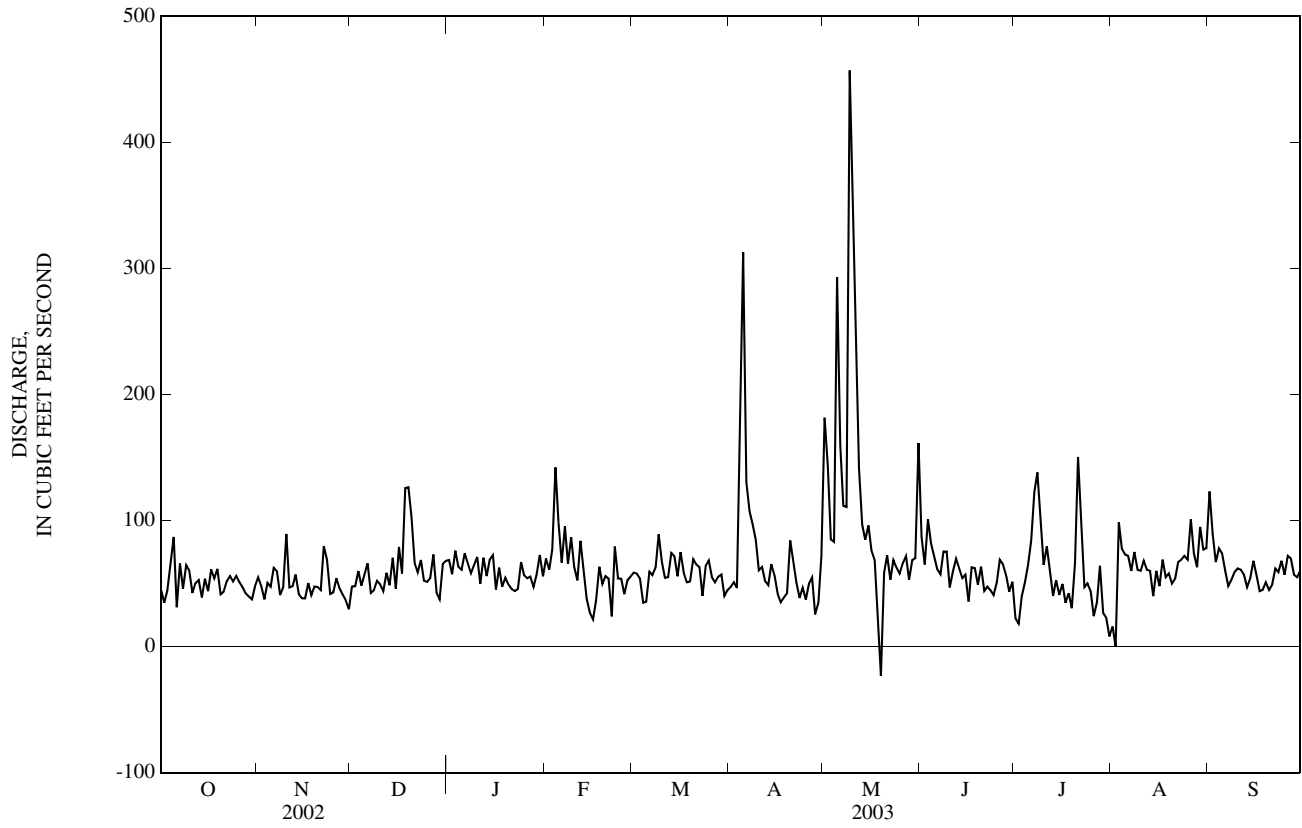
FOR 2003 WATER YEAR

WATER YEARS 1994 - 2003

ANNUAL TOTAL	39,523.7		23,415.93		
ANNUAL MEAN	108		64.2		118
HIGHEST ANNUAL MEAN					145
LOWEST ANNUAL MEAN					64.2
HIGHEST DAILY MEAN	822	May 12	457	May 9	
LOWEST DAILY MEAN	-29	Jul 6	-23	May 19	unknown
ANNUAL SEVEN-DAY MINIMUM	20	Jul 6	25	Jul 27	unknown
MAXIMUM PEAK FLOW			unknown		unknown
MAXIMUM PEAK STAGE			unknown		unknown
10 PERCENT EXCEEDS	204		89		169
50 PERCENT EXCEEDS	80		57		112
90 PERCENT EXCEEDS	44		39		58

e Estimated

04095380 TRAIL CREEK AT MICHIGAN CITY HARBOR, IN—Continued



STREAMS TRIBUTARY TO LAKE MICHIGAN

04096100 GALENA RIVER NEAR LAPORTE, IN

LOCATION.--Lat 41°44'54", long 86°40'30", in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.17, T.38 N., R.2 W., LaPorte County, Hydrologic Unit 04040001, (SPRINGVILLE, IN quadrangle), on left bank at downstream side of bridge on County Road 125 East, 1.3 mi south of Indiana- Michigan State line, 7.5 mi west of LaPorte-St. Joseph County 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 October 2003 (discontinued).

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 fair except for estimated daily discharges, which are poor.

EXTREMES FOR PERIOD OF RECORD.--Maximum instantaneous gage height may have occurred Nov. 28, 1990 during period of no gage height record.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.7	16	e18	22	17	16	20	43	23	12	15	22
2	10	17	e16	20	17	16	16	39	20	12	15	20
3	10	18	e12	19	20	e15	15	29	25	11	16	16
4	14	19	e14	19	30	e15	46	25	22	10	19	14
5	17	20	e15	19	23	e19	146	70	20	19	16	13
6	13	22	e11	19	20	e18	41	38	19	18	15	12
7	13	21	e16	19	19	e19	36	30	19	38	14	11
8	13	20	18	19	e16	e19	34	33	18	42	12	11
9	12	21	18	20	e16	e18	33	140	19	31	11	11
10	12	35	18	19	e15	e17	30	57	18	24	12	10
11	12	25	17	e15	e14	e20	28	40	18	21	12	8.8
12	12	23	17	e15	e13	26	25	38	19	19	13	8.6
13	15	22	18	e15	e19	32	24	31	18	17	12	9.8
14	14	21	19	e16	e18	28	23	29	17	16	12	11
15	13	24	18	e15	e14	29	21	33	16	15	12	11
16	13	22	18	e15	e13	31	20	29	15	15	10	10
17	13	21	17	e14	e14	32	20	26	15	14	12	9.7
18	14	21	28	e13	14	30	19	25	15	13	9.6	9.4
19	14	21	37	e13	14	28	19	23	16	13	10	9.5
20	14	21	26	e14	15	28	22	29	15	12	10	9.7
21	14	21	22	e15	15	28	22	27	14	83	9.9	9.5
22	14	26	21	e15	15	25	20	23	13	33	9.4	11
23	14	24	19	e14	15	24	19	22	13	23	8.3	13
24	14	22	19	e14	15	25	19	21	12	19	8.2	14
25	15	22	e18	e14	e14	26	18	20	12	17	9.1	15
26	16	21	e17	e14	e14	25	18	19	14	16	9.8	14
27	15	21	e17	e13	e14	24	17	19	15	22	10	17
28	15	20	19	e17	e15	23	17	18	13	26	9.7	14
29	15	20	18	e18	---	22	17	19	14	19	12	22
30	16	21	22	e17	---	22	23	19	13	17	12	18
31	16	---	28	16	---	21	---	32	---	16	11	---
TOTAL	421.7	648	591	507	458	721	828	1,046	500	663	367.0	385.0
MEAN	13.6	21.6	19.1	16.4	16.4	23.3	27.6	33.7	16.7	21.4	11.8	12.8
MAX	17	35	37	22	30	32	146	140	25	83	19	22
MIN	9.7	16	11	13	13	15	15	18	12	10	8.2	8.6
CFSM	0.79	1.26	1.11	0.95	0.95	1.35	1.60	1.96	0.97	1.24	0.69	0.75
IN.	0.91	1.40	1.28	1.10	0.99	1.56	1.79	2.26	1.08	1.43	0.79	0.83

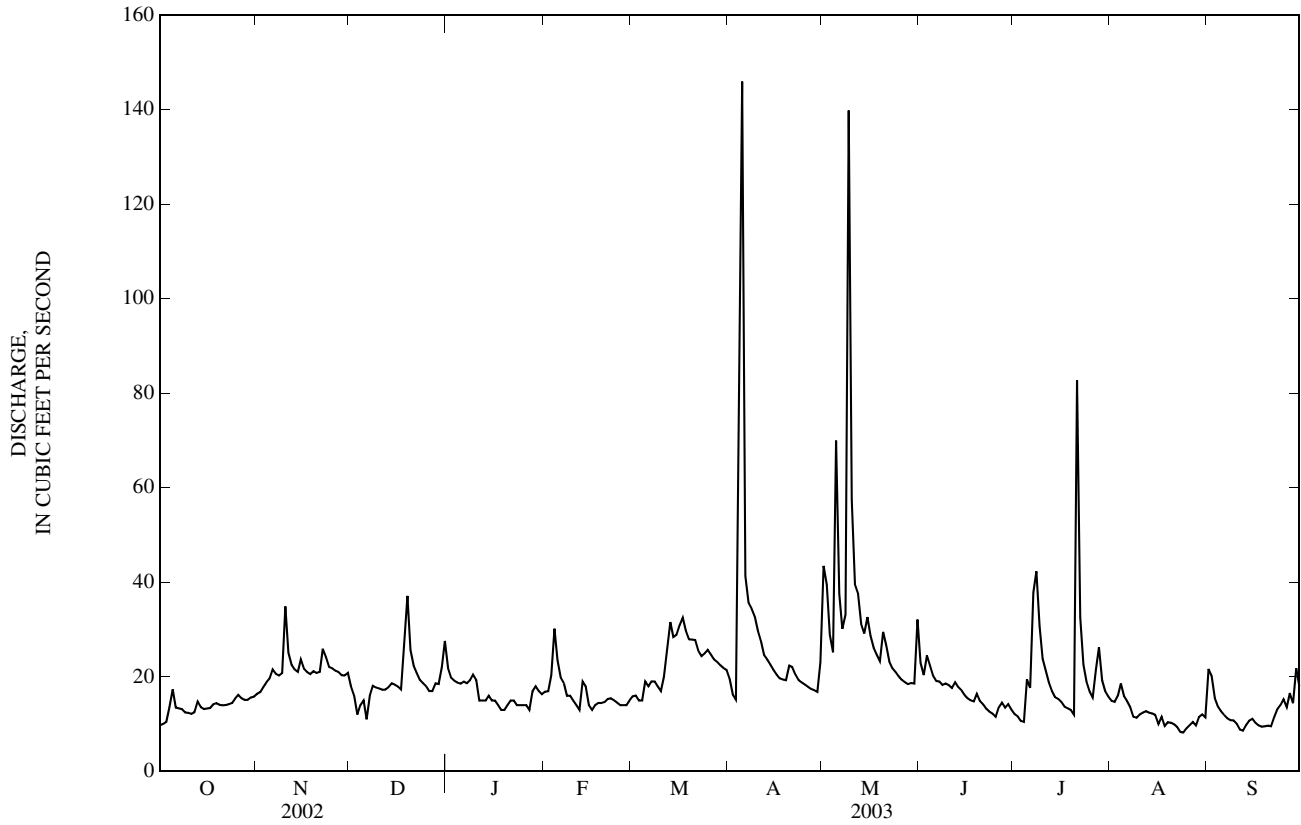
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2003, BY WATER YEAR (WY)

MEAN	22.9	29.6	29.5	26.9	31.3	36.5	33.8	27.7	23.8	17.6	15.5	16.4
MAX	47.5	64.4	51.8	54.5	65.3	70.1	56.0	65.5	69.7	39.0	28.5	32.6
(WY)	(2002)	(1991)	(1973)	(1998)	(1997)	(1982)	(1970)	(1996)	(1993)	(1996)	(1996)	(1993)
MIN	13.6	15.7	15.6	15.0	16.4	19.4	18.2	15.5	12.3	10.3	9.71	8.98
(WY)	(2003)	(2000)	(1990)	(1976)	(2003)	(1981)	(1971)	(1992)	(1971)	(1988)	(1970)	(2002)

04096100 GALENA RIVER NEAR LAPORTE, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1970 - 2003	
ANNUAL TOTAL	8,358.9		7,135.7		25.9	
ANNUAL MEAN	22.9		19.5		19.1	
HIGHEST ANNUAL MEAN					35.4	1993
LOWEST ANNUAL MEAN					19.1	2000
HIGHEST DAILY MEAN	387	May 12	146	Apr 5	650	Nov 28, 1990
LOWEST DAILY MEAN	7.2	Sep 8	8.2	Aug 24	6.7	Sep 13, 1973
ANNUAL SEVEN-DAY MINIMUM	7.8	Sep 7	9.2	Aug 22	7.6	Aug 27, 1970
MAXIMUM PEAK FLOW			222	Apr 5	900	Nov 28, 1990
MAXIMUM PEAK STAGE			4.70	Apr 5	7.04	Jun 8, 1993
ANNUAL RUNOFF (CFSM)	1.33		1.14		1.51	
ANNUAL RUNOFF (INCHES)	18.08		15.43		20.47	
10 PERCENT EXCEEDS	32		29		41	
50 PERCENT EXCEEDS	20		17		21	
90 PERCENT EXCEEDS	10		12		12	

e Estimated



STREAMS TRIBUTARY TO LAKE MICHIGAN

04099510 PIGEON CREEK NEAR ANGOLA, IN

LOCATION.--Lat 41°38'04", long 85°06'35", in NW¹/₄SE¹/₄ sec.26, T.37 N., R.12 E., Steuben County, Hydrologic Unit 04050001, (ANGOLA WEST, IN quadrangle), 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. WDR IN 92-1: 1991.

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 fair.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

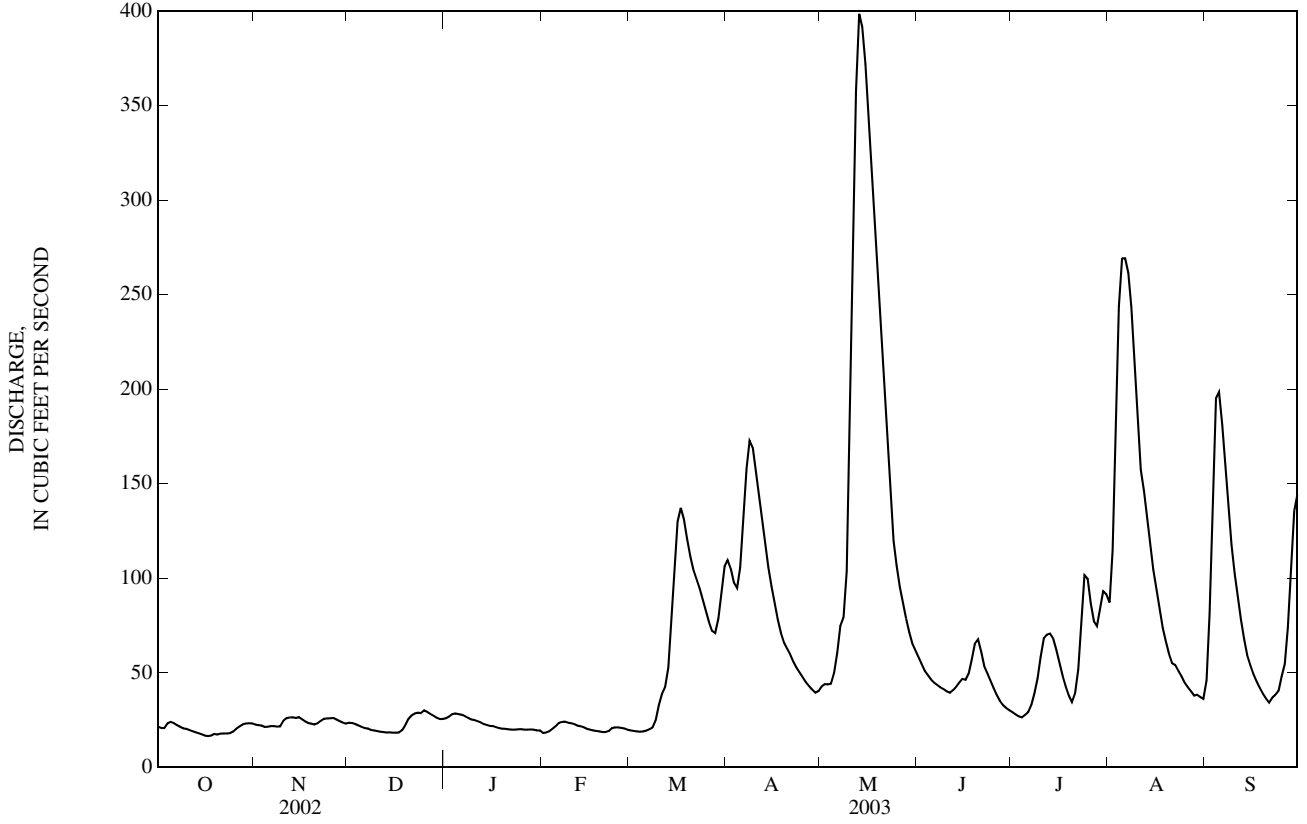
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	23	24	26	18	20	110	43	58	29	87	46
2	21	22	23	27	18	19	105	44	55	28	115	81
3	21	22	23	28	19	19	98	44	51	27	184	150
4	23	21	22	28	20	19	95	44	49	26	244	195
5	24	22	21	28	22	19	106	50	46	28	269	198
6	23	22	21	28	23	19	129	61	45	29	269	181
7	22	22	21	27	24	20	158	75	43	33	262	158
8	21	22	20	26	24	21	173	79	42	39	243	136
9	21	22	20	25	24	25	169	104	41	47	214	118
10	20	25	19	25	23	33	157	169	40	58	182	102
11	20	26	19	24	23	39	144	254	39	68	157	90
12	19	26	19	24	22	42	130	358	41	70	146	78
13	19	26	18	23	22	53	117	399	43	71	132	68
14	18	26	18	22	21	77	106	392	45	68	117	59
15	17	27	18	22	20	106	96	372	47	62	105	54
16	17	25	18	22	20	130	87	336	46	55	94	49
17	17	24	18	21	19	137	78	299	49	49	83	45
18	17	23	20	21	19	131	71	263	57	43	74	42
19	18	23	22	20	19	121	66	230	65	38	66	39
20	17	23	26	20	19	112	63	200	68	34	60	36
21	18	23	27	20	19	105	60	176	61	39	55	34
22	18	25	28	20	19	100	56	156	53	52	54	37
23	18	26	29	20	21	95	53	137	50	80	51	38
24	18	26	29	20	21	89	50	120	46	102	48	40
25	19	26	30	20	21	83	47	107	42	100	45	48
26	20	26	29	20	21	77	45	95	38	87	42	55
27	22	25	28	20	20	72	43	87	35	77	40	74
28	23	24	27	20	20	71	41	79	33	75	38	106
29	23	24	26	20	---	79	40	71	31	84	38	136
30	23	23	26	20	---	93	40	66	30	93	37	144
31	23	---	26	20	---	106	---	62	---	92	36	---
TOTAL	621	720	715	707	581	2,132	2,733	4,972	1,389	1,783	3,587	2,637
MEAN	20.0	24.0	23.1	22.8	20.8	68.8	91.1	160	46.3	57.5	116	87.9
MAX	24	27	30	28	24	137	173	399	68	102	269	198
MIN	17	21	18	20	18	19	40	43	30	26	36	34
CFSM	0.24	0.29	0.28	0.27	0.25	0.82	1.09	1.92	0.55	0.69	1.39	1.05
IN.	0.28	0.32	0.32	0.31	0.26	0.95	1.22	2.22	0.62	0.79	1.60	1.17

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2003, BY WATER YEAR (WY)

MEAN	36.7	53.5	75.7	92.7	110	157	163	118	81.5	50.1	39.1	33.5
MAX	181	195	195	385	343	437	491	423	362	164	126	119
(WY)	(2002)	(1993)	(1968)	(1993)	(2001)	(1982)	(1950)	(1996)	(1996)	(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
(WY)	(1965)	(1965)	(1964)	(1964)	(1963)	(1964)	(1946)	(1963)	(1988)	(1963)	(1964)	(1963)

04099510 PIGEON CREEK NEAR ANGOLA, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1946 - 2003	
ANNUAL TOTAL	34,398		22,577			
ANNUAL MEAN	94.2		61.9		84.1	
HIGHEST ANNUAL MEAN					151	1950
LOWEST ANNUAL MEAN					19.5	1964
HIGHEST DAILY MEAN	645	May 16	399	May 13	996	May 21, 1996
LOWEST DAILY MEAN	17	Sep 16	17	Oct 15	3.4	Oct 25, 1964
ANNUAL SEVEN-DAY MINIMUM	17	Oct 14	17	Oct 14	3.5	Oct 22, 1964
MAXIMUM PEAK FLOW			408	May 13	1,000	May 21, 1996
MAXIMUM PEAK STAGE			8.67	May 13	13.90	Mar 22, 1982
ANNUAL RUNOFF (CFSM)	1.13		0.74		1.01	
ANNUAL RUNOFF (INCHES)	15.32		10.06		13.69	
10 PERCENT EXCEEDS	260		136		188	
50 PERCENT EXCEEDS	42		38		54	
90 PERCENT EXCEEDS	20		20		17	



STREAMS TRIBUTARY TO LAKE MICHIGAN

04099750 PIGEON RIVER NEAR SCOTT, IN

LOCATION.--Lat 41°44'56", long 85°34'35", in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.14, T.38 N., R.8 E., Lagrange County, Hydrologic Unit 04050001, (SHIPSHEWANA, IN quadrangle), 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. WDR IN-92-1: 1991.

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 poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	112	112	130	120	e120	e85	292	223	283	138	203	208
2	109	111	128	110	e121	e72	318	236	264	119	294	311
3	109	112	183	104	e122	e68	308	222	254	105	347	323
4	116	111	337	94	e123	e67	309	211	237	123	325	317
5	129	114	e280	87	e125	e66	460	277	227	148	355	334
6	125	122	e210	95	e127	e66	489	327	227	161	410	363
7	121	122	e170	96	e129	e68	452	297	222	170	413	345
8	123	121	e150	95	e130	e72	447	288	217	220	410	332
9	118	119	e140	100	e130	e80	464	419	212	238	406	309
10	114	132	e150	104	e129	e97	477	697	206	227	385	275
11	110	149	139	e95	e128	e116	444	787	206	225	351	230
12	108	146	124	e97	e127	e134	426	816	216	228	304	233
13	109	141	111	e99	e128	179	400	869	216	232	279	225
14	108	136	89	e100	e129	228	375	860	211	213	271	207
15	106	137	85	e105	e130	266	338	862	205	199	248	183
16	103	135	84	e110	e128	291	322	884	197	191	222	189
17	103	132	82	e115	e129	357	310	836	196	186	219	182
18	105	128	87	e120	e130	363	296	760	199	179	199	164
19	113	130	113	e130	e132	345	281	682	205	165	175	160
20	115	130	138	e135	133	353	267	608	195	153	157	155
21	111	132	125	e132	130	372	268	571	188	210	144	143
22	110	143	121	e130	124	363	262	524	183	226	186	161
23	108	145	100	e128	138	309	231	462	177	215	206	234
24	110	141	100	e127	e116	305	225	419	170	213	182	219
25	113	137	e107	e126	e112	323	222	392	164	214	161	200
26	119	134	e110	e125	e110	301	216	373	160	227	145	193
27	118	133	e109	e124	e96	282	207	334	155	246	144	225
28	115	131	e108	e123	e93	278	201	318	149	278	139	264
29	111	129	108	e122	---	292	195	306	148	257	146	265
30	111	128	107	e121	---	286	197	292	145	225	170	295
31	110	---	129	e121	---	278	---	292	---	212	171	---
TOTAL	3,492	3,893	4,154	3,490	3,469	6,762	9,699	15,444	6,034	6,143	7,767	7,244
MEAN	113	130	134	113	124	218	323	498	201	198	251	241
MAX	129	149	337	135	138	372	489	884	283	278	413	363
MIN	103	111	82	87	93	66	195	211	145	105	139	143
CFSM	0.37	0.42	0.44	0.37	0.40	0.71	1.05	1.62	0.66	0.65	0.82	0.79
IN.	0.42	0.47	0.50	0.42	0.42	0.82	1.18	1.87	0.73	0.74	0.94	0.88

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 2003, BY WATER YEAR (WY)

MEAN	223	290	353	383	443	579	588	466	381	257	219	202
MAX	575	684	719	1,169	875	1,389	1,089	976	1,103	654	516	538
(WY)	(1987)	(1993)	(1983)	(1993)	(2001)	(1982)	(1978)	(1996)	(1981)	(1981)	(1981)	(1981)
MIN	96.3	96.7	134	113	124	218	323	233	132	104	92.5	85.8
(WY)	(1972)	(1972)	(2003)	(2003)	(2003)	(2003)	(2003)	(1971)	(1988)	(1988)	(1988)	(1971)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

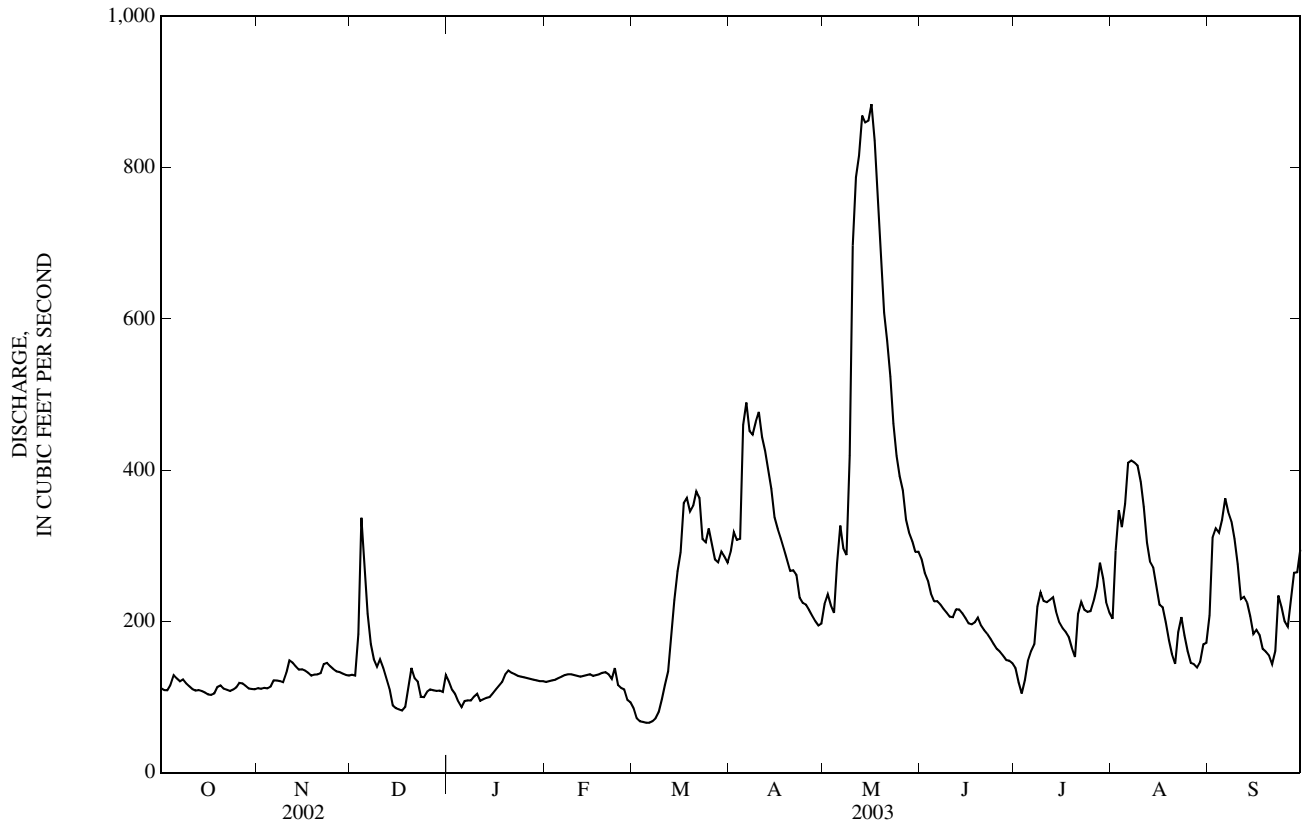
FOR 2003 WATER YEAR

WATER YEARS 1968 - 2003

ANNUAL TOTAL	128,558	77,591	
ANNUAL MEAN	352	213	364
HIGHEST ANNUAL MEAN			545
LOWEST ANNUAL MEAN			207
HIGHEST DAILY MEAN	1,650	May 14	884
LOWEST DAILY MEAN	82	Dec 17	66
ANNUAL SEVEN-DAY MINIMUM	93	Dec 13	68
MAXIMUM PEAK FLOW			892
MAXIMUM PEAK STAGE			5.35
ANNUAL RUNOFF (CFSM)	1.15		0.69
ANNUAL RUNOFF (INCHES)	15.58		9.40
10 PERCENT EXCEEDS	775		679
50 PERCENT EXCEEDS	206		290
90 PERCENT EXCEEDS	110		144

e Estimated

04099750 PIGEON RIVER NEAR SCOTT, IN—Continued



STREAMS TRIBUTARY TO LAKE MICHIGAN

04099808 LITTLE ELKHART RIVER AT MIDDLEBURY, IN

LOCATION.--Lat 41°40'31", long 85°42'01", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.10, T.37 N., R.7 E., Elkhart County, Hydrologic Unit 04050001, (MIDDLEBURY, IN quadrangle), on left bank 15 ft downstream from bridge on County Road 16, 0.1 mi east of Middlebury, 0.4 mi upstream from intersection of State Road 13 bridge and Little Elkhart River, 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 October 2003 (discontinued).

REVISED RECORDS.--WDR IN-82-1: 1980, 1981. WDR IN-92-1: 1991.

GAGE.--Water-stage recorder. Datum of gage is 810.00 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	37	35	49	39	e37	50	57	73	42	41	57
2	36	38	35	47	39	e37	48	55	69	41	55	70
3	37	37	e31	46	43	e36	47	51	68	37	48	58
4	42	38	e32	45	80	e37	61	49	66	37	49	47
5	44	39	33	45	e51	e38	122	102	64	42	48	43
6	41	40	32	44	e44	e36	92	85	62	42	44	40
7	40	39	32	44	e41	e36	83	70	61	47	42	38
8	39	39	32	43	e39	e48	78	69	60	65	42	36
9	39	39	31	43	e38	e82	77	271	59	57	41	35
10	38	45	31	42	e37	e56	74	318	57	51	39	32
11	38	42	30	e39	e36	e52	69	214	56	49	38	31
12	38	40	30	e39	e35	55	65	237	58	45	35	30
13	39	40	30	e38	e35	76	62	185	57	43	39	30
14	39	40	30	e38	e36	80	59	147	55	42	34	33
15	38	40	30	e37	e37	66	57	169	53	41	32	35
16	37	39	30	e37	e35	64	55	154	51	37	32	34
17	38	38	30	e36	e37	62	53	133	50	35	33	33
18	38	37	36	e33	e38	59	53	120	49	34	33	33
19	41	38	47	e33	39	57	52	109	49	32	33	32
20	40	38	54	e33	40	56	54	106	47	33	29	32
21	39	39	50	e32	41	57	55	99	46	50	30	32
22	38	42	48	e32	42	55	52	93	45	47	37	40
23	37	39	46	e32	e39	53	51	89	44	44	35	40
24	37	38	45	e32	e38	51	49	86	43	42	34	38
25	38	38	45	e33	e37	53	49	83	42	41	34	38
26	39	37	45	e33	e36	51	48	79	42	39	34	38
27	38	36	44	e32	e35	49	47	77	41	43	37	47
28	37	36	43	e33	e36	49	47	74	41	50	36	46
29	37	36	43	e34	---	55	46	72	43	45	41	44
30	38	36	45	e35	---	52	54	71	43	41	41	42
31	37	---	52	e36	---	50	---	80	---	39	39	---
TOTAL	1,193	1,160	1,177	1,175	1,123	1,645	1,809	3,604	1,594	1,333	1,185	1,184
MEAN	38.5	38.7	38.0	37.9	40.1	53.1	60.3	116	53.1	43.0	38.2	39.5
MAX	44	45	54	49	80	82	122	318	73	65	55	70
MIN	36	36	30	32	35	36	46	49	41	32	29	30
CFSM	0.42	0.42	0.41	0.41	0.44	0.58	0.66	1.27	0.58	0.47	0.42	0.43
IN.	0.48	0.47	0.48	0.48	0.46	0.67	0.73	1.46	0.65	0.54	0.48	0.48

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2003, BY WATER YEAR (WY)

MEAN	75.1	91.0	101	107	123	139	132	112	98.7	68.2	60.5	59.0
MAX	172	202	207	307	280	404	210	264	278	189	160	118
(WY)	(1991)	(1986)	(1991)	(1993)	(1985)	(1982)	(1985)	(1996)	(1993)	(1981)	(1998)	(1981)
MIN	36.0	38.6	36.4	37.9	40.1	53.1	60.3	55.3	36.7	34.9	37.7	35.5
(WY)	(1995)	(1981)	(2001)	(2003)	(2003)	(2003)	(2003)	(1988)	(1988)	(2001)	(2001)	(2002)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

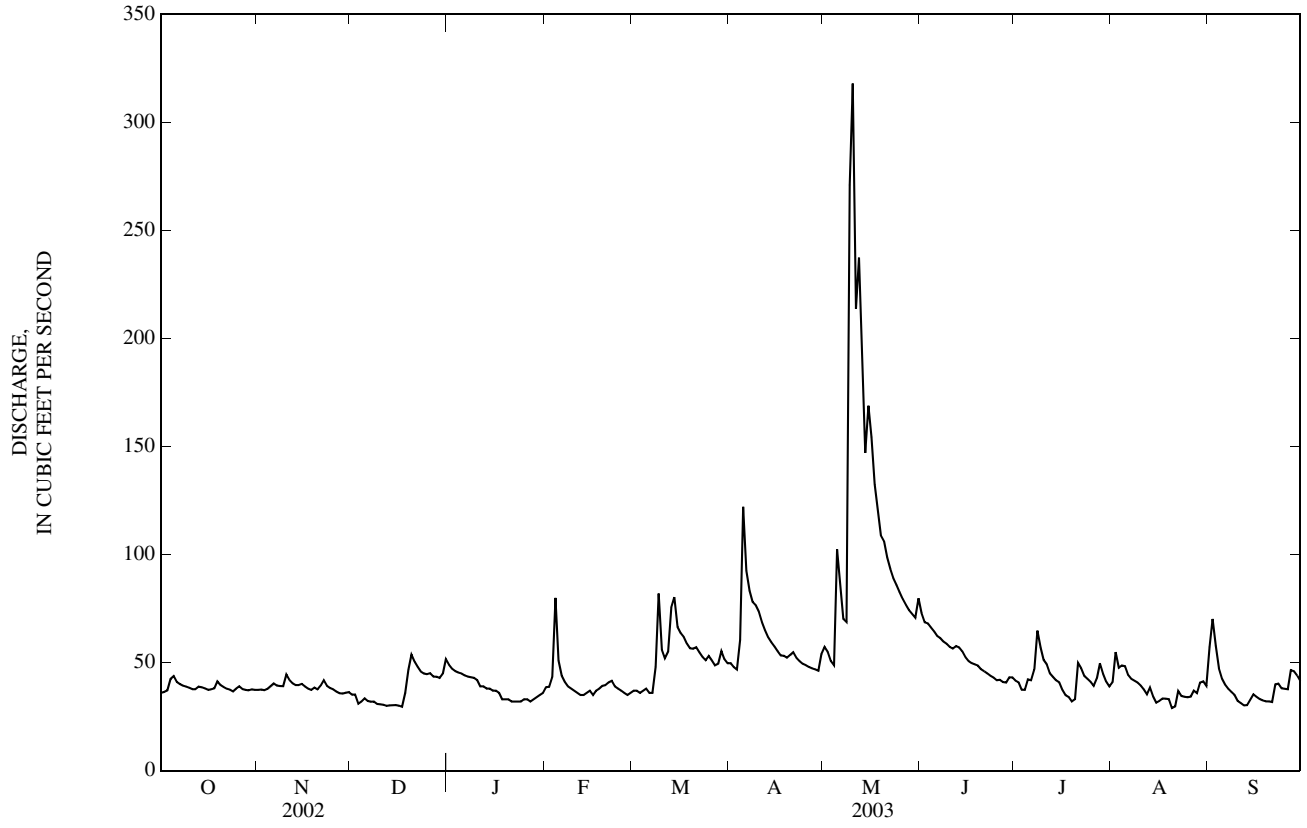
FOR 2003 WATER YEAR

WATER YEARS 1980 - 2003

ANNUAL TOTAL	31,541	18,182	
ANNUAL MEAN	86.4	49.8	97.0
HIGHEST ANNUAL MEAN			155
LOWEST ANNUAL MEAN			49.8
HIGHEST DAILY MEAN	871	May 12	318
LOWEST DAILY MEAN	30	Dec 11	29
ANNUAL SEVEN-DAY MINIMUM	30	Dec 11	30
MAXIMUM PEAK FLOW			506
MAXIMUM PEAK STAGE			7.05
ANNUAL RUNOFF (CFSM)	0.94		0.54
ANNUAL RUNOFF (INCHES)	12.80		7.38
10 PERCENT EXCEEDS	151		70
50 PERCENT EXCEEDS	60		41
90 PERCENT EXCEEDS	36		33

e Estimated

04099808 LITTLE ELKHART RIVER AT MIDDLEBURY, IN—Continued



STREAMS TRIBUTARY TO LAKE MICHIGAN

04099850 PINE CREEK NEAR ELKHART, IN

LOCATION.--Lat 41°40'53", long 85°52'57", in NE¹/₄NW¹/₄ sec. 7, T.37 N., R.6 E., Elkhart County, Hydrologic Unit 04050001, (ELKHART, IN quadrangle), 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, 3.1 mi east of Elkhart, and at mile 2.0.

DRAINAGE AREA.--31.0 mi², of which 8.75 mi² does not contribute directly to surface runoff.

PERIOD OF RECORD.--October 1979 to October 2003 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 755.00 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.7	6.9	6.6	7.3	4.9	6.7	8.1	9.7	11	7.3	11	11
2	7.7	6.8	6.7	6.8	5.0	6.6	7.5	9.5	11	6.8	23	15
3	8.1	6.9	5.6	6.6	5.7	6.7	7.4	8.8	11	6.7	12	10
4	9.1	7.0	5.8	6.4	13	6.6	10	8.5	11	6.9	11	8.4
5	9.1	7.1	6.0	6.3	8.5	6.6	22	28	11	8.3	9.8	7.6
6	8.3	7.3	5.8	6.2	9.3	6.3	14	18	10	8.3	9.2	6.9
7	8.1	7.1	5.7	6.1	7.9	6.2	13	14	10	10	8.4	6.5
8	8.0	7.0	5.8	6.1	7.6	12	12	12	10	16	8.0	6.1
9	7.7	7.0	5.1	6.1	e7.1	17	13	77	9.8	13	7.7	5.6
10	7.6	7.5	5.5	6.0	e6.8	8.8	13	52	9.7	11	6.9	5.4
11	7.5	7.4	5.7	5.1	e6.2	8.5	12	28	9.6	11	7.0	5.3
12	7.5	7.1	5.7	5.7	e6.0	8.7	11	43	9.8	10	7.3	5.3
13	7.4	7.1	5.8	5.3	e6.0	13	11	26	9.7	9.4	6.5	4.7
14	7.1	7.0	6.1	5.6	e6.0	12	10	20	9.5	8.8	5.9	5.0
15	7.0	7.2	6.1	4.5	e5.6	10	9.5	28	9.2	8.9	5.9	5.3
16	7.0	7.0	6.1	e4.4	e5.0	10	9.4	22	8.9	9.0	5.6	5.0
17	7.0	7.0	5.9	e4.3	6.4	10	9.3	18	8.9	7.4	5.1	4.6
18	7.0	7.0	7.0	e4.0	6.6	10	9.1	17	9.1	6.7	4.4	4.4
19	7.6	7.3	8.2	e4.0	6.8	9.7	8.7	15	9.0	5.8	3.3	4.5
20	7.3	7.0	8.9	e4.2	6.7	9.8	8.7	17	8.6	6.2	3.1	4.4
21	7.2	7.5	7.8	e4.4	6.9	9.9	8.9	16	8.4	13	2.7	3.9
22	7.2	8.4	7.2	e4.1	7.5	9.4	8.5	15	8.4	11	5.2	6.6
23	7.1	7.5	6.7	e4.0	6.8	9.0	8.2	14	8.1	11	5.3	7.0
24	7.1	7.3	6.6	e4.0	6.9	8.5	7.9	14	7.5	11	4.7	6.1
25	7.4	7.2	6.0	e4.0	5.9	9.1	7.6	13	6.8	10	4.6	6.4
26	7.7	7.0	6.8	e3.8	6.1	9.0	7.5	13	7.1	9.8	4.8	6.1
27	7.3	6.9	6.0	e3.6	6.1	8.5	7.2	12	7.4	11	5.7	7.3
28	7.1	6.7	6.2	e4.0	6.1	8.2	7.0	12	6.8	13	4.8	6.9
29	7.0	6.7	6.1	e4.0	---	8.7	6.9	11	8.1	11	7.2	6.8
30	7.0	6.9	6.4	4.0	---	8.2	8.6	11	7.9	10	7.3	6.2
31	7.0	---	7.8	4.7	---	8.0	---	12	---	9.8	6.3	---
TOTAL	232.9	213.8	197.7	155.6	189.4	281.7	297.0	614.5	273.3	298.1	219.7	194.3
MEAN	7.51	7.13	6.38	5.02	6.76	9.09	9.90	19.8	9.11	9.62	7.09	6.48
MAX	9.1	8.4	8.9	7.3	13	17	22	77	11	16	23	15
MIN	7.0	6.7	5.1	3.6	4.9	6.2	6.9	8.5	6.8	5.8	2.7	3.9
CFSM	0.24	0.23	0.21	0.16	0.22	0.29	0.32	0.64	0.29	0.31	0.23	0.21
IN.	0.28	0.26	0.24	0.19	0.23	0.34	0.36	0.74	0.33	0.36	0.26	0.23

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2003, BY WATER YEAR (WY)

MEAN	14.5	16.1	18.7	18.7	22.3	25.4	25.1	21.7	21.5	15.2	12.8	11.8
MAX	42.4	32.8	52.7	45.6	47.6	82.3	42.7	50.7	68.1	39.2	26.7	23.7
(WY)	(1991)	(1986)	(1991)	(1993)	(1985)	(1982)	(1999)	(1996)	(1993)	(1981)	(1997)	(1981)
MIN	4.12	5.26	4.44	4.96	6.76	9.09	9.90	8.00	7.79	6.17	5.01	3.22
(WY)	(2001)	(2001)	(2001)	(2001)	(2003)	(2003)	(2003)	(2000)	(1988)	(2001)	(2000)	(2000)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

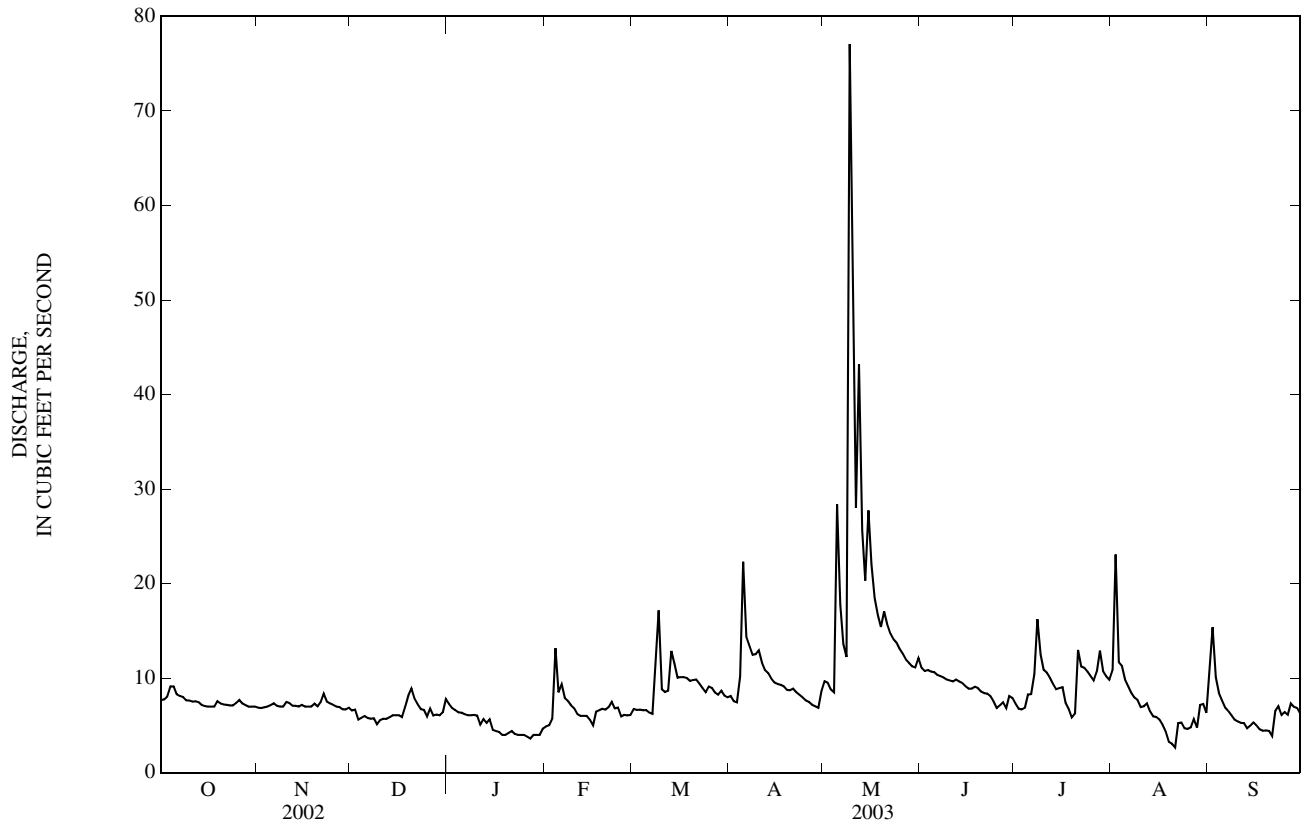
FOR 2003 WATER YEAR

WATER YEARS 1980 - 2003

ANNUAL TOTAL	6,391.1	3,168.0	
ANNUAL MEAN	17.5	8.68	18.6
HIGHEST ANNUAL MEAN			30.1
LOWEST ANNUAL MEAN			8.29
HIGHEST DAILY MEAN	175	77	532
LOWEST DAILY MEAN	5.1	2.7	1.8
ANNUAL SEVEN-DAY MINIMUM	5.6	3.9	2.2
MAXIMUM PEAK FLOW		119	607
MAXIMUM PEAK STAGE		3.90	9.74
ANNUAL RUNOFF (CFSM)	0.56	0.28	0.60
ANNUAL RUNOFF (INCHES)	7.67	3.80	8.16
10 PERCENT EXCEEDS	28	12	30
50 PERCENT EXCEEDS	14	7.3	15
90 PERCENT EXCEEDS	7.0	5.1	6.9

e Estimated

04099850 PINE CREEK NEAR ELKHART, IN—Continued



04100222 NORTH BRANCH ELKHART RIVER AT COSPERVILLE, IN

LOCATION.--Lat 41°28'54", long 85°28'32", in NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.22, T.35 N., R.9 E., Noble County, Hydrologic Unit 04050001, (ALBION, IN quadrangle), 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 for estimated daily discharges, which are poor. Flow regulated at times by dam at Waldron Lake.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	18	24	67	e42	e38	105	79	116	33	67	67
2	17	17	24	68	e42	e37	104	89	110	32	75	99
3	17	17	26	66	e43	e37	104	92	106	31	81	111
4	17	18	25	64	e44	e37	109	92	101	29	80	117
5	17	19	25	64	e45	e38	138	114	93	30	77	118
6	17	21	25	63	e46	e38	156	128	88	32	71	118
7	16	20	25	60	e47	e39	164	134	84	60	65	115
8	15	20	25	60	e48	e43	167	137	73	99	64	111
9	14	19	24	59	e47	e49	169	161	41	131	58	104
10	14	21	24	59	e45	e66	168	181	45	134	51	98
11	14	16	23	e56	e43	73	163	196	50	128	47	92
12	13	17	22	e54	e41	73	158	222	57	120	44	86
13	22	18	21	e52	e41	92	154	235	64	110	42	81
14	51	17	21	e50	e40	110	147	240	68	99	41	75
15	49	16	21	e50	e40	119	138	257	68	87	40	69
16	45	18	23	e50	e39	121	130	266	67	75	39	62
17	42	24	24	e48	e38	123	125	266	67	62	36	54
18	39	22	27	e48	40	125	118	261	69	53	33	46
19	39	22	35	e47	39	125	112	251	67	45	29	38
20	38	22	48	e47	38	124	107	243	61	38	26	33
21	36	23	56	e46	38	126	105	235	56	54	23	28
22	33	26	63	e46	38	126	102	221	51	71	29	34
23	30	26	65	e45	e36	126	97	207	47	75	30	52
24	28	26	68	e45	e37	123	93	194	44	73	30	60
25	28	26	70	e45	e40	121	89	182	41	65	28	66
26	27	27	70	e45	e40	118	84	169	39	58	28	73
27	27	26	70	e45	e39	116	79	157	36	52	34	90
28	25	26	69	e44	e39	111	74	145	34	66	34	101
29	23	25	68	e44	---	110	70	132	34	80	36	107
30	22	24	67	e43	---	110	70	123	34	79	42	107
31	19	---	66	e43	---	108	---	121	---	74	40	---
TOTAL	812	637	1,244	1,623	1,155	2,802	3,599	5,530	1,911	2,175	1,420	2,412
MEAN	26.2	21.2	40.1	52.4	41.2	90.4	120	178	63.7	70.2	45.8	80.4
MAX	51	27	70	68	48	126	169	266	116	134	81	118
MIN	13	16	21	43	36	37	70	79	34	29	23	28
CFSM	0.18	0.15	0.28	0.37	0.29	0.64	0.84	1.26	0.45	0.49	0.32	0.57
IN.	0.21	0.17	0.33	0.43	0.30	0.73	0.94	1.45	0.50	0.57	0.37	0.63

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1972 - 2003, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)	MEAN	MAX	(WY)	MIN	(WY)	MEAN	MAX	(WY)	MIN	(WY)	MEAN	MAX	(WY)	MIN	(WY)																																								
	79.4	272	(1987)	17.8	(1975)	112	314	(1973)	17.8	(1972)	136	341	(1986)	40.1	(2003)	153	542	(1993)	42.2	(1977)	160	307	(2001)	41.2	(2003)	244	553	(1985)	87.2	(2000)	238	530	(1985)	111	(2000)	173	354	(1996)	67.2	(1988)	140	405	(1996)	18.1	(1988)	81.5	211	(1981)	16.4	(1988)	60.5	171	(1997)	18.3	(1978)	62.5	161	(1972)	9.59	(1999)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

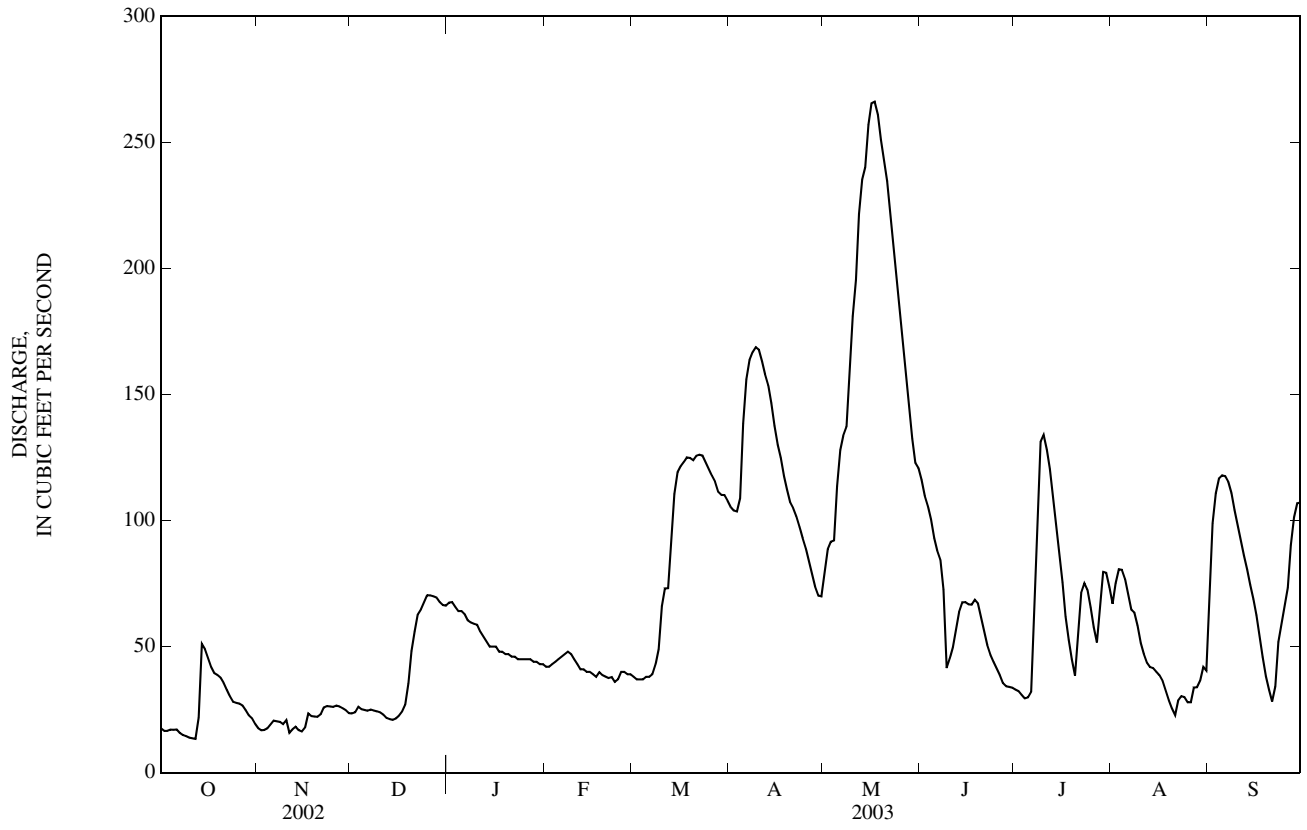
FOR 2003 WATER YEAR

WATER YEARS 1972 - 2003

ANNUAL TOTAL	42,084.9	25,320	
ANNUAL MEAN	115	69.4	136
HIGHEST ANNUAL MEAN			222
LOWEST ANNUAL MEAN			69.4
HIGHEST DAILY MEAN	402	May 18	916
LOWEST DAILY MEAN	5.1	Sep 24	2.2
ANNUAL SEVEN-DAY MINIMUM	6.2	Sep 20	2.8
MAXIMUM PEAK FLOW			266
MAXIMUM PEAK STAGE			5.25
ANNUAL RUNOFF (CFSM)	0.81		0.49
ANNUAL RUNOFF (INCHES)	11.03		6.63
10 PERCENT EXCEEDS	303		130
50 PERCENT EXCEEDS	69		51
90 PERCENT EXCEEDS	14		22
			8.12
			0.96
			13.05
			291
			105
			29

e Estimated

04100222 NORTH BRANCH ELKHART RIVER AT COSPERVILLE, IN—Continued



STREAMS TRIBUTARY TO LAKE MICHIGAN

04100252 FORKER CREEK NEAR BURR OAK, IN

LOCATION.--Lat 41°19'58", long 85°25'25", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.12, T.33 N., R.9 E., Noble County, Hydrologic Unit 04050001, (MERRIAN, IN quadrangle), on right bank 300 ft downstream from bridge on State Highway 9, and 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 October 2003 (discontinued).

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 poor. Occasional regulation at Miller Lake Outlet.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e1.2	0.76	0.68	0.36	0.64	5.9	34	7.3	5.8	3.4	14	16
2	e1.1	0.81	0.71	0.38	0.58	5.8	32	6.7	5.1	3.6	12	51
3	e0.86	0.79	0.80	0.46	0.56	5.9	29	6.4	5.0	3.7	12	73
4	0.85	0.76	0.61	0.51	1.0	6.2	30	5.7	4.6	3.7	13	63
5	0.78	0.75	0.51	0.51	2.0	6.6	42	8.4	4.7	4.0	14	46
6	0.76	0.75	0.52	0.51	2.8	6.8	59	18	4.4	4.8	17	33
7	0.76	0.76	0.45	0.55	3.3	6.7	60	23	4.0	5.3	16	23
8	0.73	0.72	0.42	0.63	3.5	6.6	e51	20	3.8	5.5	15	17
9	0.75	0.76	0.42	0.78	3.4	6.4	e45	40	3.7	6.2	13	13
10	0.73	0.81	0.45	0.70	3.4	8.9	e38	127	3.6	4.9	12	9.2
11	0.70	0.87	0.41	0.73	3.4	9.1	e32	159	3.4	5.0	11	7.6
12	0.70	0.90	0.38	0.67	3.3	7.8	e27	131	3.9	5.1	11	7.4
13	0.72	0.76	0.43	0.67	3.4	12	e22	99	4.0	5.4	11	6.9
14	0.65	0.91	0.48	0.71	3.5	23	e18	72	4.1	5.4	10	7.0
15	0.61	0.81	0.42	0.82	3.1	28	e13	56	4.6	5.7	9.0	6.5
16	0.52	0.95	0.37	0.68	3.2	26	e11	48	5.0	6.1	8.7	6.1
17	0.51	0.78	0.42	0.68	3.1	24	11	38	5.5	5.0	8.5	6.4
18	0.51	0.76	0.35	0.68	3.0	22	10	30	5.9	5.4	8.2	6.3
19	0.57	0.71	0.35	0.62	2.9	20	11	23	6.0	5.7	7.9	6.2
20	0.52	0.70	0.42	0.60	3.0	17	11	18	5.6	6.5	7.7	6.2
21	0.51	0.78	0.34	0.46	3.3	17	9.2	15	6.0	9.6	6.8	6.2
22	0.50	0.86	0.34	0.42	3.6	17	8.8	12	5.9	12	7.3	6.4
23	0.49	0.97	0.32	0.42	3.2	16	7.9	9.9	4.0	12	7.1	6.4
24	0.50	0.93	0.25	0.42	2.9	15	8.0	8.6	2.6	12	7.2	7.0
25	0.49	0.84	0.34	0.35	3.8	14	8.2	8.1	2.8	12	6.9	9.2
26	0.52	0.80	0.34	0.25	4.6	14	7.6	8.0	3.3	12	7.7	13
27	0.52	0.75	0.34	0.28	4.4	14	6.8	7.8	3.6	13	8.2	24
28	0.55	0.69	0.32	0.24	4.8	14	6.1	8.0	3.8	18	7.5	33
29	0.71	0.74	0.30	0.35	---	21	6.8	7.8	3.9	21	8.0	32
30	0.78	0.68	0.21	0.38	---	34	6.7	8.0	4.2	21	8.0	25
31	0.77	---	0.22	0.52	---	36	---	7.8	---	19	7.8	---
TOTAL	20.87	23.86	12.92	16.34	83.68	466.7	662.1	1,037.5	132.8	262.0	313.5	573.0
MEAN	0.67	0.80	0.42	0.53	2.99	15.1	22.1	33.5	4.43	8.45	10.1	19.1
MAX	1.2	0.97	0.80	0.82	4.8	36	60	159	6.0	21	17	73
MIN	0.49	0.68	0.21	0.24	0.56	5.8	6.1	5.7	2.6	3.4	6.8	6.1
CFSM	0.04	0.04	0.02	0.03	0.16	0.78	1.15	1.74	0.23	0.44	0.53	0.99
IN.	0.04	0.05	0.03	0.03	0.16	0.90	1.28	2.01	0.26	0.51	0.61	1.11

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2003, BY WATER YEAR (WY)

MEAN	7.89	12.9	18.1	17.5	23.7	33.7	33.6	19.8	18.8	8.66	4.91	5.36
MAX	50.6	48.8	52.5	67.1	62.5	111	60.5	41.9	90.7	49.5	36.4	33.4
(WY)	(1991)	(1989)	(1978)	(1993)	(1985)	(1982)	(1978)	(1996)	(1981)	(1986)	(1990)	(1990)
MIN	0.31	0.25	0.21	0.53	2.96	9.28	9.61	4.70	1.98	0.41	0.25	0.23
(WY)	(1995)	(1995)	(2000)	(2003)	(1979)	(2000)	(1971)	(1988)	(1988)	(1971)	(1971)	(1978)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

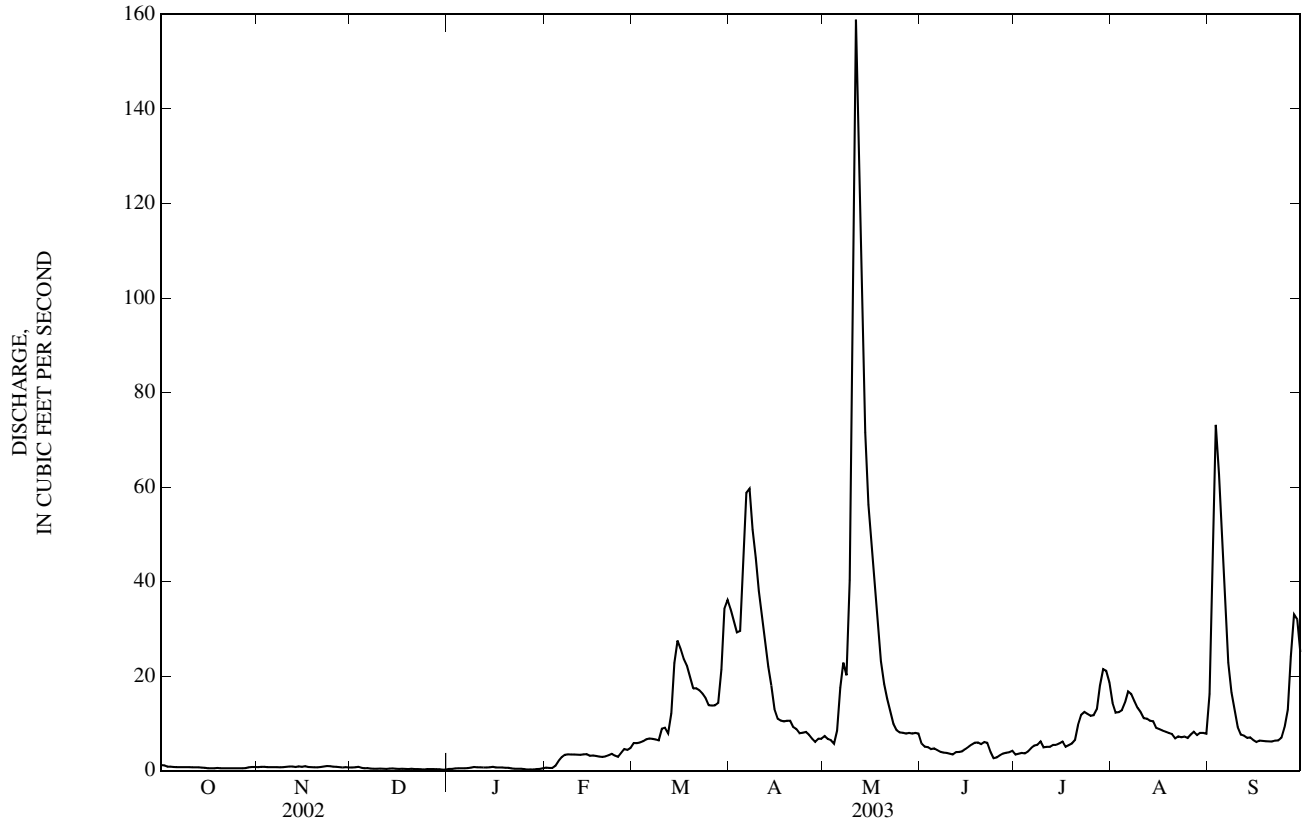
FOR 2003 WATER YEAR

WATER YEARS 1970 - 2003

ANNUAL TOTAL	6,099.05	3,605.27		
ANNUAL MEAN	16.7	9.88	17.0	1982
HIGHEST ANNUAL MEAN			6.54	2000
LOWEST ANNUAL MEAN				
HIGHEST DAILY MEAN	112	May 13	431	Feb 25, 1985
LOWEST DAILY MEAN	0.21	Dec 30	0.10	Nov 12, 1994
ANNUAL SEVEN-DAY MINIMUM	0.30	Dec 25	0.12	Oct 2, 1996
MAXIMUM PEAK FLOW			480	Feb 24, 1985
MAXIMUM PEAK STAGE			7.03	Dec 30, 1990
ANNUAL RUNOFF (CFSM)	0.87	0.51	0.89	
ANNUAL RUNOFF (INCHES)	11.82	6.99	12.04	
10 PERCENT EXCEEDS	43	23	42	
50 PERCENT EXCEEDS	6.4	5.1	8.6	
90 PERCENT EXCEEDS	0.52	0.46	0.76	

e Estimated

04100252 FORKER CREEK NEAR BURR OAK, IN—Continued



STREAMS TRIBUTARY TO LAKE MICHIGAN

04100377 SOLOMON CREEK NEAR SYRACUSE, IN

LOCATION.--Lat 41°27'30", long 85°43'12", in NW¼SE¼ sec.28, T.35 N., R.7 E., Elkhart County, Hydrologic Unit 04050001, (LAKE WAWASEE, IN quadrangle), on right bank 40 ft upstream from County Road 52 East bridge over Solomon Creek, and 2.5 mi northeast of Syracuse, and 6.8 mi west of Ligonier.

DRAINAGE AREA.--36.1 mi².

PERIOD OF RECORD.--October 1987 to October 2003 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 840.00 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	14	17	22	e14	15	21	30	33	13	26	54
2	15	14	e16	22	17	14	20	32	30	9.9	27	89
3	14	14	e13	21	19	e13	20	31	31	10	26	77
4	15	14	e12	21	24	14	24	29	30	11	31	67
5	16	14	e13	21	e17	15	49	58	28	16	36	60
6	15	14	e12	20	e16	14	43	59	27	16	30	55
7	15	14	e13	20	e17	14	40	52	26	19	27	51
8	15	14	e13	21	e17	17	39	48	26	24	25	48
9	15	15	e12	20	e17	24	37	64	25	38	24	45
10	14	15	e14	20	e17	e20	35	73	25	36	23	42
11	14	15	e15	e17	e16	e19	33	71	26	32	23	38
12	13	19	16	e17	e13	20	32	80	27	29	21	37
13	13	18	16	e17	e13	30	30	74	27	26	19	36
14	12	17	15	e18	e13	36	29	66	27	24	14	33
15	12	16	15	e15	e13	29	28	74	27	24	12	32
16	12	16	15	e14	e12	27	27	73	26	21	10	31
17	12	16	15	e14	e12	26	26	66	26	17	13	30
18	12	16	17	e13	e12	25	26	61	25	15	12	29
19	16	17	20	e13	e15	24	25	58	25	14	11	29
20	15	18	23	e14	e14	23	25	56	24	13	10	28
21	14	17	23	e14	e13	25	26	55	23	24	11	27
22	14	18	22	e13	e13	24	25	52	23	25	17	29
23	14	18	20	e12	e13	23	24	49	20	23	18	29
24	14	18	20	e12	e13	22	24	45	16	21	16	28
25	14	18	19	e13	e13	22	23	41	15	20	15	29
26	14	17	20	e13	e12	22	23	36	17	19	14	29
27	14	17	19	e12	e12	22	22	32	17	25	18	45
28	14	17	20	e12	e13	21	22	30	16	42	16	43
29	14	17	19	e13	---	22	22	29	17	36	18	39
30	14	17	20	e12	---	22	23	29	16	31	22	36
31	14	---	22	e12	---	21	---	41	---	28	20	---
TOTAL	434	484	526	498	410	665	843	1,594	721	701.9	605	1,245
MEAN	14.0	16.1	17.0	16.1	14.6	21.5	28.1	51.4	24.0	22.6	19.5	41.5
MAX	16	19	23	22	24	36	49	80	33	42	36	89
MIN	12	14	12	12	12	13	20	29	15	9.9	10	27
CFSM	0.39	0.45	0.47	0.45	0.41	0.59	0.78	1.42	0.67	0.63	0.54	1.15
IN.	0.45	0.50	0.54	0.51	0.42	0.69	0.87	1.64	0.74	0.72	0.62	1.28

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 2003, BY WATER YEAR (WY)

	2002	1993	1991	1993	2001	1998	2002	2002	1993	1997	2001	2003
MEAN	26.0	30.5	32.0	39.5	40.5	44.0	51.1	44.5	47.0	29.0	21.5	21.8
MAX	72.8	60.1	60.3	94.8	79.9	75.4	91.2	86.9	82.3	56.3	38.3	41.5
(WY)	(2002)	(1993)	(1991)	(1993)	(2001)	(1998)	(2002)	(2002)	(1993)	(1997)	(2001)	(2003)
MIN	11.2	12.5	14.8	13.7	14.6	18.7	23.4	24.4	16.5	12.1	10.5	11.7
(WY)	(1996)	(2000)	(1990)	(2000)	(2003)	(2000)	(2000)	(1989)	(1988)	(1988)	(1988)	(1994)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

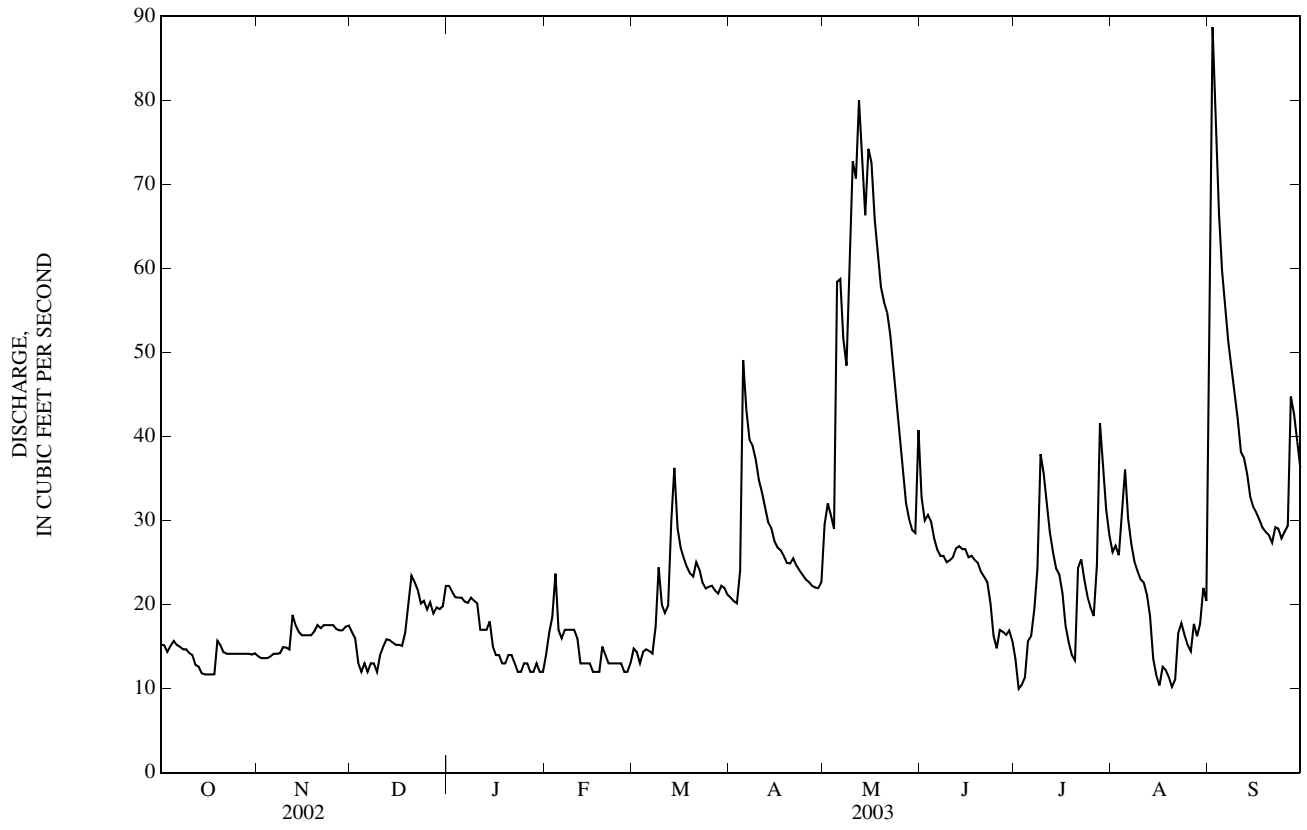
FOR 2003 WATER YEAR

WATER YEARS 1988 - 2003

ANNUAL TOTAL	15,554.4	8,726.9	
ANNUAL MEAN	42.6	23.9	35.6
HIGHEST ANNUAL MEAN			53.6
LOWEST ANNUAL MEAN			17.5
HIGHEST DAILY MEAN	242	May 12	256
LOWEST DAILY MEAN	6.8	Sep 1	6.3
ANNUAL SEVEN-DAY MINIMUM	8.6	Aug 27	7.0
MAXIMUM PEAK FLOW			333
MAXIMUM PEAK STAGE			6.35
ANNUAL RUNOFF (CFSM)	1.18		0.99
ANNUAL RUNOFF (INCHES)	16.03		13.38
10 PERCENT EXCEEDS	86		64
50 PERCENT EXCEEDS	32		29
90 PERCENT EXCEEDS	13		14

e Estimated

04100377 SOLOMON CREEK NEAR SYRACUSE, IN—Continued



STREAMS TRIBUTARY TO LAKE MICHIGAN

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, (GOSHEN, IN quadrangle), on right bank 20 ft downstream from River Avenue bridge at Goshen, 0.4 mi upstream from Rock Run, 9.1 mi northwest of Millersburg 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 fair except estimated daily discharges, which are poor. Occasional low-flow regulation at Goshen Dam, 3.4 mi upstream.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	148	110	153	216	155	e142	381	332	454	133	332	404
2	145	105	152	221	163	e133	381	394	419	122	386	773
3	148	103	135	216	188	e125	362	372	403	119	353	848
4	153	107	e118	203	271	157	410	352	382	115	358	646
5	140	116	e117	218	249	170	656	611	355	149	396	545
6	134	124	e115	211	e210	174	691	915	337	187	373	514
7	129	122	113	209	e190	176	602	639	333	245	340	518
8	133	121	121	207	e180	195	620	556	322	333	332	531
9	137	125	118	219	e170	334	630	994	315	409	312	543
10	142	146	124	213	e166	283	635	1,420	284	434	290	529
11	145	137	136	194	e162	260	579	978	277	408	276	496
12	134	133	136	e170	e160	295	556	952	291	382	253	456
13	134	134	141	e160	e158	364	543	1,030	299	361	244	426
14	135	135	145	e153	e156	557	533	958	288	345	231	410
15	155	141	144	e146	e154	480	517	1,090	281	333	225	392
16	171	136	142	e150	e152	443	484	1,210	278	317	214	362
17	171	118	123	e151	e150	451	447	1,150	279	291	203	336
18	164	105	140	e150	e149	465	434	1,090	280	265	196	309
19	160	117	173	e151	e149	453	373	1,040	256	240	183	292
20	164	122	199	e153	e160	439	368	998	249	221	170	275
21	158	134	194	e154	175	450	362	942	241	327	164	268
22	155	151	174	e155	188	450	337	880	232	415	183	305
23	149	151	172	e152	174	448	316	826	220	364	197	335
24	134	146	e167	e149	e155	445	300	767	207	341	188	329
25	122	149	e165	e148	e144	426	298	707	193	324	184	335
26	130	148	e164	e150	e141	426	299	660	186	309	182	350
27	127	150	e163	e148	e140	422	248	603	180	310	194	445
28	124	138	e165	e149	e141	409	241	561	172	377	193	476
29	115	140	e170	e150	---	420	241	527	178	377	238	452
30	115	149	179	e150	---	421	278	485	182	360	325	433
31	113	---	203	e151	---	393	---	504	---	338	278	---
TOTAL	4,384	3,913	4,661	5,367	4,750	10,806	13,122	24,543	8,373	9,251	7,993	13,333
MEAN	141	130	150	173	170	349	437	792	279	298	258	444
MAX	171	151	203	221	271	557	691	1,420	454	434	396	848
MIN	113	103	113	146	140	125	241	332	172	115	164	268
CFSM	0.24	0.22	0.25	0.29	0.29	0.59	0.74	1.33	0.47	0.50	0.43	0.75
IN.	0.27	0.25	0.29	0.34	0.30	0.68	0.82	1.54	0.52	0.58	0.50	0.83

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 2003, BY WATER YEAR (WY)

	318	392	495	590	702	930	942	718	514	357	271	254
MEAN	318	392	495	590	702	930	942	718	514	357	271	254
MAX	1,652	1,132	1,276	2,058	1,657	2,497	2,424	2,354	1,521	1,079	712	784
(WY)	(1955)	(1973)	(1983)	(1993)	(1959)	(1982)	(1950)	(1943)	(1996)	(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

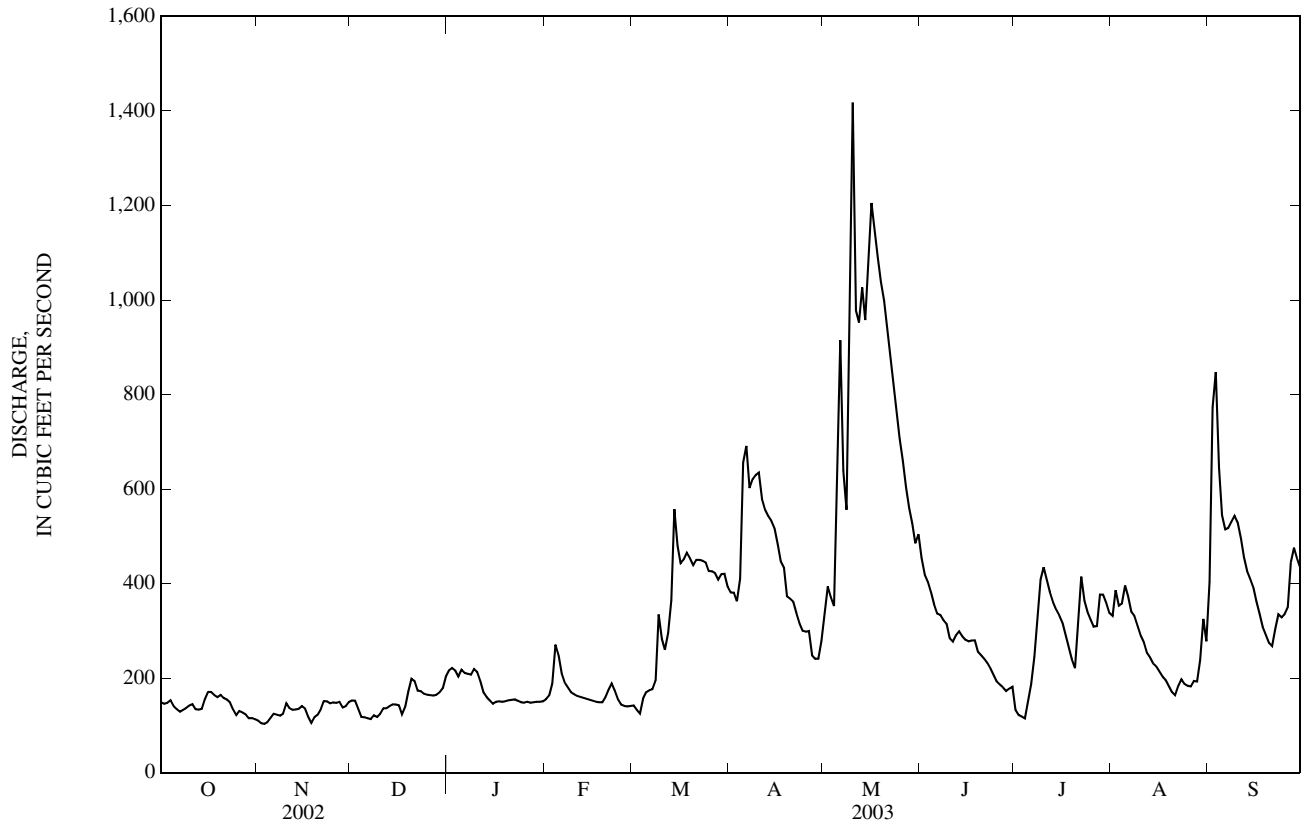
FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1932 - 2003

ANNUAL TOTAL	227,643	110,496	
ANNUAL MEAN	624	303	539
HIGHEST ANNUAL MEAN			1,005
LOWEST ANNUAL MEAN			197
HIGHEST DAILY MEAN	4,160	May 13	6,010
LOWEST DAILY MEAN	103	Nov 3	7.0
ANNUAL SEVEN-DAY MINIMUM	110	Oct 29	50
MAXIMUM PEAK FLOW			6,360
MAXIMUM PEAK STAGE			11.94
INSTANTANEOUS LOW FLOW			7.0
ANNUAL RUNOFF (CFSM)	1.05	0.51	0.91
ANNUAL RUNOFF (INCHES)	14.26	6.92	12.33
10 PERCENT EXCEEDS	1,420	549	1,110
50 PERCENT EXCEEDS	415	220	389
90 PERCENT EXCEEDS	134	133	155

04100500 ELKHART RIVER AT GOSHEN, IN—Continued



STREAMS TRIBUTARY TO LAKE MICHIGAN

04101000 ST. JOSEPH RIVER AT ELKHART, IN

LOCATION.--Lat 41°41'30", long 85°58'30", in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.5, T.37 N., R.5 E., Elkhart County, Hydrologic Unit 04050001, (ELKHART, IN quadrangle), 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,090	1,110	1,270	1,690	1,200	1,190	2,190	2,470	2,820	1,410	1,500	1,740
2	1,100	1,140	1,320	1,650	1,190	1,190	2,140	2,670	2,700	1,390	1,800	2,300
3	1,080	1,110	1,280	1,660	1,270	1,060	2,120	2,560	2,490	1,300	2,090	2,370
4	1,200	1,150	1,120	1,630	1,560	1,170	2,520	2,490	2,530	1,190	2,270	2,290
5	1,250	1,160	1,240	1,590	1,530	1,230	3,400	3,190	2,480	1,170	2,210	2,080
6	1,150	1,170	1,240	1,580	1,460	1,200	3,820	3,690	2,360	1,400	2,120	2,010
7	1,160	1,230	1,280	1,460	1,470	1,200	3,980	3,420	2,340	1,610	2,130	2,010
8	1,100	1,210	1,360	1,500	1,220	1,240	4,250	3,280	2,250	1,950	2,170	2,000
9	1,130	1,220	1,230	1,450	1,430	1,590	4,130	4,510	2,160	2,090	2,340	1,960
10	1,220	1,290	1,250	1,440	1,400	1,500	4,010	5,630	2,160	2,050	1,960	1,910
11	1,210	1,320	1,300	1,420	1,210	1,380	3,940	5,120	2,230	2,040	1,890	1,850
12	1,170	1,260	1,280	1,310	1,200	1,490	3,770	5,230	2,230	2,120	2,210	1,770
13	1,170	1,330	1,280	1,240	1,200	1,690	3,590	5,360	2,240	1,900	2,010	1,700
14	1,100	1,350	1,290	1,320	1,230	2,060	3,350	5,220	2,260	1,830	1,690	1,650
15	1,150	1,360	1,270	1,160	1,270	2,200	3,190	5,460	2,220	1,720	1,640	1,740
16	1,130	1,310	1,490	1,160	1,080	2,230	3,110	5,520	2,200	1,680	1,600	1,790
17	1,100	1,280	1,430	1,120	1,140	2,330	2,920	5,330	2,250	1,570	1,620	1,580
18	1,130	1,280	1,500	1,020	1,220	2,470	2,850	5,120	2,070	1,530	1,520	1,470
19	1,210	1,380	1,760	1,120	1,170	2,690	2,750	4,910	1,870	1,460	1,420	1,520
20	1,220	1,380	1,810	1,180	1,180	2,610	2,640	4,840	1,840	1,410	1,220	1,470
21	1,190	1,460	1,800	1,200	1,200	2,740	2,630	4,590	1,840	1,530	1,150	1,370
22	1,280	1,530	1,740	1,190	1,250	2,700	2,570	4,140	1,690	1,750	1,180	1,580
23	1,270	1,520	1,680	1,150	1,250	2,660	2,530	4,010	1,620	1,780	1,420	1,740
24	1,250	1,500	1,720	1,170	1,240	2,530	2,450	3,760	1,600	1,680	1,380	1,860
25	1,210	1,490	1,610	1,200	1,190	2,600	2,390	3,600	1,470	1,540	1,220	1,980
26	1,240	1,480	1,520	1,190	1,150	2,540	2,260	3,470	1,570	1,470	1,230	2,000
27	1,240	1,440	1,510	1,110	1,170	2,390	2,150	3,250	1,570	1,560	1,300	1,940
28	1,230	1,380	1,520	1,150	1,190	2,330	2,140	3,130	1,500	1,580	1,250	2,100
29	1,160	1,360	1,570	1,180	---	2,450	2,090	3,060	1,560	1,620	1,270	2,080
30	1,110	1,350	1,530	1,190	---	2,410	2,190	2,950	1,490	1,590	1,350	2,120
31	1,150	---	1,620	1,220	---	2,230	---	2,950	---	1,540	1,350	---
TOTAL	36,400	39,550	44,820	40,650	35,270	61,300	88,070	124,930	61,610	50,460	51,510	55,980
MEAN	1,174	1,318	1,446	1,311	1,260	1,977	2,936	4,030	2,054	1,628	1,662	1,866
MAX	1,280	1,530	1,810	1,690	1,560	2,740	4,250	5,630	2,820	2,120	2,340	2,370
MIN	1,080	1,110	1,120	1,020	1,080	1,060	2,090	2,470	1,470	1,170	1,150	1,370
CFSM	0.35	0.39	0.43	0.39	0.37	0.59	0.87	1.20	0.61	0.48	0.49	0.55
IN.	0.40	0.44	0.49	0.45	0.39	0.68	0.97	1.38	0.68	0.56	0.57	0.62

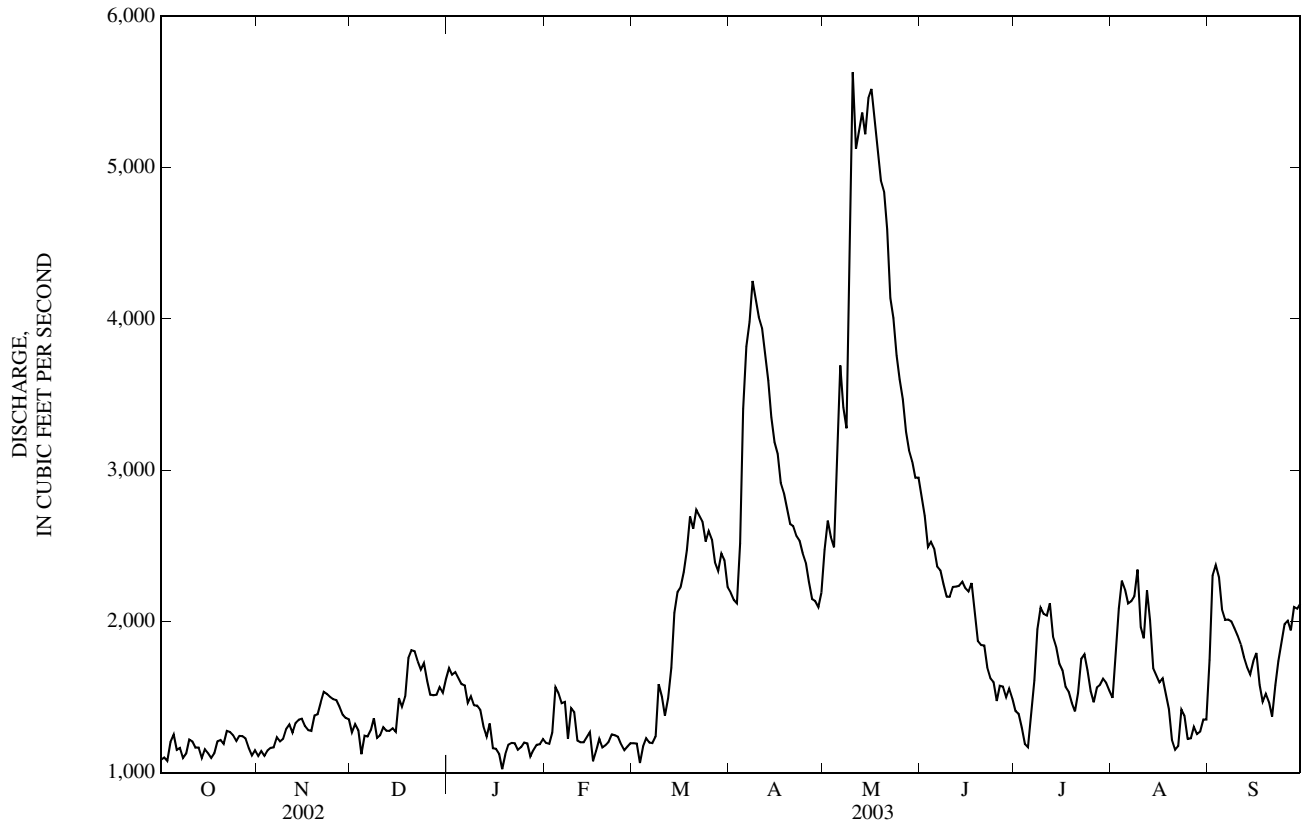
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 2003, BY WATER YEAR (WY)

MEAN	2,197	2,614	3,164	3,544	3,885	5,029	5,153	4,135	3,259	2,350	1,955	1,885
MAX	5,752	5,883	5,795	9,270	7,039	10,760	12,690	7,725	7,535	4,409	4,180	3,855
(WY)	(1987)	(1993)	(1991)	(1993)	(1968)	(1982)	(1950)	(1956)	(1989)	(1968)	(1981)	(1981)
MIN	791	856	958	1,127	1,120	1,679	2,633	1,911	1,280	898	737	721
(WY)	(1964)	(1965)	(1964)	(1964)	(1963)	(1964)	(1958)	(1958)	(1988)	(1988)	(1964)	(1964)

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1948 - 2003	
ANNUAL TOTAL	1,103,603		690,550			
ANNUAL MEAN	3,024		1,892		3,260	
HIGHEST ANNUAL MEAN					5,264	
LOWEST ANNUAL MEAN					1,283	
HIGHEST DAILY MEAN	10,200		May 13		18,500	
LOWEST DAILY MEAN	900		Sep 18		336	
ANNUAL SEVEN-DAY MINIMUM	962		Sep 12		561	
MAXIMUM PEAK FLOW			5,960		18,800	
MAXIMUM PEAK STAGE			21.28		27.91	
ANNUAL RUNOFF (CFSM)	0.90		0.56		0.97	
ANNUAL RUNOFF (INCHES)	12.18		7.62		13.14	
10 PERCENT EXCEEDS	5,690		3,080		5,790	
50 PERCENT EXCEEDS	2,220		1,560		2,780	
90 PERCENT EXCEEDS	1,130		1,170		1,370	

04101000 ST. JOSEPH RIVER AT ELKHART, IN—Continued



STREAMS TRIBUTARY TO LAKE MICHIGAN

04101370 JUDAY CREEK NEAR SOUTH BEND, IN

LOCATION.--Lat 41°43'43", long 85°15'46", in NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec .23, T. 38 N., R. 2 E., St. Joseph County, Hydrologic Unit 04050001, (SOUTH BEND WEST, IN quadrangle), on right bank at downstream side of bridge on access road to Izaak Walton League property, 0.1 mi south of Darden Road in Roseland, 0.5 mi northeast of intersection of St. Joseph River and Interstate 80/90, 0.6 mi from mouth.

DRAINAGE AREA.--Approx. 38 mi².

PERIOD OF RECORD.--October 1992 to current year.

GAGE.--Water-stage recorder. Datum of gage is about 690.00 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.5	3.0	e4.3	7.3	e5.0	e3.9	6.9	13	17	7.7	5.9	5.5
2	4.5	2.8	e4.3	7.0	e5.0	e4.0	6.2	12	17	7.2	5.6	5.6
3	4.6	2.9	e4.2	6.7	e5.2	e4.0	5.7	11	16	6.8	5.5	4.6
4	5.7	3.0	e4.2	6.3	e7.0	e4.1	11	11	15	6.5	5.4	4.1
5	4.8	3.1	e4.3	6.1	e7.4	e4.1	22	27	14	9.1	5.4	3.9
6	3.5	3.3	e4.3	5.8	e7.0	e4.0	20	25	14	5.5	5.1	3.6
7	3.4	3.0	e4.3	5.6	e6.6	e4.0	18	23	13	7.6	4.8	3.2
8	3.4	3.0	e4.1	5.7	e6.4	e4.2	16	25	13	12	4.6	2.9
9	3.3	3.1	e4.0	5.7	e6.2	e4.6	15	43	12	9.6	4.3	2.7
10	3.2	5.1	e4.0	e5.5	e6.0	e5.0	14	45	11	9.1	4.2	2.6
11	3.0	4.3	e4.1	e5.5	e5.8	e5.2	13	39	11	9.0	4.0	2.4
12	3.0	4.0	e4.1	e5.4	e5.5	5.4	12	46	11	7.9	4.4	2.2
13	3.4	4.1	e4.2	e5.5	e5.3	5.9	11	40	11	7.0	4.0	2.1
14	3.3	4.0	e4.2	e5.4	e5.1	5.8	10	34	10	6.5	3.4	2.4
15	3.5	4.3	e4.2	e5.3	e4.9	5.8	9.7	35	9.4	6.0	3.1	2.6
16	3.3	4.1	e4.1	e5.3	e4.7	5.5	9.2	32	9.0	3.9	3.0	2.5
17	3.1	4.1	e4.2	e5.2	e4.6	5.8	8.8	29	8.1	3.4	2.9	2.3
18	2.9	4.1	e6.0	e5.2	e4.5	5.7	9.1	26	8.5	3.4	2.7	2.2
19	3.3	4.3	9.6	e5.4	e4.4	5.8	8.3	24	9.7	3.3	2.7	2.2
20	3.0	4.0	9.7	e5.1	e4.3	7.2	8.7	26	8.5	4.2	2.6	2.3
21	2.9	4.5	8.6	e4.9	e4.2	8.3	8.4	23	7.9	27	2.4	2.3
22	2.9	5.6	7.7	e4.8	e4.1	8.1	8.8	22	7.0	14	2.3	4.1
23	2.9	5.0	6.9	e4.7	e4.0	7.8	8.8	21	6.6	13	2.1	4.6
24	2.9	4.6	6.9	e4.7	e4.0	7.4	8.2	20	6.1	12	2.1	4.2
25	3.1	4.5	e5.2	e4.7	e4.1	7.5	7.7	20	5.7	11	1.9	4.6
26	3.3	4.3	e5.1	e4.8	e4.2	7.0	7.3	19	6.2	8.5	2.3	4.3
27	3.1	4.2	e5.0	e5.0	e4.0	6.8	7.1	18	6.2	9.7	2.9	4.5
28	3.0	4.4	e4.9	e4.9	e4.0	6.6	6.5	18	5.7	9.9	2.2	5.0
29	2.9	4.3	4.7	e4.8	---	6.7	5.9	17	5.8	9.0	2.2	5.5
30	3.0	4.6	5.0	e4.8	---	6.7	8.0	17	5.6	8.3	2.5	5.1
31	3.1	---	6.8	e4.9	---	6.7	---	19	---	7.5	2.5	---
TOTAL	105.8	119.6	163.2	168.0	143.5	179.6	311.3	780	301.0	265.6	109.0	106.1
MEAN	3.41	3.99	5.26	5.42	5.12	5.79	10.4	25.2	10.0	8.57	3.52	3.54
MAX	5.7	5.6	9.7	7.3	7.4	8.3	22	46	17	27	5.9	5.6
MIN	2.9	2.8	4.0	4.7	4.0	3.9	5.7	11	5.6	3.3	1.9	2.1

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2003, BY WATER YEAR (WY)

MEAN	13.0	15.7	15.4	18.4	19.1	22.0	25.3	23.2	21.1	14.9	13.4	10.9
MAX	27.3	31.6	23.6	38.3	30.5	33.8	47.0	32.7	44.9	28.6	36.4	24.0
(WY)	(1994)	(1994)	(1993)	(1993)	(1997)	(1993)	(1998)	(2002)	(1993)	(1996)	(1995)	(1993)
MIN	3.41	3.32	4.49	5.42	5.12	5.79	10.4	11.3	10.0	7.18	3.52	3.54
(WY)	(2003)	(2000)	(2000)	(2003)	(2003)	(2003)	(2003)	(2001)	(2003)	(2001)	(2003)	(2003)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

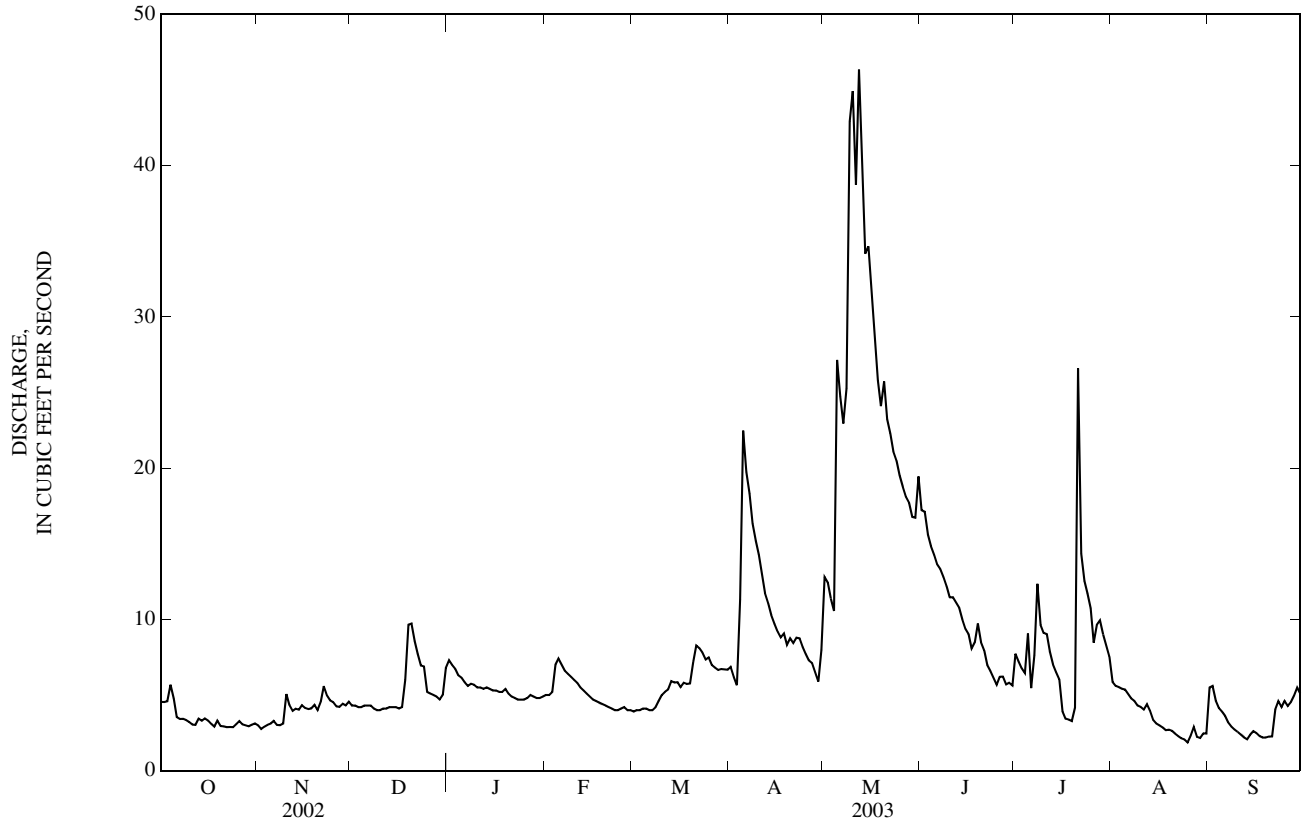
WATER YEARS 1993 - 2003

ANNUAL TOTAL	5,215.6	2,752.7	
ANNUAL MEAN	14.3	7.54	17.7
HIGHEST ANNUAL MEAN			27.7
LOWEST ANNUAL MEAN			7.54
HIGHEST DAILY MEAN	73	May 13	163
LOWEST DAILY MEAN	2.8	Nov 2	1.9
ANNUAL SEVEN-DAY MINIMUM	3.0	Oct 28	2.2
MAXIMUM PEAK FLOW			49
MAXIMUM PEAK STAGE			b3.76
10 PERCENT EXCEEDS	26		15
50 PERCENT EXCEEDS	12		5.2
90 PERCENT EXCEEDS	4.0		2.9

e Estimated

b Ice jam

04101370 JUDAY CREEK NEAR SOUTH BEND, IN—Continued



STREAMS TRIBUTARY TO LAKE ERIE

04177720 FISH CREEK AT HAMILTON, IN

LOCATION.--Lat 41°31'55", long 84°54'12", in SE¹/₄SW¹/₄ sec.34, T.36 N., R.14 E., Steuben County, Hydrologic Unit 04100003, (HAMILTON, IN quadrangle), 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 except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	3.3	6.3	14	e6.2	e7.2	37	23	9.7	3.4	80	44
2	2.1	2.9	e6.0	12	e7.4	e7.0	31	25	7.9	3.3	537	231
3	2.3	2.4	e5.6	11	8.6	e6.8	27	20	8.5	2.8	406	205
4	3.0	3.3	e5.2	9.4	16	e7.0	35	17	8.1	3.1	236	126
5	3.8	3.6	e5.1	9.1	e13	12	131	90	7.6	8.3	156	81
6	2.5	4.9	e5.0	9.6	e10	12	92	90	6.0	12	104	57
7	2.3	4.2	e5.0	8.7	e9.0	10	68	58	7.1	28	74	43
8	1.7	4.0	e4.9	8.4	e8.0	20	54	44	7.4	38	56	34
9	1.8	3.7	e4.7	8.5	e7.4	48	49	134	7.6	58	42	27
10	1.8	9.9	e4.7	8.1	e6.8	34	43	211	6.1	44	33	22
11	2.0	11	4.9	e6.6	e6.4	25	36	175	8.8	33	28	19
12	2.1	8.0	5.0	e5.8	e6.0	30	31	164	27	24	27	16
13	2.5	6.8	5.3	e5.7	e5.8	104	25	122	30	18	29	14
14	2.0	6.4	5.6	e5.6	e5.6	129	22	82	21	14	24	14
15	2.5	7.3	5.8	e5.5	e5.5	91	20	73	16	12	21	21
16	2.4	6.2	5.7	e5.5	e5.4	74	18	60	13	10	18	16
17	2.0	5.6	5.4	e5.6	e5.3	62	16	49	35	7.7	14	13
18	2.3	4.2	6.4	e5.5	e5.4	53	16	40	44	6.7	11	11
19	4.4	6.7	13	e5.5	e5.6	46	15	33	30	5.4	9.3	10
20	3.1	6.4	20	e5.6	5.9	49	15	31	21	4.2	8.1	8.1
21	2.7	8.7	16	e5.8	6.4	59	15	25	15	19	7.9	7.2
22	2.7	16	13	e6.0	8.4	46	14	20	12	38	16	18
23	2.2	10	10	e5.8	13	36	11	18	9.8	45	11	22
24	2.3	9.1	8.0	e5.4	e10	31	10	16	8.0	30	8.5	20
25	3.1	8.6	13	e5.2	e9.3	34	9.6	15	6.9	22	7.2	37
26	4.3	7.6	11	e5.2	e8.4	33	9.5	14	6.3	16	8.7	33
27	3.5	6.9	9.6	e5.3	e7.9	27	8.5	13	4.5	33	9.5	127
28	3.1	6.2	8.7	e5.3	e7.6	29	8.3	12	3.8	76	7.0	96
29	3.6	6.1	8.1	e5.4	---	88	7.6	12	4.1	61	8.4	64
30	3.4	6.9	9.1	e5.5	---	62	13	9.8	3.8	46	8.3	47
31	3.1	---	16	e5.6	---	43	---	13	---	35	6.3	---
TOTAL	83.1	196.9	252.1	216.2	220.3	1,315.0	887.5	1,708.8	396.0	756.9	2,012.2	1,483.3
MEAN	2.68	6.56	8.13	6.97	7.87	42.4	29.6	55.1	13.2	24.4	64.9	49.4
MAX	4.4	16	20	14	16	129	131	211	44	76	537	231
MIN	1.7	2.4	4.7	5.2	5.3	6.8	7.6	9.8	3.8	2.8	6.3	7.2
CFSM	0.07	0.18	0.22	0.19	0.21	1.13	0.79	1.47	0.35	0.65	1.73	1.32
IN.	0.08	0.20	0.25	0.21	0.22	1.30	0.88	1.70	0.39	0.75	2.00	1.47

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2003, BY WATER YEAR (WY)

MEAN	14.3	27.1	36.2	36.9	49.1	68.1	61.2	40.8	29.7	15.0	14.2	12.0
MAX	76.8	117	91.3	161	130	219	112	174	118	64.3	64.9	49.4
(WY)	(2002)	(1993)	(1991)	(1993)	(2001)	(1982)	(1978)	(1996)	(1981)	(1992)	(2003)	(2003)
MIN	2.14	2.46	4.69	5.96	7.84	21.6	18.7	8.24	2.05	2.02	1.89	1.88
(WY)	(1995)	(1972)	(2000)	(1977)	(1979)	(2000)	(1971)	(1985)	(1988)	(1988)	(1970)	(1988)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

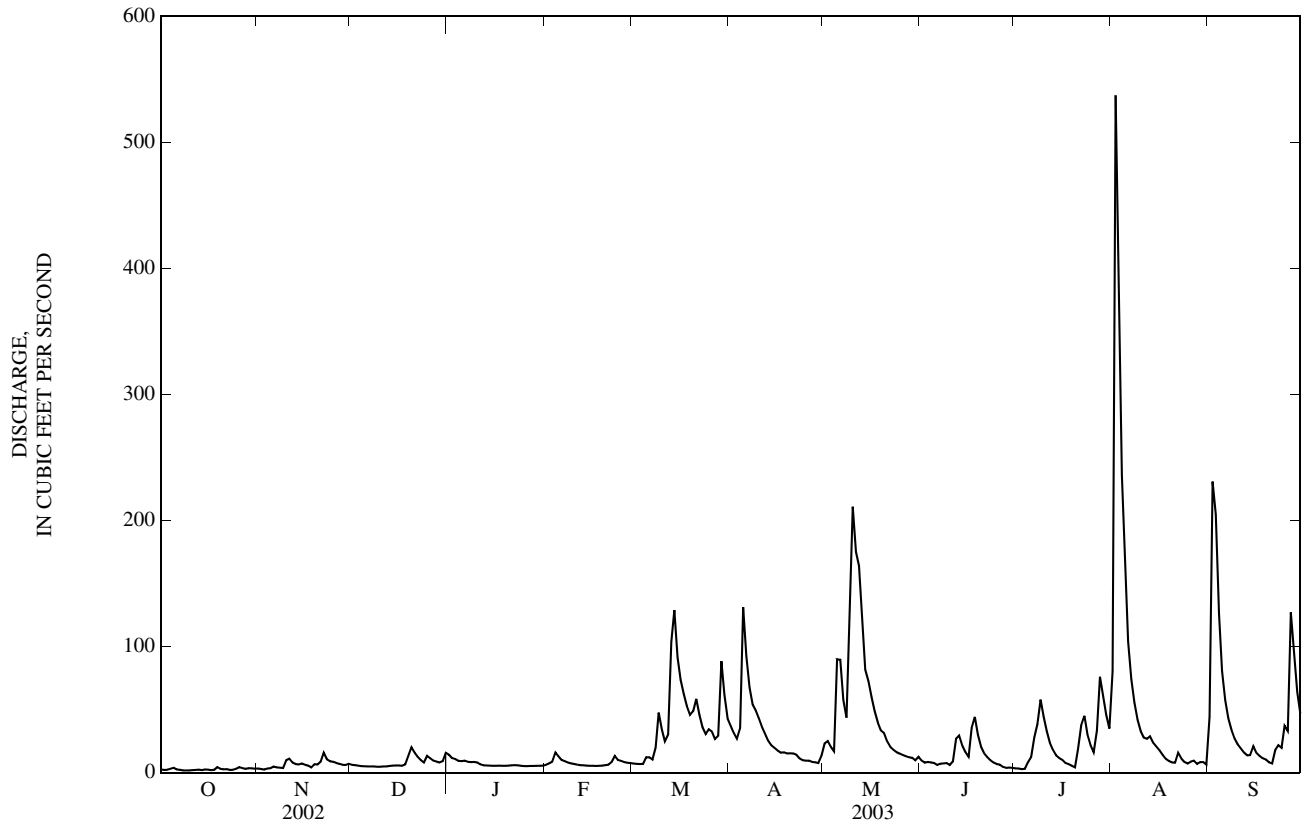
FOR 2003 WATER YEAR

WATER YEARS 1970 - 2003

ANNUAL TOTAL	10,794.9	9,528.3	
ANNUAL MEAN	29.6	26.1	33.6
HIGHEST ANNUAL MEAN			54.7
LOWEST ANNUAL MEAN			17.8
HIGHEST DAILY MEAN	448	537	1,220
LOWEST DAILY MEAN	1.4	1.7	0.52
ANNUAL SEVEN-DAY MINIMUM	1.6	2.0	0.82
MAXIMUM PEAK FLOW		581	1,510
MAXIMUM PEAK STAGE		9.37	14.49
ANNUAL RUNOFF (CFSM)	0.79	0.70	0.90
ANNUAL RUNOFF (INCHES)	10.71	9.45	12.18
10 PERCENT EXCEEDS	69	59	79
50 PERCENT EXCEEDS	12	9.9	16
90 PERCENT EXCEEDS	2.3	3.6	3.0

e Estimated

04177720 FISH CREEK AT HAMILTON, IN—Continued



STREAMS TRIBUTARY TO LAKE ERIE

04177810 FISH CREEK NEAR ARTIC, IN

LOCATION.--Lat 41°27'54", long 84°48'53", in NE¼SE¼ sec. 29, T.35 N., R.15 E., DeKalb County, Hydrologic Unit 04100003, (BUTLER EAST, IN-OH quadrangle), on right bank 3 ft upstream from bridge on County Road 79, 0.6 mi south of Artic, 0.8 mi upstream from Indiana-Ohio state line and 3.8 mi north-northeast of Butler, IN.

DRAINAGE AREA.--98 mi² (approx.).

WATER DISCHARGE RECORDS

PERIOD OF RECORD.--April 1998 to current year.

GAGE.--Water-stage recorder. Datum of gage is 832.96 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.2	8.6	18	e21	e8.4	e13	112	58	36	11	53	48
2	6.0	e8.3	e16	e16	e9.9	e13	93	68	34	11	431	272
3	5.9	e8.0	e14	e14	e14	e12	79	60	31	10	813	517
4	6.1	e9.0	e12	e13	e27	e16	86	50	30	10	582	389
5	6.6	e10	e10	e12	e28	e21	332	224	29	14	325	193
6	7.7	e11	e8.8	e11	e23	e18	365	305	28	21	209	123
7	7.2	e14	e8.0	e12	e20	e17	266	216	26	45	143	89
8	7.0	e13	e7.4	e11	e17	e25	178	135	26	97	109	69
9	6.4	e12	e7.0	e10	e15	e170	148	292	26	163	86	55
10	6.1	22	e6.8	e11	e13	e130	129	609	26	127	67	44
11	6.1	34	e6.4	e10	e13	e110	110	716	25	82	53	37
12	6.1	29	e6.8	e9.2	e12	e90	93	535	45	65	47	32
13	6.4	25	e7.0	e8.4	e12	e110	78	421	81	49	59	27
14	6.4	22	e7.2	e8.0	e11	e470	66	319	69	34	48	25
15	6.6	21	e7.5	e7.4	e10	448	57	222	e50	26	38	27
16	6.5	22	e7.7	e7.4	e10	288	50	199	e38	22	33	30
17	6.8	21	e7.3	e7.6	e9.6	223	45	172	e58	19	28	25
18	6.7	20	e9.0	e7.2	e9.3	179	42	139	e112	16	23	22
19	7.8	19	e15	e7.2	e9.6	138	40	115	e126	14	20	20
20	9.8	20	e22	e7.6	e10	128	38	99	e66	12	17	18
21	8.6	22	e26	e7.8	e11	171	36	89	e45	15	16	16
22	8.0	26	e18	e8.2	e12	151	36	77	e35	45	18	24
23	7.9	32	e14	e7.8	e17	115	33	66	e28	81	22	46
24	7.8	27	e11	e7.2	e22	91	29	59	e22	55	18	56
25	7.9	25	e14	e6.8	e19	85	27	54	e18	36	15	126
26	8.7	23	e17	e6.8	e16	94	26	49	15	26	14	97
27	10	20	e14	e7.0	e15	80	25	45	14	26	15	268
28	9.9	19	e12	e7.0	e14	68	23	42	12	145	15	325
29	9.6	18	e10	e7.2	---	179	23	40	12	183	13	227
30	9.2	18	e12	e7.2	---	221	30	37	12	104	15	136
31	9.4	---	e17	e7.6	---	155	---	35	---	70	14	---
TOTAL	231.4	578.9	368.9	291.6	407.8	4,029	2,695	5,547	1,175	1,634	3,359	3,383
MEAN	7.46	19.3	11.9	9.41	14.6	130	89.8	179	39.2	52.7	108	113
MAX	10	34	26	21	28	470	365	716	126	183	813	517
MIN	5.9	8.0	6.4	6.8	8.4	12	23	35	12	10	13	16
CFSM	0.08	0.20	0.12	0.10	0.15	1.33	0.92	1.83	0.40	0.54	1.11	1.15
IN.	0.09	0.22	0.14	0.11	0.15	1.53	1.02	2.11	0.45	0.62	1.28	1.28

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2003, BY WATER YEAR (WY)

MEAN	66.3	42.5	63.7	67.8	152	125	185	129	82.5	27.4	46.5	34.0
MAX	260	82.4	187	189	384	178	306	222	221	52.7	110	113
(WY)	(2002)	(2002)	(2002)	(1999)	(2001)	(2002)	(1999)	(2002)	(2000)	(2003)	(1998)	(2003)
MIN	5.73	7.33	11.9	9.41	14.6	66.8	89.8	61.2	25.6	14.2	7.82	4.32
(WY)	(2000)	(2000)	(2003)	(2003)	(2003)	(2000)	(2003)	(1998)	(1998)	(1999)	(1999)	(1999)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

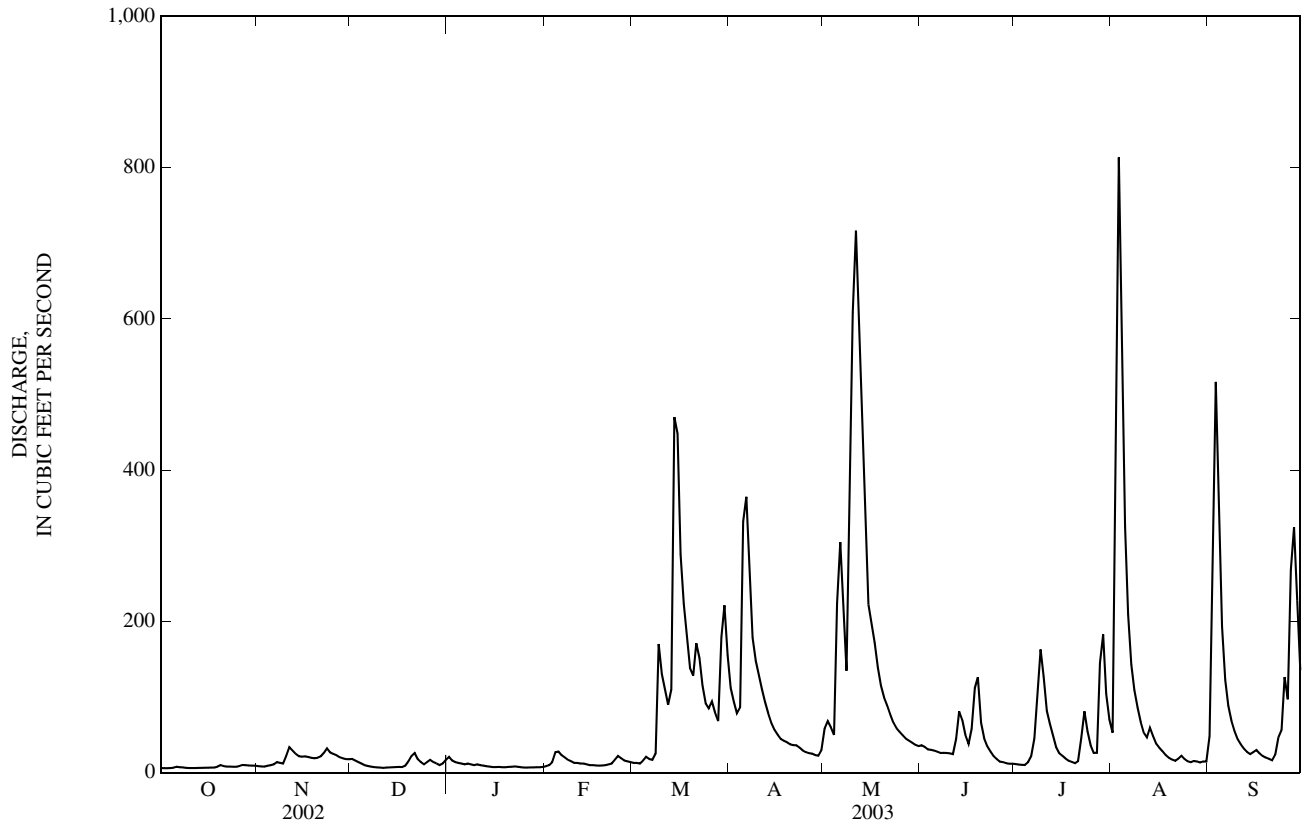
FOR 2003 WATER YEAR

WATER YEARS 1998 - 2003

ANNUAL TOTAL	31,849.6	23,700.6	
ANNUAL MEAN	87.3	64.9	85.9
HIGHEST ANNUAL MEAN			129
LOWEST ANNUAL MEAN			62.9
HIGHEST DAILY MEAN	1,360	May 13	813
LOWEST DAILY MEAN	5.9	Sep 26	5.9
ANNUAL SEVEN-DAY MINIMUM	6.3	Sep 13	6.3
MAXIMUM PEAK FLOW			845
MAXIMUM PEAK STAGE			9.72
ANNUAL RUNOFF (CFSM)	0.89		0.66
ANNUAL RUNOFF (INCHES)	12.09		9.00
10 PERCENT EXCEEDS	226		222
50 PERCENT EXCEEDS	26		23
90 PERCENT EXCEEDS	7.0		7.5

e Estimated

STREAMS TRIBUTARY TO LAKE ERIE
04177810 FISH CREEK NEAR ARTIC, IN—Continued



STREAMS TRIBUTARY TO LAKE ERIE

04177810 FISH CREEK NEAR ARTIC, IN—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY)
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Day	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)
OCTOBER			NOVEMBER			DECEMBER			
1	6.2	75	1.2	8.6	76	1.8	18	154	7.6
2	6.0	85	1.4	e8.3	41	0.91	e16	142	6.1
3	5.9	96	1.5	e8.0	89	1.9	e14	128	4.9
4	6.1	98	1.6	e9.0	81	2.0	e12	115	3.7
5	6.6	96	1.7	e10	42	1.1	e10	101	2.7
6	7.7	156	3.3	e11	35	1.0	e8.8	88	2.1
7	7.2	111	2.1	e14	65	2.4	e8.0	74	1.6
8	7.0	178	3.3	e13	114	4.0	e7.4	61	1.2
9	6.4	96	1.7	e12	107	3.5	e7.0	47	0.89
10	6.1	112	1.9	22	120	7.2	e6.8	34	0.62
11	6.1	84	1.4	34	113	10	e6.4	22	0.38
12	6.1	75	1.2	29	96	7.5	e6.8	20	0.37
13	6.4	66	1.1	25	77	5.2	e7.0	20	0.38
14	6.4	118	2.0	22	63	3.7	e7.2	20	0.39
15	6.6	57	1.0	21	66	3.7	e7.5	20	0.40
16	6.5	98	1.7	22	72	4.2	e7.7	20	0.42
17	6.8	131	2.4	21	76	4.2	e7.3	20	0.39
18	6.7	106	1.9	20	71	3.7	e9.0	20	0.49
19	7.8	106	2.2	19	106	5.5	e15	20	0.81
20	9.8	114	3.0	20	52	2.8	e22	20	1.2
21	8.6	88	2.1	22	78	4.6	e26	20	1.4
22	8.0	95	2.1	26	107	7.6	e18	20	0.98
23	7.9	57	1.2	32	110	9.6	e14	20	0.76
24	7.8	83	1.7	27	81	5.9	e11	20	0.60
25	7.9	98	2.1	25	72	4.8	e14	20	0.75
26	8.7	50	1.2	23	81	5.0	e17	20	0.92
27	10	71	1.9	20	97	5.4	e14	20	0.76
28	9.9	97	2.6	19	92	4.8	e12	20	0.65
29	9.6	85	2.2	18	128	6.2	e10	20	0.54
30	9.2	73	1.8	18	157	7.5	e12	20	0.65
31	9.4	55	1.4	---	---	---	e17	20	0.92
TOTAL	231.4	---	57.9	578.9	---	137.71	368.9	---	45.57
JANUARY			FEBRUARY			MARCH			
1	e21	20	1.1	e8.4	20	0.45	e13	20	0.70
2	e16	20	0.87	e9.9	20	0.53	e13	20	0.70
3	e14	20	0.76	e14	20	0.75	e12	20	0.65
4	e13	20	0.70	e27	20	1.5	e16	20	0.86
5	e12	20	0.65	e28	20	1.5	e21	20	1.1
6	e11	20	0.59	e23	20	1.2	e18	20	0.97
7	e12	20	0.65	e20	20	1.1	e17	20	0.92
8	e11	20	0.59	e17	20	0.92	e25	27	1.9
9	e10	20	0.54	e15	20	0.81	e170	66	30
10	e11	20	0.59	e13	20	0.70	e130	35	12
11	e10	20	0.54	e13	20	0.70	e110	23	6.9
12	e9.2	20	0.50	e12	20	0.65	e90	17	4.1
13	e8.4	20	0.45	e12	20	0.65	e110	28	8.4
14	e8.0	20	0.43	e11	20	0.59	e470	124	157
15	e7.4	20	0.40	e10	20	0.54	448	84	103
16	e7.4	20	0.40	e10	20	0.54	288	36	29
17	e7.6	20	0.41	e9.6	20	0.52	223	23	14
18	e7.2	20	0.39	e9.3	20	0.50	179	13	6.2
19	e7.2	20	0.39	e9.6	20	0.52	138	9	3.5
20	e7.6	20	0.41	e10	20	0.54	128	14	5.1
21	e7.8	20	0.42	e11	20	0.59	171	37	17
22	e8.2	20	0.44	e12	20	0.65	151	19	7.6
23	e7.8	20	0.42	e17	20	0.92	115	21	6.6
24	e7.2	20	0.39	e22	20	1.2	91	14	3.4
25	e6.8	20	0.37	e19	20	1.0	85	21	4.8
26	e6.8	20	0.37	e16	20	0.87	94	15	3.7
27	e7.0	20	0.38	e15	20	0.81	80	13	2.9
28	e7.0	20	0.38	e14	20	0.76	68	13	2.4
29	e7.2	20	0.39	---	---	---	179	58	28
30	e7.2	20	0.39	---	---	---	221	38	23
31	e7.6	20	0.41	---	---	---	155	23	9.8
TOTAL	291.6	---	15.72	407.8	---	22.01	4,029	---	496.20

04177810 FISH CREEK NEAR ARTIC, IN—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY)—CONTINUED
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Day	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)
1	112	20	6.0	58	81	13	36	55	5.4
2	93	26	6.6	68	40	7.3	34	43	4.0
3	79	37	7.8	60	32	5.2	31	56	4.7
4	86	44	13	50	29	3.9	30	54	4.5
5	332	128	111	224	188	108	29	45	3.5
6	365	56	55	305	54	45	28	46	3.5
7	266	30	23	216	34	20	26	44	3.1
8	178	21	10	135	29	10	26	44	3.1
9	148	16	6.3	292	137	117	26	47	3.3
10	129	20	6.8	609	92	147	26	41	2.8
11	110	30	9.0	716	42	84	25	42	2.8
12	93	34	8.5	535	27	40	45	59	7.6
13	78	50	11	421	24	27	81	61	13
14	66	46	8.2	319	34	29	69	51	9.5
15	57	48	7.3	222	25	15	e50	60	8.1
16	50	47	6.3	199	26	14	e38	47	4.8
17	45	54	6.5	172	24	11	e58	54	8.4
18	42	42	4.7	139	25	9.3	e112	73	22
19	40	49	5.3	115	26	8.1	e126	53	18
20	38	43	4.3	99	32	8.6	e66	49	8.9
21	36	43	4.2	89	26	6.2	e45	43	5.3
22	36	35	3.4	77	32	6.6	e35	47	4.4
23	33	39	3.4	66	27	4.8	e28	58	4.4
24	29	39	3.1	59	32	5.1	e22	40	2.4
25	27	44	3.2	54	31	4.5	e18	52	2.5
26	26	46	3.2	49	43	5.7	15	44	1.7
27	25	35	2.4	45	63	7.7	14	40	1.5
28	23	33	2.1	42	55	6.3	12	35	1.2
29	23	43	2.6	40	51	5.4	12	28	0.92
30	30	58	6.2	37	49	4.9	12	40	1.3
31	---	---	---	35	64	6.0	---	---	---
TOTAL	2,695	---	350.4	5,547	---	785.6	1,175	---	166.62

STREAMS TRIBUTARY TO LAKE ERIE
04177810 FISH CREEK NEAR ARTIC, IN—Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY)—CONTINUED
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

Day	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	JULY			AUGUST			SEPTEMBER		
				Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)	Mean discharge (cfs)	Mean concentration (mg/l)	Load (tons/day)
1	11	46	1.4	53	45	6.4	48	63	9.8			
2	11	32	0.93	431	111	112	272	117	82			
3	10	38	1.1	813	27	59	517	34	46			
4	10	28	0.77	582	15	24	389	30	31			
5	14	37	1.4	325	22	19	193	42	22			
6	21	42	2.4	209	29	16	123	44	14			
7	45	72	9.6	143	34	13	89	56	14			
8	97	101	28	109	32	9.3	69	43	7.9			
9	163	89	39	86	30	7.0	55	60	9.1			
10	127	49	17	67	30	5.5	44	24	2.9			
11	82	42	9.3	53	30	4.3	37	22	2.2			
12	65	38	6.7	47	34	4.3	32	23	2.0			
13	49	38	5.0	59	45	7.3	27	18	1.4			
14	34	42	3.8	48	38	5.0	25	16	1.1			
15	26	30	2.1	38	29	3.0	27	18	1.3			
16	22	26	1.6	33	27	2.3	30	16	1.3			
17	19	29	1.4	28	31	2.3	25	12	0.84			
18	16	29	1.2	23	42	2.6	22	15	0.89			
19	14	25	0.96	20	38	2.0	20	15	0.78			
20	12	33	1.1	17	58	2.7	18	10	0.51			
21	15	37	1.5	16	57	2.4	16	10	0.44			
22	45	68	9.4	18	76	3.7	24	29	2.1			
23	81	74	16	22	37	2.2	46	32	3.9			
24	55	52	7.7	18	51	2.5	56	38	9.5			
25	36	52	5.2	15	37	1.5	126	114	41			
26	26	39	2.7	14	44	1.6	97	49	13			
27	26	50	3.6	15	21	0.89	268	103	72			
28	145	127	53	15	29	1.2	325	48	42			
29	183	85	43	13	23	0.84	227	32	20			
30	104	49	14	15	15	0.60	136	19	6.8			
31	70	44	8.3	14	18	0.69	---	---	---			
TOTAL	1,634	---	299.16	3,359	---	325.12	3,383	---	461.76			
YEAR	23,700.6	3,163.77										

e Estimated

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, (BUTLER EAST, IN-OH quadrangle), on left downstream side at bridge on Ohio State Highway 249, 3.5 mi northeast of Newville, 6.5 mi northwest of Hicksville, OH, 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 fair except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52	e46	66	279	e62	e62	890	283	209	81	228	598
2	51	e48	65	216	e65	e60	798	349	212	79	945	1,260
3	46	e47	61	e137	e70	e60	635	346	211	75	1,480	1,600
4	47	e47	61	e120	172	e61	565	320	193	73	1,830	1,660
5	50	e47	60	e110	e150	e68	1,400	910	180	98	1,870	1,380
6	47	e50	56	e105	e130	e88	1,600	1,400	170	147	1,470	799
7	48	e55	56	e100	e110	e100	1,500	1,270	164	191	1,120	489
8	49	e52	55	e90	e100	e130	1,400	1,020	157	388	859	359
9	48	e54	51	e100	e88	e300	1,350	1,200	152	788	638	322
10	47	e73	54	e130	e80	e450	1,270	1,890	146	803	508	250
11	46	e98	52	e120	e74	e370	1,060	2,260	142	527	404	206
12	44	e80	51	e100	e72	e340	825	2,530	184	351	393	178
13	43	e70	50	e85	e70	1,000	658	2,470	245	301	359	156
14	44	e58	50	e76	e68	1,390	536	2,240	267	237	286	139
15	47	e70	51	e70	e64	1,410	447	1,870	258	184	264	136
16	44	e64	52	e67	e61	1,440	393	1,540	222	151	233	135
17	45	e62	51	e65	e63	1,400	363	1,280	228	130	199	133
18	44	e61	57	e63	e65	1,310	332	1,020	394	114	178	123
19	47	e60	61	e61	e67	1,220	300	813	331	102	162	114
20	47	e63	92	e60	e71	1,160	279	654	253	93	146	106
21	47	69	100	e60	e69	1,260	266	547	200	102	129	101
22	46	101	107	e60	e72	1,160	261	475	168	124	121	128
23	47	93	105	e59	e79	989	253	419	145	234	123	215
24	50	93	e90	e58	e74	867	243	373	130	221	118	269
25	50	88	e80	e58	e72	729	224	337	117	171	106	837
26	53	81	e70	e57	e70	629	207	308	107	135	100	892
27	51	76	e64	e58	e68	561	194	285	101	133	99	1,240
28	51	72	e60	e58	e65	497	183	263	96	376	91	1,470
29	e50	69	e70	e59	---	849	171	243	93	692	104	1,380
30	e47	69	87	e60	---	999	166	230	86	480	107	1,190
31	e45	---	276	e61	---	944	---	220	---	283	92	---
TOTAL	1,473	2,016	2,261	2,802	2,271	21,903	18,769	29,365	5,561	7,864	14,762	17,865
MEAN	47.5	67.2	72.9	90.4	81.1	707	626	947	185	254	476	596
MAX	53	101	276	279	172	1,440	1,600	2,530	394	803	1,870	1,660
MIN	43	46	50	57	61	60	166	220	86	73	91	101
CFSM	0.08	0.11	0.12	0.15	0.13	1.16	1.03	1.55	0.30	0.42	0.78	0.98
IN.	0.09	0.12	0.14	0.17	0.14	1.34	1.14	1.79	0.34	0.48	0.90	1.09

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 2003, BY WATER YEAR (WY)

MEAN	200	370	579	649	859	1,180	1,068	656	418	237	157	146
MAX	1,537	1,756	2,085	2,545	2,302	3,512	3,102	2,499	1,864	1,045	921	671
(WY)	(2002)	(1993)	(1968)	(1950)	(1976)	(1982)	(1950)	(1956)	(1989)	(1951)	(1998)	(1997)
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)

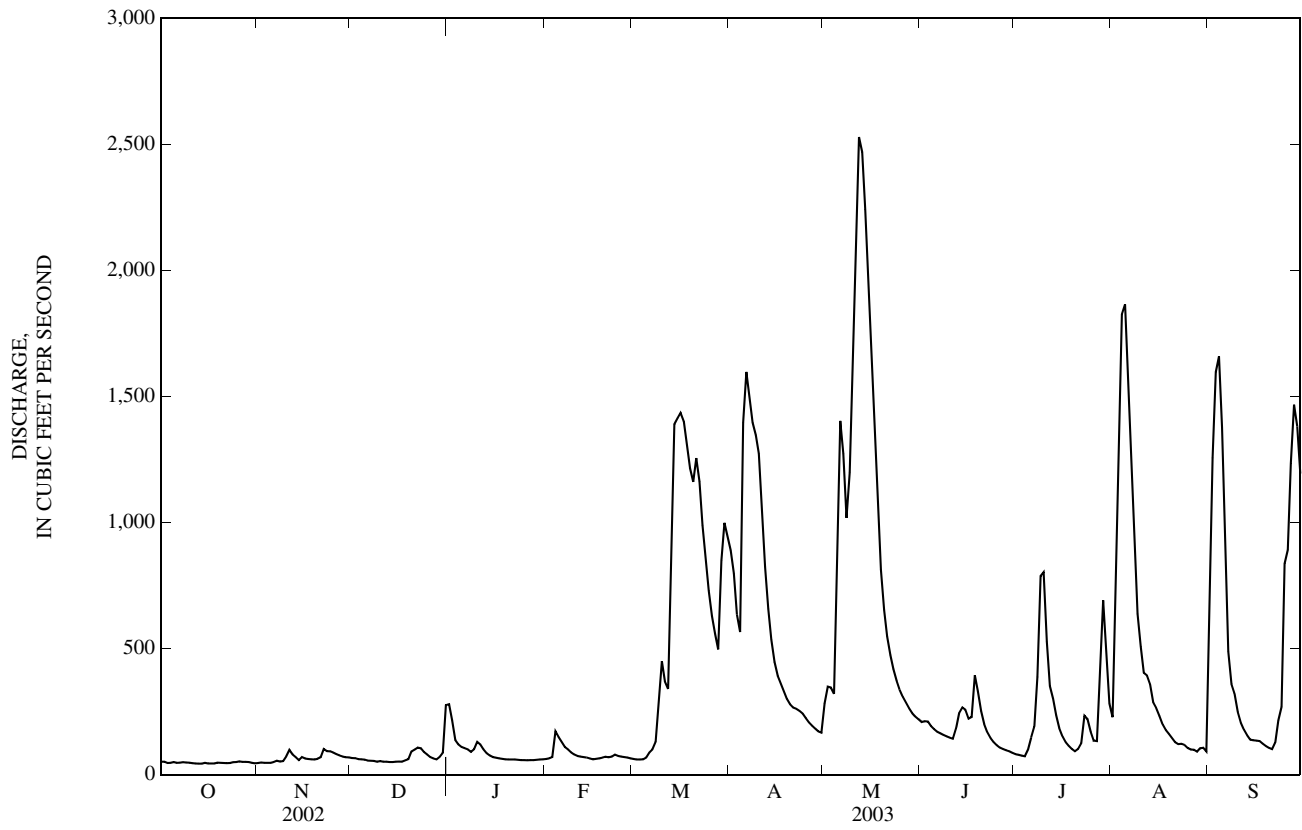
SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1947 - 2003	
ANNUAL TOTAL	193,964		126,912			
ANNUAL MEAN	531		348		540	
HIGHEST ANNUAL MEAN					1,008	
LOWEST ANNUAL MEAN					132	
HIGHEST DAILY MEAN	6,200	May 15	2,530	May 12	9,790	May 18, 1996
LOWEST DAILY MEAN	28	Sep 14	43	Oct 13	14	Sep 10, 1964
ANNUAL SEVEN-DAY MINIMUM	29	Sep 12	44	Oct 12	15	Sep 10, 1964
MAXIMUM PEAK FLOW			2,580	May 12	10,400	May 18, 1996
MAXIMUM PEAK STAGE			12.64	May 12	17.96	Mar 17, 1982
ANNUAL RUNOFF (CFSM)	0.87		0.57		0.89	
ANNUAL RUNOFF (INCHES)	11.83		7.74		12.03	
10 PERCENT EXCEEDS	1,720		1,170		1,480	
50 PERCENT EXCEEDS	162		130		237	
90 PERCENT EXCEEDS	47		51		50	

e Estimated

STREAMS TRIBUTARY TO LAKE ERIE

04178000 ST. JOSEPH RIVER NEAR NEWVILLE, IN—Continued



04179520 CEDAR CREEK AT 18TH STREET AT AUBURN, IN

LOCATION.--Lat 41°21'36", long 85°02'57", in NW¼SE¼ sec.32, T.34 N., R.13 E., Dekalb County, Hydrologic Unit 04100003, (AUBURN, IN quadrangle), on top of right upstream wingwall of the bridge on 18th Street, 0.3 mi east of downtown Auburn, 1.46 mi above John Diehl Ditch and at mile 20.94.

DRAINAGE AREA.--87.3 mi².

PERIOD OF RECORD.--September 2001 to current year.

GAGE.--Water-stage recorder. Datum of gage is 844.02 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e5.0	8.5	12	66	8.6	9.4	109	107	36	16	58	275
2	e4.7	7.7	11	40	10	9.3	87	97	33	15	422	497
3	e4.6	6.9	7.5	31	16	8.7	72	73	35	14	294	336
4	8.1	7.1	6.1	25	80	11	116	61	33	26	190	215
5	5.2	10	5.8	22	e30	21	572	420	31	33	186	139
6	5.2	10	5.6	20	e28	28	337	329	28	28	134	94
7	4.8	8.8	4.8	18	e20	28	230	192	27	100	92	73
8	4.2	8.7	5.1	18	14	64	186	132	27	163	70	59
9	3.9	8.1	4.9	22	13	236	168	533	26	294	61	50
10	4.1	32	4.8	26	12	133	134	841	24	170	49	42
11	4.2	21	5.1	18	11	79	107	476	24	101	43	37
12	3.8	13	5.2	17	10	122	88	512	88	69	37	32
13	4.1	11	5.4	15	9.1	461	74	340	96	50	39	28
14	4.0	11	5.4	14	8.5	439	65	232	68	40	42	26
15	4.3	12	5.6	12	8.3	270	60	213	51	35	37	27
16	4.3	9.2	6.5	11	7.0	202	55	178	40	30	32	24
17	4.7	9.8	6.0	11	7.8	164	50	146	60	26	27	22
18	5.8	10	8.7	8.9	7.8	132	47	119	77	23	24	20
19	9.9	12	27	8.9	8.3	107	44	100	79	20	22	18
20	4.3	11	58	9.3	9.0	132	41	90	52	18	20	17
21	3.8	16	37	8.7	12	203	40	78	38	52	19	16
22	3.8	27	25	8.2	17	134	38	68	32	149	21	45
23	4.0	16	17	7.1	18	95	34	60	28	183	18	52
24	4.0	13	15	7.0	16	75	32	55	25	98	16	60
25	6.4	12	10	6.6	12	82	31	51	23	63	16	194
26	6.4	11	15	7.0	11	86	30	46	22	43	24	123
27	5.5	9.0	12	6.8	9.6	68	28	42	21	133	19	424
28	5.5	7.4	11	6.9	9.5	83	26	40	19	210	17	265
29	17	7.3	12	7.3	---	356	25	38	19	109	37	164
30	13	9.9	28	7.5	---	221	37	36	17	70	24	112
31	9.7	---	117	7.4	---	141	---	41	---	50	24	---
TOTAL	178.3	356.4	499.5	493.6	423.5	4,200.4	2,963	5,746	1,179	2,431	2,114	3,486
MEAN	5.75	11.9	16.1	15.9	15.1	135	98.8	185	39.3	78.4	68.2	116
MAX	17	32	117	66	80	461	572	841	96	294	422	497
MIN	3.8	6.9	4.8	6.6	7.0	8.7	25	36	17	14	16	16
CFSM	0.06	0.13	0.18	0.18	0.17	1.50	1.09	2.05	0.44	0.87	0.76	1.29
IN.	0.07	0.15	0.21	0.20	0.17	1.73	1.22	2.37	0.49	1.00	0.87	1.44

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2003, BY WATER YEAR (WY)

	2001	2002	2003	2001	2002	2003	2001	2002	2003	2001	2002	2003
MEAN	133	46.0	91.9	40.8	86.5	148	149	171	38.2	48.5	39.5	61.8
MAX	260	80.2	168	65.8	158	160	200	185	39.3	78.4	68.2	116
(WY)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2002)	(2003)	(2003)	(2003)	(2003)	(2003)
MIN	5.75	11.9	16.1	15.9	15.1	135	98.8	156	37.2	18.6	10.9	7.36
(WY)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2003)	(2002)	(2002)	(2002)	(2002)	(2002)

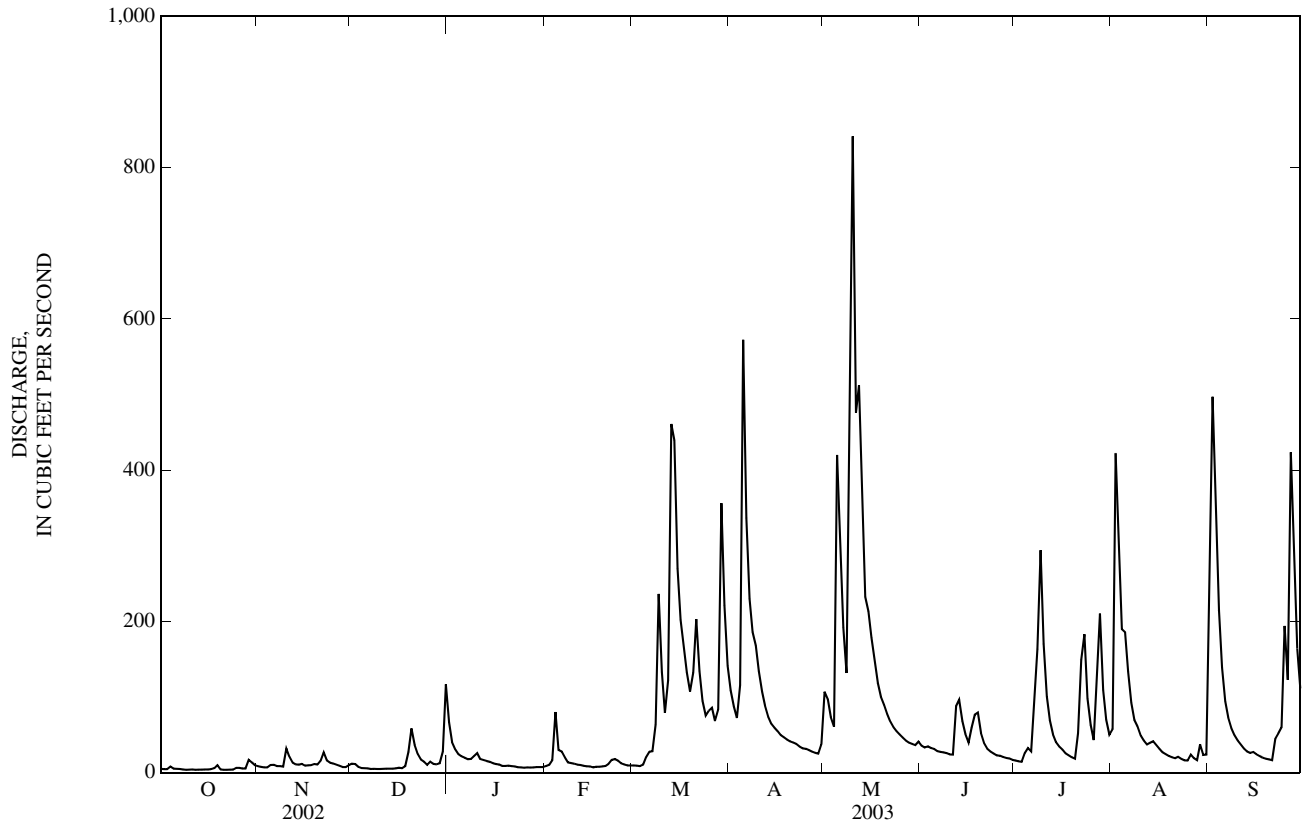
SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 2001 - 2003	
ANNUAL TOTAL	25,534.8		24,070.7			
ANNUAL MEAN	70.0		65.9		88.0	
HIGHEST ANNUAL MEAN					110	2002
LOWEST ANNUAL MEAN					65.9	2003
HIGHEST DAILY MEAN	934	Feb 1	841	May 10	934	Feb 1, 2002
LOWEST DAILY MEAN	3.8	Oct 12	3.8	Oct 12	3.8	Oct 12, 2002
ANNUAL SEVEN-DAY MINIMUM	4.0	Oct 8	4.0	Oct 8	4.0	Oct 8, 2002
MAXIMUM PEAK FLOW			1,170	May 10	1,170	May 10, 2003
MAXIMUM PEAK STAGE			8.23	May 10	8.23	May 10, 2003
ANNUAL RUNOFF (CFSM)	0.78		0.73		0.98	
ANNUAL RUNOFF (INCHES)	10.53		9.93		13.26	
10 PERCENT EXCEEDS	161		180		227	
50 PERCENT EXCEEDS	27		26		41	
90 PERCENT EXCEEDS	5.6		6.1		7.1	

e Estimated

STREAMS TRIBUTARY TO LAKE ERIE

04179520 CEDAR CREEK AT 18TH STREET AT AUBURN, IN—Continued



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, (CEDARVILLE, IN quadrangle), on left bank at downstream side of bridge on Tonkle Road, 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 fair except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	36	43	248	e45	e42	504	263	114	32	179	1,370
2	27	33	42	151	e52	e41	397	323	99	29	853	2,620
3	27	31	e41	109	61	e41	318	246	99	25	979	2,220
4	28	30	e39	96	277	e41	334	182	95	29	672	1,190
5	43	34	38	79	e170	62	1,600	1,190	89	153	884	769
6	30	47	38	73	e160	88	1,430	1,500	81	99	558	515
7	29	40	35	62	e120	85	920	834	77	275	352	366
8	30	37	34	67	e90	100	902	573	73	441	251	277
9	28	36	e34	73	e68	693	718	1,460	70	713	195	219
10	28	80	e33	93	e61	507	583	2,870	64	528	159	177
11	27	130	33	e84	e58	369	474	2,730	64	307	132	145
12	26	77	33	e77	e53	305	381	1,890	167	201	124	120
13	25	58	33	e68	e50	1,010	315	1,490	324	138	132	101
14	23	48	34	e60	e46	1,490	259	938	264	101	119	87
15	26	45	33	e57	e44	923	231	917	195	81	102	87
16	25	45	33	e54	e40	709	208	796	143	70	86	78
17	25	39	34	e52	e43	584	181	585	164	58	70	64
18	28	38	36	e50	e44	488	174	456	265	48	58	54
19	55	41	64	e50	45	402	158	369	199	41	51	47
20	46	45	150	e52	44	410	144	318	154	34	45	41
21	34	43	148	e50	45	707	140	273	108	458	41	37
22	33	90	97	e45	e52	520	135	233	85	572	70	140
23	30	81	71	e42	e60	368	122	201	69	765	61	272
24	27	61	59	e40	e52	294	111	175	61	468	45	171
25	30	53	68	e38	e48	267	105	154	52	267	38	670
26	47	50	56	e39	e46	298	105	134	46	171	51	506
27	36	47	52	e37	e43	252	94	120	44	171	160	1,340
28	31	43	45	e38	e42	222	87	110	41	1,120	79	1,150
29	32	40	42	e40	---	1,070	84	102	38	626	114	677
30	45	41	45	e42	---	993	83	92	35	348	177	438
31	40	---	233	e41	---	697	---	111	---	227	99	---
TOTAL	991	1,519	1,776	2,107	1,959	14,078	11,297	21,635	3,379	8,596	6,936	15,948
MEAN	32.0	50.6	57.3	68.0	70.0	454	377	698	113	277	224	532
MAX	55	130	233	248	277	1,490	1,600	2,870	324	1,120	979	2,620
MIN	23	30	33	37	40	41	83	92	35	25	38	37
CFSM	0.12	0.19	0.21	0.25	0.26	1.68	1.39	2.58	0.42	1.03	0.83	1.97
IN.	0.14	0.21	0.24	0.29	0.27	1.94	1.56	2.98	0.47	1.18	0.96	2.20

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 2003, BY WATER YEAR (WY)

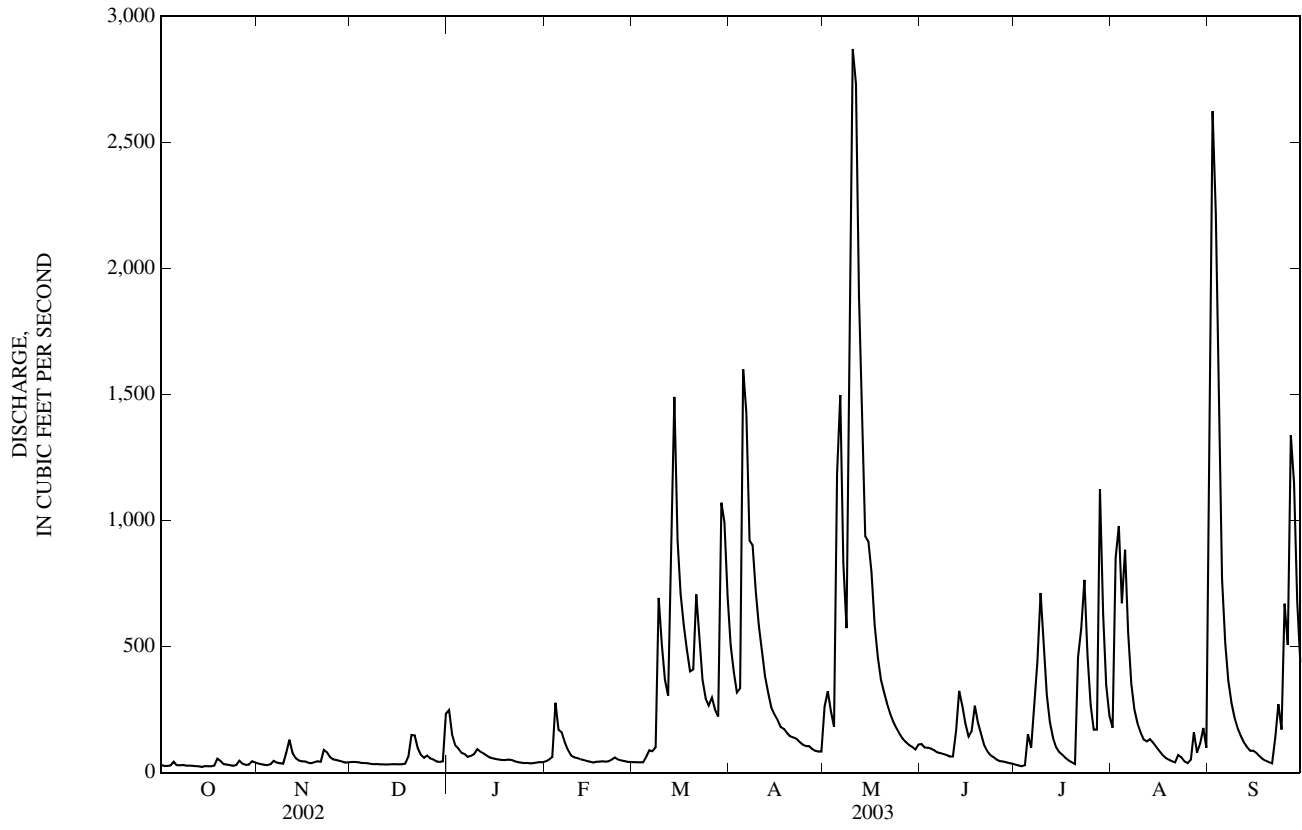
	MEAN	121	181	278	313	400	504	471	293	213	123	87.7	93.8
MAX	814	936	908	1,393	1,290	1,724	1,130	947	1,046	515	331	532	
(WY)	(2002)	(1993)	(1967)	(1950)	(1959)	(1982)	(1950)	(1956)	(1981)	(1986)	(1997)	(2003)	
MIN	19.8	24.0	24.7	25.9	28.5	146	139	68.6	44.0	35.1	22.0	20.9	
(WY)	(1965)	(1965)	(1964)	(1963)	(1963)	(1957)	(1971)	(1958)	(1988)	(1953)	(1964)	(1964)	

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1947 - 2003	
ANNUAL TOTAL	85,700		90,221			
ANNUAL MEAN	235		247		256	
HIGHEST ANNUAL MEAN					485	
LOWEST ANNUAL MEAN					85.3	
HIGHEST DAILY MEAN	2,700	Feb 1	2,870	May 10	5,220	Dec 31, 1990
LOWEST DAILY MEAN	21	Sep 15	23	Oct 14	13	Oct 3, 1949
ANNUAL SEVEN-DAY MINIMUM	23	Sep 9	25	Oct 11	18	Sep 27, 1949
MAXIMUM PEAK FLOW			3,240	May 11	5,580	Dec 30, 1990
MAXIMUM PEAK STAGE			8.86	May 11	13.38	Dec 30, 1990
ANNUAL RUNOFF (CFSM)	0.87		0.92		0.95	
ANNUAL RUNOFF (INCHES)	11.81		12.43		12.88	
10 PERCENT EXCEEDS	562		701		601	
50 PERCENT EXCEEDS	87		84		115	
90 PERCENT EXCEEDS	30		34		32	

e Estimated

STREAMS TRIBUTARY TO LAKE ERIE
04180000 CEDAR CREEK NEAR CEDARVILLE, IN—Continued



04180500 ST. JOSEPH RIVER NEAR FORT WAYNE, IN

LOCATION.--Lat 41°10'41", long 85°03'19", in NW¼NE¼ sec.3, T.31 N., R.13 E., Allen County, Hydrologic Unit 04100003, (CEDARVILLE, IN quadrangle), on left bank 0.8 mi downstream from Ely Run, 1.3 mi upstream from Mayhew Road, 8.0 mi northeast of the Fort Wayne Court House, and at mile 10.71.

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 754.00 ft above National Geodetic Vertical Datum of 1929 (levels by State of Indiana).

REMARKS.--Records fair except for estimated daily discharges, which are poor. Flow regulated by Cedarville Reservoir and some flow diverted into storage of Hurshtown Reservoir.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	93	132	978	e124	e122	1,460	405	407	184	783	2,320
2	35	95	e130	540	e130	e120	1,280	694	379	187	3,820	5,670
3	81	95	e128	326	e140	e119	1,160	751	372	179	3,040	4,840
4	121	94	e126	237	e350	e119	1,050	464	366	176	2,900	3,550
5	126	95	e123	e230	e540	e140	3,850	3,150	345	301	3,590	2,960
6	95	103	121	e215	e400	e180	3,830	3,920	311	397	3,020	2,110
7	89	111	112	e200	e310	e210	3,040	2,630	264	581	1,990	1,260
8	105	106	107	176	e250	e260	3,060	2,090	321	786	1,430	854
9	116	108	101	195	e200	e900	2,330	4,660	347	1,690	1,320	835
10	89	155	102	258	e180	e1,200	2,120	6,230	287	1,610	778	710
11	84	318	104	e240	e160	e1,000	1,890	6,210	253	1,170	714	493
12	82	291	103	e200	e150	913	1,460	5,200	439	708	756	437
13	94	178	101	e170	e140	2,740	1,120	4,850	801	549	723	453
14	106	117	102	e150	e140	3,580	923	4,070	661	466	578	365
15	94	158	102	e140	e130	3,040	788	3,590	489	400	400	419
16	97	153	102	e134	e120	2,790	663	3,290	556	310	505	352
17	95	149	101	e130	e125	2,500	636	2,460	469	285	460	307
18	98	126	108	e125	e130	2,230	574	1,890	600	263	317	352
19	94	120	190	e122	135	2,000	492	1,570	742	235	305	295
20	112	130	233	e120	146	1,880	529	1,160	558	195	365	230
21	94	131	298	e120	134	2,530	383	1,110	364	1,130	304	243
22	90	217	262	e119	e150	2,300	475	872	360	956	302	401
23	88	216	224	e118	e160	1,600	376	726	321	1,350	247	757
24	84	218	e180	e117	e150	1,500	340	723	260	996	241	576
25	90	202	e170	e116	e143	1,170	435	678	236	627	285	1,580
26	111	170	e150	e115	e137	1,090	355	570	233	389	283	1,950
27	106	140	e130	e115	e133	918	321	460	230	306	406	3,390
28	99	139	e120	e116	e130	839	317	493	197	1,710	298	3,150
29	100	134	e140	e118	---	2,400	314	473	198	1,410	248	2,520
30	96	136	179	e119	---	2,470	305	401	193	1,340	360	2,140
31	91	---	523	e120	---	1,870	---	416	---	653	306	---
TOTAL	2,904	4,498	4,804	6,179	5,137	44,730	35,876	66,206	11,559	21,539	31,074	45,519
MEAN	93.7	150	155	199	183	1,443	1,196	2,136	385	695	1,002	1,517
MAX	126	318	523	978	540	3,580	3,850	6,230	801	1,710	3,820	5,670
MIN	35	93	101	115	120	119	305	401	193	176	241	230
CFSM	0.09	0.14	0.15	0.19	0.17	1.36	1.13	2.01	0.36	0.66	0.95	1.43
IN.	0.10	0.16	0.17	0.22	0.18	1.57	1.26	2.32	0.41	0.76	1.09	1.60

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1984 - 2003, BY WATER YEAR (WY)

MEAN	587	903	1,134	1,314	1,643	1,847	1,826	1,196	964	464	393	412
MAX	2,797	3,330	2,421	4,615	3,728	3,612	3,071	3,675	2,915	1,413	1,157	1,517
(WY)	(2002)	(1993)	(1991)	(1993)	(2001)	(1985)	(1999)	(1996)	(1989)	(1986)	(1998)	(2003)
MIN	78.6	98.8	155	145	183	689	607	272	153	122	111	81.5
(WY)	(1995)	(2000)	(2003)	(2000)	(2003)	(2000)	(1986)	(1988)	(1988)	(1988)	(2002)	(1994)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

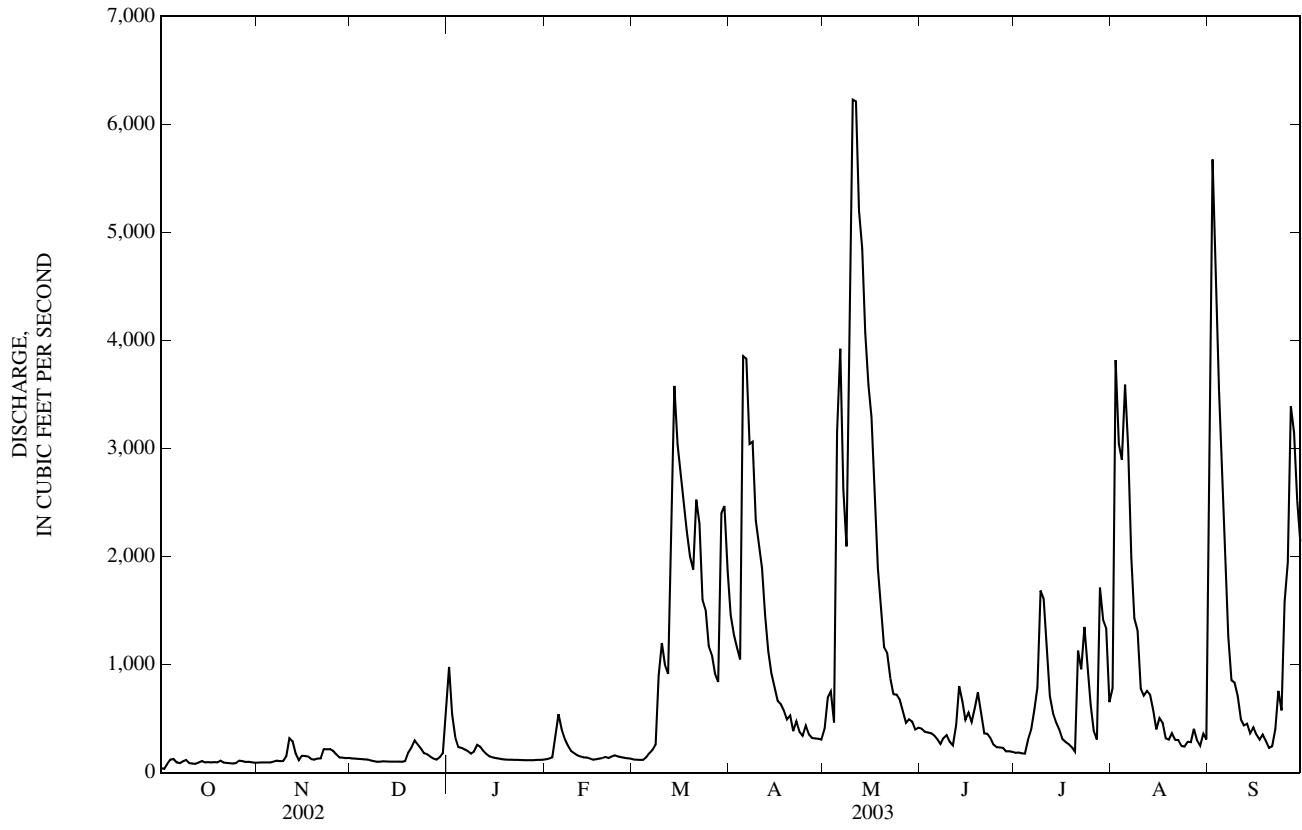
WATER YEARS 1984 - 2003

ANNUAL TOTAL	323,283	280,025	
ANNUAL MEAN	886	767	1,053
HIGHEST ANNUAL MEAN			1,532
LOWEST ANNUAL MEAN			642
HIGHEST DAILY MEAN	7,010	Feb 1	13,100
LOWEST DAILY MEAN	35	Oct 2	35
ANNUAL SEVEN-DAY MINIMUM	45	Sep 13	45
MAXIMUM PEAK FLOW		6,640	13,400
MAXIMUM PEAK STAGE		11.91	18.40
ANNUAL RUNOFF (CFSM)	0.84	0.72	0.99
ANNUAL RUNOFF (INCHES)	11.35	9.83	13.50
10 PERCENT EXCEEDS	2,890	2,360	2,700
50 PERCENT EXCEEDS	317	306	500
90 PERCENT EXCEEDS	88	103	139

e Estimated

STREAMS TRIBUTARY TO LAKE ERIE

04180500 ST. JOSEPH RIVER NEAR FORT WAYNE, IN—Continued



04181500 ST. MARYS RIVER AT DECATUR, IN

LOCATION.--Lat 40°50'55", long 84°56'16", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.27, T.28 N., R.14 E., Adams County, Hydrologic Unit 04100004, (DECATUR, IN quadrangle), on left downstream side of bridge on U.S. Highway 27, 0.5 mi upstream from Holthouse Ditch, 1.3 mi north of Decatur, and at mile 29.1.

DRAINAGE AREA.--621 mi².

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 fair, 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 Canal.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	80	26	91	2,820	e58	e230	539	120	176	886	252	517
2	57	20	69	1,840	e59	e215	419	1,070	182	808	3,000	3,180
3	37	17	64	1,440	e90	e200	320	1,240	225	439	4,250	3,650
4	29	18	65	1,480	1,220	e190	566	813	399	484	5,640	3,150
5	26	22	63	1,340	1,100	e230	3,820	2,830	533	4,230	6,500	2,950
6	22	23	57	934	753	612	3,050	3,840	534	5,730	5,960	2,420
7	18	19	48	505	e520	837	2,330	2,760	417	11,000	4,580	1,420
8	15	39	45	343	e380	868	2,800	3,480	291	14,300	3,210	666
9	e12	41	39	726	e270	2,260	2,060	5,100	225	14,800	2,010	296
10	e11	177	38	1,340	e210	2,800	1,590	6,980	187	13,800	977	177
11	e10	905	38	902	e160	2,420	1,300	7,230	162	11,800	486	132
12	e9.8	572	36	739	e120	2,690	945	6,690	476	9,230	303	110
13	e12	339	41	536	e100	3,880	597	5,500	1,600	6,610	254	94
14	e11	268	48	e326	e90	4,250	388	4,650	3,950	4,530	188	85
15	e10	182	56	e300	e78	4,290	297	3,920	3,820	2,930	174	87
16	e9.8	126	55	e220	e70	4,140	251	2,890	3,400	1,290	164	84
17	e9.6	97	47	e180	e65	3,910	218	1,740	3,630	600	138	77
18	e9.4	82	97	e150	61	3,440	194	1,260	5,050	337	116	73
19	e12	74	947	e130	58	2,630	173	1,080	4,690	241	99	71
20	e13	69	1,940	e110	59	2,010	157	778	3,610	194	86	69
21	e12	64	1,300	e98	68	1,790	144	493	2,440	770	76	66
22	12	69	847	e88	204	1,700	128	332	1,710	1,440	71	463
23	11	70	726	e80	714	1,310	123	266	1,140	1,780	65	1,040
24	11	80	517	e72	e580	1,330	117	224	586	1,970	62	376
25	17	101	289	e68	e500	1,320	117	195	286	1,840	58	1,590
26	17	115	e160	e65	e400	1,040	127	176	194	1,660	63	1,120
27	21	125	e120	e63	e350	655	115	153	191	1,220	64	4,030
28	18	131	e110	e61	e300	490	108	138	172	839	64	4,560
29	21	125	e120	e60	---	905	110	133	180	386	79	3,810
30	21	111	e140	e59	---	827	99	128	171	237	81	2,680
31	31	---	2,240	e59	---	600	---	140	---	185	87	---
TOTAL	605.6	4,107	10,453	17,134	8,637	54,069	23,202	66,349	40,627	116,566	39,157	39,043
MEAN	19.5	137	337	553	308	1,744	773	2,140	1,354	3,760	1,263	1,301
MAX	80	905	2,240	2,820	1,220	4,290	3,820	7,230	5,050	14,800	6,500	4,560
MIN	9.4	17	36	59	58	190	99	120	162	185	58	66
CFSM	0.03	0.22	0.54	0.89	0.50	2.81	1.25	3.45	2.18	6.06	2.03	2.10
IN.	0.04	0.25	0.63	1.03	0.52	3.24	1.39	3.97	2.43	6.98	2.35	2.34

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 2003, BY WATER YEAR (WY)

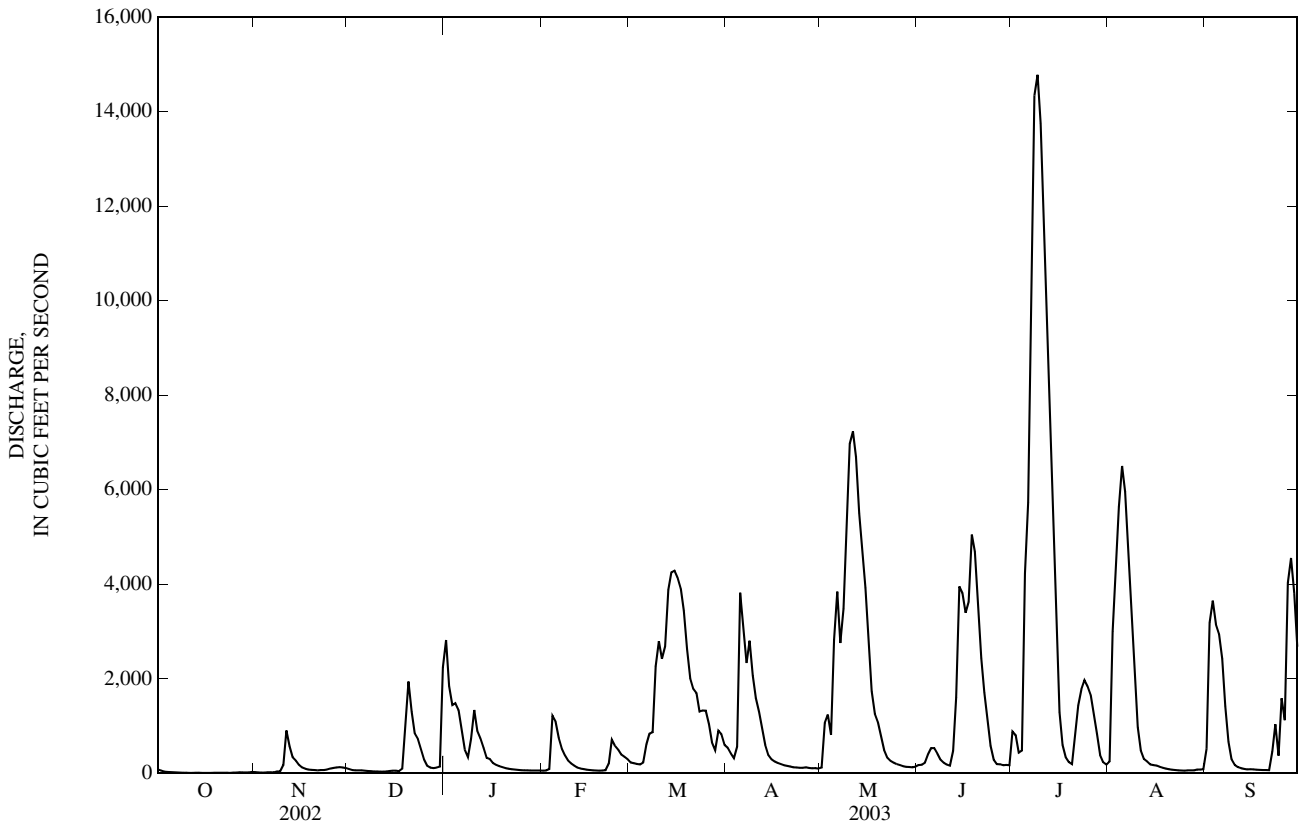
MEAN	140	299	558	716	872	1,087	953	527	463	379	158	127
MAX	1,250	1,988	2,079	3,834	2,546	3,263	3,409	2,140	2,075	3,760	1,263	1,301
(WY)	(2002)	(1993)	(1991)	(1950)	(1950)	(1978)	(1957)	(2003)	(1981)	(2003)	(2003)	(2003)
MIN	7.52	13.7	12.8	21.0	30.5	125	79.3	55.6	28.1	20.6	15.5	12.6
(WY)	(1964)	(1965)	(1964)	(1961)	(1964)	(1981)	(1966)	(1988)	(1988)	(1965)	(1963)	(1963)

STREAMS TRIBUTARY TO LAKE ERIE

04181500 ST. MARYS RIVER AT DECATUR, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1947 - 2003	
ANNUAL TOTAL	164,537.6		419,949.6			
ANNUAL MEAN	451		1,151		518	
HIGHEST ANNUAL MEAN					1,151	2003
LOWEST ANNUAL MEAN					140	1966
HIGHEST DAILY MEAN	5,330	Mar 31	14,800	Jul 9	14,800	Jul 9, 2003
LOWEST DAILY MEAN	9.4	Oct 18	9.4	Oct 18	5.4	Oct 18, 1960
ANNUAL SEVEN-DAY MINIMUM	10	Oct 12	10	Oct 12	6.2	Oct 12, 1963
MAXIMUM PEAK FLOW			15,000	Jul 9	15,000	Jul 9, 2003
MAXIMUM PEAK STAGE			26.92	Jul 9	26.92	Jul 9, 2003
ANNUAL RUNOFF (CFSM)	0.73		1.85		0.83	
ANNUAL RUNOFF (INCHES)	9.86		25.16		11.33	
10 PERCENT EXCEEDS	1,360		3,710		1,510	
50 PERCENT EXCEEDS	100		230		130	
90 PERCENT EXCEEDS	24		37		23	

e Estimated



04182000 ST. MARYS RIVER NEAR FORT WAYNE, IN

LOCATION.--Lat 40°59'16", long 85°06'43", in A. LaFontaine Reserve, T.29 N., R.12 E., Allen County, Hydrologic Unit 04100004, (POE, IN quadrangle), 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 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	83	35	111	2,990	e73	e275	634	108	156	380	294	667
2	89	39	111	2,220	e74	e250	527	506	182	1,010	3,120	2,750
3	63	32	87	1,490	e110	e240	400	1,340	206	583	3,960	3,770
4	44	29	e70	1,440	1,080	e230	560	933	304	421	4,910	3,470
5	37	25	e72	1,380	1,700	e300	4,170	3,230	452	3,730	6,160	3,030
6	34	29	e68	1,070	988	602	4,110	4,280	519	5,480	6,890	2,710
7	27	38	e64	654	e730	1,100	2,750	3,450	455	9,090	6,300	1,870
8	21	33	e56	403	e520	1,220	3,150	3,470	340	12,900	4,510	1,020
9	15	38	e50	493	e400	2,460	2,470	5,970	254	14,800	2,620	516
10	12	79	e47	1,350	e300	3,390	1,790	7,760	202	14,800	1,460	287
11	11	769	e43	1,070	e240	3,260	1,450	8,300	170	14,000	784	190
12	14	781	e42	791	e200	3,390	1,110	8,410	363	12,100	490	142
13	14	426	e43	673	e170	5,040	757	7,310	1,300	9,870	395	115
14	13	311	e51	e520	e140	5,440	497	5,860	3,670	7,200	324	100
15	12	237	e57	e430	e120	5,590	364	4,770	4,060	4,420	261	100
16	11	163	e61	e290	e100	4,880	296	3,460	3,530	1,990	253	100
17	11	119	e56	e250	e88	4,430	253	2,100	3,240	964	228	90
18	11	95	e68	e210	e80	3,950	221	1,360	4,130	564	193	79
19	13	83	428	e180	e73	3,150	197	1,140	4,990	386	163	73
20	13	76	1,880	e150	e84	2,340	175	954	4,310	300	140	72
21	14	72	1,600	e130	e110	2,000	166	637	2,850	1,140	125	69
22	12	73	952	e120	e200	1,900	149	420	1,870	1,760	115	138
23	12	80	763	e110	e480	1,460	131	317	1,300	1,800	104	1,160
24	12	84	614	e100	e740	1,330	121	267	775	2,060	97	714
25	14	95	397	e90	e600	1,370	116	227	399	1,920	91	1,230
26	21	111	239	e84	e470	1,180	127	202	239	1,790	131	1,660
27	31	123	e150	e79	e390	815	129	179	190	1,450	126	3,650
28	25	128	e125	e77	e340	565	116	158	190	1,140	83	4,760
29	27	134	e137	e75	---	1,090	111	146	173	674	82	4,610
30	26	125	e150	e74	---	1,100	110	139	181	391	117	3,380
31	33	---	1,770	e73	---	732	---	149	---	281	101	---
TOTAL	775	4,462	10,362	19,066	10,600	65,079	27,157	77,552	41,000	129,394	44,627	42,522
MEAN	25.0	149	334	615	379	2,099	905	2,502	1,367	4,174	1,440	1,417
MAX	89	781	1,880	2,990	1,700	5,590	4,170	8,410	4,990	14,800	6,890	4,760
MIN	11	25	42	73	73	230	110	108	156	281	82	69
CFSM	0.03	0.20	0.44	0.81	0.50	2.76	1.19	3.28	1.79	5.48	1.89	1.86
IN.	0.04	0.22	0.51	0.93	0.52	3.18	1.33	3.79	2.00	6.32	2.18	2.08

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2003, BY WATER YEAR (WY)

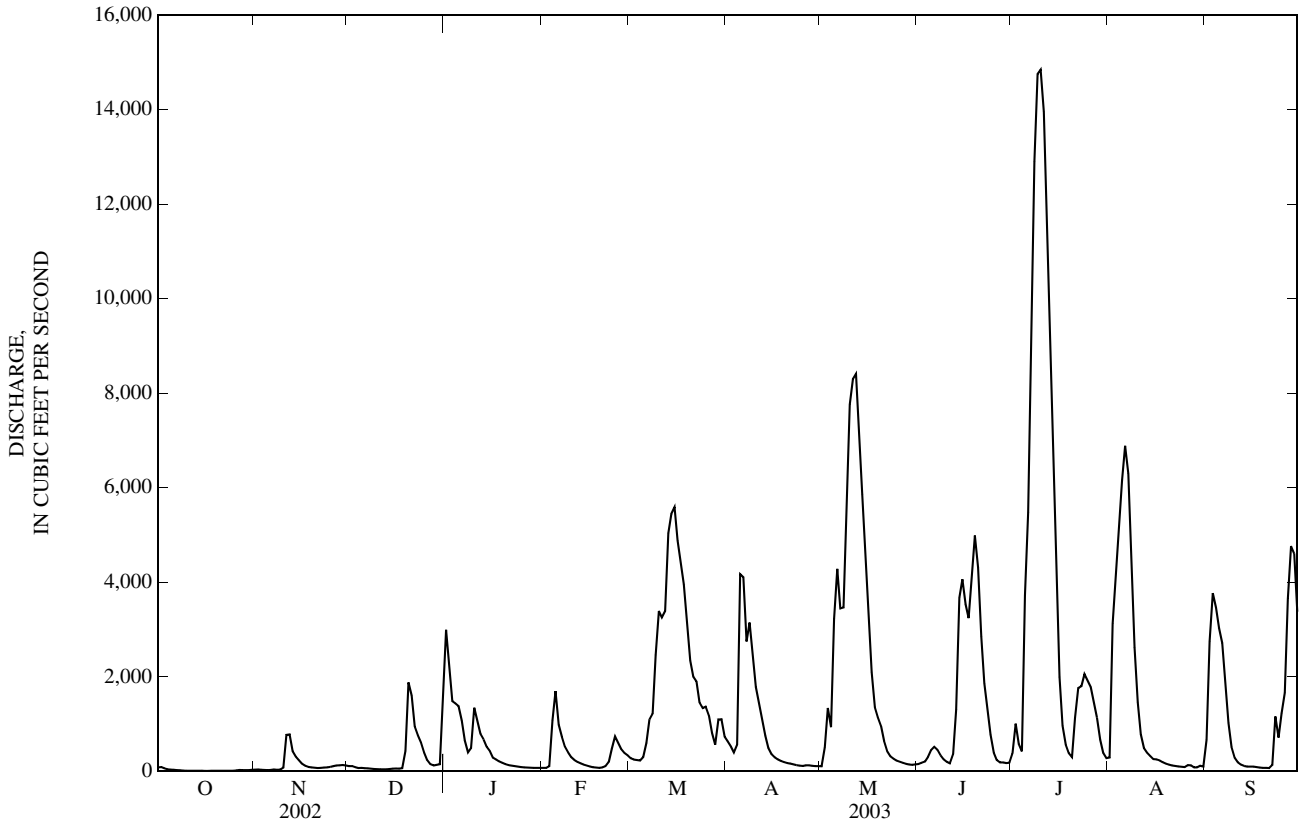
MEAN	164	322	624	855	1,030	1,316	1,147	675	538	398	177	132
MAX	1,595	2,612	2,349	4,897	3,404	4,070	4,119	3,866	2,545	4,174	1,440	1,453
(WY)	(2002)	(1973)	(1978)	(1950)	(1959)	(1978)	(1957)	(1943)	(1981)	(2003)	(2003)	(1992)
MIN	8.28	16.9	16.7	21.3	45.4	87.0	90.7	59.9	34.3	11.9	13.9	11.6
(WY)	(1964)	(1965)	(1964)	(1977)	(1964)	(1941)	(1946)	(1931)	(1988)	(1936)	(1932)	(1944)

STREAMS TRIBUTARY TO LAKE ERIE

04182000 ST. MARYS RIVER NEAR FORT WAYNE, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1931 - 2003	
ANNUAL TOTAL	202,238		472,596		623	
ANNUAL MEAN	554		1,295		1,295	
HIGHEST ANNUAL MEAN					174	2003
LOWEST ANNUAL MEAN					1966	
HIGHEST DAILY MEAN	6,500	Apr 1	14,800	Jul 9	14,800	Jul 9, 2003
LOWEST DAILY MEAN	11	Oct 11	11	Oct 11	3.4	Oct 19, 1934
ANNUAL SEVEN-DAY MINIMUM	12	Oct 14	12	Oct 14	4.9	Oct 15, 1934
MAXIMUM PEAK FLOW			16,000	Jul 9	16,000	Jul 9, 2003
MAXIMUM PEAK STAGE			21.20	Jul 9	21.20	Jul 9, 2003
ANNUAL RUNOFF (CFSM)	0.73		1.70		0.82	
ANNUAL RUNOFF (INCHES)	9.87		23.07		11.11	
10 PERCENT EXCEEDS	1,590		4,000		1,800	
50 PERCENT EXCEEDS	125		300		151	
90 PERCENT EXCEEDS	32		41		25	

e Estimated



04182900 MAUMEE RIVER AT FORT WAYNE, IN

LOCATION.--Lat 41°04'55", long 85°06'53", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 1, T.30 N., R.12 E., Allen County, Hydrologic Unit 04100005, (FORT WAYNE EAST, IN quadrangle), on left bank at downstream side of Hosey Dam, 250 ft upstream of Anthony Boulevard, 1.2 mi below confluence of St. Joseph and St. Mary's Rivers and 1.5 mi upstream of Highway 930.

DRAINAGE AREA.--1,926 mi².

PERIOD OF RECORD.--October 1997 to current year.

GAGE.--Water-stage recorder. Datum of gage 730.07 ft above National Geodetic Vertical Datum of 1929. Prior to December 12, 1962, nonrecording gage on downstream side of bridge at same datum. Dec. 12, 1962 to Aug. 13, 1997 water-stage recorder at site 310 ft downstream at same datum.

EXTREMES FOR PERIOD OF RECORD.--Maximum gage height, 21.24 ft, July 10, 2003; minimum gage height, 0.75 ft, Sept. 29, 1999.

EXTREMES FOR CURRENT YEAR.--Maximum gage height, 21.24 ft, July 10; minimum gage height, 0.81 ft, Oct. 22.

GAGE HEIGHT, FEET
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.20	1.05	1.42	8.03	1.31	2.18	5.10	2.90	2.24	2.45	8.80	10.51
2	1.23	1.06	1.40	5.96	1.38	1.96	4.78	4.57	2.30	3.12	12.24	14.33
3	1.13	1.05	1.28	4.78	2.00	---	4.22	5.20	2.45	2.48	11.72	13.32
4	1.48	1.01	1.30	4.67	4.11	---	7.96	3.97	2.68	6.42	13.15	11.21
5	1.43	1.17	1.30	4.51	4.20	2.03	14.48	14.62	2.62	10.31	14.84	10.11
6	1.15	1.10	1.33	3.76	3.02	2.37	12.64	13.21	3.26	12.34	14.65	8.47
7	1.02	1.12	1.32	2.72	2.77	3.17	11.24	11.00	2.04	16.54	12.75	5.69
8	0.99	1.08	1.27	2.34	2.35	4.75	10.96	10.11	2.37	19.10	9.49	4.60
9	1.14	1.10	1.23	2.93	2.09	7.13	8.87	18.29	2.33	21.10	7.57	3.61
10	1.11	3.34	1.24	4.72	1.85	7.36	7.91	18.62	2.19	20.95	4.72	2.96
11	1.08	3.77	1.22	3.66	1.72	6.86	6.91	18.80	1.82	20.06	3.82	2.15
12	0.97	3.07	1.23	3.05	1.63	7.52	6.00	18.08	4.02	18.35	3.56	1.97
13	0.88	2.04	1.24	2.55	1.60	12.86	4.64	16.85	7.93	15.94	3.26	2.54
14	1.08	1.78	1.25	2.10	1.55	13.23	3.99	15.00	9.35	12.40	2.90	2.47
15	0.93	1.72	1.29	1.80	1.48	13.59	3.47	13.61	8.87	8.46	2.13	1.71
16	0.96	1.57	1.28	1.75	1.44	12.64	3.18	11.30	8.35	5.08	2.46	2.27
17	0.98	1.47	1.34	1.76	1.42	11.79	3.01	8.53	8.20	3.33	2.45	1.68
18	1.28	1.37	1.49	2.48	1.36	10.62	2.75	6.62	9.49	2.69	1.67	1.77
19	1.48	1.34	3.08	2.07	1.39	9.53	2.56	6.05	10.46	2.18	1.88	1.87
20	1.00	1.34	5.71	2.24	1.44	9.66	2.55	5.13	9.06	1.96	2.13	1.28
21	0.91	1.46	4.62	1.46	1.47	9.11	2.11	4.78	6.56	9.02	1.72	1.73
22	0.85	1.62	3.42	1.57	2.17	8.23	2.47	3.31	5.27	7.69	1.81	3.69
23	0.95	1.57	3.07	2.08	2.29	6.14	1.91	3.35	4.30	7.78	1.65	5.36
24	0.94	1.54	2.62	2.06	2.49	6.74	2.01	3.23	2.96	6.66	1.37	4.44
25	1.33	1.52	2.03	1.31	2.55	5.95	2.25	3.12	2.24	5.97	1.87	7.96
26	1.13	1.53	1.79	1.49	2.56	5.56	1.98	2.77	2.01	5.22	2.81	8.40
27	1.14	1.48	1.74	1.99	2.59	4.55	1.97	2.98	1.88	5.37	2.17	13.32
28	1.06	1.48	1.70	1.30	2.49	5.93	1.92	2.38	1.95	7.31	1.30	12.70
29	1.07	1.48	1.73	1.27	---	8.81	1.92	2.61	1.86	5.08	2.22	11.62
30	1.05	1.46	2.40	1.28	---	---	2.03	1.53	1.88	4.78	2.15	9.47
31	1.06	---	7.45	1.29	---	6.21	---	2.27	---	2.55	1.77	---
TOTAL	34.01	47.69	64.79	84.98	58.72	---	147.79	254.79	132.94	272.69	157.03	183.21
MEAN	1.10	1.59	2.09	2.74	2.10	---	4.93	8.22	4.43	8.80	5.07	6.11
MAX	1.48	3.77	7.45	8.03	4.20	---	14.48	18.80	10.46	21.10	14.84	14.33
MIN	0.85	1.01	1.22	1.27	1.31	---	1.91	1.53	1.82	1.96	1.30	1.28

STREAMS TRIBUTARY TO LAKE ERIE

04183000 MAUMEE RIVER AT NEW HAVEN, IN

LOCATION.--Lat 41°05'06", long 85°01'20", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.2, T.30 N., R.13 E., Allen County, Hydrologic Unit 04100005, (FORT WAYNE EAST, IN quadrangle), 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, 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 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	153	138	258	4,300	e170	e470	2,580	683	671	400	1,400	4,260
2	158	137	232	3,530	e176	e440	2,080	1,170	685	1,260	8,230	9,080
3	148	141	196	2,290	e230	e420	1,900	2,340	790	1,010	8,000	9,720
4	153	141	171	1,940	1,170	e410	2,140	1,850	806	1,500	7,810	7,980
5	257	147	177	1,900	1,860	517	8,190	7,490	943	5,050	9,360	6,460
6	210	176	178	1,700	1,340	603	9,530	9,850	1,000	6,620	10,300	5,240
7	121	143	179	1,260	e1,000	956	7,310	7,700	990	11,200	9,110	3,810
8	96	152	174	833	e700	1,360	7,260	6,460	799	13,800	7,160	2,100
9	94	146	154	844	e560	2,660	5,840	10,900	675	17,700	4,650	1,570
10	146	668	153	1,670	e440	3,660	4,450	15,200	676	19,300	2,880	1,160
11	114	1,270	153	1,740	e370	3,440	3,850	15,400	552	18,700	1,750	809
12	117	1,480	148	e1,150	e310	3,440	3,010	15,200	1,150	16,800	1,340	441
13	95	948	157	e800	e280	6,290	2,410	14,000	2,530	13,800	1,310	499
14	94	529	157	e600	e260	8,600	1,710	11,900	4,950	10,300	1,090	445
15	126	448	163	e450	e240	8,820	1,510	10,300	5,090	6,520	773	828
16	109	391	168	e400	e230	8,780	1,260	8,490	4,830	3,360	659	381
17	104	320	159	e350	e224	7,850	1,170	5,840	4,260	1,640	718	385
18	103	262	215	e310	e220	7,200	1,080	4,050	4,820	1,090	590	290
19	334	236	427	e280	219	5,870	901	3,100	6,090	773	343	340
20	195	223	2,150	e260	233	4,970	873	3,040	5,640	536	441	298
21	121	222	2,390	e240	261	5,220	782	2,060	3,970	6,650	459	155
22	92	390	1,630	e230	470	4,780	668	1,850	2,720	4,080	328	1,010
23	104	363	1,260	e220	633	3,740	776	1,340	2,090	3,710	353	1,850
24	113	340	1,080	e210	e740	3,080	496	1,270	1,470	3,500	251	1,760
25	147	321	759	e200	e680	2,980	631	1,210	873	2,820	228	2,720
26	217	306	522	e190	e620	2,590	667	1,090	603	2,470	1,070	4,030
27	162	298	e380	e186	e560	2,200	526	587	482	2,250	883	7,530
28	152	285	e340	e182	e520	1,870	516	988	446	2,860	427	8,720
29	145	280	e360	e177	---	4,070	499	765	454	2,630	419	7,780
30	152	279	e470	e172	---	4,410	514	753	438	1,950	484	6,260
31	140	---	2,110	e170	---	3,030	---	752	---	1,370	489	---
TOTAL	4,472	11,180	17,070	28,784	14,716	114,726	75,129	167,628	61,493	185,649	83,305	97,911
MEAN	144	373	551	929	526	3,701	2,504	5,407	2,050	5,989	2,687	3,264
MAX	334	1,480	2,390	4,300	1,860	8,820	9,530	15,400	6,090	19,300	10,300	9,720
MIN	92	137	148	170	170	410	496	587	438	400	228	155
CFSM	0.07	0.19	0.28	0.47	0.27	1.88	1.27	2.75	1.04	3.04	1.37	1.66
IN.	0.08	0.21	0.32	0.54	0.28	2.17	1.42	3.17	1.16	3.51	1.58	1.85

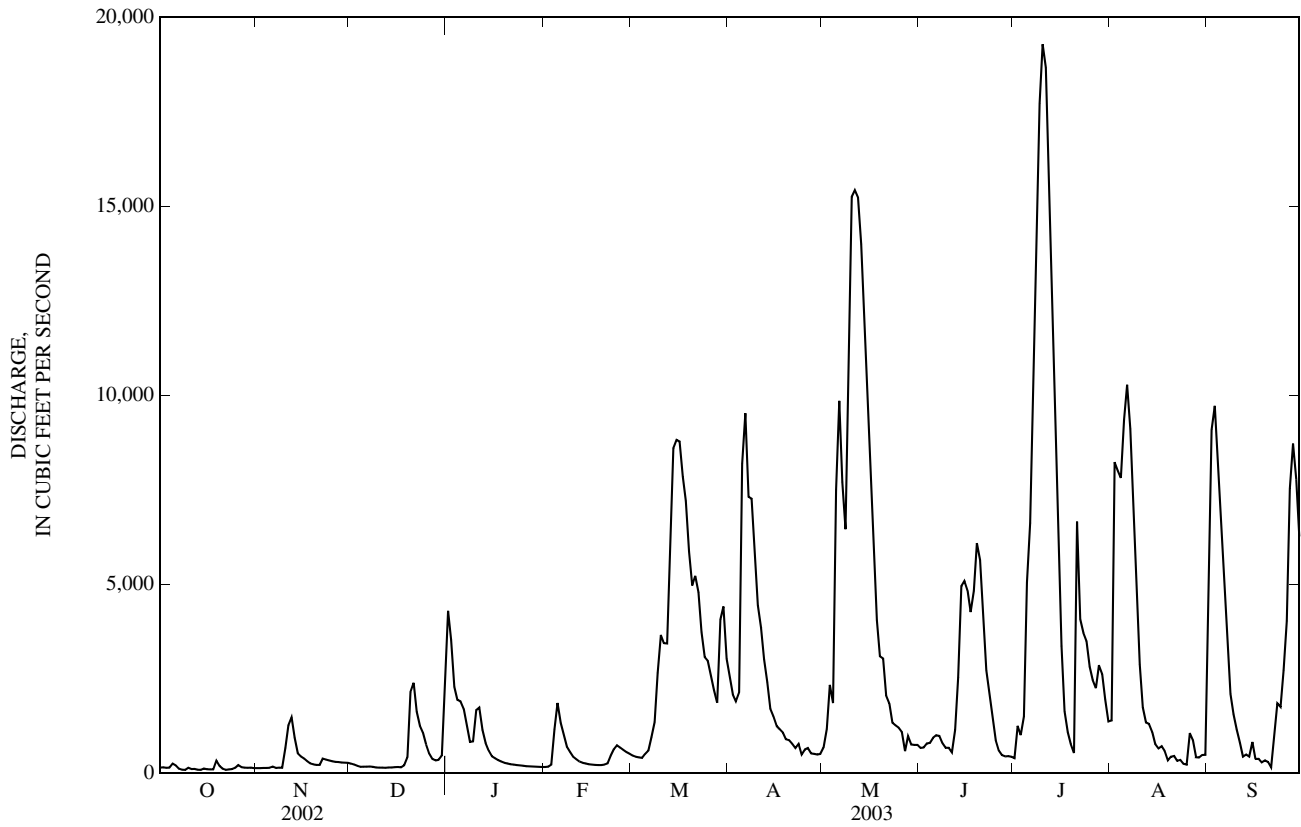
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2003, BY WATER YEAR (WY)

MEAN	630	1,210	2,056	1,931	2,701	3,682	3,440	2,019	1,656	1,104	616	577
MAX	5,219	6,523	6,292	7,203	7,649	11,460	7,955	6,914	6,480	5,989	2,687	3,264
(WY)	(2002)	(1993)	(1968)	(1993)	(1976)	(1982)	(1957)	(1996)	(1981)	(2003)	(2003)	(2003)
MIN	62.3	102	96.4	119	161	1,181	789	382	122	197	99.1	91.2
(WY)	(1964)	(1965)	(1964)	(1963)	(1964)	(1981)	(1971)	(1988)	(1988)	(1964)	(1962)	(1963)

04183000 MAUMEE RIVER AT NEW HAVEN, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1957 - 2003	
ANNUAL TOTAL	612,911		862,063			
ANNUAL MEAN	1,679		2,362		1,796	
HIGHEST ANNUAL MEAN					2,975	
LOWEST ANNUAL MEAN					669	
HIGHEST DAILY MEAN	13,300	Feb 2	19,300	Jul 10	26,300	Mar 17, 1982
LOWEST DAILY MEAN	88	Aug 29	92	Oct 22	48	Oct 6, 1963
ANNUAL SEVEN-DAY MINIMUM	103	Sep 4	107	Oct 12	55	Oct 4, 1963
MAXIMUM PEAK FLOW			19,400	Jul 10	26,600	Mar 17, 1982
MAXIMUM PEAK STAGE			21.57	Jul 10	25.49	Mar 17, 1982
ANNUAL RUNOFF (CFSM)	0.85		1.20		0.91	
ANNUAL RUNOFF (INCHES)	11.59		16.30		12.40	
10 PERCENT EXCEEDS	5,110		7,510		4,890	
50 PERCENT EXCEEDS	591		782		777	
90 PERCENT EXCEEDS	123		155		156	

e Estimated



05515000 KANKAKEE RIVER NEAR NORTH LIBERTY, IN

LOCATION.--Lat 41°33'50", long 86°29'50", in NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.23, T.36 N., R.1 W., St. Joseph County, Hydrologic Unit 07120001, (NORTH LIBERTY, IN quadrangle), on left bank at upstream 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 October 2003 (discontinued).

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 on downstream side of bridge; June 26, 1956 to Sept. 3, 1996, water-stage recorder on left bank at downstream side of bridge, all at same datum

REMARKS.--Records good except for estimated daily discharges and those above 300 ft³/s (backwater), which are poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	77	75	87	120	86	87	103	107	146	91	94	94
2	74	76	88	113	86	88	99	114	141	87	91	111
3	74	75	84	108	91	86	98	110	141	82	87	108
4	78	75	84	103	122	87	107	106	143	83	97	104
5	84	77	86	102	119	88	171	170	138	101	93	98
6	81	78	85	99	112	86	158	179	135	108	86	94
7	81	76	86	98	107	86	146	151	133	129	82	92
8	79	77	84	99	105	90	139	167	132	152	83	88
9	78	77	83	99	101	111	136	342	131	150	78	85
10	77	93	84	98	99	102	131	461	127	141	78	83
11	75	90	84	96	96	99	125	386	127	136	81	78
12	76	86	86	94	95	100	119	333	127	128	72	72
13	76	84	86	94	94	121	115	278	126	122	71	73
14	75	83	86	93	91	129	113	237	125	118	66	78
15	77	85	85	91	89	125	112	233	121	117	70	82
16	76	85	84	91	86	128	110	215	118	113	71	79
17	76	84	83	90	87	131	107	196	118	108	71	77
18	76	84	95	89	87	129	106	182	115	105	67	73
19	76	85	121	95	87	127	102	175	118	99	59	74
20	75	84	128	89	87	130	104	178	113	90	55	72
21	75	85	122	85	92	144	103	167	109	127	58	73
22	75	88	114	85	93	136	100	161	108	140	56	80
23	74	89	108	e84	91	127	98	155	105	124	56	88
24	73	89	103	e83	89	120	95	157	102	113	58	e82
25	75	90	104	e84	88	120	94	148	94	104	52	e88
26	76	90	98	85	87	117	93	146	92	102	51	e82
27	75	86	96	88	87	112	92	142	99	107	70	e84
28	72	85	95	84	87	110	91	140	99	113	68	e90
29	74	88	93	83	---	107	91	140	100	107	71	e110
30	77	89	97	83	---	104	98	139	98	104	74	e100
31	75	---	122	86	---	103	---	155	---	99	73	---
TOTAL	2,362	2,508	2,941	2,891	2,641	3,430	3,356	5,970	3,581	3,500	2,239	2,592
MEAN	76.2	83.6	94.9	93.3	94.3	111	112	193	119	113	72.2	86.4
MAX	84	93	128	120	122	144	171	461	146	152	97	111
MIN	72	75	83	83	86	86	91	106	92	82	51	72
CFSM	0.44	0.48	0.55	0.54	0.54	0.64	0.64	1.11	0.69	0.65	0.42	0.50
IN.	0.50	0.54	0.63	0.62	0.56	0.73	0.72	1.28	0.77	0.75	0.48	0.55

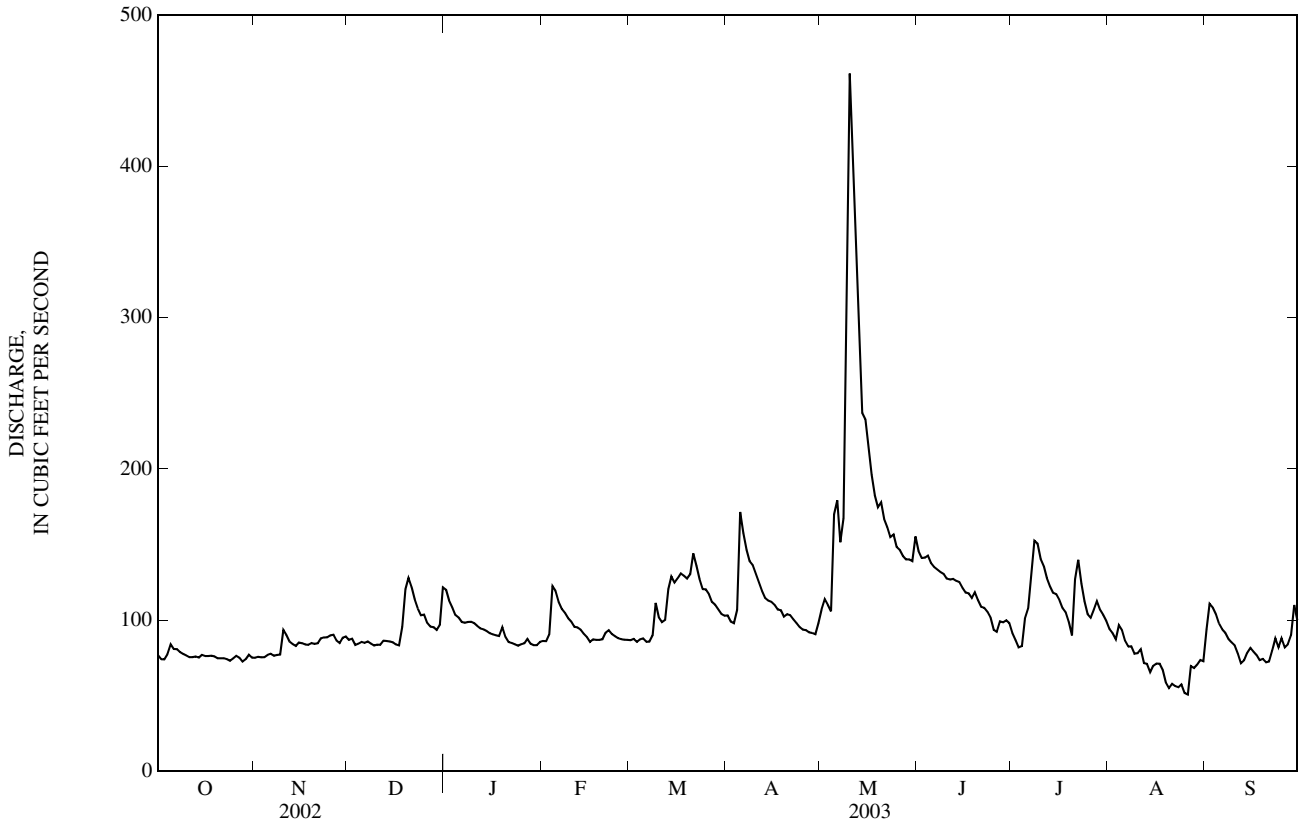
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1951 - 2003, BY WATER YEAR (WY)

MEAN	135	153	165	165	178	219	210	180	159	127	106	104
MAX	333	303	341	367	298	471	310	335	410	390	273	222
(WY)	(1994)	(1991)	(1991)	(1991)	(1991)	(1982)	(1985)	(1996)	(1996)	(1996)	(1995)	(1993)
MIN	70.1	67.3	77.5	78.0	76.3	111	112	98.4	84.0	64.2	63.1	64.4
(WY)	(1954)	(1965)	(1961)	(1961)	(1963)	(2003)	(1987)	(1958)	(1971)	(1971)	(1964)	(1953)

05515000 KANKAKEE RIVER NEAR NORTH LIBERTY, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1951 - 2003	
ANNUAL TOTAL	50,104		38,011		158	
ANNUAL MEAN	137		104		95.4	
HIGHEST ANNUAL MEAN					245	1991
LOWEST ANNUAL MEAN					95.4	1964
HIGHEST DAILY MEAN	580	May 13	461	May 10	903	Mar 17, 1982
LOWEST DAILY MEAN	60	Sep 9	51	Aug 26	44	Aug 4, 1988
ANNUAL SEVEN-DAY MINIMUM	62	Sep 7	55	Aug 20	51	Sep 7, 1964
MAXIMUM PEAK FLOW			483	May 9	908	Mar 17, 1982
MAXIMUM PEAK STAGE			5.27	May 9	9.04	Jun 27, 1968
ANNUAL RUNOFF (CFSM)	0.79		0.60		0.91	
ANNUAL RUNOFF (INCHES)	10.71		8.13		12.35	
10 PERCENT EXCEEDS	213		140		258	
50 PERCENT EXCEEDS	119		93		137	
90 PERCENT EXCEEDS	75		75		82	

e Estimated



05515500 KANKAKEE RIVER AT DAVIS, IN

LOCATION.--Lat 41°24'00", long 86°42'04", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.13, T.34 N., R.3 W., Starke County, Hydrologic Unit 07120001, (KINGSFORD HEIGHTS, IN quadrangle), 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 and Acoustic Doppler Velocity meter. 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 fair except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	248	e250	283	375	e283	e271	355	424	473	278	290	287
2	246	e242	285	366	e286	e272	350	511	456	264	284	352
3	245	e249	280	344	e303	e252	339	484	462	252	279	349
4	250	e259	276	331	362	e258	354	434	468	245	317	329
5	273	e277	270	323	387	e275	528	590	451	277	318	300
6	e283	287	276	319	374	e277	605	814	435	336	295	282
7	257	281	272	309	347	274	546	703	427	467	272	271
8	250	278	272	311	e327	280	525	679	420	589	259	260
9	247	e283	268	314	e293	329	512	1,080	414	610	248	250
10	250	305	267	314	317	325	485	1,550	403	557	238	243
11	255	318	270	302	301	322	462	1,400	398	497	233	241
12	255	303	274	e309	e363	327	438	1,240	402	448	228	236
13	e259	293	275	303	e454	362	415	1,080	404	415	225	230
14	e259	289	279	298	e499	423	403	953	403	388	231	233
15	e260	287	285	e297	298	417	395	890	384	383	220	239
16	266	284	284	e296	278	416	385	843	374	379	221	234
17	264	277	276	e295	281	433	371	768	358	355	217	228
18	268	274	297	e295	282	446	361	700	352	342	212	222
19	274	279	366	e293	282	448	356	651	363	331	197	219
20	e272	283	392	e292	e294	439	354	638	354	313	197	215
21	e270	285	387	e292	e300	455	367	639	340	329	197	213
22	e266	296	359	e292	302	451	364	597	327	373	187	227
23	e255	301	341	e289	296	427	343	563	320	356	184	242
24	253	298	335	e289	289	407	337	541	306	329	176	243
25	252	294	327	e288	278	408	335	521	295	308	175	241
26	262	302	323	e286	e269	401	332	504	288	292	186	242
27	266	299	310	e282	e267	394	324	486	287	301	237	257
28	e260	288	305	e280	e269	384	319	476	292	361	236	254
29	e260	286	306	e277	---	376	313	468	297	348	241	259
30	e253	293	309	e276	---	361	327	460	287	324	260	269
31	e249	---	346	e279	---	354	---	474	---	309	253	---
TOTAL	8,027	8,540	9,395	9,416	8,881	11,264	11,900	22,161	11,240	11,356	7,313	7,667
MEAN	259	285	303	304	317	363	397	715	375	366	236	256
MAX	283	318	392	375	499	455	605	1,550	473	610	318	352
MIN	245	242	267	276	267	252	313	424	287	245	175	213
CFSM	0.48	0.53	0.56	0.57	0.59	0.68	0.74	1.33	0.70	0.68	0.44	0.48
IN.	0.56	0.59	0.65	0.65	0.62	0.78	0.82	1.54	0.78	0.79	0.51	0.53

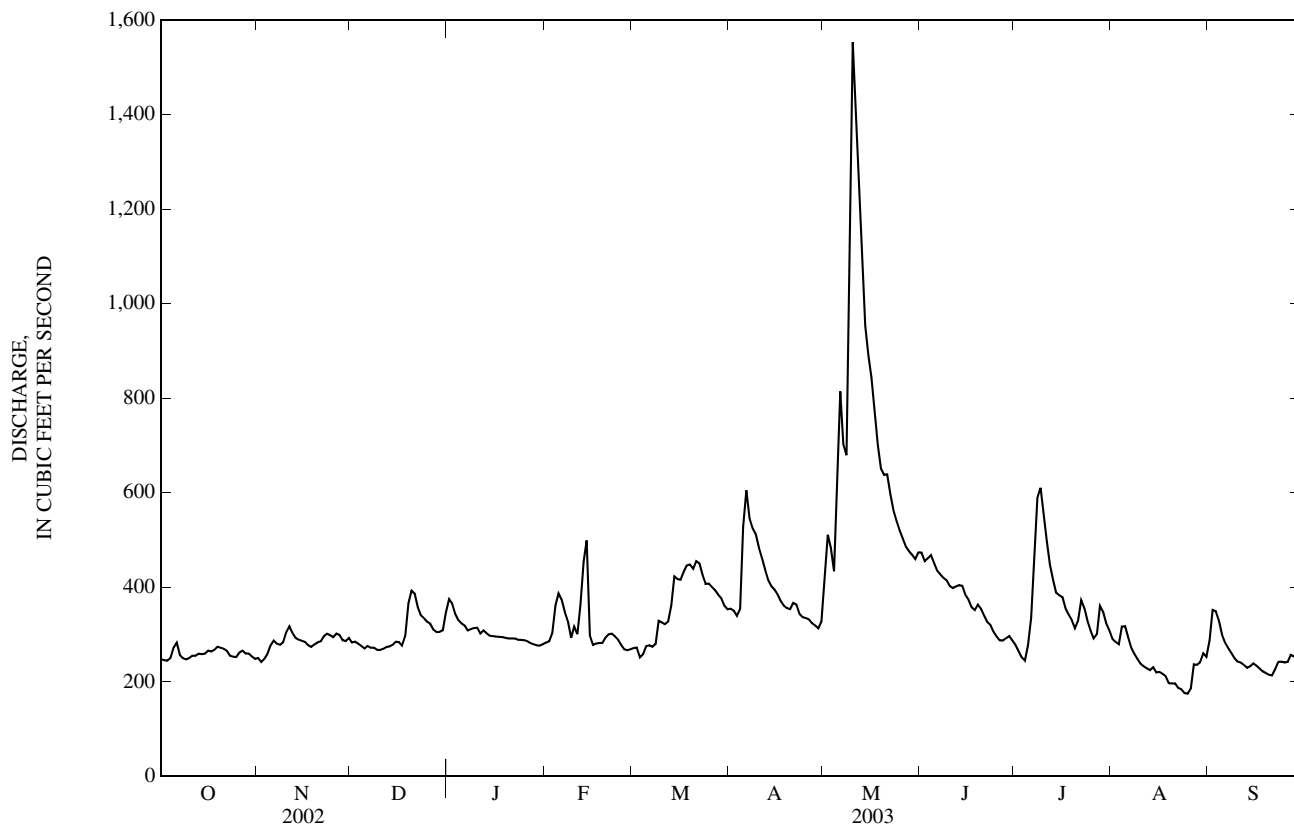
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1926 - 2003, BY WATER YEAR (WY)

MEAN	410	475	517	543	585	715	736	632	532	426	359	344
MAX	1,162	988	1,191	1,275	990	1,376	1,218	1,067	1,076	983	804	718
(WY)	(1955)	(1991)	(1928)	(1993)	(1991)	(1985)	(1982)	(1983)	(1996)	(1996)	(1996)	(1972)
MIN	198	230	236	235	236	325	397	296	248	205	174	179
(WY)	(1964)	(1965)	(1964)	(1963)	(1964)	(1934)	(2003)	(1934)	(1934)	(1934)	(1941)	(1941)

05515500 KANKAKEE RIVER AT DAVIS, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1926 - 2003	
ANNUAL TOTAL	182,746		127,160			
ANNUAL MEAN	501		348		522	
HIGHEST ANNUAL MEAN					823	1991
LOWEST ANNUAL MEAN					293	1964
HIGHEST DAILY MEAN	1,740	May 13	1,550	May 10	1,920	Mar 20, 1982
LOWEST DAILY MEAN	195	Sep 13	175	Aug 25	154	Aug 30, 1941
ANNUAL SEVEN-DAY MINIMUM	199	Sep 8	186	Aug 20	156	Aug 28, 1941
MAXIMUM PEAK FLOW			1,590	May 10	1,920	Mar 20, 1982
MAXIMUM PEAK STAGE			11.69	May 10	13.79	Jul 19, 1996
ANNUAL RUNOFF (CFSM)	0.93		0.65		0.97	
ANNUAL RUNOFF (INCHES)	12.66		8.81		13.21	
10 PERCENT EXCEEDS	884		479		888	
50 PERCENT EXCEEDS	413		300		450	
90 PERCENT EXCEEDS	241		243		276	

e Estimated



05516500 YELLOW RIVER AT PLYMOUTH, IN

LOCATION.--Lat 41°20'25", long 86°18'16", in SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.13, T.33 N., R.2 E., Marshall County, Hydrologic Unit 07120001. (PLYMOUTH, IN quadrangle), on left bank 50 ft upstream from LaPorte Street footbridge in Plymouth, 1.1 mi downstream from Elmer Seltentright (formerly Baker) Ditch, 8.1 mi upstream from Wolf Creek, and at mile 40.3.

DRAINAGE AREA.--294 mi², of which 22 mi² does not contribute directly to surface runoff.

PERIOD OF RECORD.--July 1948 to current year.

REVISED RECORDS.--WSP 1338: 1950-51. WSP 2115: Drainage area. WDR IN-73-1: 1972(M).

GAGE.--Water-stage recorder. Datum of gage is 764.78 ft above National Geodetic Vertical Datum of 1929 (levels by State of Indiana, Department of Natural Resources). Prior to Aug. 27, 1959, nonrecording gage at same site and datum.

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

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	50	52	79	e42	e39	67	346	154	63	79	219
2	e43	50	50	64	e43	e38	65	423	127	61	79	544
3	e43	52	43	50	65	e37	62	284	132	57	72	522
4	e50	52	46	48	179	e38	89	199	127	58	83	283
5	64	57	43	e45	134	e38	563	592	113	64	88	177
6	56	60	42	e42	e82	e40	522	1,080	103	104	78	132
7	49	57	42	34	e63	44	294	890	102	210	71	107
8	48	51	43	e35	e56	56	319	404	100	433	76	92
9	45	49	42	e37	e52	186	286	647	100	486	67	83
10	46	61	41	e42	e49	129	229	1,260	97	348	61	77
11	45	63	42	e50	e47	97	189	1,570	106	233	61	71
12	44	59	42	e48	e44	85	163	1,370	120	153	66	66
13	47	55	43	e47	e44	178	143	1,070	135	119	72	63
14	46	52	45	e46	e43	450	130	617	121	100	65	65
15	46	50	44	e44	e41	213	122	628	110	91	60	66
16	44	52	44	e43	e40	163	113	725	101	86	57	88
17	43	51	43	e41	e40	157	105	464	95	74	53	80
18	46	52	73	e40	e41	148	98	343	93	69	51	73
19	64	54	110	e39	e42	131	90	282	94	66	50	69
20	56	52	116	e39	e43	119	92	320	86	61	49	65
21	50	58	96	e40	47	125	101	404	81	198	47	62
22	50	69	74	e40	52	118	91	285	78	388	44	83
23	48	66	56	e39	50	102	82	231	76	201	43	101
24	47	59	e53	e39	e44	91	76	200	74	123	41	93
25	51	55	e51	e38	e41	92	76	177	72	93	40	83
26	57	54	e51	e37	e41	95	74	159	71	77	48	85
27	54	52	e50	e37	e41	89	68	146	72	92	68	159
28	53	48	e50	e37	e40	83	66	138	69	219	59	199
29	53	49	e51	e38	---	79	65	136	70	164	95	146
30	54	53	62	e38	---	71	88	129	68	112	218	131
31	53	---	79	e40	---	67	---	149	---	90	145	---
TOTAL	1,539	1,642	1,719	1,336	1,546	3,398	4,528	15,668	2,947	4,693	2,186	4,084
MEAN	49.6	54.7	55.5	43.1	55.2	110	151	505	98.2	151	70.5	136
MAX	64	69	116	79	179	450	563	1,570	154	486	218	544
MIN	43	48	41	34	40	37	62	129	68	57	40	62
CFSM	0.17	0.19	0.19	0.15	0.19	0.37	0.51	1.72	0.33	0.51	0.24	0.46
IN.	0.19	0.21	0.22	0.17	0.20	0.43	0.57	1.98	0.37	0.59	0.28	0.52

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 2003, BY WATER YEAR (WY)

MEAN	153	188	265	302	381	516	494	306	257	174	108	92.4
MAX	1,583	689	733	1,244	1,132	1,586	1,190	1,098	850	711	494	536
(WY)	(1955)	(1993)	(1983)	(1993)	(2001)	(1982)	(1950)	(1996)	(1996)	(1996)	(1958)	(1972)
MIN	23.7	20.9	30.4	26.5	35.7	79.5	99.8	65.4	51.2	39.4	31.2	22.4
(WY)	(1965)	(1965)	(1954)	(1963)	(1963)	(1957)	(1971)	(1958)	(1988)	(1988)	(1949)	(1949)

SUMMARY STATISTICS

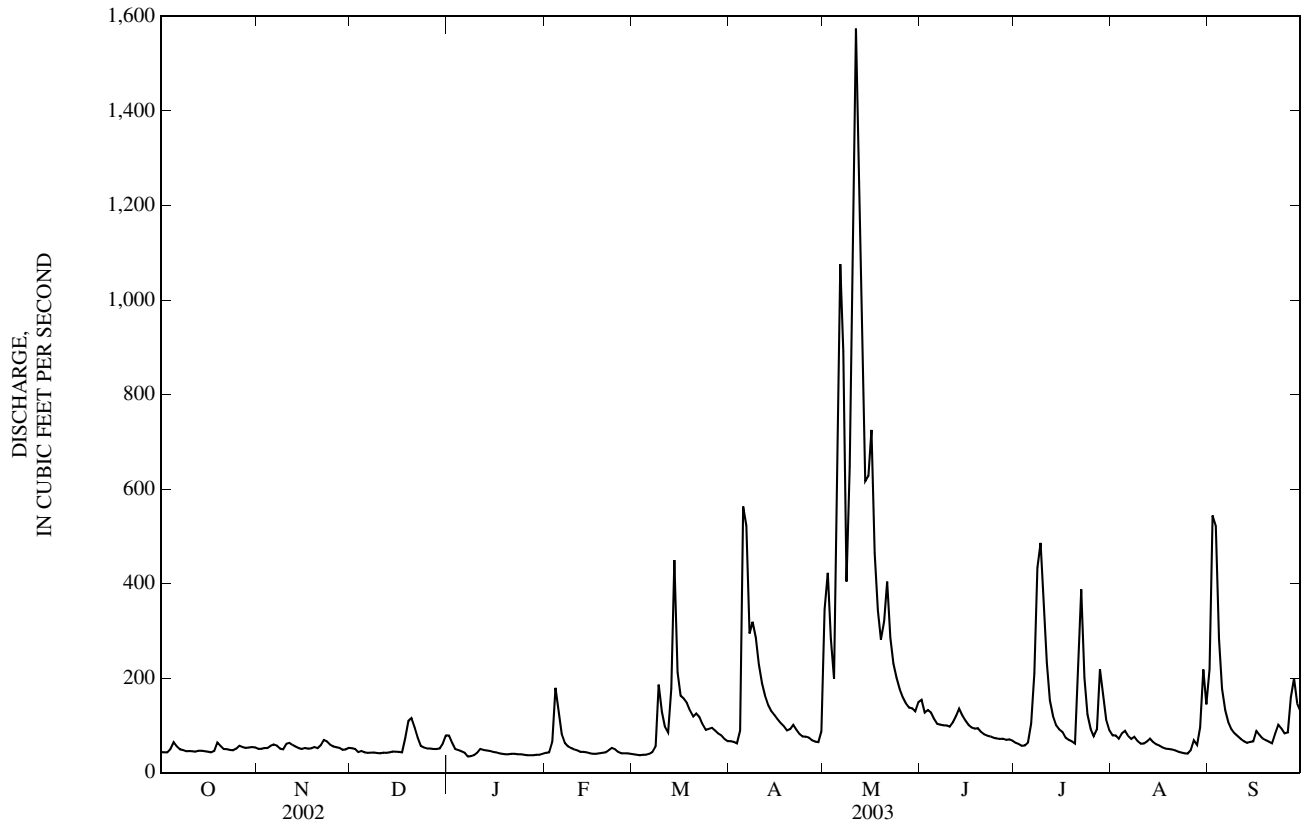
FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1949 - 2003

ANNUAL TOTAL	100,147	45,286	
ANNUAL MEAN	274	124	269
HIGHEST ANNUAL MEAN			453
LOWEST ANNUAL MEAN			119
HIGHEST DAILY MEAN	2,770	1,570	5,310
LOWEST DAILY MEAN	41	34	13
ANNUAL SEVEN-DAY MINIMUM	42	38	15
MAXIMUM PEAK FLOW		1,610	5,390
MAXIMUM PEAK STAGE		10.81	17.13
ANNUAL RUNOFF (CFSM)	0.93	0.42	0.92
ANNUAL RUNOFF (INCHES)	12.67	5.73	12.43
10 PERCENT EXCEEDS	635	230	671
50 PERCENT EXCEEDS	124	67	131
90 PERCENT EXCEEDS	49	42	39

05516500 YELLOW RIVER AT PLYMOUTH, IN—Continued



ILLINOIS RIVER BASIN

05517000 YELLOW RIVER AT KNOX, IN

LOCATION.--Lat 41°18'10", long 86°37'14", in SW¹/₄SW¹/₄ sec.14, T.33 N., R.2 W., Starke County, Hydrologic Unit 07120001, (KNOX EAST, IN quadrangle), on right bank 40 ft upstream from bridge on U.S. Highway 35 in Knox, 0.3 mi north of 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 for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	76	93	112	190	e95	e108	158	444	282	93	234	302
2	75	90	113	208	e100	e109	155	664	275	92	217	413
3	75	88	e110	193	e120	e106	150	629	260	81	210	650
4	80	93	e78	171	223	e100	168	480	266	82	192	619
5	89	99	e105	167	351	113	316	507	251	131	196	409
6	96	104	e82	160	e260	117	723	860	231	162	199	294
7	91	110	e92	156	e170	117	648	1,050	219	332	176	235
8	84	112	e96	150	e140	118	508	1,070	211	580	160	201
9	81	114	e92	153	e133	161	509	820	204	748	165	178
10	81	125	e94	158	e130	305	459	1,050	198	757	156	165
11	80	130	e97	e150	e125	236	393	1,240	196	614	139	153
12	79	133	98	e106	e122	196	342	1,480	203	483	139	142
13	81	128	99	e130	e121	308	303	1,490	218	378	143	133
14	79	121	99	e124	e121	520	269	1,260	236	319	152	133
15	79	119	99	e84	e120	578	251	925	211	286	145	133
16	79	112	99	e120	e119	390	236	879	191	266	135	129
17	79	111	99	e114	e118	338	222	900	177	246	128	150
18	80	111	116	e107	125	321	211	699	170	220	122	138
19	99	111	172	e103	125	300	201	575	167	207	115	129
20	121	117	221	e102	126	276	197	536	158	199	105	124
21	107	116	243	e100	128	261	218	602	148	210	109	120
22	98	128	218	e98	130	258	215	600	137	443	106	135
23	93	135	187	e96	140	239	199	488	130	545	101	162
24	90	133	163	e95	130	215	185	426	123	375	101	171
25	92	125	161	e94	e123	206	177	380	117	284	90	162
26	98	122	146	e93	e117	205	175	344	114	237	90	152
27	101	118	145	e92	e113	203	167	312	108	224	100	174
28	97	115	144	e91	e110	195	157	293	105	301	125	258
29	96	111	142	e90	---	184	153	288	105	406	130	290
30	96	112	141	e90	---	173	167	276	100	332	181	238
31	97	---	157	e91	---	162	---	272	---	267	309	---
TOTAL	2,749	3,436	4,020	3,876	3,935	7,118	8,232	21,839	5,511	9,900	4,670	6,692
MEAN	88.7	115	130	125	141	230	274	704	184	319	151	223
MAX	121	135	243	208	351	578	723	1,490	282	757	309	650
MIN	75	88	78	84	95	100	150	272	100	81	90	120
CFSM	0.20	0.26	0.30	0.29	0.32	0.53	0.63	1.62	0.42	0.73	0.35	0.51
IN.	0.24	0.29	0.34	0.33	0.34	0.61	0.70	1.87	0.47	0.85	0.40	0.57

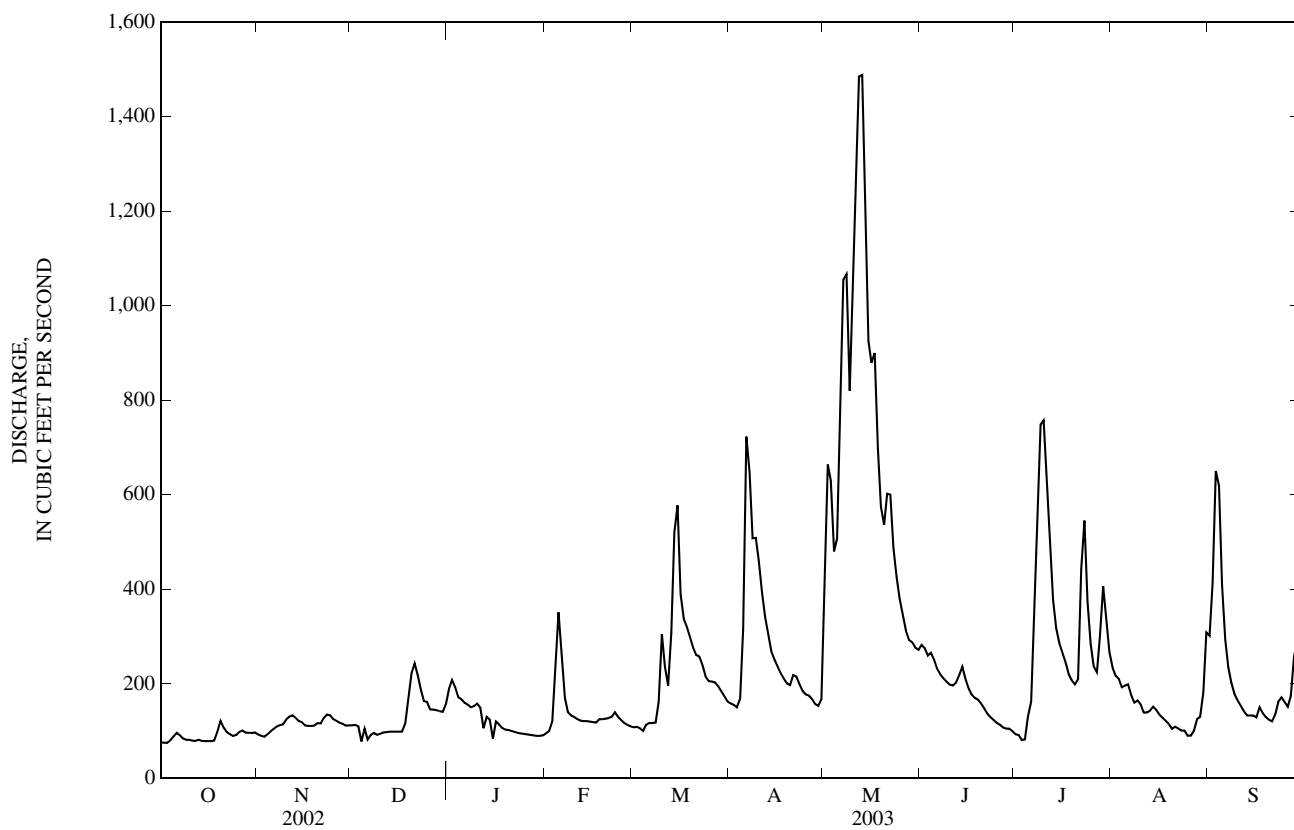
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 2003, BY WATER YEAR (WY)

MEAN	257	296	385	440	527	709	713	512	418	288	205	178
MAX	1,939	883	1,070	1,580	1,289	2,127	1,714	1,154	1,113	955	652	692
(WY)	(1955)	(1973)	(1967)	(1993)	(2001)	(1982)	(1950)	(1996)	(1975)	(1996)	(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)

05517000 YELLOW RIVER AT KNOX, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1944 - 2003	
ANNUAL TOTAL	149,877		81,978		410	
ANNUAL MEAN	411		225		180	
HIGHEST ANNUAL MEAN					661	
LOWEST ANNUAL MEAN					1964	
HIGHEST DAILY MEAN	2,880	May 16	1,490	May 13	5,600	Oct 15, 1954
LOWEST DAILY MEAN	75	Oct 2	75	Oct 2	47	Jan 2, 1999
ANNUAL SEVEN-DAY MINIMUM	79	Sep 28	79	Oct 11	50	Jan 21, 1963
MAXIMUM PEAK FLOW			1,550	May 12	5,660	Oct 15, 1954
MAXIMUM PEAK STAGE			7.87	May 12	13.75	Oct 15, 1954
ANNUAL RUNOFF (CFSM)	0.94		0.52		0.94	
ANNUAL RUNOFF (INCHES)	12.82		7.01		12.81	
10 PERCENT EXCEEDS	934		467		882	
50 PERCENT EXCEEDS	236		150		266	
90 PERCENT EXCEEDS	90		93		112	

e Estimated



05517500 KANKAKEE RIVER AT DUNNS BRIDGE, IN

LOCATION.--Lat 41°13'10", long 86°58'07", in NE¼SE¼ sec.15, T.32 N., R.5 W., Porter County, Hydrologic Unit 07120001, (SAN PIERRE, IN quadrangle), on right bank at downstream side of county road 500E 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, and July 17, 1956 to Oct. 31 1998, water-stage recorder at site 250 ft downstream at same datum.

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

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	418	410	488	721	e600	572	775	899	1,200	620	897	548
2	416	401	482	731	e610	577	754	1,270	1,180	595	849	675
3	412	407	477	719	e620	550	738	1,400	1,180	559	817	823
4	418	418	445	678	e630	559	761	1,330	1,170	543	819	909
5	434	430	462	669	647	585	968	1,360	1,130	803	823	855
6	454	456	471	654	682	587	1,240	1,710	1,090	1,050	798	750
7	454	462	465	627	659	586	1,400	1,960	1,060	1,470	754	681
8	449	458	491	626	622	594	1,400	2,120	1,050	1,860	706	632
9	451	461	488	628	627	633	1,370	2,280	1,010	2,250	663	588
10	451	502	479	635	693	640	1,340	2,540	982	2,350	636	551
11	450	539	485	592	623	720	1,280	2,750	966	2,230	606	525
12	448	530	486	616	862	748	1,220	2,870	970	1,940	578	507
13	457	510	478	644	1,070	798	1,140	2,930	973	1,650	562	513
14	453	499	474	635	1,090	937	1,090	2,940	1,010	1,390	552	505
15	455	504	484	644	1,100	1,050	1,030	2,890	968	1,270	546	523
16	456	491	507	671	1,000	1,090	986	2,680	929	1,200	537	570
17	457	482	489	e690	834	1,080	932	2,500	879	1,110	546	554
18	445	479	515	e680	786	1,090	884	2,370	855	1,090	521	542
19	463	468	624	e685	631	1,080	862	2,140	853	1,020	489	523
20	451	466	700	e670	603	1,040	850	1,960	832	957	460	506
21	442	465	723	e660	606	997	859	1,860	799	1,300	451	499
22	435	474	746	e650	629	986	860	1,820	779	1,540	436	518
23	423	484	724	e640	635	962	828	1,720	749	1,510	413	541
24	414	493	739	e630	620	926	796	1,600	721	1,370	403	459
25	416	490	667	e625	582	903	785	1,500	695	1,140	389	457
26	423	477	645	e620	575	888	771	1,430	672	1,000	375	466
27	428	488	617	e610	571	860	759	1,360	658	951	392	530
28	424	493	605	e590	573	845	736	1,300	644	1,060	425	561
29	424	495	618	e585	---	831	717	1,280	652	1,110	448	592
30	418	505	651	e580	---	812	731	1,230	644	1,080	418	604
31	408	---	687	e590	---	785	---	1,240	---	980	442	---
TOTAL	13,547	14,237	17,412	19,995	19,780	25,311	28,862	59,239	27,300	38,998	17,751	17,507
MEAN	437	475	562	645	706	816	962	1,911	910	1,258	573	584
MAX	463	539	746	731	1,100	1,090	1,400	2,940	1,200	2,350	897	909
MIN	408	401	445	580	571	550	717	899	644	543	375	457
CFSM	0.32	0.35	0.42	0.48	0.52	0.60	0.71	1.41	0.67	0.93	0.42	0.43
IN.	0.37	0.39	0.48	0.55	0.54	0.70	0.79	1.63	0.75	1.07	0.49	0.48

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 2003, BY WATER YEAR (WY)

	935	1,126	1,346	1,456	1,591	2,051	2,180	1,770	1,457	1,102	836	724
MEAN	935	1,126	1,346	1,456	1,591	2,051	2,180	1,770	1,457	1,102	836	724
MAX	3,378	2,562	2,816	3,845	2,874	4,229	4,376	3,231	3,360	2,622	2,316	1,924
(WY)	(1955)	(1973)	(1983)	(1991)	(1968)	(1985)	(1950)	(1983)	(1996)	(1996)	(1990)	(1993)
MIN	350	398	447	449	391	719	962	767	657	419	371	360
(WY)	(1964)	(1965)	(1964)	(1963)	(1963)	(1957)	(2003)	(1958)	(1988)	(1988)	(1964)	(1964)

SUMMARY STATISTICS

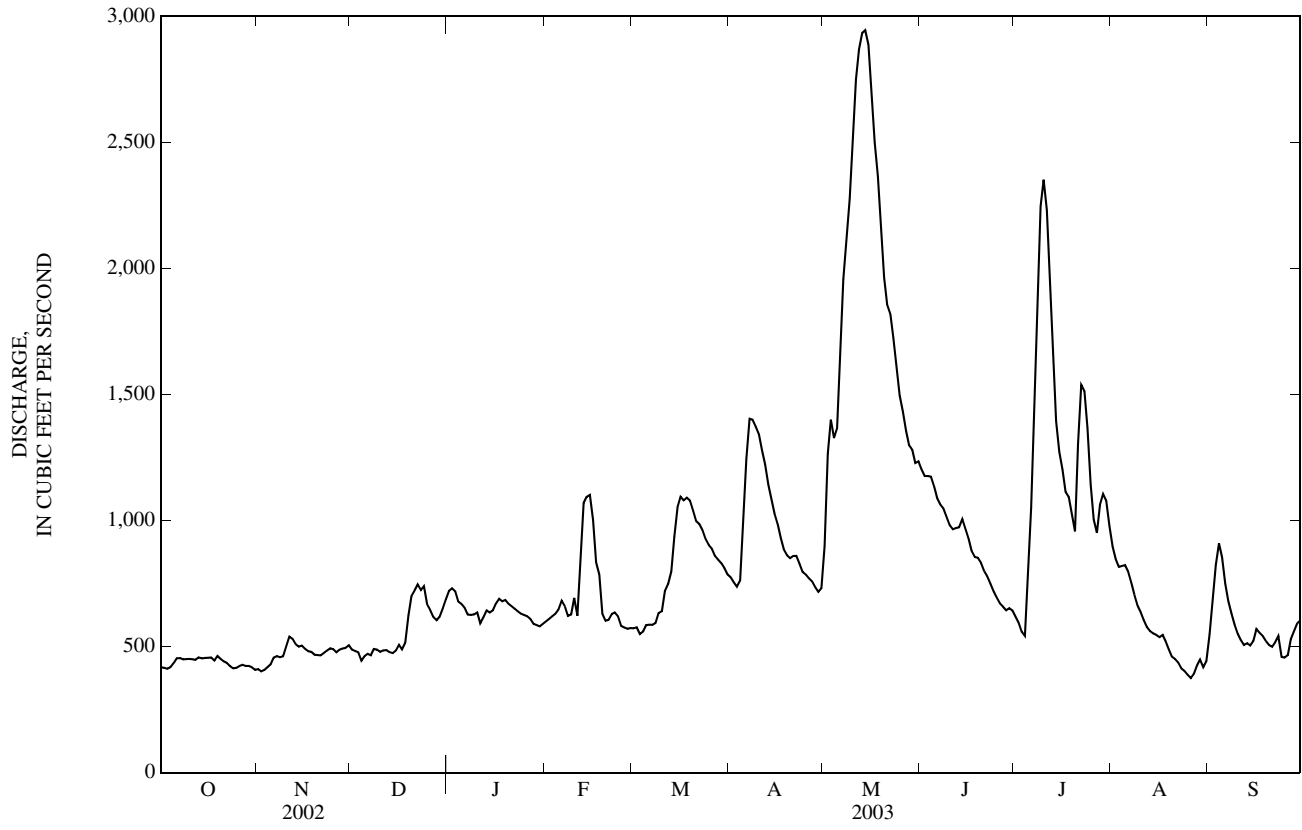
FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1949 - 2003

ANNUAL TOTAL	464,779	299,939	
ANNUAL MEAN	1,273	822	1,380
HIGHEST ANNUAL MEAN			2,161
LOWEST ANNUAL MEAN			618
HIGHEST DAILY MEAN	4,160	May 18	5,850
LOWEST DAILY MEAN	326	Sep 6	280
ANNUAL SEVEN-DAY MINIMUM	352	Sep 4	283
MAXIMUM PEAK FLOW			5,870
MAXIMUM PEAK STAGE			9.18
ANNUAL RUNOFF (CFSM)	0.94		0.61
ANNUAL RUNOFF (INCHES)	12.79		8.25
10 PERCENT EXCEEDS	2,660	1,360	2,630
50 PERCENT EXCEEDS	989	650	1,140
90 PERCENT EXCEEDS	425	451	532

05517500 KANKAKEE RIVER AT DUNNS BRIDGE, IN—Continued



05517530 KANKAKEE RIVER NEAR KOUTS, IN

LOCATION.--Lat 41°15'14", long 87°02'02", in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.6, T.32 N., R.5 W., Jasper County, Hydrologic Unit 07120001, (KOUTS, IN quadrangle), on left bank, 20 ft downstream from bridge on State Highway 49, 0.7 mi upstream from Cook Ditch, 4.5 mi south of Kouts, 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 fair except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	394	407	461	738	e610	575	745	810	1,160	603	962	575
2	412	393	466	760	e620	551	725	1,160	1,140	592	890	683
3	393	407	490	732	e630	526	702	1,280	1,150	547	855	816
4	449	393	473	704	e640	531	717	1,240	1,130	548	838	916
5	418	422	446	699	e650	555	901	1,300	1,100	807	857	866
6	429	484	447	675	e690	590	1,160	1,610	1,060	1,100	820	745
7	460	455	435	667	e670	592	1,330	1,860	1,040	1,540	787	659
8	431	437	470	673	e650	605	1,350	2,040	1,030	1,930	720	615
9	431	449	469	693	e630	646	1,300	2,290	1,010	2,340	677	555
10	447	469	446	687	e690	642	1,270	2,570	992	2,460	679	521
11	462	555	471	650	e650	718	1,200	2,720	973	2,330	636	508
12	445	514	483	610	e620	739	1,170	2,830	968	2,040	606	474
13	446	489	475	643	967	797	1,100	2,870	988	1,720	594	489
14	443	472	445	659	996	900	1,050	2,880	1,010	1,470	562	495
15	449	455	465	645	1,020	977	995	2,850	985	1,340	556	509
16	485	431	483	e680	959	1,040	978	2,650	944	1,250	545	567
17	470	442	506	e700	839	998	902	2,450	887	1,160	556	563
18	466	422	535	e690	843	1,030	863	2,350	878	1,140	535	537
19	443	440	631	e700	757	1,010	858	2,110	861	1,060	495	505
20	453	442	728	e680	627	998	839	1,930	852	976	470	488
21	423	451	728	e670	610	937	852	1,810	799	1,530	459	471
22	426	428	762	e660	604	961	846	1,750	773	1,870	427	506
23	417	439	726	e640	613	936	820	1,660	743	1,670	383	540
24	412	449	773	e630	627	920	790	1,570	697	1,500	373	491
25	443	463	726	e640	589	889	773	1,450	661	1,250	361	468
26	422	452	706	e650	583	872	750	1,420	646	1,100	348	481
27	418	454	679	e640	573	846	721	1,330	624	1,020	383	528
28	417	491	659	e620	564	836	692	1,290	605	1,140	401	548
29	447	498	628	e600	---	796	684	1,270	628	1,160	434	575
30	427	473	680	e580	---	780	685	1,200	623	1,120	391	579
31	396	---	710	e600	---	756	---	1,200	---	1,040	455	---
TOTAL	13,474	13,576	17,602	20,615	19,521	24,549	27,768	57,750	26,957	41,353	18,055	17,273
MEAN	435	453	568	665	697	792	926	1,863	899	1,334	582	576
MAX	485	555	773	760	1,020	1,040	1,350	2,880	1,160	2,460	962	916
MIN	393	393	435	580	564	526	684	810	605	547	348	468
CFSM	0.32	0.33	0.41	0.48	0.51	0.58	0.67	1.35	0.65	0.97	0.42	0.42
IN.	0.36	0.37	0.48	0.56	0.53	0.66	0.75	1.56	0.73	1.12	0.49	0.47

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2003, BY WATER YEAR (WY)

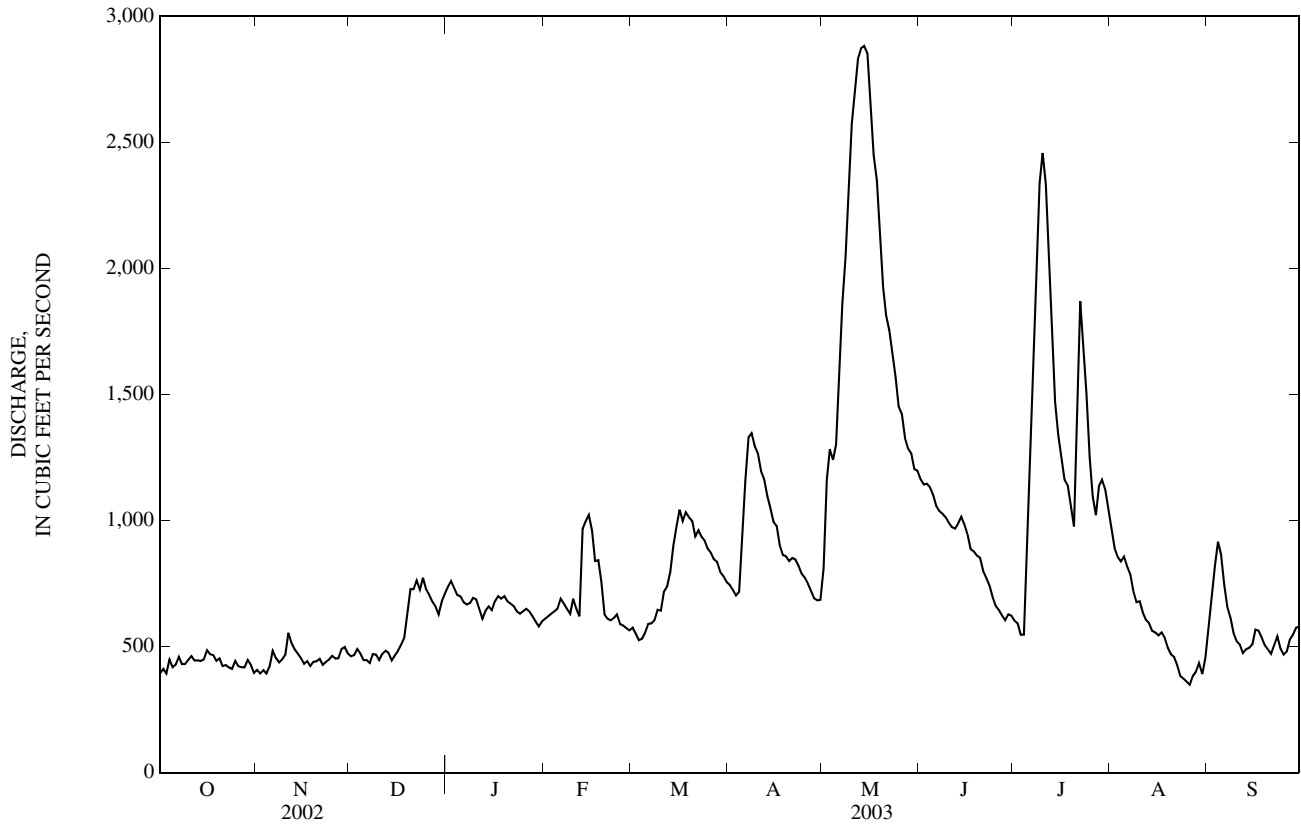
MEAN	989	1,228	1,511	1,495	1,646	2,264	2,350	1,890	1,685	1,208	921	796
MAX	2,770	2,392	2,889	3,787	2,784	4,613	4,229	3,255	3,403	2,642	2,432	2,014
(WY)	(1991)	(1991)	(1991)	(1991)	(2001)	(1985)	(1985)	(1983)	(1996)	(1996)	(1990)	(1993)
MIN	435	437	568	634	697	792	926	1,113	619	411	398	350
(WY)	(2003)	(2000)	(2003)	(1977)	(2003)	(2003)	(2003)	(1992)	(1988)	(1988)	(1988)	(1999)

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1975 - 2003	
ANNUAL TOTAL	468,218		298,493			
ANNUAL MEAN	1,283		818		1,497	
HIGHEST ANNUAL MEAN					2,160	
LOWEST ANNUAL MEAN					818	
HIGHEST DAILY MEAN	4,150	May 19	2,880	May 14	6,410	Mar 24, 1982
LOWEST DAILY MEAN	299	Sep 5	348	Aug 26	281	Sep 12, 1999
ANNUAL SEVEN-DAY MINIMUM	331	Sep 4	382	Aug 22	306	Sep 11, 1999
MAXIMUM PEAK FLOW			2,900	May 14	6,420	Mar 24, 1982
MAXIMUM PEAK STAGE			9.99	May 14	14.52	Mar 24, 1982
ANNUAL RUNOFF (CFSM)	0.93		0.59		1.09	
ANNUAL RUNOFF (INCHES)	12.66		8.07		14.78	
10 PERCENT EXCEEDS	2,720		1,330		2,850	
50 PERCENT EXCEEDS	969		670		1,260	
90 PERCENT EXCEEDS	423		440		582	

e Estimated

05517530 KANKAKEE RIVER NEAR KOUTS, IN—Continued



05517890 COBB DITCH NEAR KOUTS, IN

LOCATION.--Lat 41°20'19", long 87°04'30", in NW¹/₄SE¹/₄ sec. 2, T.33 N., R.6 W., Porter County, Hydrologic Unit 07120001, (KOUTS, IN quadrangle), on left bank 15 ft upstream from bridge on County Road 50 West, 1.6 mi upstream from mouth, 3 mi northwest of Kouts, and 6.5 mi northeast of Hebron.

DRAINAGE AREA.--30.3 mi².

PERIOD OF RECORD.--July 1968 to October 2003, (discontinued). 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 for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	12	11	15	12	10	13	17	20	13	27	17
2	10	12	12	14	12	10	12	18	18	12	25	14
3	10	12	11	14	13	11	12	16	22	12	23	13
4	10	12	11	13	15	10	16	19	22	13	21	12
5	10	12	11	14	14	10	63	77	19	62	20	11
6	10	10	11	13	12	10	34	49	18	34	19	11
7	10	9.5	11	13	13	10	31	34	18	27	19	11
8	10	9.5	11	13	e13	22	31	39	17	23	18	11
9	10	9.6	11	13	e13	30	24	335	17	35	18	11
10	10	11	11	13	12	24	20	184	17	27	17	11
11	10	11	11	e12	e13	14	19	91	17	23	16	11
12	10	11	11	e12	e13	16	17	60	17	20	16	11
13	10	11	11	e12	e12	48	16	46	17	18	15	11
14	10	11	11	e12	11	25	19	37	16	17	14	11
15	10	11	11	e11	11	19	17	36	16	27	15	11
16	10	11	11	e11	15	18	14	31	15	21	15	11
17	10	11	11	e11	11	18	14	27	15	20	16	10
18	e11	11	14	e11	11	18	13	25	16	158	15	10
19	e11	11	18	e11	10	17	13	27	17	48	14	10
20	e11	11	16	e11	11	16	16	24	15	34	14	10
21	e11	12	15	e11	12	17	14	21	15	541	14	10
22	e11	12	14	e11	12	16	13	20	15	183	13	12
23	e11	12	13	e11	11	15	12	19	15	81	12	11
24	e11	11	13	e11	11	14	13	19	14	60	13	11
25	12	11	14	e11	e10	14	12	18	14	46	13	11
26	12	11	13	e11	e10	14	12	18	14	38	13	11
27	12	11	13	e11	e10	14	12	17	14	36	12	12
28	12	11	13	e11	10	14	13	17	14	48	13	11
29	12	12	13	e11	---	13	12	18	14	33	13	11
30	12	12	14	e11	---	13	14	17	13	32	13	10
31	12	---	16	e11	---	13	---	27	---	30	13	---
TOTAL	331	334.6	387	370	333	513	541	1,403	491	1,772	499	338
MEAN	10.7	11.2	12.5	11.9	11.9	16.5	18.0	45.3	16.4	57.2	16.1	11.3
MAX	12	12	18	15	15	48	63	335	22	541	27	17
MIN	10	9.5	11	11	10	10	12	16	13	12	12	10
CFSM	0.35	0.37	0.41	0.39	0.39	0.55	0.60	1.49	0.54	1.89	0.53	0.37
IN.	0.41	0.41	0.48	0.45	0.41	0.63	0.66	1.72	0.60	2.18	0.61	0.41

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 2003, BY WATER YEAR (WY)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
MEAN	21.2	29.5	31.1	32.1	38.8	50.4	48.4	41.4	38.3	27.5	20.7	17.9
MAX	67.8	112	88.9	86.8	82.8	142	103	89.4	121	77.7	99.0	60.6
(WY)	(1991)	(1986)	(1991)	(1993)	(1997)	(1982)	(1975)	(1974)	(1997)	(1996)	(1990)	(1993)
MIN	9.35	9.62	9.70	10.5	10.6	16.5	18.0	14.9	14.6	12.0	9.45	9.68
(WY)	(2000)	(2000)	(2001)	(2000)	(1978)	(2003)	(2003)	(1980)	(1988)	(1988)	(2001)	(2002)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

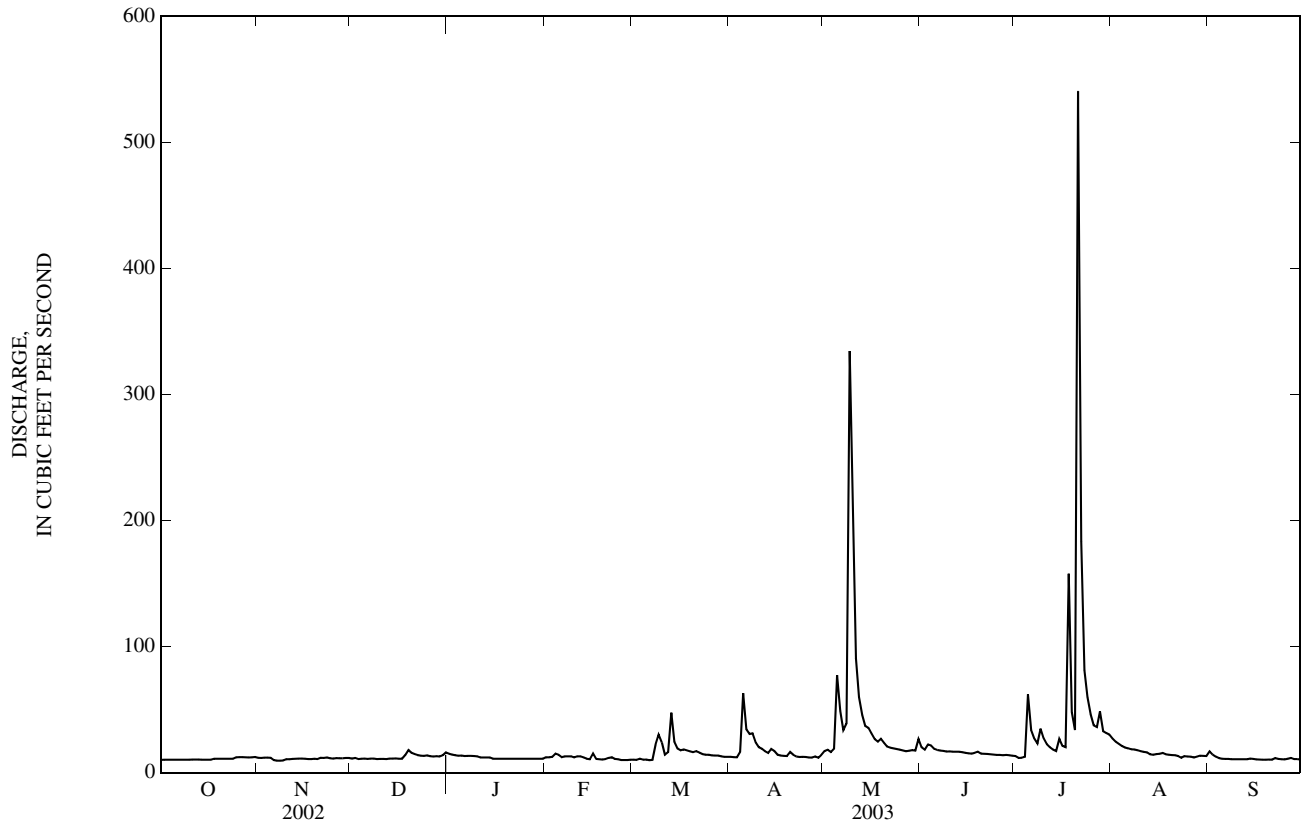
FOR 2003 WATER YEAR

WATER YEARS 1969 - 2003

ANNUAL TOTAL	10,116.5	7,312.6	
ANNUAL MEAN	27.7	20.0	33.1
HIGHEST ANNUAL MEAN			53.1
LOWEST ANNUAL MEAN			19.3
HIGHEST DAILY MEAN	496	May 12	541
LOWEST DAILY MEAN	7.7	Sep 7	9.5
ANNUAL SEVEN-DAY MINIMUM	8.7	Sep 6	10
MAXIMUM PEAK FLOW			808
MAXIMUM PEAK STAGE			15.45
ANNUAL RUNOFF (CFSM)	0.91		0.66
ANNUAL RUNOFF (INCHES)	12.42		8.98
10 PERCENT EXCEEDS	49		27
50 PERCENT EXCEEDS	16		13
90 PERCENT EXCEEDS	10		10

e Estimated

05517890 COBB DITCH NEAR KOUTS, IN—Continued



05518000 KANKAKEE RIVER AT SHELBY, IN

LOCATION.--Lat 41°10'58", long 87°20'25", in SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.33, T.32 N., R.8 W., Lake County, Hydrologic Unit 07120001, (SHELBY, IN quadrangle), on right bank at upstream side of Highway 55 bridge, 1.0 mi south of Shelby, 7.8 mi upstream from Beaver Lake Ditch, and at mile 68.0.

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, Dec. 19, 1934, to Oct. 4, 1965, water-stage recorder on left bank 50 ft downstream, Oct. 5, 1965, to Sept. 21, 1966, nonrecording gage on right bank 200 ft downstream, and Sept. 21, 1966 to July 21, 1998, water-stage recorder on right bank 25 ft upstream from Monon railroad bridge and approximately 400 ft downstream, all at same datum.

REMARKS.--Records fair except those for Sept. 8 - 30, and estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	573	547	643	929	e820	775	985	1,020	1,600	720	1,700	759
2	524	535	653	970	e840	745	977	1,300	1,550	696	1,570	926
3	542	541	638	952	e860	710	933	1,560	1,560	629	1,440	1,030
4	552	549	676	e940	e870	710	932	1,610	1,590	618	1,390	1,110
5	587	539	671	e920	e880	724	1,160	1,830	1,520	1,060	1,350	1,120
6	552	597	646	e900	e900	747	1,430	2,180	1,470	2,040	1,310	1,020
7	582	609	666	e885	e880	765	1,650	2,320	1,420	2,460	1,240	892
8	574	596	650	875	e860	775	1,760	2,530	1,390	3,120	1,150	832
9	561	587	662	874	e830	845	1,740	3,070	1,360	3,700	1,050	770
10	564	635	633	888	e900	815	1,690	3,780	1,330	3,990	983	717
11	587	688	608	850	e860	843	1,640	3,750	1,300	3,880	927	690
12	595	705	644	820	e830	932	1,550	3,720	1,270	3,590	821	666
13	574	670	638	828	e974	1,010	1,500	3,730	1,290	3,140	749	680
14	589	663	631	e860	e1,020	1,190	1,420	3,690	1,300	2,700	724	692
15	556	643	615	e840	e1,080	1,200	1,340	3,720	1,300	2,460	691	698
16	607	643	640	e890	e1,100	1,280	1,300	3,640	1,240	2,400	673	742
17	605	621	645	e920	e1,080	1,280	1,220	3,420	1,180	2,160	668	771
18	598	620	718	e900	e1,020	1,290	1,150	3,220	1,110	2,320	659	743
19	602	618	789	e910	e970	1,290	1,140	3,030	1,130	2,250	617	690
20	581	613	909	e900	e900	1,280	1,120	2,800	1,090	1,910	574	664
21	584	660	962	e880	e820	1,250	1,140	2,610	1,050	2,880	568	651
22	566	624	971	e870	e820	1,220	1,130	2,420	1,000	4,390	537	662
23	559	612	970	e860	e810	1,220	1,080	2,300	969	3,970	481	704
24	540	640	972	e860	e810	1,180	1,050	2,160	908	3,490	449	696
25	572	632	992	e850	e800	1,170	1,050	2,010	855	3,000	437	657
26	578	629	910	e850	e800	1,140	999	1,920	826	2,530	418	648
27	553	608	895	e840	e780	1,110	962	1,820	800	2,190	404	703
28	574	614	872	e820	e770	1,090	935	1,720	768	2,210	441	727
29	568	664	817	e800	---	1,040	908	1,720	789	2,160	485	745
30	582	646	839	e780	---	1,020	925	1,650	762	2,000	493	744
31	550	---	910	e810	---	989	---	1,620	---	1,850	511	---
TOTAL	17,731	18,548	23,485	27,071	24,884	31,635	36,816	77,870	35,727	76,513	25,510	23,149
MEAN	572	618	758	873	889	1,020	1,227	2,512	1,191	2,468	823	772
MAX	607	705	992	970	1,100	1,290	1,760	3,780	1,600	4,390	1,700	1,120
MIN	524	535	608	780	770	710	908	1,020	762	618	404	648
CFSM	0.32	0.35	0.43	0.49	0.50	0.57	0.69	1.41	0.67	1.39	0.46	0.43
IN.	0.37	0.39	0.49	0.57	0.52	0.66	0.77	1.63	0.75	1.60	0.53	0.48

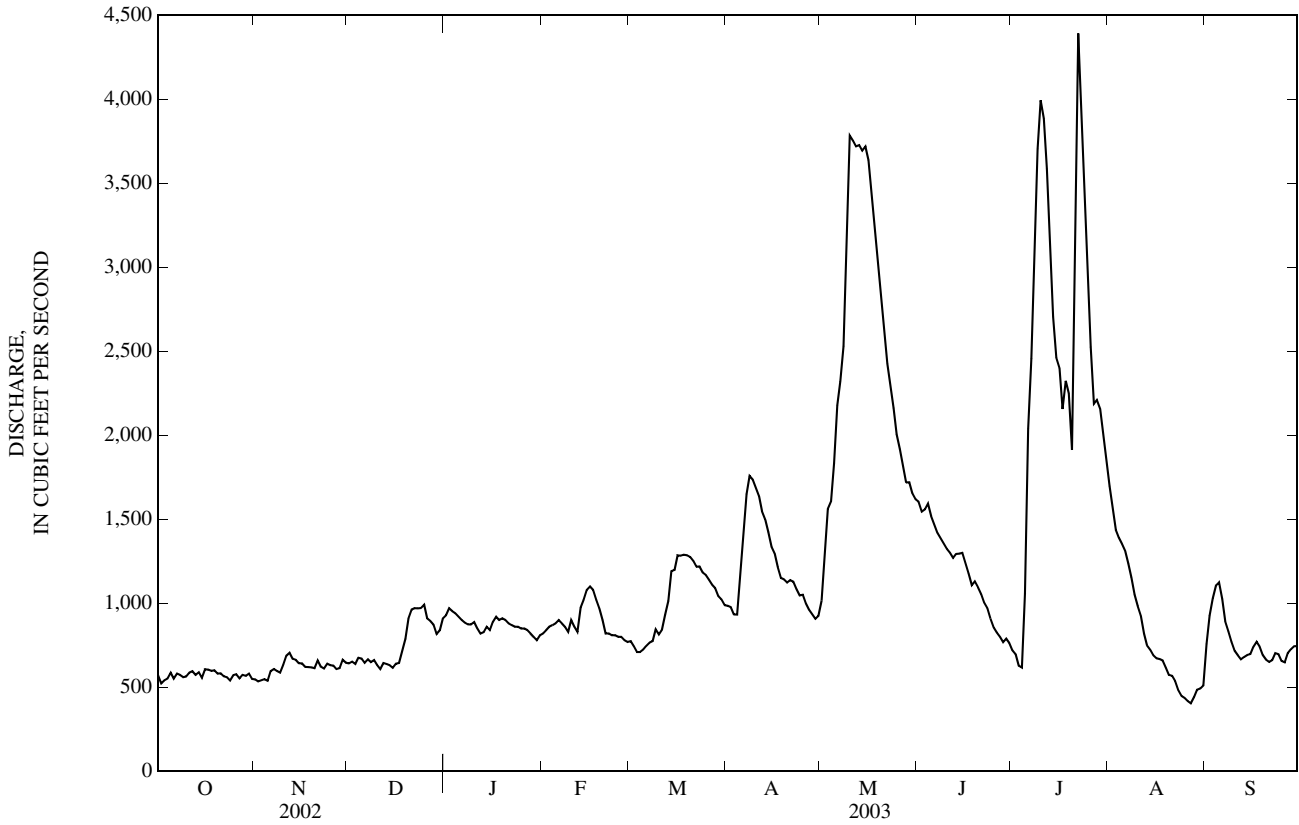
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 2003, BY WATER YEAR (WY)

MEAN	1,076	1,332	1,611	1,803	1,976	2,536	2,750	2,315	1,825	1,297	970	866
MAX	3,529	3,413	4,502	4,867	3,658	5,570	5,365	4,409	4,347	3,228	3,058	2,843
(WY)	(1991)	(1973)	(1928)	(1991)	(1950)	(1985)	(1982)	(1943)	(1981)	(1996)	(1990)	(1993)
MIN	455	500	540	460	462	848	1,226	789	569	441	402	356
(WY)	(1954)	(2000)	(1964)	(1940)	(1963)	(1934)	(1925)	(1934)	(1934)	(1988)	(1988)	(1941)

05518000 KANKAKEE RIVER AT SHELBY, IN—Continued

SUMMARY STATISTICS	FOR 2002 CALENDAR YEAR		FOR 2003 WATER YEAR		WATER YEARS 1924 - 2003	
ANNUAL TOTAL	609,832		418,939			
ANNUAL MEAN	1,671		1,148		1,694	
HIGHEST ANNUAL MEAN					2,767 1993	
LOWEST ANNUAL MEAN					775 1964	
HIGHEST DAILY MEAN	5,090	May 19	4,390	Jul 22	7,650	Mar 26, 1982
LOWEST DAILY MEAN	358	Sep 9	404	Aug 27	260	Jan 13, 1954
ANNUAL SEVEN-DAY MINIMUM	383	Sep 5	445	Aug 23	298	Aug 2, 1988
MAXIMUM PEAK FLOW			4,510	Jul 22	7,650	Mar 26, 1982
MAXIMUM PEAK STAGE			10.90	Jul 22	12.98	Mar 24, 1982
ANNUAL RUNOFF (CFSM)	0.94		0.65		0.95	
ANNUAL RUNOFF (INCHES)	12.75		8.76		12.94	
10 PERCENT EXCEEDS	3,620		2,200		3,350	
50 PERCENT EXCEEDS	1,110		880		1,350	
90 PERCENT EXCEEDS	548		580		628	

e Estimated



05521000 IROQUOIS RIVER AT ROSEBUD, IN

LOCATION.--Lat 41°02'00", long 87°10'49", in NW¼SW¼ sec.24, T.30 N., R.7 W., Jasper County, Hydrologic Unit 07120002, (PARR, IN quadrangle), on right bank 100 ft downstream from bridge on county road 700W, 0.5 mi north of Rosebud, 0.5 mi downstream from the confluence of Swain and Dexter Ditches, 1.5 mi upstream from Davisson Ditch, 2 mi east of Parr, and at mile 93.5.

DRAINAGE AREA.--35.6 mi².

PERIOD OF RECORD.--July 1948 to October 2003 (discontinued).

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

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.5	4.9	e5.0	15	e6.2	e4.5	13	17	17	9.3	50	24
2	3.3	5.1	4.8	12	e8.0	e4.7	12	17	17	7.7	57	32
3	3.6	5.8	e4.5	11	e12	e4.8	12	15	19	7.0	77	24
4	5.1	5.5	e4.2	e8.0	34	e5.0	19	16	18	8.5	63	20
5	5.0	6.6	4.0	e7.0	e16	e5.2	50	37	17	242	54	16
6	4.1	7.2	e3.9	e6.6	e11	e5.4	32	29	17	279	46	14
7	4.7	6.3	3.8	e6.2	e8.4	e6.0	36	27	16	217	42	13
8	4.2	5.8	3.7	e6.4	e7.5	e8.0	38	35	16	307	39	12
9	3.8	6.4	e3.6	e7.0	e6.8	e13	30	75	16	387	36	12
10	3.7	12	e3.5	e7.6	e6.2	e10	26	64	15	345	34	11
11	3.6	9.7	3.4	e7.2	e5.8	e9.0	24	56	15	246	32	11
12	3.7	8.1	3.5	e7.4	e5.6	e8.0	22	39	16	173	30	11
13	4.1	7.4	3.9	e7.3	e5.2	e7.6	20	33	19	122	28	10
14	3.8	7.2	4.0	e6.8	e4.8	e7.4	19	31	25	91	27	11
15	3.8	7.3	3.7	e6.4	e4.8	8.7	18	39	22	122	26	9.9
16	3.4	6.4	3.4	e6.0	e4.5	11	17	32	18	135	25	8.9
17	3.6	6.1	3.3	e5.8	e4.3	12	17	29	16	94	23	8.7
18	4.1	5.8	7.7	e5.6	e4.1	13	15	26	15	202	21	8.6
19	7.4	6.9	15	e5.5	e4.2	15	15	25	15	138	19	8.3
20	5.0	7.0	13	e5.4	e4.4	16	18	24	13	91	19	8.2
21	4.2	7.3	10	e5.2	e4.6	24	19	22	12	382	17	7.8
22	3.8	7.3	8.6	e5.0	e4.8	20	17	21	11	368	16	9.8
23	3.6	6.1	e6.0	e4.8	e4.9	16	15	20	11	230	15	8.9
24	3.7	5.8	e5.0	e4.5	e4.8	15	15	19	10	146	13	9.4
25	4.7	5.5	e4.7	e4.3	e4.7	20	15	19	8.4	106	13	8.9
26	4.6	5.4	e4.5	e4.2	e4.6	21	14	17	8.6	84	12	11
27	4.2	5.3	e4.3	e4.2	e4.5	18	13	17	8.0	79	12	28
28	4.0	5.3	e4.1	e4.0	e4.4	17	13	18	9.6	103	11	19
29	5.4	5.6	e4.1	e4.2	---	15	12	18	11	80	12	15
30	5.9	5.6	e10	e4.5	---	14	14	17	9.5	66	11	12
31	5.0	---	20	e5.2	---	13	---	19	---	56	12	---
TOTAL	132.6	196.7	183.2	200.3	201.1	367.3	600	873	441.1	4,923.5	892	403.4
MEAN	4.28	6.56	5.91	6.46	7.18	11.8	20.0	28.2	14.7	159	28.8	13.4
MAX	7.4	12	20	15	34	24	50	75	25	387	77	32
MIN	3.3	4.9	3.3	4.0	4.1	4.5	12	15	8.0	7.0	11	7.8
CFSM	0.12	0.18	0.17	0.18	0.20	0.33	0.56	0.79	0.41	4.46	0.81	0.38
IN.	0.14	0.21	0.19	0.21	0.21	0.38	0.63	0.91	0.46	5.14	0.93	0.42

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 2003, BY WATER YEAR (WY)

	MEAN	15.6	18.8	27.1	29.5	37.3	49.1	50.6	40.1	33.5	20.9	10.8	11.8
MAX	106	68.5	96.8	113	91.1	149	141	111	111	159	52.1	88.9	
(WY)	(1994)	(1993)	(1991)	(1950)	(1959)	(1982)	(1950)	(1974)	(1981)	(2003)	(1972)	(1993)	
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 2002 CALENDAR YEAR

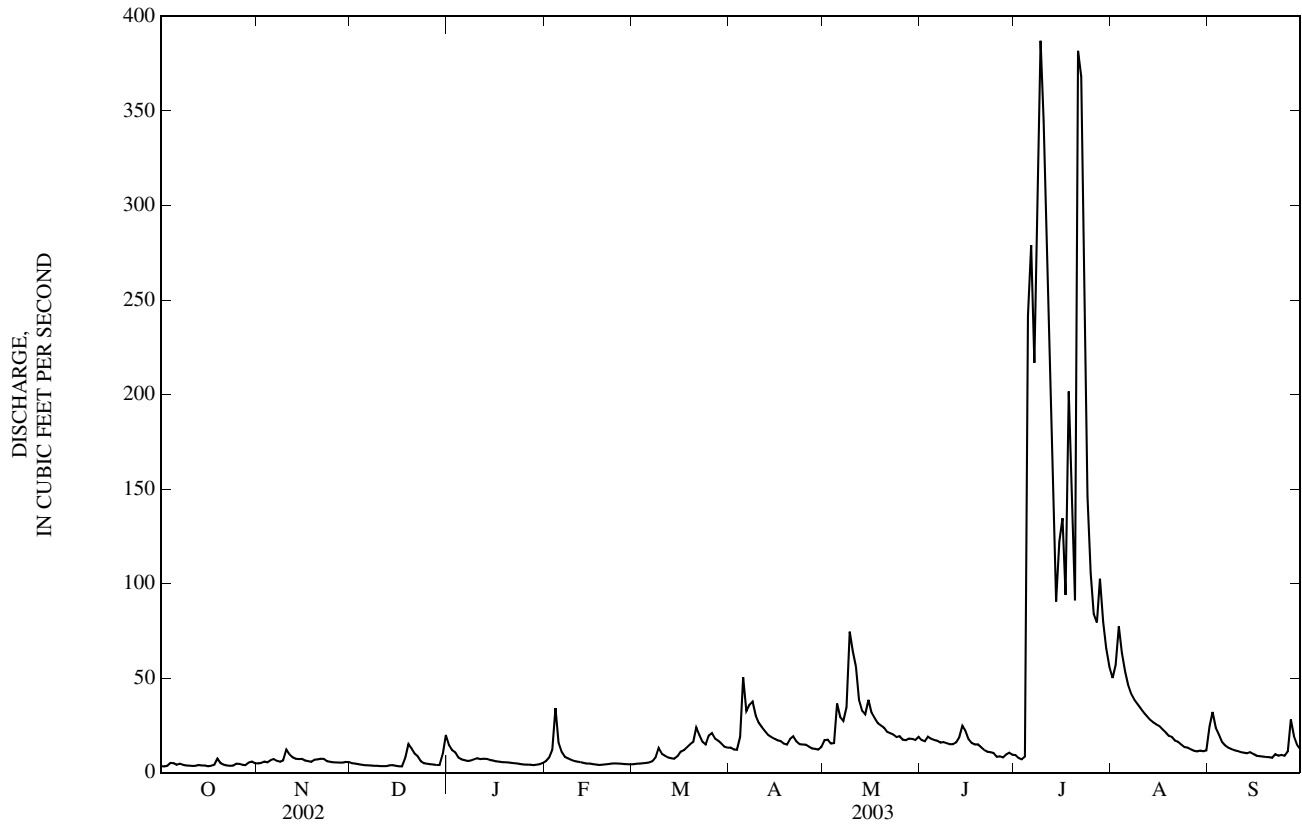
FOR 2003 WATER YEAR

WATER YEARS 1949 - 2003

ANNUAL TOTAL	10,657.9	9,414.2	
ANNUAL MEAN	29.2	25.8	28.7
HIGHEST ANNUAL MEAN			61.7
LOWEST ANNUAL MEAN			6.38
HIGHEST DAILY MEAN	315	May 12	621
LOWEST DAILY MEAN	3.3	Sep 30	0.50
ANNUAL SEVEN-DAY MINIMUM	3.5	Sep 27	0.77
MAXIMUM PEAK FLOW			656
MAXIMUM PEAK STAGE		6.30	8.86
ANNUAL RUNOFF (CFSM)	0.82	0.72	0.81
ANNUAL RUNOFF (INCHES)	11.14	9.84	10.95
10 PERCENT EXCEEDS	68	48	63
50 PERCENT EXCEEDS	17	11	17
90 PERCENT EXCEEDS	4.1	4.2	4.3

e Estimated

05521000 IROQUOIS RIVER AT ROSEBUD, IN—Continued



ILLINOIS RIVER BASIN

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, (RENSSELAER, IN quadrangle), 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 estimated daily discharges, which are poor. Streamflow affected by irrigation.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	26	24	75	e34	e30	58	109	108	53	403	130
2	16	24	30	61	e38	e31	57	174	98	53	394	229
3	16	22	25	e48	e48	e31	54	148	112	50	469	165
4	18	23	27	e44	144	e33	74	123	128	54	492	112
5	22	26	25	e42	120	e35	331	264	114	1,040	421	84
6	20	28	24	e41	79	e37	320	345	105	1,910	345	69
7	18	27	24	e40	e56	e44	264	251	105	2,110	280	61
8	18	25	24	e42	e47	e58	324	410	99	2,260	229	55
9	16	26	23	e45	e42	e88	261	643	93	2,470	197	52
10	17	33	23	e50	e39	e70	200	762	86	2,610	175	49
11	16	45	24	e47	e36	e58	168	714	88	2,570	157	47
12	15	36	24	e48	e35	e54	145	571	90	2,390	143	45
13	17	31	25	e47	e33	e52	123	408	138	2,150	132	45
14	17	28	27	e46	e31	e50	111	314	247	1,880	121	48
15	17	29	26	e42	e31	51	104	382	171	1,680	111	48
16	17	28	26	e39	e30	51	97	355	128	1,570	101	44
17	16	27	22	e39	e28	60	92	300	109	1,350	92	41
18	17	27	31	e38	e27	67	88	250	98	1,230	83	40
19	24	27	55	e37	e28	72	81	219	93	1,070	76	39
20	25	28	68	e37	e29	76	100	203	85	914	70	38
21	20	27	57	e36	e31	88	139	189	78	1,370	65	36
22	18	29	49	e34	e32	88	117	170	72	1,890	60	42
23	17	29	e37	e32	e33	75	98	155	67	1,980	55	44
24	17	29	e33	e28	e32	69	90	143	64	1,910	51	48
25	20	29	e30	e28	e31	78	90	131	56	1,700	50	47
26	26	27	e29	e27	e31	102	84	126	53	1,430	48	51
27	24	26	e28	e27	e30	91	76	114	50	1,190	46	135
28	21	24	e27	e26	e30	81	70	110	53	1,040	42	116
29	23	26	e27	e27	---	73	71	121	61	850	43	78
30	26	28	e40	e29	---	63	72	121	54	660	44	62
31	25	---	77	e31	---	58	---	118	---	516	45	---
TOTAL	594	840	1,011	1,233	1,205	1,914	3,959	8,443	2,903	43,950	5,040	2,100
MEAN	19.2	28.0	32.6	39.8	43.0	61.7	132	272	96.8	1,418	163	70.0
MAX	26	45	77	75	144	102	331	762	247	2,610	492	229
MIN	15	22	22	26	27	30	54	109	50	50	42	36
CFSM	0.09	0.14	0.16	0.20	0.21	0.30	0.65	1.34	0.48	6.98	0.80	0.34
IN.	0.11	0.15	0.19	0.23	0.22	0.35	0.73	1.55	0.53	8.05	0.92	0.38

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 2003, BY WATER YEAR (WY)

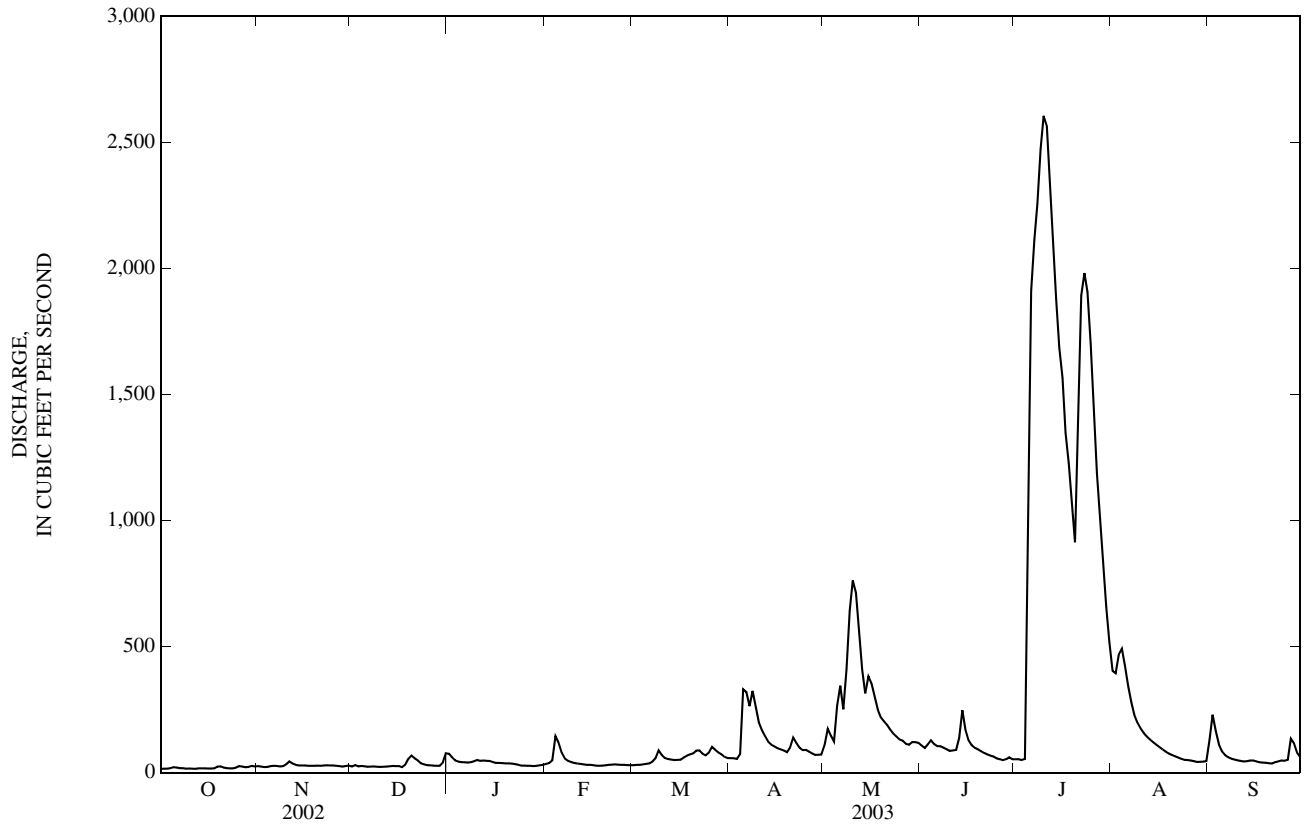
	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN
(WY)	(1994)	(1993)	(1991)	(1950)	(1997)	(1982)	(1950)	(1974)	(1958)	(2003)	(1990)	(1993)	(1964)	(1964)	(1964)
(WY)	(1965)	(1965)	(1964)	(1963)	(1964)	(1957)	(1986)	(1958)	(1988)	(1964)	(1964)	(1964)	(1964)	(1964)	(1964)

SUMMARY STATISTICS

	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR	FOR 2002 CALENDAR YEAR	FOR 2003 WATER YEAR
ANNUAL TOTAL	67,707	73,192														
ANNUAL MEAN	185	201														
HIGHEST ANNUAL MEAN																
LOWEST ANNUAL MEAN																
HIGHEST DAILY MEAN	1,780	2,610	May 14	Jul 10												
LOWEST DAILY MEAN	15	15	Oct 1	Oct 1												
ANNUAL SEVEN-DAY MINIMUM	16	16	Sep 27	Oct 9												
MAXIMUM PEAK FLOW		2,620		Jul 10												
MAXIMUM PEAK STAGE		16.59		Jul 10												
ANNUAL RUNOFF (CFSM)	0.91	0.99														
ANNUAL RUNOFF (INCHES)	12.41	13.41														
10 PERCENT EXCEEDS	524	405														
50 PERCENT EXCEEDS	78	53														
90 PERCENT EXCEEDS	18	24														

e Estimated

05522500 IROQUOIS RIVER AT RENNELAER, IN—Continued



05524500 IROQUOIS RIVER NEAR FORESMAN, IN

LOCATION.--Lat 40°52'14", long 87°18'24", in NE¼SE¼ sec.15, T.28 N., R.8 W., Newton County, Hydrologic Unit 07120002, (GOODLAND, IN quadrangle), on right bank at downstream side of bridge on State Highway 55, 0.2 mi north of intersection of State Highways 16 and 55, 0.5 mi downstream from Mosquito Creek, 0.6 mi west of Foresman, 3 mi east of Brook, and at mile 72.7.

DRAINAGE AREA.--449 mi².

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 and Acoustic Doppler Velocity meter. 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 poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e36	e37	e42	e109	e58	e48	147	188	231	154	970	320
2	e38	e31	e46	e91	e66	e50	145	271	204	140	e899	567
3	e37	e30	e43	e71	e80	e51	142	262	220	123	e878	465
4	e38	e35	e46	e68	e262	e54	152	221	225	109	e1,000	316
5	e41	e36	e43	e62	e219	e58	595	420	205	e120	e800	231
6	e41	e44	e42	e61	e150	e62	636	629	135	e2,400	e640	190
7	e40	e43	e43	e65	e118	e72	547	487	123	e4,000	e560	166
8	e39	e41	e49	e69	e69	e92	660	492	166	e4,300	e440	147
9	e38	e42	e43	e74	e63	e171	564	941	132	e4,800	e380	135
10	e37	e48	e42	e82	e61	e140	452	1,620	103	e5,100	e330	126
11	e38	e73	e42	e75	e58	e112	376	1,910	105	e5,350	e300	119
12	e36	e69	e44	e72	e56	e97	317	1,680	148	e5,100	e280	111
13	e38	e58	e48	e67	e55	e87	267	1,370	242	e4,800	e240	108
14	e35	e53	e49	e63	e53	e85	240	1,050	948	e4,500	e220	110
15	e32	e53	e42	e62	e53	e86	227	882	856	e4,200	e200	113
16	e33	e46	e40	e61	e51	e88	216	762	574	e3,800	e190	105
17	e40	e49	e39	e59	e48	e102	200	595	401	e3,500	e170	96
18	e33	e49	e47	e58	e46	e160	186	486	312	e3,200	e160	91
19	e39	e50	e91	e58	e46	176	173	419	263	e3,000	e140	89
20	e45	e51	e111	e57	e48	199	204	375	225	e2,800	e130	85
21	e38	e51	e80	e56	e50	228	316	348	197	e2,700	e120	80
22	e34	e50	e78	e53	e51	237	279	313	179	3,260	e115	93
23	e32	e50	e51	e53	e49	204	226	286	166	3,270	e110	104
24	e31	e51	e47	e48	e49	182	203	282	151	3,060	e105	112
25	e33	e46	e44	e48	e48	196	197	260	136	2,780	e100	125
26	e41	e48	e42	e47	e48	240	191	243	124	2,440	e96	133
27	e42	e47	e41	e47	e49	224	175	222	118	2,110	e93	396
28	e39	e44	e41	e45	e49	201	164	213	121	1,880	97	392
29	e36	e40	e41	e47	---	185	159	232	168	1,680	98	272
30	e41	e47	e54	e50	---	161	158	238	155	1,400	108	205
31	e43	---	e101	e54	---	148	---	253	---	1,160	102	---
TOTAL	1,164	1,412	1,612	1,932	2,053	4,196	8,514	17,950	7,333	87,236	10,071	5,602
MEAN	37.5	47.1	52.0	62.3	73.3	135	284	579	244	2,814	325	187
MAX	45	73	111	109	262	240	660	1,910	948	5,350	1,000	567
MIN	31	30	39	45	46	48	142	188	103	109	93	80
CFSM	0.08	0.10	0.12	0.14	0.16	0.30	0.63	1.29	0.54	6.27	0.72	0.42
IN.	0.10	0.12	0.13	0.16	0.17	0.35	0.71	1.49	0.61	7.23	0.83	0.46

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 2003, BY WATER YEAR (WY)

	189	249	386	424	562	730	752	571	484	308	109	135
MAX	1,792	1,218	1,274	1,736	1,490	2,266	1,672	1,440	2,314	2,814	435	1,387
(WY)	(1994)	(1993)	(1968)	(1993)	(1968)	(1982)	(1950)	(2002)	(1958)	(2003)	(1990)	(1993)
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)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

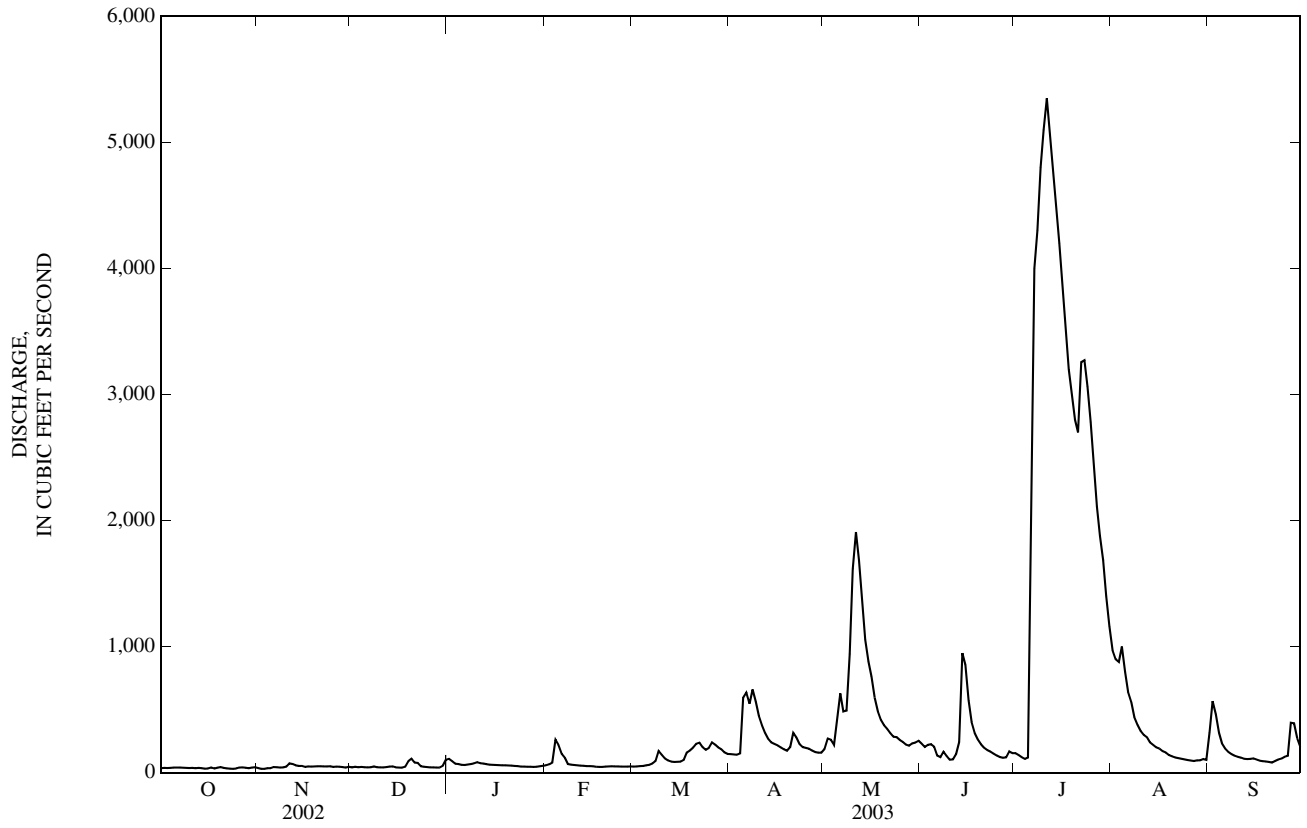
FOR 2003 WATER YEAR

WATER YEARS 1950 - 2003

ANNUAL TOTAL	159,465	149,075	
ANNUAL MEAN	437	408	407
HIGHEST ANNUAL MEAN			891
LOWEST ANNUAL MEAN			77.6
HIGHEST DAILY MEAN	3,990	May 14	e 5,350 Jul 11
LOWEST DAILY MEAN	30	Nov 3	30 Nov 3
ANNUAL SEVEN-DAY MINIMUM	35	Oct 12	35 Oct 12
MAXIMUM PEAK FLOW			e 5,350 Jul 11
MAXIMUM PEAK STAGE			24.87 Jul 11
ANNUAL RUNOFF (CFSM)	0.97		0.91
ANNUAL RUNOFF (INCHES)	13.21		12.35
10 PERCENT EXCEEDS	1,240		889
50 PERCENT EXCEEDS	161		111
90 PERCENT EXCEEDS	39		41

e Estimated

05524500 IROQUOIS RIVER NEAR FORESMAN, IN—Continued



05536179 HART DITCH AT DYER, IN

LOCATION.--Lat 41°30'28", long 87°30'36", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.12, T.35 N., R.10 W., Lake County, Hydrologic Unit 07120003, (CALUMET CITY, IL-IN quadrangle), on right bank, 50 ft upstream from 213th Street in Dyer, 0.8 mi upstream from Dyer Ditch, 0.8 mi east of Illinois state line, 3.5 mi east of intersection of U.S. Highway 30 and Interstate 394.

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 fair except for estimated daily discharges, which are poor. Low-flow affected by sewage effluent.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	e2.7	3.6	6.1	e3.3	e4.0	4.7	63	24	5.9	34	12
2	3.7	e2.8	3.7	5.4	e3.1	e4.2	4.4	59	17	5.5	60	11
3	6.6	e2.9	3.6	4.7	e4.1	e4.2	4.6	35	22	5.6	84	8.1
4	12	e3.3	3.6	4.0	e4.0	e5.6	19	28	26	5.4	313	6.3
5	e5.0	e4.2	3.5	4.4	e3.9	e5.2	111	188	20	59	108	5.4
6	e3.9	e3.6	3.5	4.2	e3.7	e5.3	55	117	16	64	59	5.0
7	e3.7	e3.2	3.4	4.1	e3.7	e7.6	39	60	15	54	42	4.8
8	e3.7	e3.2	3.4	4.3	e3.6	9.5	38	44	14	75	33	4.6
9	e3.7	e3.6	3.3	4.3	e3.6	7.9	32	421	13	156	28	4.6
10	e3.7	e4.0	3.4	3.9	e3.6	13	25	330	12	148	23	4.3
11	3.5	e5.6	3.3	3.8	e3.4	8.3	20	184	11	88	20	4.4
12	3.7	e4.6	3.3	3.6	e3.3	9.3	17	120	11	52	17	4.3
13	3.8	e4.0	3.3	3.5	e3.9	22	15	77	10	39	15	4.1
14	3.7	e4.3	3.5	3.6	e4.0	13	14	54	9.5	31	13	5.6
15	3.2	e5.0	3.4	3.6	e4.0	11	13	43	9.0	100	12	5.2
16	4.5	e4.5	3.4	3.5	e3.9	9.9	12	35	8.3	104	11	5.0
17	3.5	e4.2	3.6	3.5	e3.8	10	12	29	7.7	67	9.7	4.6
18	e3.4	e4.0	11	3.4	e3.8	9.2	11	24	12	171	8.6	4.3
19	e3.3	e3.9	18	3.3	e3.8	7.9	11	21	10	97	7.7	4.1
20	e3.2	e3.9	12	3.4	e4.0	11	12	26	10	54	7.1	4.0
21	e3.2	5.6	7.0	3.3	e5.0	15	12	25	8.3	653	6.7	3.9
22	e3.0	5.1	5.3	3.3	e4.6	12	12	20	7.5	262	6.0	5.0
23	e2.9	4.8	4.3	3.0	e4.3	8.7	11	17	6.8	137	5.6	3.9
24	e2.9	4.7	4.5	2.8	e4.3	7.1	9.9	15	6.5	91	5.2	4.2
25	e3.4	4.6	4.0	3.0	e3.9	6.5	9.4	14	6.2	66	5.0	4.0
26	e3.2	4.3	4.2	3.1	e5.0	6.3	9.2	13	6.1	52	5.0	5.1
27	e2.9	3.9	3.8	3.0	e4.5	5.6	8.6	11	6.2	53	4.6	5.6
28	e2.9	3.8	3.7	e3.1	e4.1	5.8	8.3	11	6.3	68	4.3	5.2
29	e2.9	3.7	3.7	e3.0	---	5.8	8.3	12	6.5	54	5.3	4.9
30	e2.9	3.7	4.8	e3.0	---	6.1	16	12	6.1	39	4.9	4.1
31	e3.1	---	5.6	e3.7	---	5.2	---	22	---	32	5.5	---
TOTAL	118.2	121.7	150.7	114.9	110.2	262.2	574.4	2,130	344.0	2,888.4	963.2	157.6
MEAN	3.81	4.06	4.86	3.71	3.94	8.46	19.1	68.7	11.5	93.2	31.1	5.25
MAX	12	5.6	18	6.1	5.0	22	111	421	26	653	313	12
MIN	2.9	2.7	3.3	2.8	3.1	4.0	4.4	11	6.1	5.4	4.3	3.9
CFSM	0.10	0.11	0.13	0.10	0.10	0.22	0.51	1.83	0.30	2.48	0.83	0.14
IN.	0.12	0.12	0.15	0.11	0.11	0.26	0.57	2.11	0.34	2.86	0.95	0.16

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 2003, BY WATER YEAR (WY)

MEAN	22.0	41.8	33.9	45.6	56.9	63.1	55.9	58.0	52.0	25.2	20.4	14.1
MAX	113	195	106	136	183	169	138	140	182	93.2	74.1	106
(WY)	(1994)	(1991)	(1991)	(1993)	(1997)	(1991)	(1999)	(1996)	(1993)	(2003)	(1998)	(1993)
MIN	2.77	3.55	4.86	3.71	3.94	7.00	16.6	7.48	4.21	4.46	3.87	2.41
(WY)	(1996)	(2000)	(2003)	(2003)	(2003)	(2000)	(2001)	(1992)	(1992)	(1991)	(2002)	(1994)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

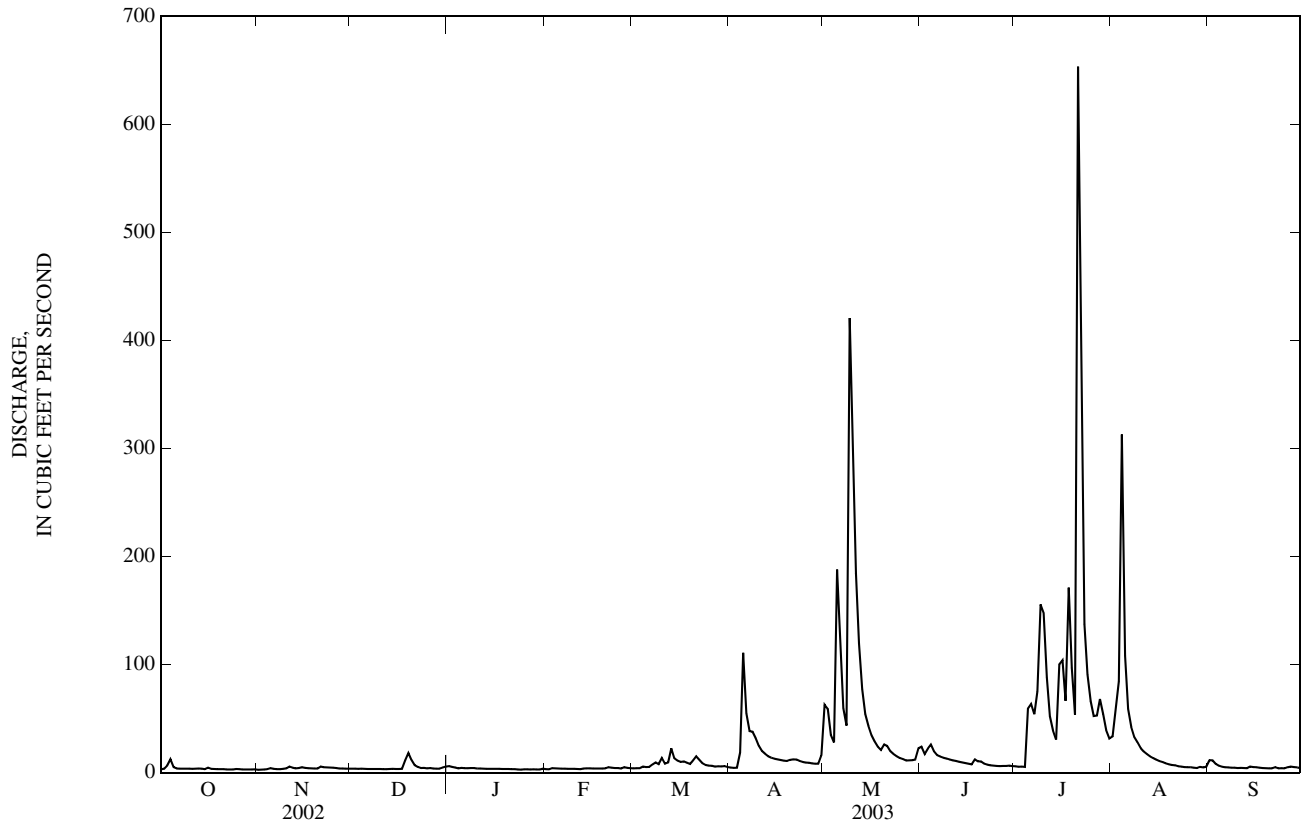
FOR 2003 WATER YEAR

WATER YEARS 1990 - 2003

ANNUAL TOTAL	11,176.0	7,935.5	
ANNUAL MEAN	30.6	21.7	40.6
HIGHEST ANNUAL MEAN			76.6
LOWEST ANNUAL MEAN			19.1
HIGHEST DAILY MEAN	950	May 12	653
LOWEST DAILY MEAN	2.7	Nov 1	2.7
ANNUAL SEVEN-DAY MINIMUM	2.9	Oct 27	2.9
MAXIMUM PEAK FLOW			887
MAXIMUM PEAK STAGE			8.17
ANNUAL RUNOFF (CFSM)	0.81		0.58
ANNUAL RUNOFF (INCHES)	11.06		7.85
10 PERCENT EXCEEDS	60		54
50 PERCENT EXCEEDS	6.5		5.5
90 PERCENT EXCEEDS	3.4		3.3

e Estimated

05536179 HART DITCH AT DYER, IN—Continued



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, (HIGHLAND, IN quadrangle), on left bank, 0.2 mi downstream from Ridge Road, 0.4 mi upstream from mouth, and 0.9 mi south of intersection of Interstate 80/90 and U.S. Highway 41.

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. Datum of gage is 591.27 ft above National Geodetic Vertical Datum of 1929 (levels by State of Indiana, Department of Natural Resources).

REMARKS.--Records fair except for daily discharges above 170 ft³/s due to possible backwater from Little Calumet River and estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	9.4	13	23	16	12	24	208	52	14	e152	111
2	13	9.7	13	20	15	13	21	127	40	14	e142	61
3	9.9	10	13	18	21	13	20	75	91	14	e370	41
4	86	12	12	16	21	14	331	81	65	15	e780	32
5	24	17	11	17	16	16	313	672	50	421	e290	28
6	15	13	11	17	16	16	130	297	41	232	e142	25
7	13	11	11	16	14	16	102	180	37	174	115	24
8	13	11	11	17	13	42	88	114	35	240	84	22
9	13	15	11	16	12	26	69	1,380	32	341	71	21
10	13	41	11	15	12	27	55	1,040	31	262	60	19
11	12	e30	11	13	11	32	46	703	31	154	59	19
12	13	e24	9.5	12	9.1	43	40	364	34	92	51	23
13	17	17	11	13	12	98	35	193	32	69	45	18
14	12	21	12	12	12	51	33	130	24	55	41	49
15	12	30	13	12	12	44	29	107	23	346	41	25
16	23	20	12	12	11	38	27	91	21	216	46	25
17	14	17	11	13	11	40	27	69	19	452	47	20
18	15	15	142	15	11	37	27	70	96	949	42	18
19	12	14	107	15	11	33	27	50	58	426	36	17
20	11	13	40	13	12	51	51	134	32	187	26	16
21	11	21	26	13	15	52	33	75	23	2,120	25	15
22	10	19	21	14	13	41	33	60	21	1,280	24	30
23	9.8	16	16	18	13	34	29	42	20	664	23	19
24	9.7	e16	14	15	13	28	26	38	17	381	23	18
25	14	e15	17	14	11	32	24	34	17	218	23	16
26	12	e15	17	16	15	28	22	33	18	124	31	37
27	10	e14	16	17	14	25	21	31	17	500	20	33
28	10	e14	14	16	12	32	21	46	18	373	20	21
29	10	e14	14	13	---	29	20	38	20	191	137	20
30	10	e13	32	13	---	26	95	59	16	107	35	17
31	11	---	27	21	---	25	---	108	---	81	40	---
TOTAL	468.4	507.1	699.5	475	374.1	1,014	1,819	6,649	1,031	10,712	3,041	840
MEAN	15.1	16.9	22.6	15.3	13.4	32.7	60.6	214	34.4	346	98.1	28.0
MAX	86	41	142	23	21	98	331	1,380	96	2,120	780	111
MIN	9.7	9.4	9.5	12	9.1	12	20	31	16	14	20	15
CFSM	0.21	0.24	0.32	0.22	0.19	0.46	0.86	3.03	0.49	4.89	1.39	0.40
IN.	0.25	0.27	0.37	0.25	0.20	0.53	0.96	3.50	0.54	5.64	1.60	0.44

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1943 - 2003, BY WATER YEAR (WY)

MEAN	33.1	50.9	63.8	67.6	88.7	135	132	106	74.2	42.0	31.3	28.1
MAX	282	287	279	335	479	429	430	373	423	346	156	219
(WY)	(1955)	(1986)	(1983)	(1999)	(1997)	(1979)	(1999)	(1996)	(1993)	(2003)	(1998)	(1993)
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

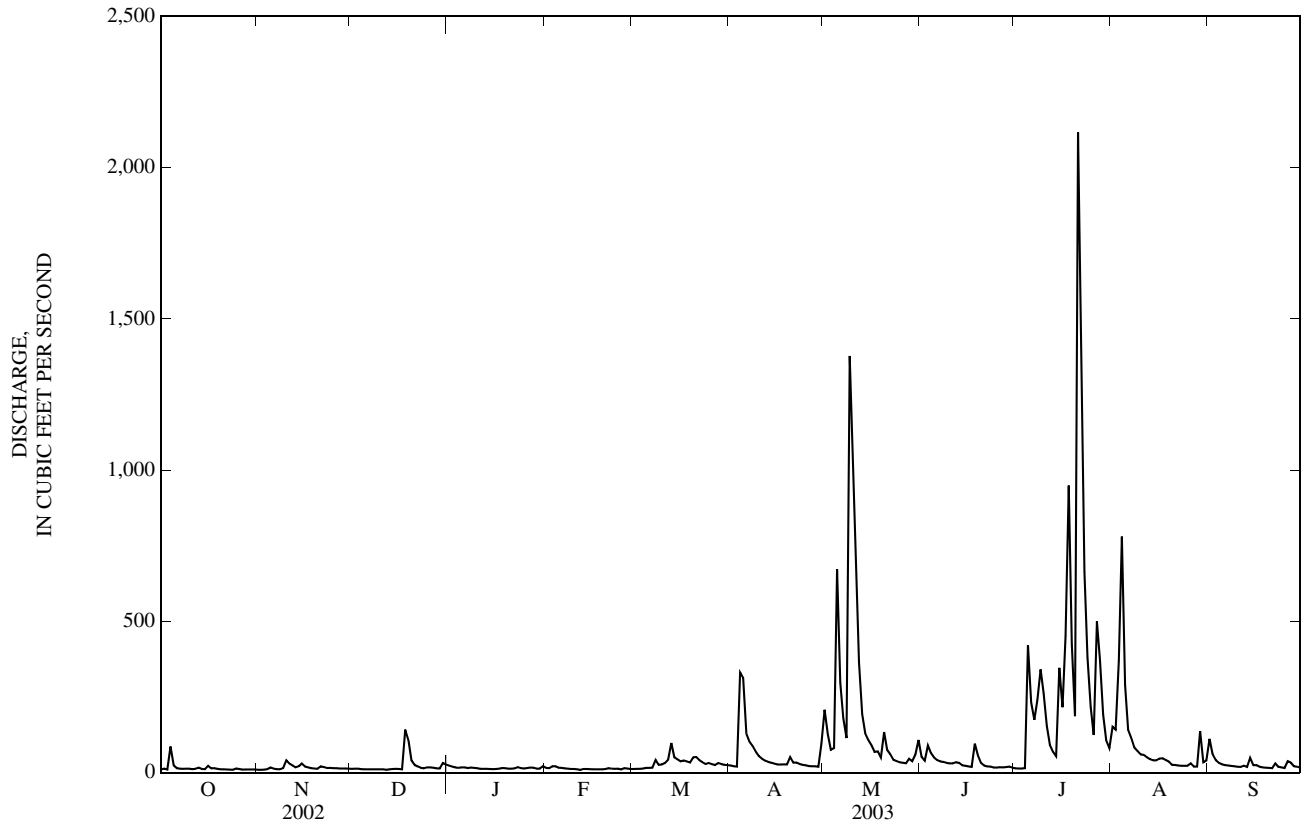
FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1943 - 2003

ANNUAL TOTAL	29,529.5	27,630.1	
ANNUAL MEAN	80.9	75.7	
HIGHEST ANNUAL MEAN			70.9
LOWEST ANNUAL MEAN			160
HIGHEST DAILY MEAN	2,500	May 12	19.2
LOWEST DAILY MEAN	9.4	Nov 1	1964
ANNUAL SEVEN-DAY MINIMUM	10	Oct 27	2,600
MAXIMUM PEAK FLOW			1.6
MAXIMUM PEAK STAGE			Nov 28, 1990
ANNUAL RUNOFF (CFSM)	1.14		1.7
ANNUAL RUNOFF (INCHES)	15.54		Sep 3, 1964
10 PERCENT EXCEEDS	147		3,010
50 PERCENT EXCEEDS	26		8.72
90 PERCENT EXCEEDS	11		Nov 28, 1990

05536190 HART DITCH AT MUNSTER, IN—Continued



05536195 LITTLE CALUMET RIVER AT MUNSTER, IN

LOCATION.--Lat 41°34'38", long 87°31'17", in SE¹/₄NW¹/₄ sec.13, T.36 N., R.10 W., Lake County, Hydrologic Unit 07120003, (CALUMET CITY, IL-IN quadrangle), on left bank 200 ft upstream from Hohman Avenue 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 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 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	e9.0	11	e20	e14	e10	12	109	25	8.4	101	72
2	12	e9.2	12	e17	e13	e10	11	78	18	9.1	157	41
3	10	e9.5	e12	e15	e18	e11	9.7	44	43	9.2	171	27
4	60	e10	e13	e13	e18	e10	120	37	28	11	326	21
5	34	e14	e10	e14	e14	e12	174	219	23	193	215	17
6	15	e11	e11	e14	e14	e12	85	148	17	128	138	15
7	12	e10	11	e13	e12	e12	63	86	17	138	100	14
8	12	e10	11	e12	e11	e26	54	71	14	108	74	14
9	12	e17	12	e13	e10	e22	43	316	15	169	55	13
10	11	47	11	e11	e10	e24	34	338	13	141	42	13
11	11	18	11	e13	e9.0	e28	28	254	12	109	38	13
12	10	15	7.8	e10	e8.0	e35	24	173	16	69	33	15
13	16	18	9.0	e11	e10	78	21	121	15	48	26	15
14	12	21	10	e10	e10	52	20	94	11	36	23	36
15	11	34	11	e10	e10	43	18	77	9.3	158	20	21
16	19	23	11	e10	e9.6	36	17	57	8.1	139	24	18
17	16	19	9.5	e11	e9.6	35	16	44	6.9	164	25	18
18	12	17	101	e13	e9.6	26	17	38	36	397	22	15
19	16	14	116	e13	e9.6	21	17	28	47	223	20	15
20	11	13	46	e11	e10	29	31	70	17	133	13	15
21	11	12	27	e11	e13	32	22	38	10	529	12	14
22	10	12	21	e12	e11	25	20	30	8.8	462	11	25
23	9.2	21	17	e14	e11	20	18	19	7.8	298	9.9	19
24	9.1	16	13	e13	e11	17	16	16	7.5	208	9.7	17
25	13	12	e15	e12	e9.6	19	15	14	6.7	155	9.7	15
26	14	17	e15	e14	e11	16	13	12	7.1	116	15	23
27	11	13	e14	e15	e13	14	13	11	7.4	247	11	36
28	10	12	e12	e14	e10	15	13	15	7.0	290	9.8	20
29	10	11	e11	e11	---	19	12	16	11	169	78	18
30	e10	11	e22	e11	---	14	54	20	9.0	108	26	16
31	e11	---	e27	e17	---	13	---	63	---	78	20	---
TOTAL	441.3	475.7	640.3	398	319.0	736	1,010.7	2,656	473.6	5,050.7	1,835.1	631
MEAN	14.2	15.9	20.7	12.8	11.4	23.7	33.7	85.7	15.8	163	59.2	21.0
MAX	60	47	116	20	18	78	174	338	47	529	326	72
MIN	9.1	9.0	7.8	10	8.0	10	9.7	11	6.7	8.4	9.7	13
CFSM	0.16	0.18	0.23	0.14	0.13	0.26	0.37	0.95	0.18	1.81	0.66	0.23
IN.	0.18	0.20	0.26	0.16	0.13	0.30	0.42	1.10	0.20	2.09	0.76	0.26

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 2003, BY WATER YEAR (WY)

MEAN	35.0	57.6	72.0	62.5	82.7	124	125	94.1	70.6	42.5	37.4	39.0
MAX	151	212	301	199	252	386	268	266	222	185	141	217
(WY)	(1994)	(1973)	(1983)	(1993)	(1959)	(1979)	(1973)	(1959)	(1993)	(1996)	(1990)	(1965)
MIN	6.47	5.29	7.12	7.32	8.49	18.2	21.3	18.1	11.2	9.56	7.28	5.54
(WY)	(1969)	(1972)	(1961)	(1961)	(1963)	(2000)	(1963)	(1992)	(1965)	(1991)	(1964)	(1966)

SUMMARY STATISTICS

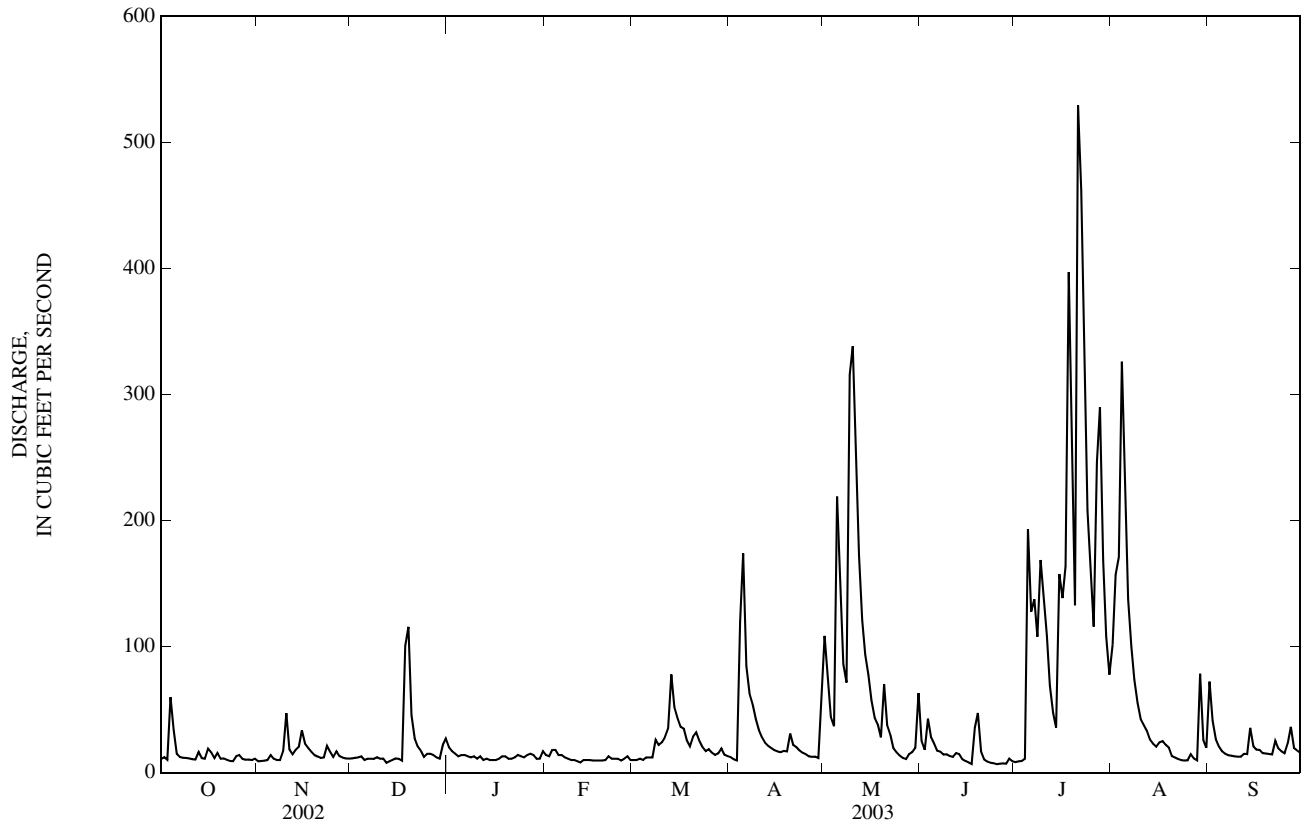
FOR 2002 CALENDAR YEAR

FOR 2003 WATER YEAR

WATER YEARS 1959 - 2003

ANNUAL TOTAL	15,702.3	14,667.4	
ANNUAL MEAN	43.0	40.2	70.1
HIGHEST ANNUAL MEAN			121
LOWEST ANNUAL MEAN			23.5
HIGHEST DAILY MEAN	701	529	1,160
LOWEST DAILY MEAN	7.8	6.7	1.9
ANNUAL SEVEN-DAY MINIMUM	9.8	7.5	2.2
MAXIMUM PEAK FLOW		606	1,510
MAXIMUM PEAK STAGE		12.73	17.03
ANNUAL RUNOFF (CFSM)	0.48	0.45	0.78
ANNUAL RUNOFF (INCHES)	6.49	6.06	10.58
10 PERCENT EXCEEDS	90	109	175
50 PERCENT EXCEEDS	22	15	31
90 PERCENT EXCEEDS	11	10	8.9

05536195 LITTLE CALUMET RIVER AT MUNSTER, IN—Continued



05536357 GRAND CALUMET RIVER AT HOHMAN AVE AT HAMMOND, IN

LOCATION.--Lat 41°37'28", long 87°31'04", in NE¼NW¼sec. 36, T37 N., R10 W., Lake County, Hydrologic Unit 07120003, (CALUMET CITY, IL-IN quadrangle), on left bank, 20 feet upstream of Hohman Avenue, 1,000 feet east of Indiana-Illinois State line, 0.57 mi downstream of U.S. Highway 41, and 0.7 mi north of St. Margaret's Hospital (Hohman Avenue).

DRAINAGE AREA.--Indeterminate.

PERIOD OF RECORD.--October 1991 to current year.

GAGE.--Water-stage recorder. Datum of gage is 575.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor.

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.37	2.9	0.51	e2.3	e2.1	3.5	1.7	18	9.7	1.1	26	47
2	1.4	2.3	e0.97	e1.4	e3.0	6.4	1.6	3.7	7.3	1.1	32	28
3	1.1	1.4	e1.7	e2.9	e5.4	8.5	2.7	2.2	19	0.97	41	12
4	7.7	0.20	e0.92	e1.3	e3.0	8.5	39	5.2	12	0.68	42	7.4
5	3.7	2.2	e0.84	e2.0	e1.9	8.6	35	27	8.6	25	29	5.5
6	2.2	2.1	e0.70	e1.3	e1.7	7.5	6.1	9.7	7.5	23	24	4.5
7	3.7	0.78	e0.39	e1.8	e2.1	5.3	9.0	5.7	6.8	25	21	3.0
8	1.9	1.1	e0.54	e2.0	e1.3	13	8.4	5.5	7.1	13	21	4.1
9	1.7	1.1	e0.81	e2.8	e1.8	30	5.2	34	4.4	15	20	5.0
10	1.8	8.0	0.28	e2.0	e1.3	25	2.3	9.6	6.0	12	20	3.8
11	2.3	1.5	1.1	e3.0	e4.2	22	2.2	21	5.7	9.2	24	4.3
12	2.0	2.4	0.40	e0.93	5.5	26	3.3	8.4	4.4	7.4	25	3.8
13	4.8	0.47	1.4	e0.84	5.7	30	2.4	8.1	2.8	4.8	20	2.4
14	1.5	0.83	0.41	e1.1	9.6	24	1.9	8.6	2.8	4.1	18	29
15	1.8	2.6	0.52	e1.2	16	13	1.9	11	1.8	e35	16	14
16	3.2	1.5	0.97	e0.68	32	4.8	2.1	6.5	1.9	e23	15	4.2
17	1.6	2.2	0.33	e2.0	31	3.3	2.2	6.3	2.4	e31	21	3.2
18	1.6	1.1	21	e1.9	37	2.2	1.9	5.7	8.7	e65	16	2.9
19	2.8	4.4	4.5	e1.9	21	2.9	1.7	4.8	10	e28	11	3.3
20	1.8	0.83	3.4	e1.3	11	4.2	6.8	16	5.5	e13	10	2.2
21	1.7	4.2	2.3	e1.2	10	1.8	2.7	8.0	2.2	e85	8.9	2.6
22	1.7	3.9	3.4	e1.4	5.1	0.57	1.3	6.1	1.4	e53	7.3	13
23	1.4	1.4	0.93	e1.9	6.3	0.84	0.97	5.9	1.5	e26	6.2	9.9
24	1.0	2.4	1.8	e3.1	7.0	0.83	0.63	6.2	1.1	27	5.5	11
25	1.7	1.7	e3.2	e2.3	4.5	2.7	0.61	4.7	1.3	23	3.6	12
26	2.1	2.7	e0.49	e1.1	4.3	0.87	0.92	5.0	0.76	19	7.4	15
27	1.4	0.88	e0.97	e3.4	6.4	1.4	0.64	4.9	1.2	83	11	27
28	1.4	2.4	e1.4	e1.7	5.1	3.2	0.75	7.5	0.59	72	6.1	8.0
29	4.8	0.50	e0.93	e3.1	---	3.1	0.89	7.1	1.8	43	55	5.9
30	3.9	2.8	e3.9	e2.2	---	1.2	16	11	1.3	31	22	4.4
31	3.4	---	e1.9	e3.0	---	1.3	---	27	---	25	9.8	---
TOTAL	73.47	62.79	62.91	59.05	245.3	266.51	162.81	310.4	147.55	824.35	594.8	298.4
MEAN	2.37	2.09	2.03	1.90	8.76	8.60	5.43	10.0	4.92	26.6	19.2	9.95
MAX	7.7	8.0	21	3.4	37	30	39	34	19	85	55	47
MIN	0.37	0.20	0.28	0.68	1.3	0.57	0.61	2.2	0.59	0.68	3.6	2.2

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1991 - 2003, BY WATER YEAR (WY)

MEAN	30.8	29.1	25.6	25.1	29.6	31.6	36.9	39.4	40.8	44.2	36.4	31.9
MAX	80.4	63.7	65.2	66.8	95.9	81.5	90.8	85.9	98.8	102	93.9	88.9
(WY)	(1998)	(1998)	(1998)	(1998)	(1997)	(1998)	(1998)	(1997)	(1993)	(1993)	(1997)	(1997)
MIN	2.37	2.09	2.03	1.90	6.24	8.44	5.43	9.98	4.92	6.06	4.54	1.22
(WY)	(2003)	(2003)	(2003)	(2003)	(2000)	(2000)	(2003)	(2001)	(2003)	(2002)	(2002)	(2002)

SUMMARY STATISTICS

FOR 2002 CALENDAR YEAR

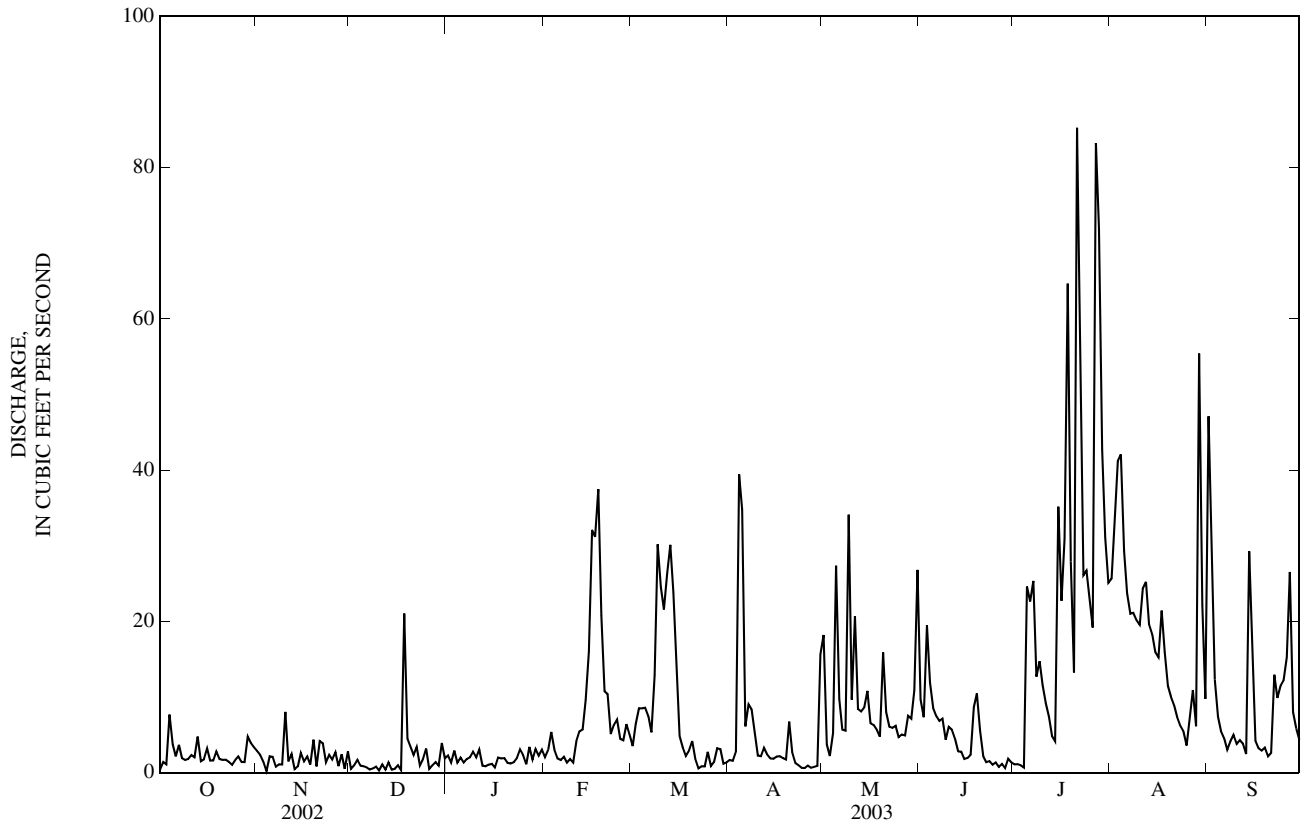
FOR 2003 WATER YEAR

WATER YEARS 1991 - 2003

ANNUAL TOTAL	2,257.09		3,108.34		33.5	
ANNUAL MEAN	6.18		8.52		76.2	
HIGHEST ANNUAL MEAN					1997	
LOWEST ANNUAL MEAN					8.21	
HIGHEST DAILY MEAN	166	May 12	85	Jul 21	464	Feb 21, 1997
LOWEST DAILY MEAN	0.20	Nov 4	0.20	Nov 4	0.20	Nov 4, 2002
ANNUAL SEVEN-DAY MINIMUM	0.60	Dec 6	0.60	Dec 6	0.60	Dec 6, 2002
MAXIMUM PEAK FLOW			unknown		701	Feb 21, 1997
MAXIMUM PEAK STAGE			unknown		8.76	Jul 18, 1996
10 PERCENT EXCEEDS	12		25		74	
50 PERCENT EXCEEDS	4.0		3.5		24	
90 PERCENT EXCEEDS	0.83		0.93		5.0	

e Estimated

05536357 GRAND CALUMET RIVER AT HOHMAN AVE AT HAMMOND, IN—Continued



DISCHARGE AT MISCELLANEOUS SITES

Special study and miscellaneous sites

STREAMS TRIBUTARY TO LAKE MICHIGAN BASIN

Lake Michigan Basin

Streamflow was measured at points other than continuous gaging stations from 4 sites in the Lake Michigan Basin on October 16, 2002. This data was collected as a part of an investigation of water quality and ground-water/surface-water interactions near Long Lake, Indiana Dunes National Lakeshore. This study was funded under the US Geological Survey-National Park Service Water Quality Assessment and Monitoring Partnership.

Stream	Tributary to	Location	Measurement date	Discharge (ft ³ /s)
Little Calumet River/Burns Ditch	Lake Michigan	Lat 41°34'28"N, long 87°17'22"W, NAD83, at Central Avenue bridge at Lake Station, Lake County, IN.	10-16-02	22.7
Little Calumet River/Burns Ditch	Lake Michigan	Lat 41°35'29"N, long 87°13'33"W, NAD83 approximately 200 feet downstream(east) of US Highway/Interstate 90 bridge at Lake Station, Lake County, IN.	10-16-02	36.4
Willow Creek	Little Calumet River/Burns Ditch	Lat 41°35'35"N, long 87°12'45"W, NAD83, approximately 700 feet downstream(west) of US Highway 20 bridge at Portage, Porter County, IN.	10-16-02	1.60
East Arm Little Calumet River	Burns Ditch	Lat 41°36'45"N, long 87°10'25"W, NAD83, at US Highway 249 bridge at Portage, Porter County, IN.	10-16-02	240

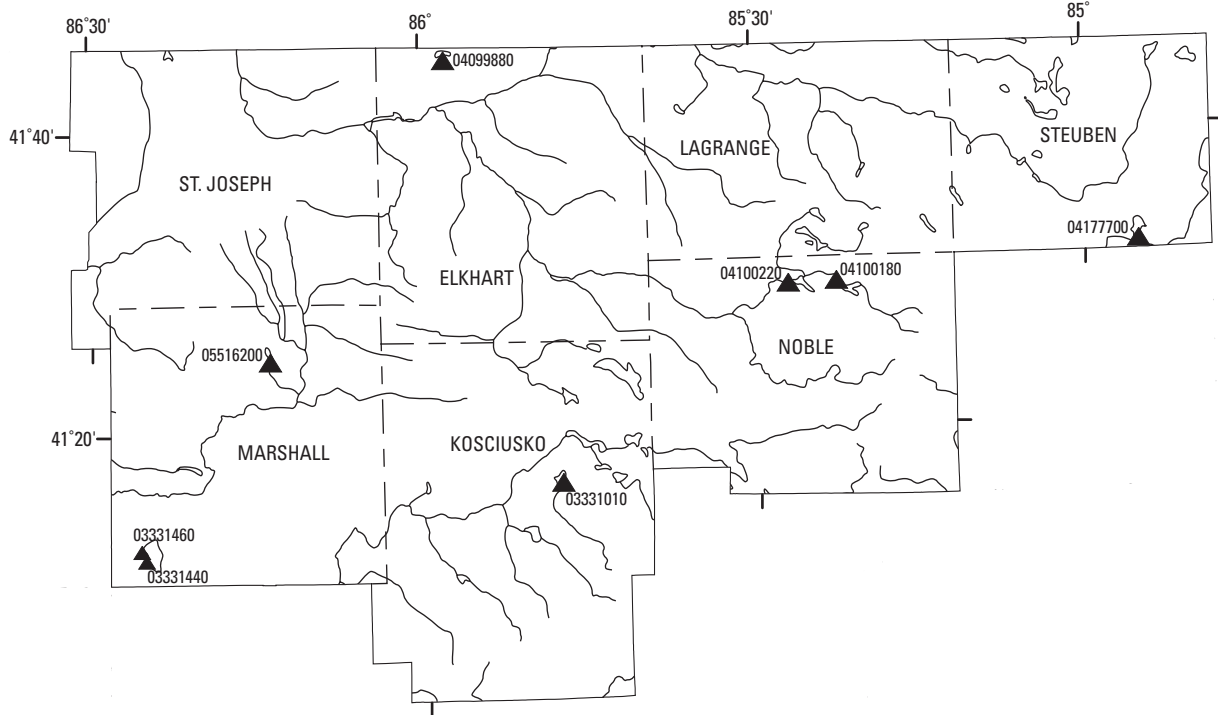
Streamflow was measured at points other than continuous gaging stations at one site in the Lake Michigan basin during the period April 7-August 27, 1998 as part of a miscellaneous surface water study.

Stream	Tributary to	Location	Measurement date	Discharge (ft ³ /s)
Turkey Creek	Elkhart River	Lat 41°24'31"N Long 85°51'27W NAD27 at West Emeline Street, in Milford, Kosciusko County, IN	04-07-1998	148
			06-01-1998	29.7
			06-04-1998	23.3
			06-18-1998	46.0
			07-20-1998	20.5
			08-27-1998	21.8

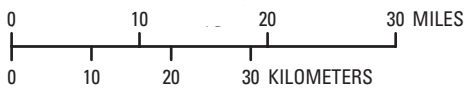
Wabash River Basin

Streamflow was measured at points other than continuous gaging stations at one site in the Wabash River basin on November 19, 2003. This data was collected as a test of an acoustic streamflow measurement device.

Stream	Tributary to	Location	Measurement date	Discharge (ft ³ /s)
Eagle Creek	White River	Lat 39°53'16"N, Long 86°18'00W NAD27 at Lafayette Road, Marion County, IN	11-19-03	530



Base from U.S. Geological Survey digital data, 1:2,000,000, 1996
 Albers Equal-Area Conic projection
 Standard parallels 29°30' and 45°30' central meridian -96°



EXPLANATION

▲ 04100180 ACTIVE LAKE STATION WITH SITE IDENTIFIER



Figure 8.--Locations of lakes having water-level records for water year 2003.

03331010 BIG CHAPMAN LAKE NEAR WARSAW, IN—Continued

LAKE LEVEL, FEET
WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.19	8.14	8.13	7.82	7.94	8.18	8.16	7.84	8.27	7.77	7.95	---
10	8.14	8.37	8.01	7.79	8.36	8.09	8.53	7.88	8.25	7.75	7.94	---
15	8.15	8.29	8.04	7.85	8.29	8.11	8.37	7.96	8.06	7.66	7.84	---
20	8.17	8.23	8.03	7.85	8.11	8.15	8.10	8.01	7.90	7.72	7.89	---
25	8.23	8.25	7.92	7.81	8.35	8.12	8.00	8.08	7.85	7.98	7.78	---
EOM	8.15	8.35	7.85	7.97	8.30	8.12	7.88	8.13	7.80	7.93	---	---
MEAN	8.15	8.25	8.04	7.83	8.16	8.14	8.23	7.99	8.05	7.80	---	---
MAX	8.25	8.37	8.34	7.97	8.37	8.27	8.59	8.17	8.31	7.98	---	---
MIN	7.96	8.13	7.85	7.78	7.94	8.09	7.88	7.83	7.80	7.65	---	---
WTR YR	2001	MEAN 8.04	MAX 8.60	MIN 7.26								

LAKE LEVEL, FEET
WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.08	8.27	8.32	7.99	8.39	8.30	8.30	7.96	7.96	7.71	7.72	7.54
10	8.04	8.21	8.32	7.96	8.31	8.38	8.39	8.06	7.89	7.70	7.62	7.53
15	8.50	8.05	8.47	7.98	8.26	8.25	8.32	8.31	7.89	7.61	7.60	7.46
20	8.38	8.08	8.54	8.01	8.38	8.14	8.19	8.14	7.85	---	7.66	7.60
25	8.34	8.14	8.46	8.08	8.32	8.11	8.03	8.06	7.90	7.66	7.68	7.52
EOM	8.15	8.33	8.13	8.62	8.34	8.23	8.02	7.95	7.80	7.74	7.60	7.50
MEAN	8.29	8.16	8.39	8.05	8.34	8.24	8.24	8.12	7.88	7.69	7.66	7.52
MAX	8.62	8.33	8.62	8.62	8.58	8.50	8.51	8.54	7.96	7.79	7.74	7.60
MIN	8.00	8.05	8.13	7.96	8.23	8.08	7.98	7.95	7.80	7.60	7.59	7.44
WTR YR	2002	MEAN 8.05	MAX 8.63	MIN 7.44								

LAKE LEVEL, FEET
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.53	---	---	---	---	---	---	---	---	---	---	7.92
10	---	---	---	---	---	---	---	---	---	---	---	7.83
15	---	---	---	---	---	---	---	---	---	---	---	7.78
20	---	---	---	---	---	---	---	---	---	---	---	7.71
25	---	---	---	---	---	---	---	---	---	---	---	7.80
EOM	---	---	---	---	---	---	---	---	---	---	7.83	7.82
MEAN	---	---	---	---	---	---	---	---	---	---	---	7.84
MAX	---	---	---	---	---	---	---	---	---	---	---	8.03
MIN	---	---	---	---	---	---	---	---	---	---	---	7.71
WTR YR	2003	MEAN 7.77	MAX 8.03	MIN 7.49								

04177700 HAMILTON LAKE AT HAMILTON, IN

LOCATION.--Lat 41°32'10", long 84°54'45", in SW¹/₄SW¹/₄NW¹/₄ 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 2002, June 2003 to September 30, 2003.

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, FEET
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	---	---	---	---	---	---	---	8.55	8.96	8.84
10	---	---	---	---	---	---	---	---	---	8.70	8.67	8.64
15	---	---	---	---	---	---	---	---	---	8.57	8.62	8.60
20	---	---	---	---	---	---	---	---	---	8.50	8.54	8.53
25	---	---	---	---	---	---	---	---	8.52	8.63	8.53	8.64
EOM	---	---	---	---	---	---	---	---	8.48	8.71	8.55	8.70
MEAN	---	---	---	---	---	---	---	---	---	8.62	8.70	8.69
MAX	---	---	---	---	---	---	---	---	---	8.84	9.35	9.09
MIN	---	---	---	---	---	---	---	---	---	8.47	8.51	8.52

WTR YR 2003 MEAN 8.66 MAX 9.38 MIN 8.41

03331440 LAKE MAXINKUCKEE AT CULVER, IN

LOCATION.--Lat 41°11'48", long 86°25'00", in NE¹/₄SE¹/₄NW¹/₄ 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 access site, 50 ft north of boat ramp, 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.

ESTABLISHED LEGAL LEVEL.--3.12 ft gage datum or 733.12 ft above National Geodetic Vertical Datum of 1929 as decreed on August 9, 1948, by the Marshall County Circuit Court.

LAKE-LEVEL CONTROL.--The level of the lake is controlled by a concrete dam with a fixed crest at the outlet channel.

INLET AND OUTLET.--Wilson Ditch enters the lake at the northeast corner, Curtiss Ditch enters at the east center, and Norris Inlet enters at the southeast corner. The outlet leaves the lake at the western shore, north of the point, and flows into Lost Lake 1,600 ft downstream, thence into the Tippecanoe River.

EXTREMES FOR PERIOD OF RECORD.--Maximum stage, 5.48 ft June 14, 15, 1981; minimum stage, 2.12 ft Nov. 19, 1953 and Nov. 19, 1956.

LAKE LEVEL, FEET
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	2.85	2.69	2.73	2.99	3.15	3.24	3.56	---	---	3.39	3.57	3.36
10	2.81	2.72	2.72	3.02	3.18	3.27	---	---	---	3.64	3.51	3.32
15	2.76	2.73	2.73	2.99	3.19	3.30	---	---	---	3.54	3.42	3.24
20	2.73	2.72	2.86	3.02	3.19	3.36	---	---	---	3.49	3.34	3.22
25	2.71	2.75	2.90	3.04	3.21	3.42	---	---	---	3.70	3.22	3.22
EOM	2.71	2.76	2.93	3.09	3.22	3.40	---	---	3.33	3.66	3.36	3.18
MEAN	2.77	2.73	2.80	3.02	3.18	3.33	---	---	---	3.57	3.43	3.28
MAX	2.88	2.76	2.93	3.09	3.22	3.48	---	---	---	3.74	3.63	3.47
MIN	2.71	2.69	2.72	2.98	3.09	3.23	---	---	---	3.31	3.20	3.18

WTR YR 2003 MEAN 3.14 MAX 3.74 MIN 2.69

04099880 SIMONTON LAKE NEAR ELKHART, IN

LOCATION.--Lat 41°45'05", long 85°57'28", in NE $\frac{1}{4}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$ 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 access 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, FEET
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	2.04	1.94	2.11	2.32	2.35	2.35	2.57	2.65	2.80	2.41	2.49	2.31
10	1.99	2.01	2.10	2.33	2.35	2.35	2.60	2.90	2.77	2.52	2.52	2.25
15	1.96	2.00	2.10	2.32	2.35	2.36	2.57	2.97	2.71	2.43	2.48	2.18
20	1.95	2.00	2.24	2.33	2.35	2.52	2.56	2.95	2.61	2.43	2.36	2.09
25	1.95	2.08	2.29	2.33	2.35	2.50	2.50	2.88	2.52	2.50	2.26	2.25
EOM	1.94	2.10	2.31	2.33	2.35	2.46	2.49	2.84	2.44	2.48	2.21	2.27
MEAN	1.97	2.01	2.18	2.32	2.35	2.41	2.54	2.83	2.67	2.46	2.40	2.23
MAX	2.05	2.10	2.31	2.33	2.35	2.52	2.60	2.97	2.83	2.55	2.56	2.34
MIN	1.93	1.92	2.10	2.30	2.33	2.35	2.45	2.53	2.44	2.35	2.19	2.07

WTR YR 2003 MEAN 2.37 MAX 2.98 MIN 1.92

04100180 SYLVAN LAKE AT ROME CITY, IN

LOCATION.--Lat 41°29'53", long 85°22'38", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.9, T.35 N., R.10 E., Noble County, Hydrologic Unit 04050001 (ALBION, IN quadrangle). The gage is on the lake 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 wall of the dam at same site.

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, 11.14 ft Aug. 22 and 23, 1996; minimum stage, below -.30 ft Oct. 3-9, and 16-18, 1994.

LAKE LEVEL, FEET
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003
DAILY OBSERVATION AT 2400 HOURS

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.11	9.10	9.10	9.18	9.17	9.17	9.69	9.52	9.28	9.14	9.32	9.71
10	9.07	9.14	9.09	9.17	9.15	9.37	9.68	9.89	9.25	9.61	9.24	9.42
15	9.05	9.12	9.10	9.13	9.13	9.62	9.46	10.01	9.35	9.40	9.22	9.29
20	9.11	9.12	9.20	9.13	9.13	9.59	9.41	9.71	9.26	9.23	9.13	9.19
25	9.10	9.14	9.21	9.11	9.16	9.49	9.30	9.48	9.16	9.36	9.18	9.37
EOM	9.10	9.12	9.19	9.12	9.16	9.50	9.29	9.37	9.10	9.34	9.21	9.53
MEAN	9.09	9.12	9.14	9.14	9.14	9.42	9.47	9.64	9.26	9.35	9.23	9.43
MAX	9.11	9.15	9.21	9.19	9.17	9.63	9.76	10.05	9.36	9.61	9.39	9.75
MIN	9.04	9.08	9.09	9.11	9.12	9.15	9.21	9.37	9.10	9.08	9.13	9.18

WTR YR 2003 MEAN 9.29 MAX 10.06 MIN 9.04

RECORDS AVAILABLE ON LAKES

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	Drain-age (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	-----	-----	-	1957-2002
BAYOU DRAIN BASIN								
03322300	Hovey Lake near Mount Vernon	Posey	6.36	253	-----	-----	-	1950-69
WABASH RIVER BASIN								
03327550	Everett Lake near 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, 1976-2002
03327650	Shriner Lake at Tri-Lakes	Whitley	.94	111	907.04	-----	-	1943-2002
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, 1959-2002
03328250	North Little Lake at Silver Lake ^b	Kosciusko	2.89	12	861.73	170	+	1947-
03328350	Silver Lake at Silver Lake	Kosciusko	6.31	102	861.73	1,520	+	1947-2002
03328400	Lukens Lake near Disko	Wabash	1.76	46	763.60	1,010	+	1948-49, 1959-2002
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, 1976-2002
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	+	1943-2002
03330160	Gilbert Lake near Washington Center	Noble	.37	28	-----	490	+	1954-2002
03330180	Horseshoe Lake near 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 ¹	Noble	35.2	10	-----	-----	-	1945-51
03330240	Webster Lake at North Webster	Kosciusko	49.2	774	852.75	7,170	+	1943-2002
03330243	James Lake at Oswego ^c	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	+	1943-2002
03330320	Kuhn Lake near North Webster ^d	Kosciusko	3.85	137	837.50	1,290	+	1945-
03330340	Big Barbee Lake near North Webster ^d	Kosciusko	44.7	304	837.50	5,640	+	1945-49
03330360	Little Barbee Lake near North Webster ^d	Kosciusko	49.0	74	837.50	960	+	1945-49
03330380	Shoe Lake near Oswego	Kosciusko	.34	40	841.57	-----	-	1946-53, 1972,74, 1976-2002
03330400	Banning Lake near North Webster ^d	Kosciusko	.48	12	837.50	110	+	1945-
03330420	Irish Lake near North Webster ^d	Kosciusko	50.9	182	837.50	2,330	+	1945-
03330440	Sechrist Lake near North Webster ^d	Kosciusko	.58	105	837.50	2,490	+	1945-
03330460	Sawmill Lake near North Webster	Kosciusko	51.8	36	837.50	370	+	1945-2002
03330480	Tippecanoe Lake at Oswego	Kosciusko	113	768	836.40	28,380	+	1943-2002
03330495	Oswego Lake at Oswego ^c	Kosciusko	113	83	836.40	780	+	1943-
03331010	Big Chapman Lake near Warsaw ²	Kosciusko	4.17	581	827.75	6,080	+	1945-71, 1976-

RECORDS AVAILABLE ON LAKES--Continued

Lakes in the Ohio River Basin for which records are available--Continued

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
WABASH RIVER BASIN--Continued								
03331020	Little Chapman Lake near Warsaw ^e	Kosciusko	7.13	77	827.75	1,990	+	1945-71, 1976-
03331040	Pike Lake at Warsaw	Kosciusko	41.5	203	805.64	2,830	+	1954-2002
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	+	1954-2002
03331140	Winona Lake at Warsaw	Kosciusko	32.1	562	811.06	16,680	+	1943-2002
03331160	Center Lake at Warsaw	Kosciusko	0.73	120	803.86	2,060	+	1945-2002
03331180	Palestine Lake at Palestine	Kosciusko	32.4	290	-----	1,170	+	1954-2002
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	+	1952-2002
03331320	Diamond Lake near Silver Lake	Kosciusko	3.92	79	-----	1,280	+	1954-2002
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	+	1943-2002
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	+	1946-2002
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	+	1971-2002
03331440	Lake Maxinkuckee at Culver ⁹	Marshall	13.7	1,864	733.12	45,600	+	1943-
03331460	Lost Lake near Culver ⁴	Marshall	14.2	40	732.00	-----	-	1954-
03331480	Langenbaum Lake near Monterey	Starke	.72	48	717.96	260	+	1954-66
03331700	Bruce Lake at Bruce Lake	Pulaski	6.38	245	723.69	1,790	+	1943-53
03332200	Fletcher Lake at Fletcher	Fulton	.67	45	783.20	880	+	1946-53
03370900	Starve Hollow Lake near Vallonia	Jackson	6.67	145	-----	980	+	1946-61 1963-71
03371700	Ogle Lake near Nashville	Brown	1.03	20	-----	250	+	1954-2002

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	-----	-	1946-2002
04097520	Lake Pleasant near Nevada Mills	Steuben	3.18	24	961.50	3,490	+	1954-69, 1971, 1976-2002
04097550	Lake George at Jamestown	Steuben	^a 14.7	488	985.28	-----	-	1946-2002
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	+	1946-2002
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	+	1946-2002
04097950	Lake Gage at Panama	Steuben	^a 17.3	332	954.25	10,140	+	1946-2002
04097960	Lime Lake at Panama ^f	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	+	1946-2002
04099250	Bower Lake near Pleasant Lake	Steuben	^a 84.6	25	948.50	280	+	1946-71, 1976-2002

RECORDS AVAILABLE ON LAKES--Continued

Lakes in the St. Lawrence River Basin for which records are available--Continued

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								
04099260	Golden Lake near Pleasant Lake ^g	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	+	1946-2002
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 ^h	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, 1976-2002
04099600	Big Long Lake near Stroh	Lagrange	4.77	388	956.2	-----	-	1954-2002
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 ⁱ	Lagrange	4.69	69	936.50	1,630	+	1952-66
04099670	Fish Lake near Plato	Lagrange	^a 10.6	100	936.50	4,050	+	1945-2002
04099700	North Twin Lake near Howe	Lagrange	1.54	135	843.56	2,120	+	1953-2002
04099710	South Twin Lake near Howe ^j	Lagrange	2.22	116	843.56	3,600	+	1953-70
04099740	Shipshewana Lake near Shipshewana	Lagrange	^a 6.74	202	852.04	1,350	+	1951-2002
04099760	Fish Lake near Scott	Lagrange	^a 6.21	139	814.42	2,560	+	1954-73, 1976-2002
04099780	Stone Lake near Scott	Lagrange	1.51	152	818.76	2,060	+	1954-73, 1976-2002
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, 1976-2002
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	+	1946-2002
04100040	Atwood Lake near Wolcottville	Lagrange	1.23	170	899.99	1,560	+	1948-53
04100050	Witmer Lake near Wolcottville ^k	Lagrange	36.1	204	897.36	7,040	+	1945-
04100060	Westler Lake near Wolcottville ^k	Lagrange	37.8	88	897.36	1,770	+	1945-
04100070	Dallas Lake near Wolcottville ^k	Lagrange	39.8	283	897.36	9,970	+	1945-
04100080	Martin Lake near Valentine ^m	Lagrange	4.93	26	899.45	890	+	1945-
04100090	Olin Lake near Valentine ^m	Lagrange	5.81	103	899.45	9,180	+	1945-
04100100	Oliver Lake near Valentine	Lagrange	11.1	362	899.45	15,358	+	1945-2002
04100110	Hackenburg Lake near Wolcottville	Lagrange	55.4	42	897.36	510	+	1945-2002
04100120	Messick Lake near Wolcottville ^k	Lagrange	56.4	68	897.36	1,450	+	1945-
04100130	Jones Lake near Cosperville ^{7, n}	Noble	70.3	114	885.55	960	+	1948-
04100140	Bixler Lake at Kendallville	Noble	5.28	120	963.65	2,090	+	1945-2002
04100150	Round Lake at Kendallville ^o	Noble	3.47	99	954.50	2,140	+	1954-
04100160	Little Long Lake at Kendallville	Noble	4.55	71	954.50	1,750	+	1954-2002
04100170	Latta Lake near Rome City	Noble	2.52	42	918.71	900	+	1954-66
04100180	Sylvan Lake at Rome City	Noble	33.8	669	916.20	5,986	+	1943-
04100190	Sacarider Lake near Kendallville	Noble	1.43	33	-----	740	+	1954-63
04100200	Tamarack Lake near Cosperville ⁿ	Noble	15.9	50	885.55	880	+	1948-
04100210	Steinbarger Lake near Cosperville ⁿ	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	+	1961-2002
04100260	Bear Lake near Wolflake	Noble	6.98	136	894.60	3,030	+	1943-2002
04100280	Muncie Lake near Burr Oak	Noble	42.8	47	-----	580	+	1954-2002
04100290	Silver Lake near Wolflake	Noble	.28	34	-----	220	+	1953-63

RECORDS AVAILABLE ON LAKES--Continued

Lakes in the St. Lawrence River Basin for which records are available--Continued

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								
04100300	Skinner Lake near Albion	Noble	14.0	125	927.74	1,750	+	1945-72, 1977-2002
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	+	1956-2002
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	+	1946-2002
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, 1977-2002
04100380	Harper Lake near Washington Center ^P	Noble	2.76	11	878.25	160	+	1946-
04100390	Knapp Lake near Washington Center	Noble	6.02	88	878.25	3,040	+	1946-2002
04100400	Moss Lake near Washington Center ^P	Noble	6.12	9	878.25	80	+	1946-
04100410	Hindman Lake near Washington Center ^P	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	-----	-----	-	1964-67
04100448	Papakeechee Lake near Syracuse	Kosciusko	5.52	300	-----	-----	-	1964-67
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	+	1943-2002
04100470	Dewart Lake near Leesburg	Kosciusko	^a 8.05	551	867.70	9,000	+	1945-2002
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	+	1943-2002
04177210	Round Lake at Clear Lake ^q	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	+	1961-2002
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

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
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	+	1946-76 1978-95
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	-----	-----	-----	-	1960-2002
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 1980-2002
05515230	Stone Lake at LaPorte ^u	LaPorte	^a 10.7	140	796.20	-----	-	1946-75 1980-
05515240	Clear Lake at LaPorte	LaPorte	.65	106	798.20	760	+	1942-49, 1952-75 1980-2002

RECORDS AVAILABLE ON LAKES--Continued

Lakes in the Upper Mississippi River Basin for which records are available--Continued

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
ILLINOIS RIVER BASIN--Continued								
05515600	Koontz Lake at Koontz Lake	Starke	^a 6.25	346	714.56	3,170	+	1943-2002
05515800	Riddles Lake near Lakeville	St. Joseph	^a 11.7	77	817.50	640	+	1946-73, 1976-2002
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 1989-00
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
05517200	Bass Lake at Bass Lake	Starke	5.18	1,400	713.65	-----	-	1943-2002
05517600	Wauhob Lake near Valparaiso	Porter	.40	21	-----	-----	-	1946-2002
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	-----	-	1946-2002
05517800	Lake Eliza near Beatrice	Porter	1.70	45	738.70	-----	-	1954-74, 1976-2002
05518700	Cedar Lake at Cedar Lake	Lake	8.14	781	-----	6,750	+	1943-2002
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 Wilnot.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 Druely Lake near Cromwell, and Druely Lake near Cromwell.⁹ Formerly published as Maxinkuckee Lake at Culver.^a Contains drainage area (5 percent or greater) that does not contribute directly to surface-water runoff.^b Has same control structure and level records as Silver Lake at Silver Lake.^c Has same control structure and level records as Tippecanoe Lake at Oswego.^d Has same control structure and level records as Sawmill Lake near North Webster.^e Has same control structure and level records as Big Chapman Lake near Warsaw.^f Has same control structure and level records as Lake Gage at Panama.^g Has same control structure and level records as Bower Lake near Pleasant Lake.^h Has same control structure and level records as Lake of The Woods near Helmer.ⁱ Has same control structure and level records as Fish Lake near Plato.^j Has same control structure and level records as North Twin Lake near Howe.^k Has same control structure and level records as Hackenburgh Lake near Wolcottville.^m Has same control structure and level records as Oliver Lake near Valentine.ⁿ Has same control structure and level records as Waldron Lake near Cosperville.^o Has same control structure and level records as Little Long Lake at Kendallville.^p Has same control structure and level records as Knapp Lake near Washington Center.^q Has same control structure and level records as Clear Lake at Clear Lake.^u Has same control structure and level records as Pine Lake at Laporte.

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	Schlamm Lake	Clark	19	170
Franke Lake	Clark	9	70	Sellers Lake	Kosciusko	32	340
Hartz Lake	Starke	28	370	Shakamak Lake	Sullivan	56	610
Kunkel Lake	Wells	25	150	Twin Lakes	Wabash	18	190
Lake Freeman	Carroll	1,547	26,000	Whitewater Lake	Union	199	3,650
Lake Shafer	White	1,291	13,120	Yellowwood Lake	Brown	133	1,890

STREAMS TRIBUTARY TO LAKE MICHIGAN

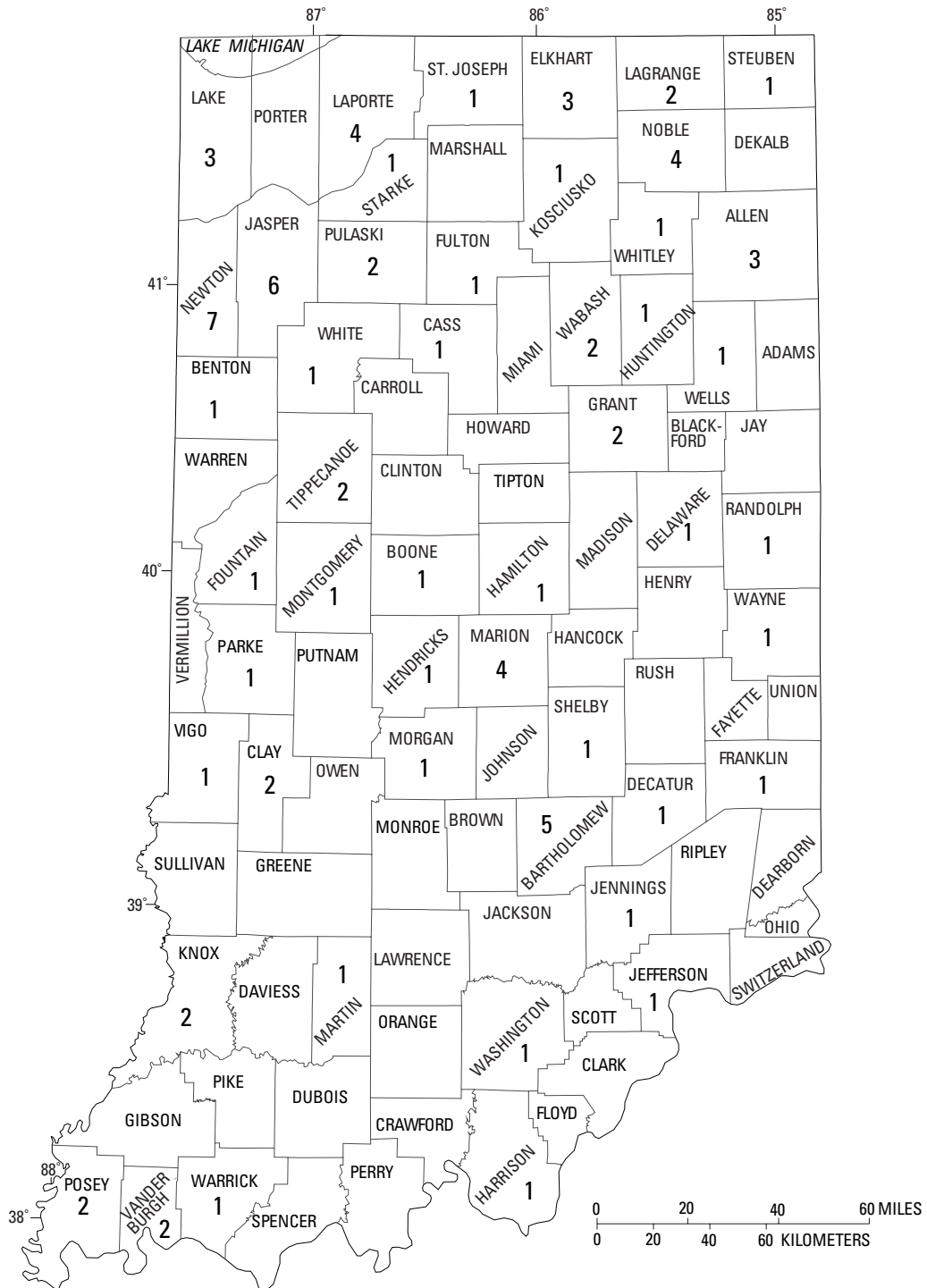
Appleman Lake	Lagrange	52	590	Mateer Lake	Lagrange	18	150
Bartley Lake	Noble	34	430	Miller Lake	Noble	11	160
Barton Lake	Steuben	94	1,340	Millers Lake	Noble	28	410
Bell Lake	Steuben	38	510	Mud Lake	Noble	8	70
Boner Lake	Kosciusko	40	370	Norman Lake	Noble	14	280
Bowen Lake	Noble	30	1,080	Pigeon Lake	Lagrange	61	1,160
Bristol Lake	Noble	27	740	Port Mitchell Lake	Noble	15	180
Buck Lake	Lagrange	18	150	Rainbow Lake	Lagrange	16	250
Center Lake	Steuben	46	390	Schockopee Lake	Noble	21	280
Cline Lake	Lagrange	20	350	Shock Lake	Kosciusko	37	1,210
Deer Lake	Noble	36	420	Smith Hole	Lagrange	2	10
Dock Lake	Noble	16	230	Still Lake	Lagrange	30	620
Eve Lake	Lagrange	31	670	Sweet Lake	Noble	16	210
Fish Lake	Steuben	59	750	Tamarack Lake	Noble	84	1,340
Hog Lake	LaPorte	59	690	Walters Lake	Steuben	53	550
Hog Lake	Steuben	48	570	Weir Lake	Lagrange	6	70
Lime Lake	Steuben	30	330	Wible Lake	Noble	49	650
Little Turkey Lake	Steuben	58	780	Williams Lake	Noble	46	1,070
Marl Lake	Noble	30	510	Wyland Lake	Kosciusko	6	100

STREAMS TRIBUTARY TO LAKE ERIE

Dunton Lake	DeKalb	21	340	Mirror Lake	Steuben	9	120
Handy Lake	Steuben	16	290	Terry Lake	DeKalb	17	160
Lake Anne	Steuben	17	280				

UPPER MISSISSIPPI RIVER BASIN

Cook Lake	Marshall	93	1,650	Gilbert Lake	Marshall	37	490
Dixon Lake	Marshall	33	480	Holem Lake	Marshall	40	390
Flat Lake	Marshall	26	210	Lawrence Lake	Marshall	69	1,580



Base from U.S. Geological Survey digital data, 1:2,000,000, 1996
 Albers Equal-Area Conic projection
 Standard parallels 29°30' and 45°30' central meridian -96°

EXPLANATION
 2 NUMBER OF GROUND-WATER WELLS IN DESIGNATED COUNTY

Figure 9.--Number of ground-water wells by county having water-level records for water-year 2003.

ALLEN COUNTY

410426084495201. Local number, AL 5.

LOCATION.--Lat 41°04'26", long 84°49'52", in NW $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.9, T.30 N., R.15 E., Allen County, Hydrologic Unit 04100005, (WOODBURN SOUTH, IN-OH quadrangle), 1.3 mi west of Edgerton.
Owner: Noel Gerig.

AQUIFER.--Limestone of Salina Formation of Silurian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 4 in., depth 97 ft, cased to 40 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 760 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of floor of shelter, 0.00 ft above land-surface datum.

REMARKS.--Water level affected by quarry operations until 1980. Quarry operations resumed in 1997.

PERIOD OF RECORD.--July 1962 to December 1971, January 1973 to October 2003 (discontinued).

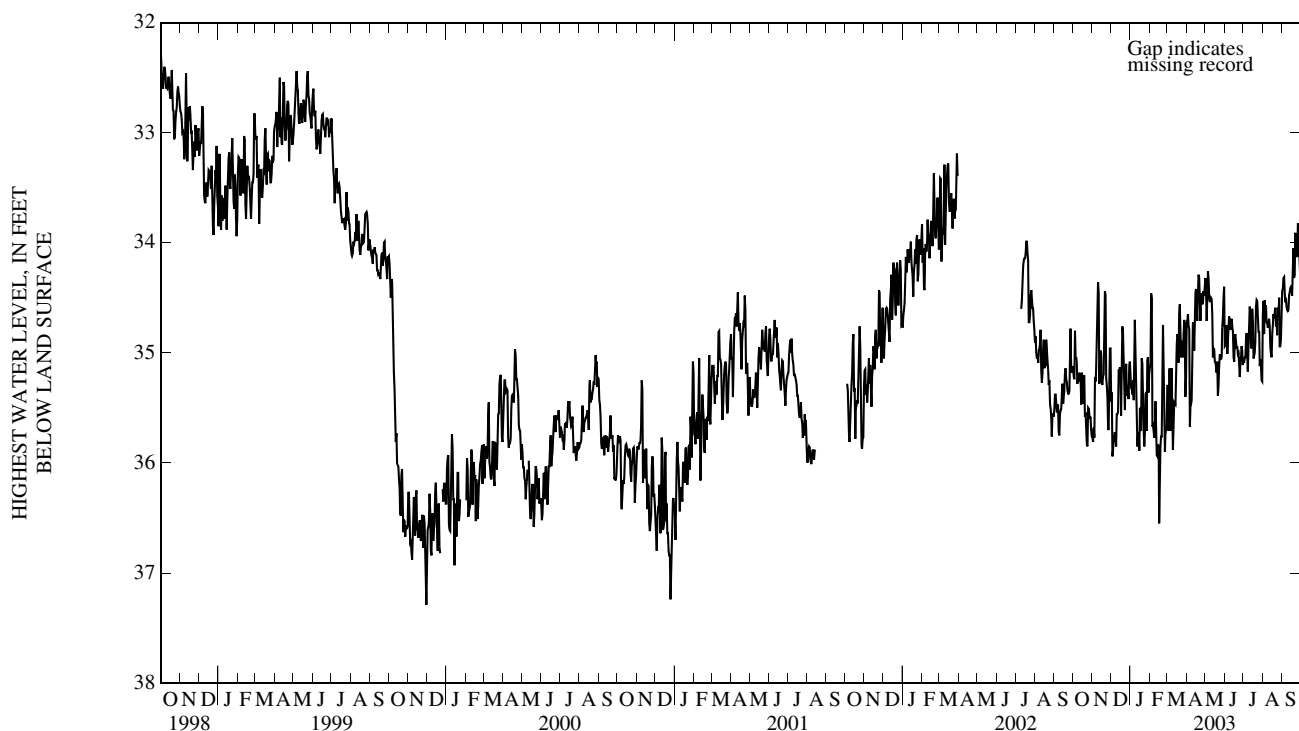
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 10.04 ft below land-surface datum, July 8, 9, 1962; lowest, 38.41 ft below land-surface datum, May 4, 1967.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	35.06	35.22	35.77	35.25	35.67	35.15	34.78	34.26	35.01	34.87	34.65	34.46
10	35.24	34.36	35.56	35.17	35.44	35.88	35.04	34.50	34.79	34.74	34.74	34.62
15	35.18	35.02	35.13	35.89	35.85	35.29	34.45	34.97	35.04	34.60	35.04	34.40
20	35.58	34.92	34.82	35.10	35.76	34.65	34.29	35.08	34.96	34.90	34.64	34.32
25	35.50	35.41	35.10	35.37	35.90	34.90	34.46	35.02	35.22	34.81	34.59	34.13
EOM	35.76	34.96	35.08	35.19	35.69	35.23	34.40	34.40	35.11	35.26	34.63	34.30
MIN	34.80	34.36	34.76	34.70	34.46	34.56	34.29	34.26	34.67	34.52	34.50	33.83
WTR YR	2003	HIGH 33.83 SEP 26										

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	35.94	36.04	36.22	35.82	36.25	35.90	36.02	34.85	35.39	35.34	35.33	34.99
10	35.65	34.96	36.27	35.91	36.08	36.46	35.78	35.27	35.22	35.19	35.41	35.06
15	35.92	35.78	35.70	36.32	36.73	35.92	35.00	35.50	35.67	35.11	35.66	34.84
20	36.06	35.71	35.45	35.71	36.55	35.58	34.92	35.42	35.37	35.26	35.27	34.85
25	36.24	36.00	35.86	35.99	36.48	35.39	35.02	35.58	35.84	35.40	35.28	34.27
EOM	36.43	35.94	35.65	36.15	36.20	35.88	34.91	34.94	35.60	35.80	35.01	34.98
MAX	36.43	36.34	36.58	36.37	36.79	36.46	36.14	35.86	35.84	35.80	35.74	35.17
WTR YR	2003	LOW 36.79 FEB 16										



ALLEN COUNTY

410932084561101. Local number, AL 6.

LOCATION.--Lat 41°09'32", long 84°56'11", in SW¹/₄SW¹/₄NE¹/₄ sec.10, T.31 N., R.14 E., Allen County, Hydrologic Unit 04100005, (GRABILL, IN quadrangle), 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.

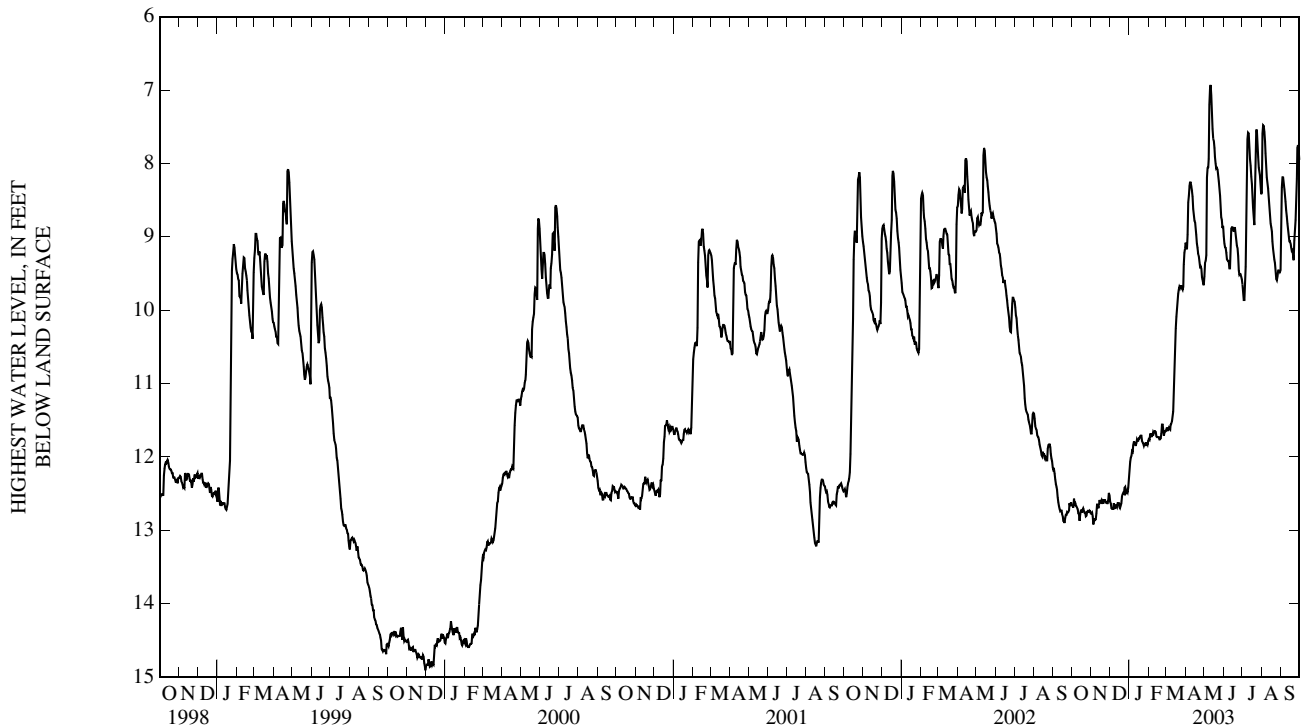
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 6.93 ft below land-surface datum, May 11, 2003; lowest, 15.10 ft below land-surface datum, Nov. 26, 1994.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	12.64	12.85	12.71	11.92	11.73	11.60	8.53	8.19	9.22	9.66	7.57	8.27
10	12.71	12.65	12.66	11.81	11.65	11.52	8.31	6.99	9.43	7.58	8.27	8.72
15	12.73	12.62	12.63	11.78	11.73	10.49	8.78	7.66	8.87	8.18	8.82	9.06
20	12.73	12.64	12.54	11.71	11.75	9.78	9.15	8.07	8.97	8.84	9.24	9.25
25	12.75	12.62	12.41	11.82	11.71	9.67	9.40	8.34	9.46	7.70	9.59	8.42
EOM	12.77	12.52	12.29	11.78	11.65	9.16	9.66	8.85	9.58	8.42	9.46	7.95
MIN	12.57	12.49	12.29	11.71	11.56	9.16	8.26	6.93	8.87	7.55	7.48	7.75
WTR YR	2003	HIGH 6.93 MAY 11										

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	12.74	12.97	12.74	11.99	11.81	11.73	8.97	9.25	9.31	9.86	7.70	8.43
10	12.87	12.77	12.79	11.92	11.75	11.60	8.51	7.20	9.51	7.67	8.38	8.89
15	12.80	12.67	12.73	11.87	11.85	10.79	8.87	7.72	8.94	8.28	8.92	9.17
20	12.84	12.69	12.65	11.81	11.85	9.93	9.27	8.13	9.05	8.98	9.46	9.47
25	12.85	12.69	12.52	11.93	11.78	9.86	9.49	8.44	9.63	7.95	9.74	8.77
EOM	12.87	12.64	12.45	11.88	11.75	9.27	9.72	8.99	9.66	8.60	9.58	8.09
MAX	12.95	13.04	12.85	12.29	11.91	11.75	9.77	9.67	9.66	10.02	9.74	9.47
WTR YR	2003	LOW 13.04 NOV 4										



ALLEN COUNTY

410335085190701. Local number, AL 8.

LOCATION.--Lat 41°03'35", long 85°19'07", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 8, T.30 N., R.11 E., Allen County, Hydrologic Unit 05120101, (ARCOLA, IN quadrangle), on Covington Road about 5 mi west of Interstate 69 on the northeast corner of the United Telephone Co. 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 above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.50 ft above land-surface datum.

REMARKS.--Water level data is affected by nearby pumpage. Daily fluctuations greater than 3 ft are common.

PERIOD OF RECORD.--July 1988 to current year. Records for WY1988, WY1989, WY1990 published as AL 7.

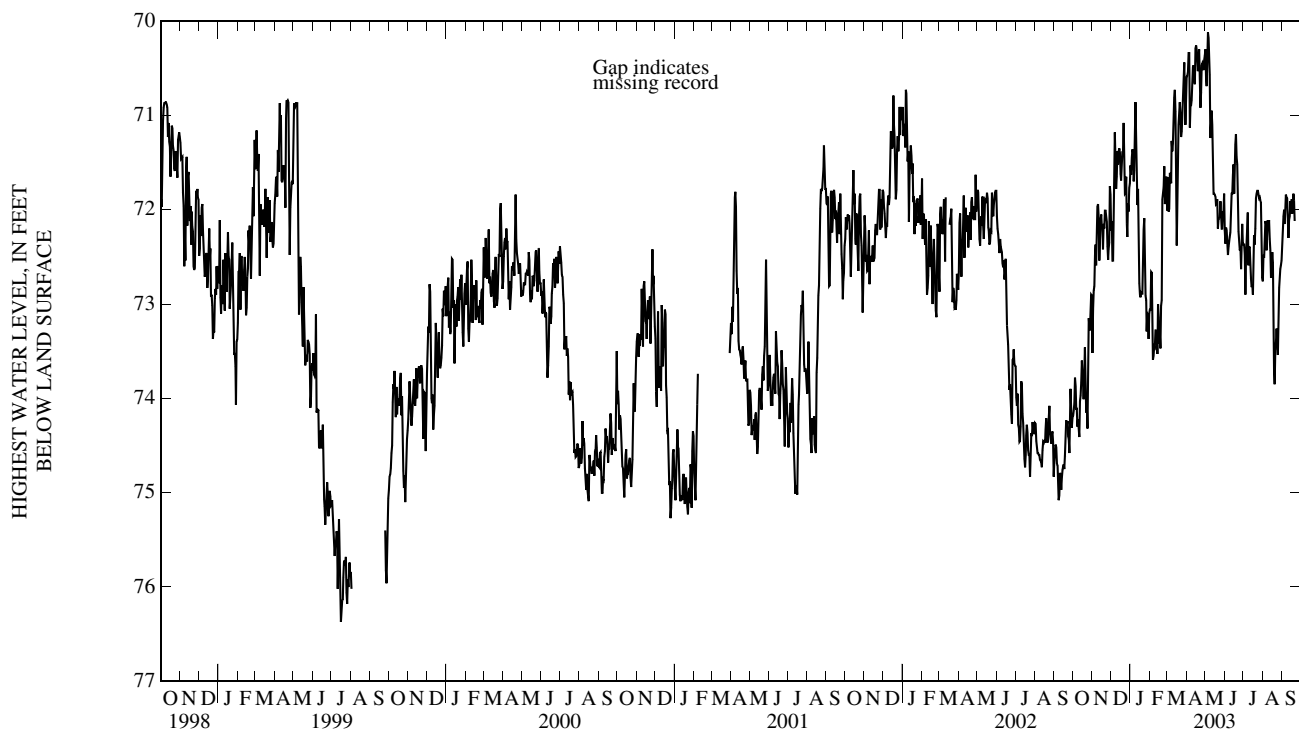
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 55.70 ft below land-surface datum, Apr. 26, 1989; lowest, unknown, but greater than 76.48 ft below land-surface datum, July 10, 12, 15, 16, 18, 19, 31, Aug. 1, 2, 3, 1999. Recorder was unable to record below this water level, which occurred on numerous occasions between Aug. 3, and Sept. 24, 1999.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	73.87	72.48	71.75	71.40	73.31	71.61	70.34	70.12	72.33	72.50	72.12	72.15
10	74.32	71.94	71.65	71.28	73.28	71.30	70.67	71.09	72.24	72.40	72.21	72.06
15	73.60	72.05	71.40	72.78	73.14	71.89	70.29	71.83	71.52	72.79	72.59	72.04
20	73.46	72.20	71.39	72.89	72.96	70.97	70.38	71.89	71.44	72.20	73.85	71.90
25	73.66	72.39	71.65	72.91	71.94	71.04	70.47	71.91	72.43	71.84	73.54	---
EOM	72.91	71.84	71.72	73.10	71.65	70.89	70.37	71.83	72.35	72.72	72.54	71.47
MIN	72.90	71.75	71.08	70.86	71.54	70.44	70.26	70.12	71.20	71.80	72.11	71.47
WTR YR	2003	HIGH	70.12	MAY	5							

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	74.60	73.12	72.63	72.32	73.80	72.18	71.47	70.96	72.81	73.09	72.67	72.41
10	74.83	72.54	72.14	72.20	73.63	72.00	71.05	71.81	72.76	72.91	72.70	72.58
15	74.27	72.83	72.07	73.18	73.90	72.74	70.67	72.74	72.16	73.11	73.19	72.55
20	74.05	72.91	71.99	73.41	73.41	71.39	70.68	72.79	72.22	72.56	74.48	72.64
25	74.32	73.58	72.54	73.28	72.32	71.37	71.08	72.39	73.01	72.28	74.10	---
EOM	73.78	72.66	72.59	73.57	72.58	71.17	70.83	72.52	73.00	73.00	73.00	71.93
MAX	74.84	74.03	73.34	73.84	74.11	72.94	71.56	72.80	73.24	73.54	74.48	72.83
WTR YR	2003	LOW	74.84	OCT	7							



GROUND-WATER DATA
BARTHOLOMEW COUNTY

391627085534401. Local number, BA 4.

LOCATION.--Lat 39°16'27", long 85°53'44", in NE¼NE¼NE¼ sec.31, T.10 N., R.6 E., Bartholomew County, Hydrologic Unit 05120205, (EDINBURGH, IN quadrangle), 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.

REMARKS.--Water level affected by agricultural withdrawals during May - August growing season.

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

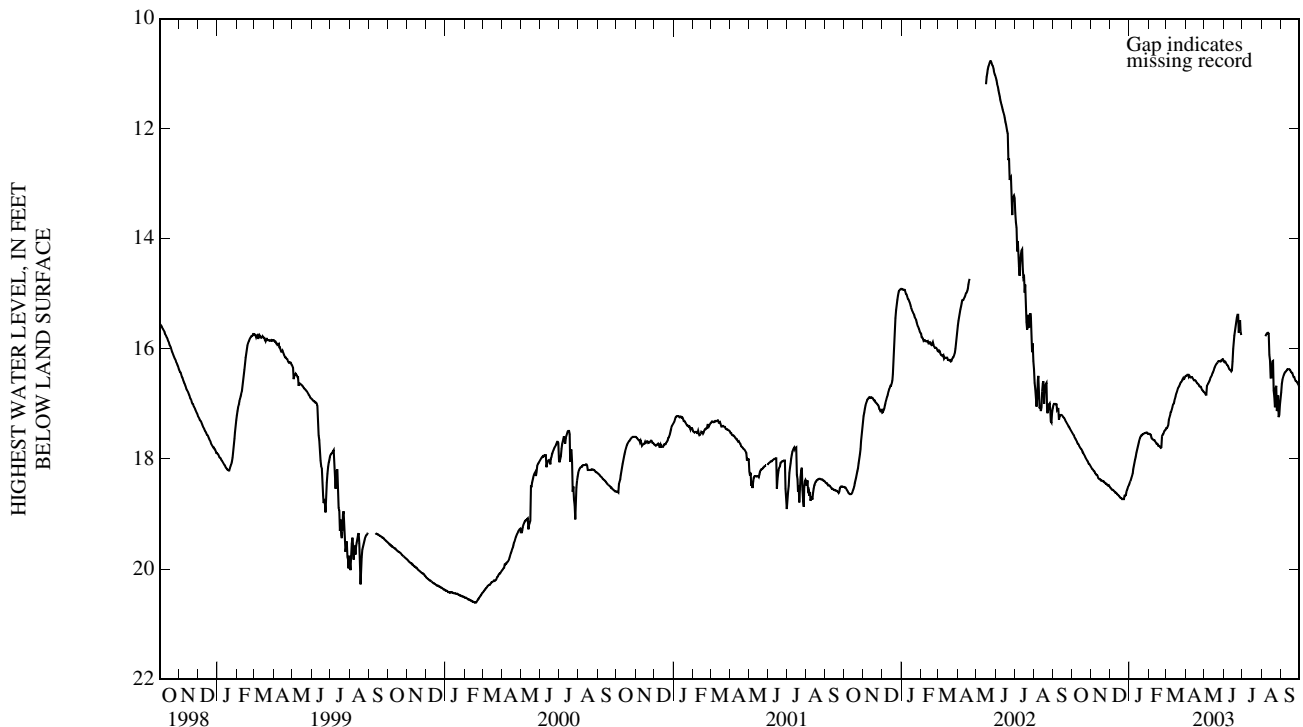
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 10.77 ft below land-surface datum, May 23-24, 2002; lowest, 21.18 ft below land-surface datum, July 2, 1992.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	17.61	18.22	18.56	18.31	17.61	17.29	16.47	16.67	16.27	---	---	16.48
10	17.72	18.29	18.61	18.01	17.66	17.10	16.51	16.56	16.37	---	15.72	16.39
15	17.81	18.37	18.67	17.74	17.73	16.90	16.57	16.42	16.23	---	16.52	16.38
20	17.92	18.41	18.73	17.57	17.80	16.71	16.63	16.28	15.59	---	16.76	16.48
25	18.03	18.45	18.67	17.53	17.52	16.60	16.69	16.22	15.71	---	17.13	16.59
EOM	18.14	18.50	18.48	17.54	17.47	16.51	16.78	16.19	---	---	16.91	16.69
MIN	17.52	18.16	18.48	17.52	17.47	16.51	16.47	16.19	15.38	---	15.71	16.37
WTR YR	2003	HIGH 15.38	JUN 23									

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	17.63	18.23	18.57	18.35	17.63	17.39	16.53	16.83	16.30	---	---	16.52
10	17.73	18.31	18.62	18.07	17.69	17.14	16.53	16.59	16.38	---	15.72	16.40
15	17.83	18.39	18.69	17.79	17.76	16.94	16.58	16.44	16.39	---	16.84	16.40
20	17.94	18.41	18.73	17.59	17.81	16.75	16.64	16.30	15.67	---	16.98	16.51
25	18.04	18.47	18.68	17.54	17.55	16.61	16.71	16.23	15.91	---	17.31	16.61
EOM	18.16	18.52	18.50	17.54	17.48	16.54	16.79	16.23	---	---	17.02	16.71
MAX	18.16	18.52	18.74	18.48	17.81	17.47	16.79	16.85	16.43	---	17.64	16.91
WTR YR	2003	LOW 18.74	DEC 21									



GROUND-WATER DATA
BARTHOLOMEW COUNTY

390950085553501. Local number, BA 8.

LOCATION.--Lat 39°09'50", long 85°55'35", in NE¹/₄NW¹/₄SW¹/₄ sec.1, T.8 N., R.5 E., Bartholomew County, Hydrologic Unit 05120206, (COLUMBUS, IN quadrangle), 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.

REMARKS.--Water levels may be affected by nearby water-supply well fields.

PERIOD OF RECORD.--February 1967 to October 2003 (discontinued).

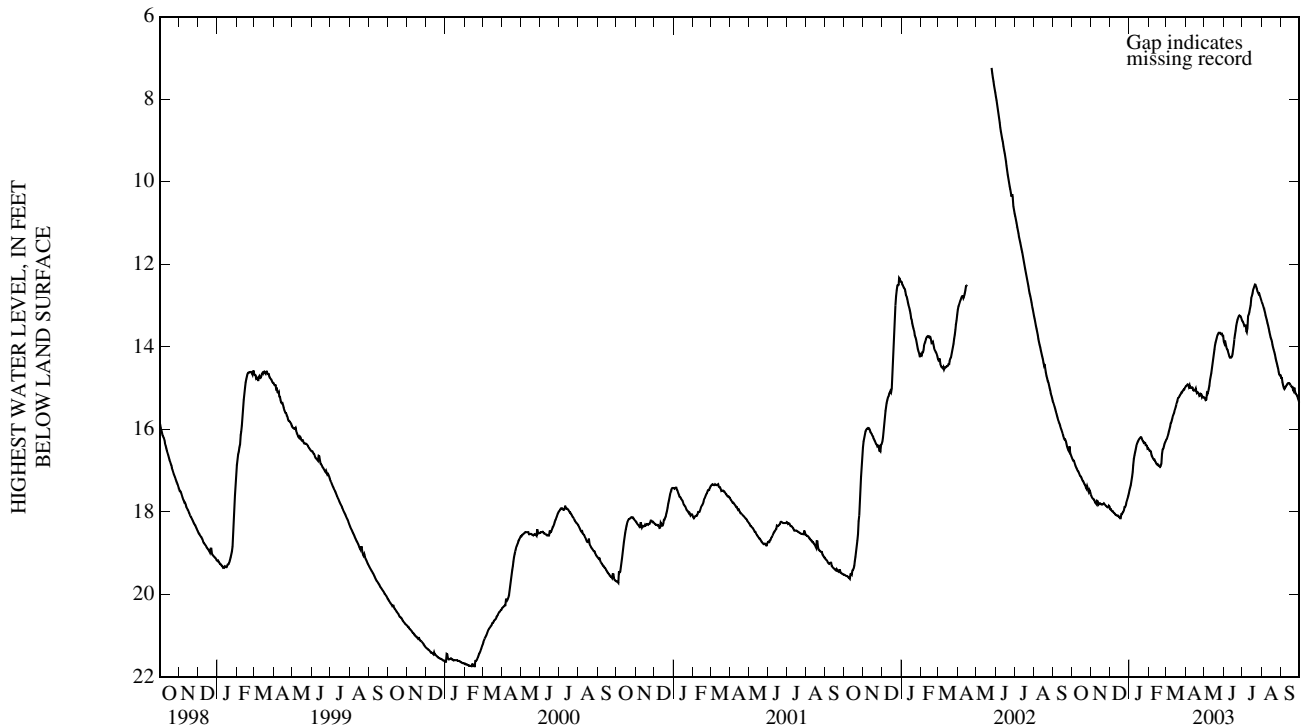
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 7.24 ft below land-surface datum, May 24-25, 2002; lowest, 24.13 ft below land-surface datum, Dec. 27, 1988.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	16.81	17.70	17.98	17.15	16.61	16.05	14.92	15.12	14.00	13.48	13.11	14.99
10	17.00	17.73	18.07	16.55	16.73	15.77	14.98	14.81	14.23	13.26	13.42	14.93
15	17.14	17.79	18.12	16.28	16.84	15.51	15.05	14.28	14.17	12.82	13.77	14.90
20	17.29	17.81	18.05	16.19	16.89	15.24	15.10	13.83	13.61	12.54	14.07	15.04
25	17.37	17.86	17.88	16.32	16.41	15.11	15.14	13.66	13.26	12.65	14.40	15.15
EOM	17.58	17.87	17.55	16.46	16.29	14.99	15.22	13.73	13.34	12.86	14.69	15.35
MIN	16.69	17.61	17.55	16.19	16.29	14.99	14.91	13.66	13.24	12.49	12.91	14.75
WTR YR	2003	HIGH 12.49 JUL 21										

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	16.86	17.73	18.01	17.25	16.65	16.12	15.02	15.28	14.05	13.60	13.17	15.02
10	17.02	17.82	18.08	16.63	16.78	15.83	15.01	14.94	14.27	13.55	13.48	14.95
15	17.17	17.81	18.13	16.31	16.87	15.56	15.08	14.40	14.25	12.99	13.81	14.93
20	17.33	17.84	18.05	16.23	16.92	15.29	15.13	13.89	13.71	12.59	14.12	15.07
25	17.47	17.88	17.88	16.34	16.47	15.15	15.18	13.66	13.30	12.69	14.47	15.21
EOM	17.61	17.93	17.61	16.49	16.32	15.03	15.25	13.86	13.38	12.91	14.81	15.40
MAX	17.61	17.93	18.16	17.55	16.92	16.29	15.25	15.33	14.35	13.73	14.81	15.40
WTR YR	2003	LOW 18.16 DEC 17										



GROUND-WATER DATA
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, (COLUMBUS, IN quadrangle), 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 October 2003 (discontinued).

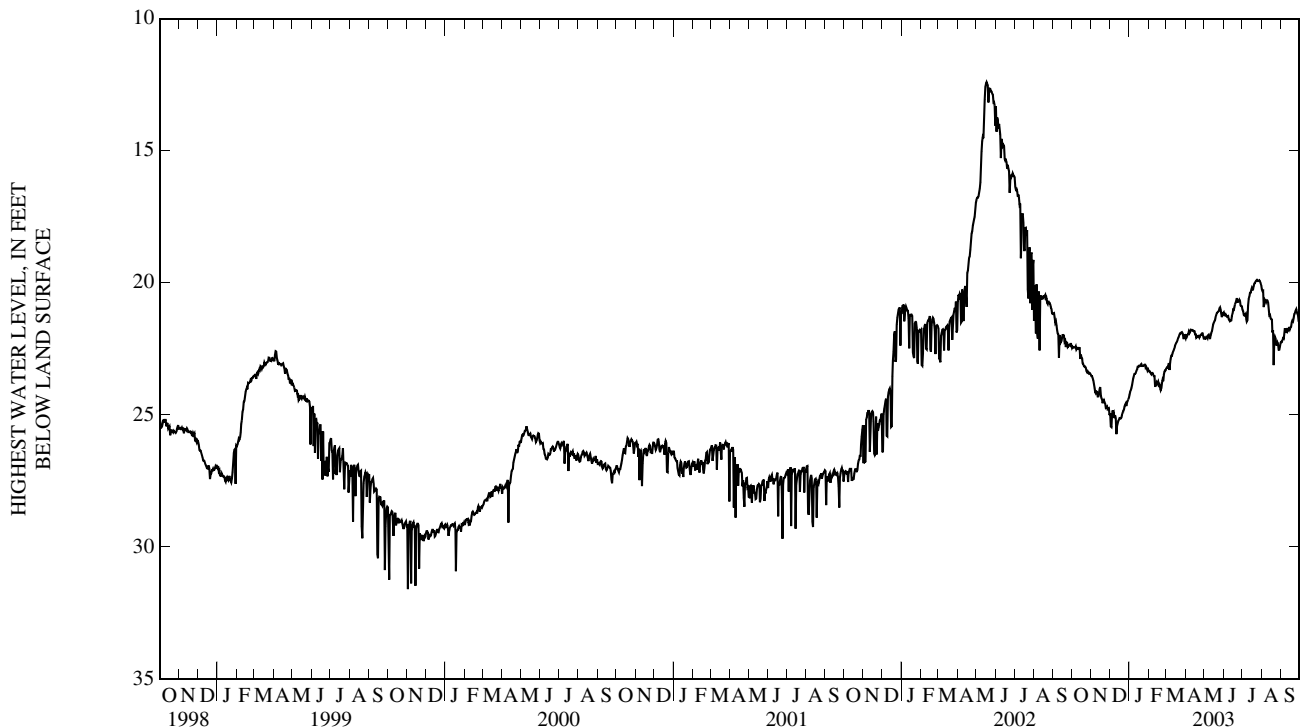
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 12.40 ft below land-surface datum, May 17, 2002; lowest, 42.01 ft below land-surface datum, Nov. 14, 1992.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	22.44	23.85	24.83	23.87	23.47	23.04	21.94	22.03	21.25	21.21	20.62	22.12
10	22.47	24.13	25.12	23.45	23.53	22.76	21.79	22.13	21.41	20.86	20.67	21.86
15	22.72	23.95	25.18	23.18	23.78	22.37	21.83	21.57	21.17	20.27	21.34	21.76
20	23.15	24.47	25.00	23.07	24.07	22.10	22.02	21.23	20.76	20.03	23.12	21.46
25	23.39	24.72	24.62	23.10	23.47	21.88	21.97	20.97	20.69	19.93	22.34	21.00
EOM	23.47	25.01	24.36	23.28	23.31	22.04	22.10	21.15	20.89	20.08	22.28	21.48
MIN	22.41	23.53	24.36	23.07	23.31	21.87	21.78	20.93	20.58	19.89	20.24	21.00
WTR YR	2003	HIGH 19.89 JUL 24										

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	24.33	25.76	26.63	25.29	24.67	24.22	23.04	23.64	22.57	22.50	21.88	23.22
10	24.37	26.11	26.83	24.86	24.70	23.84	23.35	23.30	22.74	22.51	21.94	22.94
15	24.68	25.96	26.64	24.56	24.98	23.56	23.42	22.97	22.54	21.66	22.55	22.74
20	24.85	26.49	26.58	24.38	25.09	23.26	23.60	22.62	22.13	21.38	25.00	21.92
25	25.21	26.61	26.08	24.39	24.73	22.98	23.53	22.38	22.02	21.22	23.45	21.49
EOM	25.34	26.67	25.82	24.52	24.47	23.00	23.66	22.52	22.23	21.32	23.62	22.62
MAX	25.34	26.67	27.11	25.56	25.10	24.41	23.66	23.67	22.78	22.73	25.29	23.51
WTR YR	2003	LOW 27.11 DEC 13										



BARTHOLOMEW COUNTY

390317085523701. Local number, BA 10.

LOCATION.--Lat 39°03'17", long 85°52'08", in NE¹/₄NW¹/₄NW¹/₄ sec.16, T.7 N., R.6 E., Bartholomew County, Hydrologic Unit 05120206, (AZALIA, IN quadrangle), 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.

REMARKS.--Hourly record indicates water level is affected by domestic pumpage. Not significant in monthly-annual report.

PERIOD OF RECORD.--October 1978 to October 2003 (discontinued).

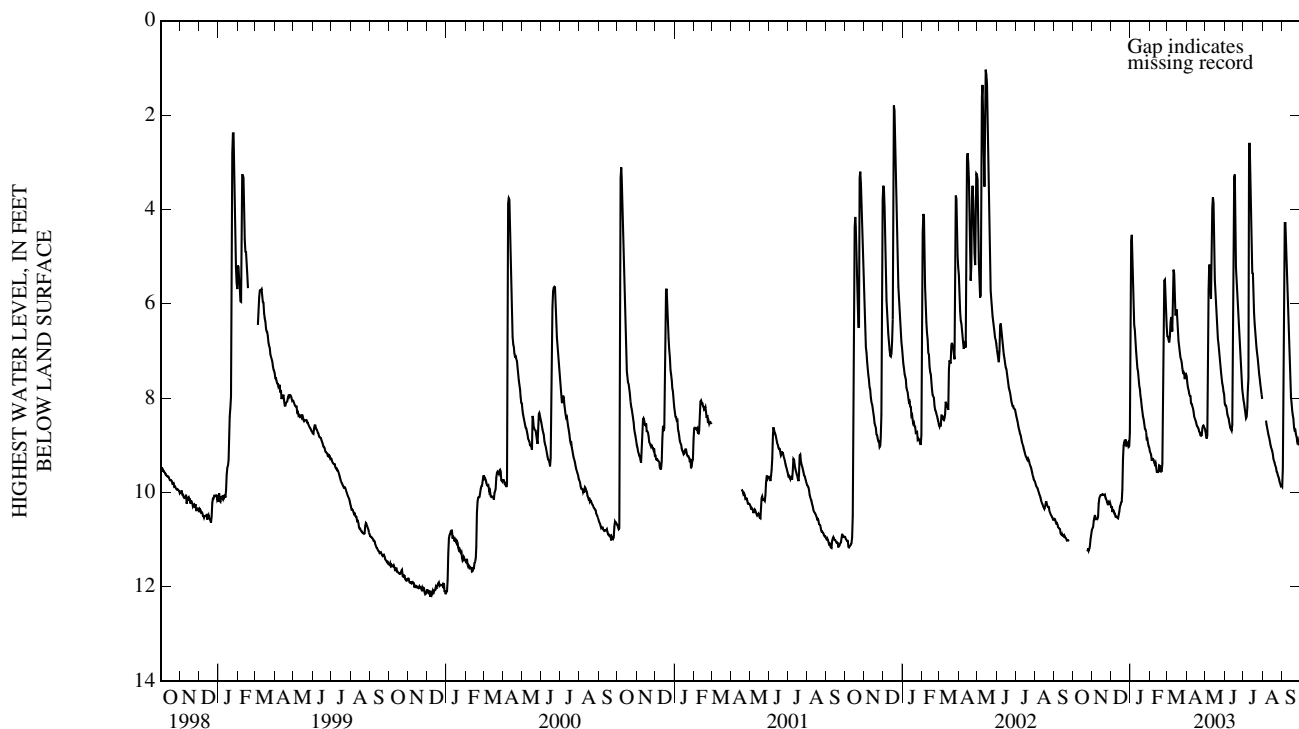
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.66 ft below land-surface datum, Nov. 17, 1993; lowest, 12.65 ft below land-surface datum, Oct. 29, Nov. 2, 1988.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	10.48	10.39	5.58	9.29	6.70	7.91	7.86	8.34	8.43	---	4.29
10	---	10.53	10.52	7.01	9.37	5.70	8.17	5.90	8.64	2.61	8.78	6.89
15	---	10.06	10.30	7.75	9.56	6.19	8.47	4.71	5.91	5.35	9.08	7.98
20	---	10.06	9.29	8.29	9.55	6.91	8.65	6.55	5.63	6.60	9.38	8.62
25	11.19	10.23	8.92	8.67	5.49	7.37	8.79	7.31	7.13	7.35	9.64	8.92
EOM	10.81	10.26	8.73	9.05	6.47	7.49	8.64	7.92	7.92	8.02	9.86	9.00
MIN	10.81	10.04	8.73	4.54	5.49	5.28	7.53	3.74	3.26	2.61	8.48	4.29
WTR YR	2003	HIGH 2.61 JUL 10										

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	10.66	10.54	6.09	9.40	6.87	8.11	8.84	8.43	8.51	---	5.56
10	---	10.60	10.56	7.20	9.56	6.65	8.27	6.05	8.75	7.58	8.93	7.17
15	---	10.15	10.41	7.92	9.69	6.35	8.63	5.50	7.82	5.87	9.16	8.12
20	---	10.17	9.96	8.43	9.70	7.04	8.75	6.75	6.06	6.78	9.44	8.71
25	11.35	10.27	9.05	8.78	5.74	7.51	8.88	7.49	7.32	7.50	9.77	9.06
EOM	10.95	10.44	9.04	9.20	6.76	7.61	8.80	8.15	8.06	8.14	9.98	9.08
MAX	11.36	10.92	10.64	9.20	9.70	7.71	8.90	8.97	8.85	8.57	9.98	9.93
WTR YR	2003	LOW 11.36 OCT 24										



GROUND-WATER DATA
BARTHOLOMEW COUNTY

390658085572201. Local number, BA 13.

LOCATION.--Lat 39°06'50", long 85°57'17", in SE¹/₄SW¹/₄SE¹/₄ sec.22, T.8 N., R.5 E., Bartholomew County, Hydrologic Unit 05120206, (JONESVILLE, IN quadrangle), at the end of farm access road, 0.3 mi north of County Road 600 South at its intersection with Interstate 65.
Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled artesian 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 October 2003 (discontinued).

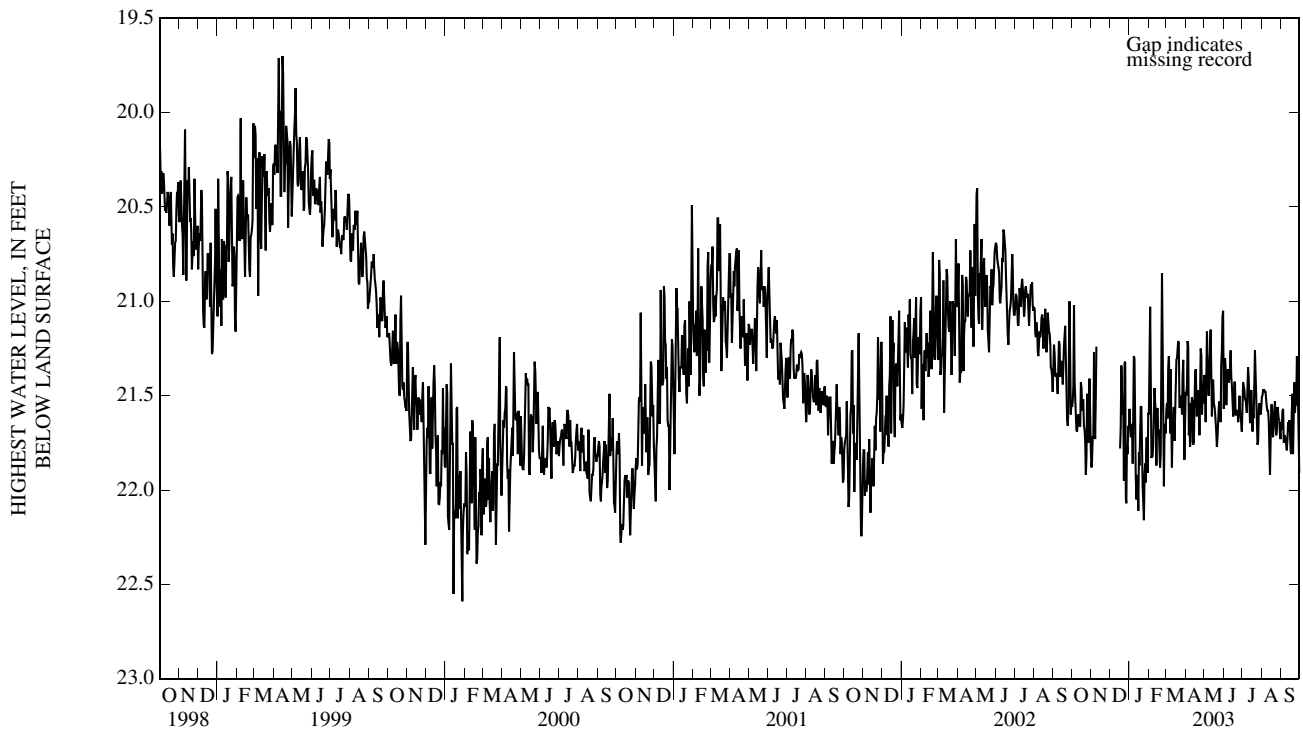
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 19.26 ft below land-surface datum, Apr. 30, 1997; lowest, 24.17 ft below land-surface datum, Feb. 16, 1989.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	21.43	21.27	---	21.65	21.83	21.29	21.24	21.16	21.55	21.52	21.47	21.75
10	21.64	---	---	21.57	21.46	21.88	21.59	21.24	21.41	21.35	21.58	21.79
15	21.43	---	---	22.11	21.57	21.62	21.53	21.42	21.54	21.47	21.75	21.71
20	21.66	---	21.45	21.56	21.81	21.21	21.50	21.69	21.60	21.46	21.66	21.81
25	21.49	---	21.32	21.92	21.98	21.50	21.25	21.53	21.59	21.76	21.68	21.55
EOM	21.78	---	21.68	21.59	21.70	21.63	21.44	21.05	21.69	21.57	21.73	21.91
MIN	21.02	21.24	21.32	21.29	20.85	21.21	21.21	21.05	21.26	21.26	21.47	21.29
WTR YR	2003	HIGH	20.85	FEB	22							

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	21.73	21.80	---	21.86	22.03	21.58	21.94	21.35	21.63	21.66	21.56	21.82
10	21.75	---	---	21.94	21.76	22.06	21.75	21.47	21.59	21.50	21.68	21.86
15	21.66	---	---	22.19	21.87	21.76	21.76	21.56	21.64	21.66	21.95	21.82
20	21.75	---	21.60	21.81	22.07	21.41	21.62	21.89	21.75	21.66	21.76	21.93
25	21.82	---	22.04	22.16	22.25	21.64	21.40	21.61	21.75	21.85	21.76	21.76
EOM	21.88	---	21.80	21.91	21.81	21.88	21.60	21.57	21.79	21.64	21.87	21.99
MAX	22.01	21.98	22.24	22.38	22.25	22.06	21.98	21.91	21.79	21.86	22.01	21.99
WTR YR	2003	LOW	22.38	JAN	24							



BOONE COUNTY

400532086183901. Local number, BO 17.

LOCATION.--Lat 40°05'32", long 86°18'39", in SW¹/₄SE¹/₄NW¹/₄ sec.16, T.19 N., R.2 E., Boone County, Hydrologic Unit 05120201, (ROSSTON, IN quadrangle), 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.

REMARKS.--Water level may be affected by pumpage.

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

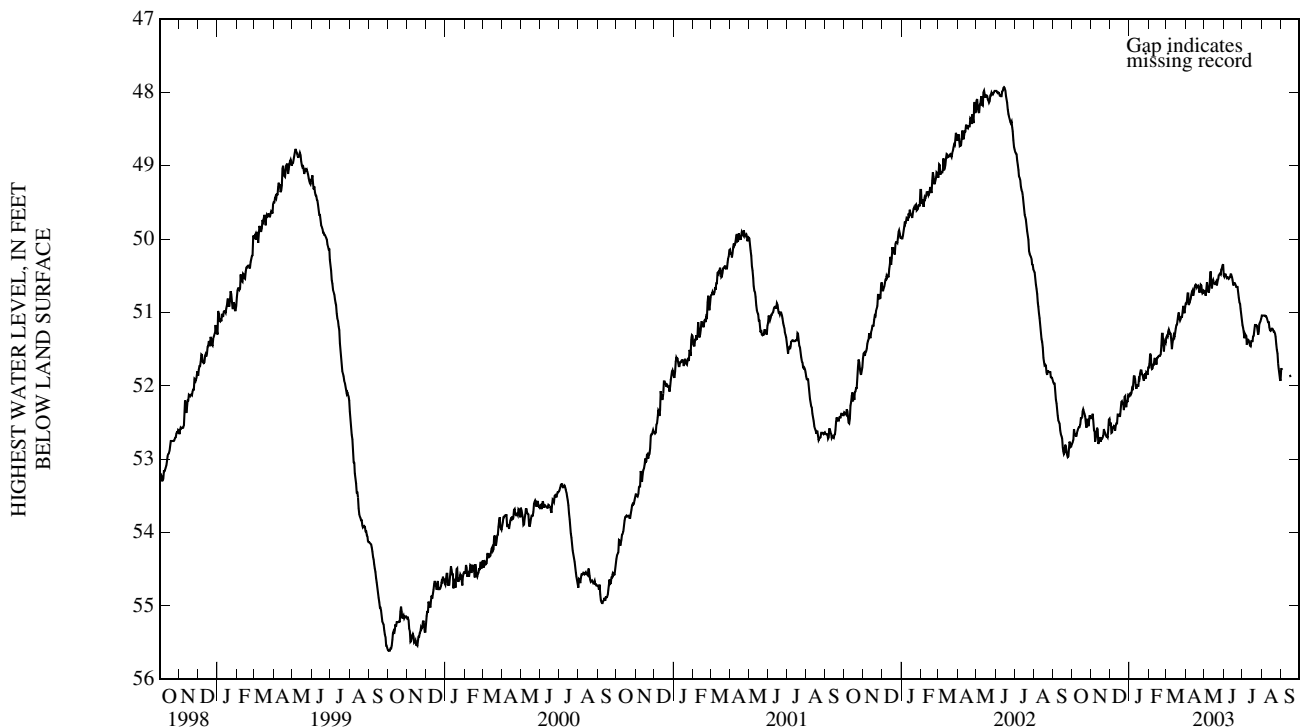
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 45.87 ft below land-surface datum, July 11-13, 1986; lowest, 55.69 ft below land-surface datum, Oct. 3, 1999.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	52.65	52.60	52.57	52.04	51.75	51.23	50.74	50.59	50.51	51.29	51.04	---
10	52.61	52.57	52.54	51.91	51.63	51.50	50.76	50.53	50.53	51.37	51.10	---
15	52.44	52.71	52.39	52.01	51.61	51.28	50.68	50.56	50.56	51.39	51.25	51.85
20	52.35	52.68	52.21	51.79	51.57	51.04	50.64	50.58	50.62	51.25	51.26	---
25	52.46	52.69	52.14	51.86	51.53	51.06	50.62	50.48	50.80	51.24	51.51	---
EOM	52.44	52.45	52.14	51.75	51.41	50.94	50.70	50.34	51.10	51.09	51.93	---
MIN	52.32	52.38	52.13	51.75	51.29	50.91	50.62	50.34	50.48	51.09	51.04	51.77
WTR YR	2003	HIGH 50.34 MAY 31										

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	52.73	52.68	52.63	52.10	51.80	51.27	50.93	50.68	50.56	51.47	51.04	---
10	52.64	52.66	52.61	52.00	51.71	51.56	50.82	50.70	50.57	51.41	51.13	---
15	52.53	52.76	52.44	52.02	51.68	51.33	50.74	50.61	50.63	51.46	51.26	51.88
20	52.38	52.76	52.24	51.84	51.63	51.14	50.66	50.63	50.65	51.32	51.26	---
25	52.59	52.70	52.27	51.93	51.53	51.09	50.69	50.49	50.86	51.32	51.56	---
EOM	52.44	52.59	52.17	51.85	51.42	51.02	50.75	50.49	51.17	51.12	51.97	---
MAX	52.82	52.81	52.72	52.17	51.80	51.56	50.97	50.83	51.17	51.49	51.97	51.96
WTR YR	2003	LOW 52.82 OCT 1										



CASS COUNTY

403407086175701. Local number, CS 3.

LOCATION.--Lat 40°34'07", long 86°17'57", in NE¹/₄NE¹/₄SE¹/₄ sec.33, T.25 N., R.2 E., Cass County, Hydrologic Unit 05120105, (YOUNG AMERICA, IN quadrangle), at intersection of State Highway 18 and County Road 400 East, 2.5 mi east of Young America.
Owner: U.S. Geological Survey.

AQUIFER.--Dolomitic limestone of Devonian-Silurian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 130 ft, cased to 78 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 781.74 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of floor of shelter, 2.65 ft above land-surface datum.

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

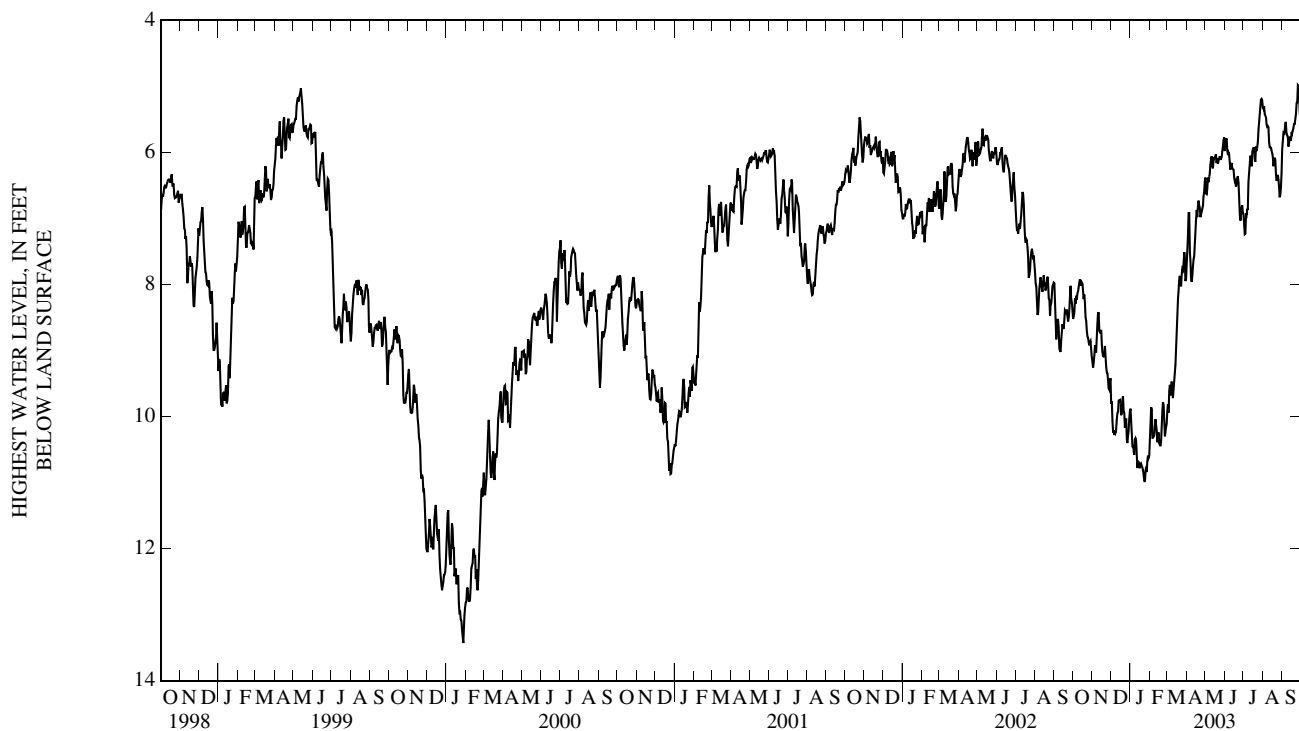
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.85 ft below land-surface datum, Feb. 2, 1968; lowest, 13.56 ft below land-surface datum, Jan. 28, 2000.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.29	8.92	10.23	10.45	10.32	9.52	6.92	6.38	5.98	6.92	5.44	5.66
10	8.04	8.43	10.05	10.37	10.04	9.72	7.88	6.12	6.26	6.29	5.62	5.76
15	7.97	8.70	9.75	10.77	10.24	8.91	7.19	6.07	6.26	5.99	5.98	5.82
20	8.27	9.08	9.69	10.77	10.18	7.94	6.73	6.09	6.47	6.14	6.08	5.57
25	8.81	9.35	10.04	10.82	10.30	7.76	6.89	6.10	6.93	5.65	6.34	5.24
EOM	9.10	9.42	9.92	10.60	10.11	7.92	6.45	5.77	6.91	5.21	6.31	5.49
MIN	7.92	8.43	9.69	9.88	9.78	7.51	6.45	5.77	5.80	5.19	5.30	4.98
WTR YR	2003	HIGH 4.98 SEP 26										

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.41	9.17	10.35	10.53	10.44	9.73	7.51	6.54	6.31	7.23	5.55	5.80
10	8.14	8.59	10.20	10.58	10.26	9.92	8.02	6.23	6.34	6.45	5.90	6.02
15	8.06	8.96	9.86	10.97	10.52	9.21	7.42	6.21	6.45	6.23	6.13	5.99
20	8.56	9.22	9.93	10.86	10.39	8.14	6.96	6.24	6.65	6.25	6.23	5.68
25	8.94	9.46	10.35	10.99	10.38	7.90	7.00	6.20	7.12	5.84	6.55	5.36
EOM	9.26	9.85	10.07	10.75	10.21	8.12	6.62	6.03	7.18	5.45	6.60	5.71
MAX	9.26	9.85	10.58	11.19	10.60	10.11	8.10	6.77	7.18	7.52	6.87	6.31
WTR YR	2003	LOW 11.19 JAN 23										



CLAY COUNTY

392653087120501. Local number, CY 6.

LOCATION.--Lat 39°26'53", long 87°12'05", in SE¹/₄SE¹/₄SE¹/₄ sec.29, T.12 N., R.7 W., Clay County, Hydrologic Unit 05120111, (STAUNTON, IN quadrangle), 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.

REMARKS.--Water level affected by pumpage.

PERIOD OF RECORD.--September 1987 to October 2003 (discontinued).

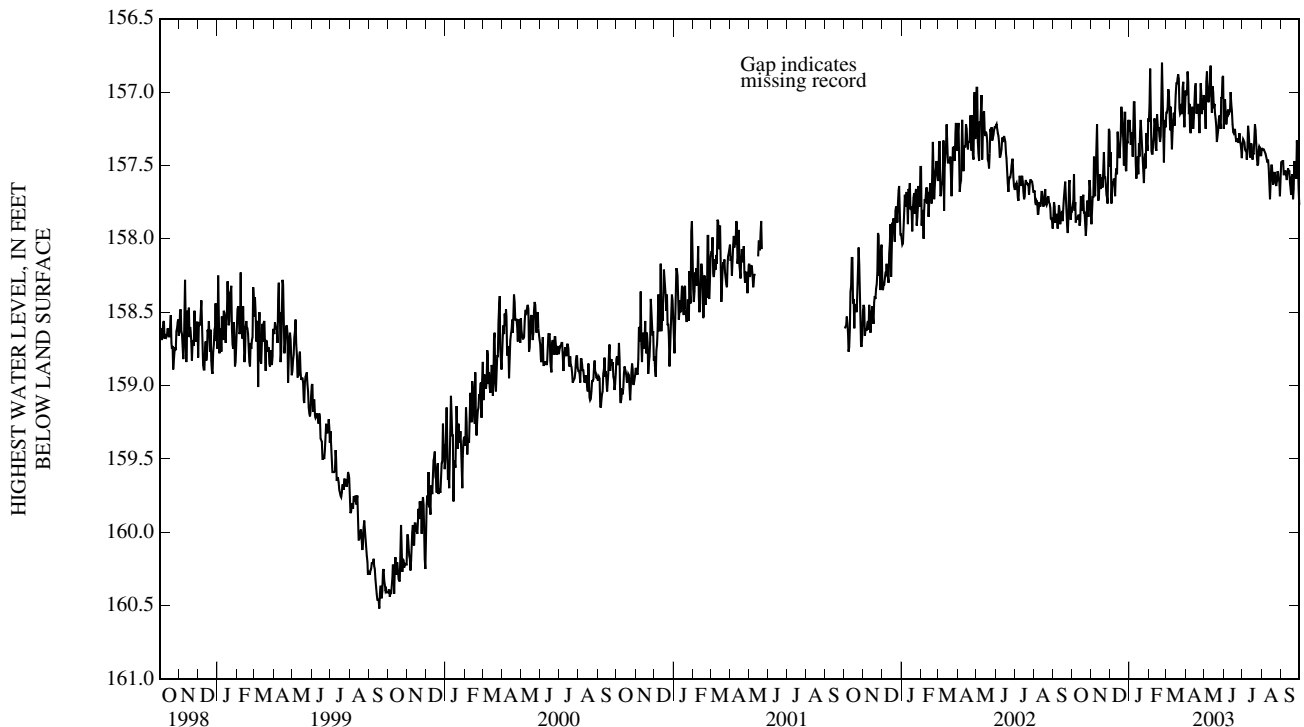
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 151.36 ft below land-surface datum, Jan. 19, 1988; lowest, 165.28 ft below land-surface datum, June 8, 1992.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	157.81	157.44	157.61	157.28	157.40	157.00	156.93	156.86	157.22	157.39	157.40	157.56
10	157.85	157.22	157.56	157.25	157.18	157.39	157.19	156.92	157.14	157.23	157.48	157.60
15	157.71	157.56	157.36	157.56	157.22	157.14	157.06	157.00	157.22	157.35	157.61	157.62
20	157.82	157.54	157.19	157.29	157.30	156.88	157.10	157.23	157.30	157.32	157.61	157.73
25	157.74	157.70	157.14	157.46	157.48	157.08	156.94	157.16	157.34	157.50	157.61	157.59
EOM	157.83	157.27	157.27	157.18	157.24	157.11	157.02	156.89	157.45	157.43	157.60	157.77
MIN	157.56	157.22	157.10	157.07	156.80	156.88	156.86	156.82	157.00	157.22	157.38	157.33
WTR YR	2003	HIGH 156.80 FEB 22										

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	158.04	157.87	157.80	157.44	157.53	157.23	157.37	157.04	157.36	157.46	157.50	157.72
10	158.02	157.38	157.74	157.52	157.41	157.44	157.30	157.10	157.35	157.44	157.65	157.76
15	157.88	157.75	157.58	157.69	157.48	157.36	157.33	157.24	157.42	157.47	157.78	157.71
20	157.97	157.81	157.38	157.40	157.52	157.06	157.23	157.44	157.36	157.46	157.71	157.86
25	157.98	157.80	157.53	157.62	157.62	157.24	157.12	157.26	157.46	157.65	157.81	157.79
EOM	157.95	157.72	157.43	157.54	157.39	157.38	157.25	157.26	157.59	157.57	157.84	157.86
MAX	158.16	158.03	158.03	157.77	157.63	157.52	157.42	157.44	157.59	157.66	157.84	157.86
WTR YR	2003	LOW 158.16 OCT 13										



CLAY COUNTY

391124087134701. Local number, CY 7.

LOCATION.--Lat 39°11'24", long 87°13'47", in SW¹/₄NW¹/₄SE¹/₄ sec. 30, T.9N., R.7W., Clay County, Hydrologic Unit 05120111, (JASONVILLE, IN quadrangle), 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 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 October 2003 (discontinued).

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 25.59 ft below land-surface datum, Sept. 4, 5, 1988; lowest, 33.05 ft below land-surface datum, Dec. 26, 1988.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

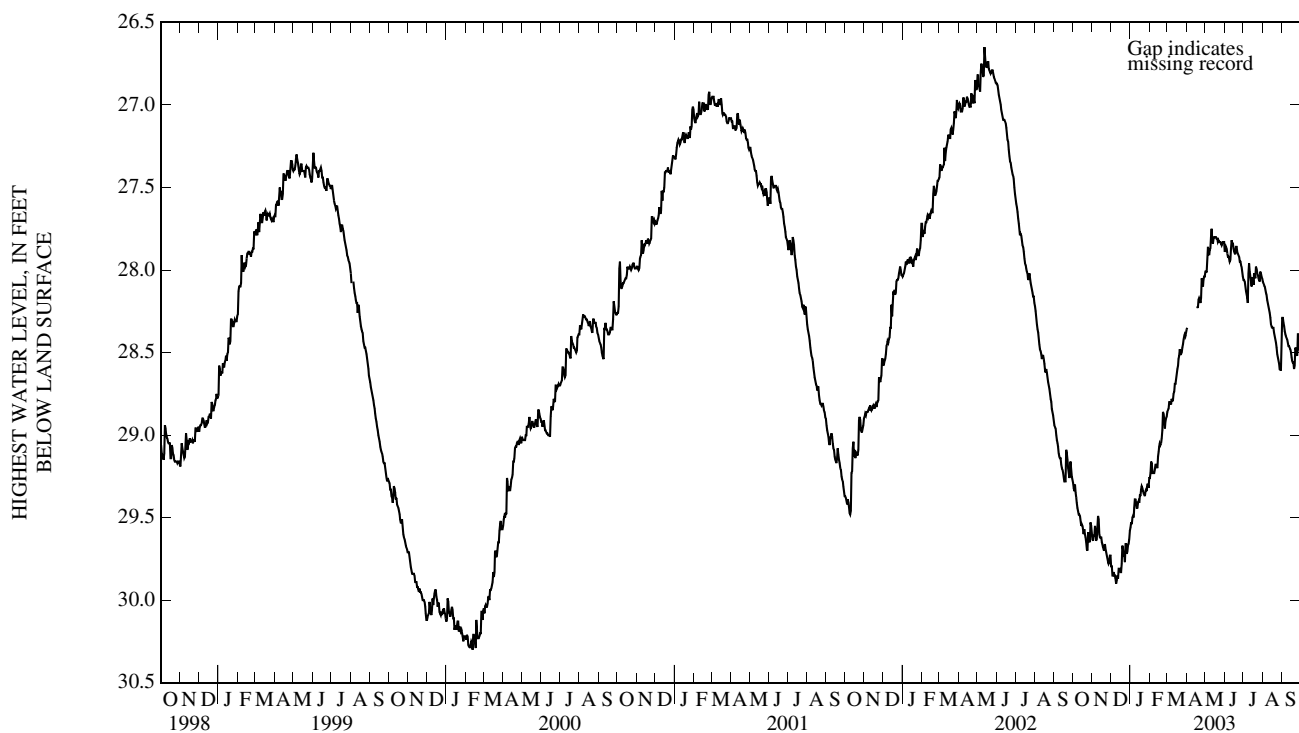
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	29.35	29.55	29.83	29.49	29.23	28.80	---	27.86	27.90	28.13	28.12	28.37
10	29.48	29.49	29.88	29.41	29.18	28.79	---	27.80	27.94	27.96	28.22	28.44
15	29.54	29.62	29.81	29.41	29.10	28.66	---	27.80	27.87	28.05	28.34	28.50
20	29.60	29.70	29.69	29.32	29.02	28.52	28.18	27.81	27.86	28.05	28.40	28.60
25	29.59	29.75	29.66	29.34	28.96	28.47	28.05	27.83	27.95	28.05	28.53	28.52
EOM	29.59	29.73	29.58	29.26	28.89	28.38	28.04	27.83	28.04	28.05	28.46	28.51
MIN	29.29	29.49	29.58	29.26	28.86	28.38	28.04	27.75	27.82	27.96	28.07	28.29

WTR YR 2003 HIGH 27.75 MAY 11

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	29.40	29.65	29.86	29.50	29.26	28.82	---	27.93	27.94	28.15	28.14	28.40
10	29.49	29.57	29.90	29.44	29.21	28.81	---	27.88	28.00	28.02	28.25	28.46
15	29.56	29.66	29.84	29.43	29.14	28.70	---	27.82	27.91	28.11	28.36	28.53
20	29.63	29.73	29.73	29.34	29.06	28.55	28.23	27.83	27.89	28.06	28.42	28.63
25	29.71	29.78	29.72	29.37	28.98	28.50	28.17	27.84	27.96	28.07	28.56	28.56
EOM	29.63	29.82	29.66	29.33	28.91	28.42	28.05	27.89	28.07	28.08	28.65	28.53
MAX	29.71	29.82	29.92	29.60	29.28	28.91	28.38	28.04	28.07	28.23	28.65	28.64

WTR YR 2003 LOW 29.92 DEC 9



DECATUR COUNTY

392022085371801. Local number, DC 2.

LOCATION.--Lat 39°20'22", long 85°37'18", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.3, T.10 N., R.8 E., Decatur County, Hydrologic Unit 05120206, (FOREST HILL, IN quadrangle), 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 840.80 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.

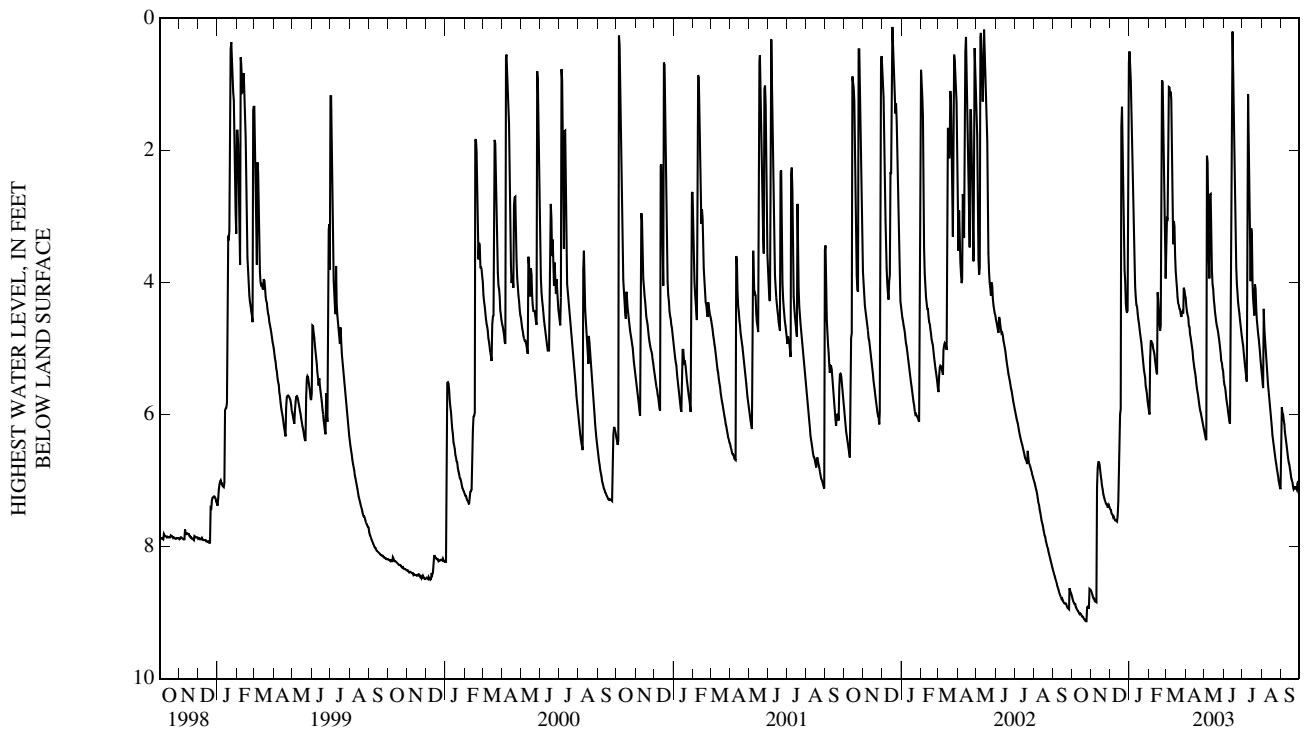
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.12 ft below land-surface datum, Dec. 30, 1991; lowest, 9.25 ft below land-surface datum, Feb. 9-11, 1977.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.87	8.78	7.52	1.80	4.89	1.04	4.52	2.08	5.76	5.27	4.71	6.09
10	8.97	7.10	7.60	4.05	5.09	1.82	4.90	2.67	6.10	1.15	5.43	6.49
15	9.02	6.85	6.91	4.56	4.15	3.60	5.31	4.10	0.20	3.18	6.02	6.83
20	9.09	7.20	1.34	4.91	4.66	4.31	5.66	4.60	3.12	4.50	6.46	7.09
25	8.92	7.36	3.98	5.38	2.02	4.52	5.97	4.90	4.40	4.68	6.82	7.12
EOM	8.66	7.40	0.67	5.87	3.94	4.19	6.21	5.34	4.82	5.28	7.13	7.02
MIN	8.64	6.72	0.67	0.50	0.94	1.04	4.23	2.08	0.20	1.15	4.40	5.89
WTR YR	2003	HIGH 0.20 JUN 15										

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.89	8.81	7.56	2.20	4.91	1.67	4.68	6.41	5.83	5.36	4.89	6.15
10	8.98	8.86	7.62	4.22	5.20	2.65	4.97	4.21	6.16	2.19	5.56	6.58
15	9.05	6.94	7.31	4.63	5.39	3.84	5.37	4.26	1.17	4.28	6.11	6.89
20	9.11	7.24	1.65	5.02	4.86	4.37	5.72	4.66	3.77	4.57	6.54	7.13
25	9.17	7.39	4.32	5.46	2.80	4.59	6.02	4.99	4.48	4.78	6.88	7.15
EOM	8.69	7.45	1.52	5.93	4.13	4.24	6.26	5.47	4.89	5.38	7.17	7.04
MAX	9.17	8.87	7.65	5.93	6.05	4.59	6.26	6.43	6.21	5.61	7.17	7.19
WTR YR	2003	LOW 9.17 OCT 25										



DELAWARE COUNTY

400541085213701. Local number, DW 4.

LOCATION.--Lat 40°05'36", long 85°21'38", in NW $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.14, T.19 N., R.10 E., Delaware County, Hydrologic Unit 05120201, (MOUNT PLEASANT, IN quadrangle), on property owned by Monroe Township Conservation Club, 0.6 mi east from County Road 700 S, 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.

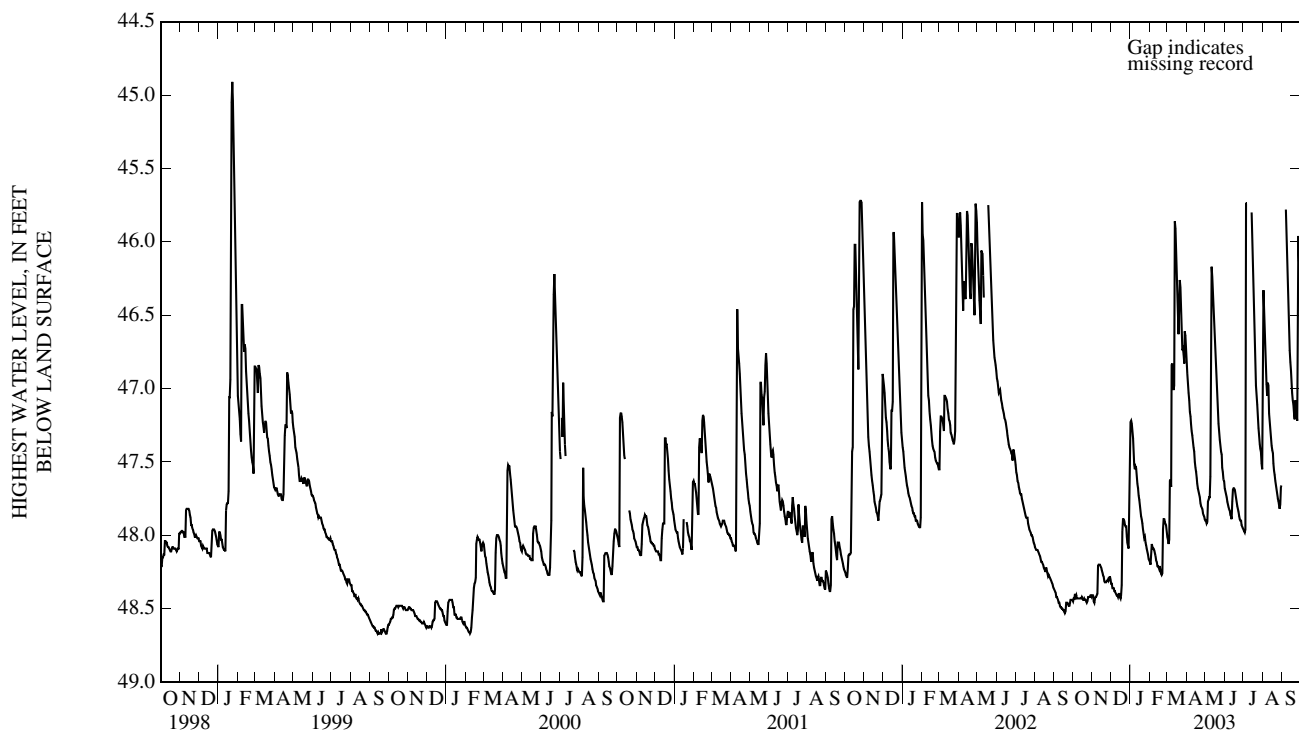
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 42.21 ft below land-surface datum, Dec. 30, 1990; lowest, 49.50 ft below land-surface datum, Oct. 13, 14, 1966.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	48.42	48.43	48.36	47.34	48.08	47.63	47.08	47.77	47.77	45.74	46.74	---
10	48.43	48.21	48.41	47.54	48.14	46.94	47.32	46.51	47.86	---	46.98	46.35
15	48.42	48.22	48.42	47.76	48.22	46.01	47.54	46.63	47.68	46.05	47.39	46.88
20	48.44	48.31	47.89	47.92	48.27	46.43	47.70	47.10	47.77	46.88	47.59	47.17
25	48.42	48.31	47.94	48.05	47.91	46.74	47.81	47.39	47.89	47.27	47.75	47.22
EOM	48.42	48.30	47.41	48.17	47.97	46.71	47.89	47.63	47.95	47.55	47.66	46.38
MIN	48.40	48.20	47.41	47.22	47.89	45.86	46.80	46.17	47.68	45.74	46.33	45.78
WTR YR	2003	HIGH	45.74	JUL 5								

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	48.44	48.47	48.38	47.44	48.09	48.03	47.16	47.91	47.79	47.96	46.86	---
10	48.44	48.40	48.41	47.59	48.17	47.01	47.36	47.60	47.87	---	47.17	46.50
15	48.43	48.24	48.43	47.80	48.24	46.17	47.57	46.74	47.69	46.26	47.42	46.96
20	48.45	48.32	47.97	47.96	48.28	46.76	47.72	47.17	47.80	46.98	47.64	47.21
25	48.46	48.32	48.01	48.07	47.92	46.82	47.82	47.43	47.90	47.33	47.78	47.24
EOM	48.43	48.33	47.68	48.18	48.01	46.80	47.90	47.68	47.96	47.59	47.73	46.49
MAX	48.47	48.47	48.44	48.18	48.28	48.08	47.90	47.93	47.96	48.02	47.85	47.25
WTR YR	2003	LOW	48.47	OCT 1								



ELKHART COUNTY

413121085481301. Local number, EH 4.

LOCATION.--Lat 41°31'21", long 85°48'13", in SW¹/₄SE¹/₄SW¹/₄ sec.35, T.36 N., R.6 E., Elkhart County, Hydrologic Unit 04050001, (GOSHEN, IN quadrangle), at the southwest corner of Goshen Municipal Airport, at intersection of County Roads 42 and 27.
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.

REMARKS.--Water level slightly affected by irrigation pumpage.

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

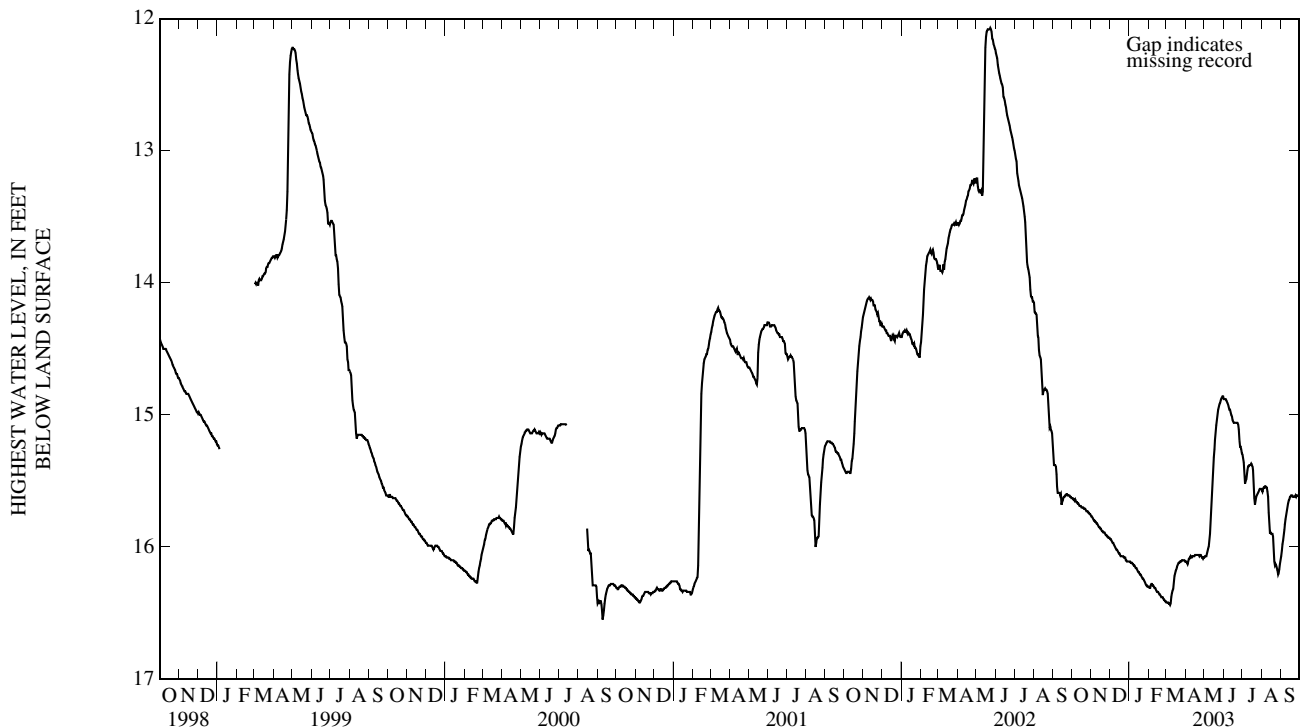
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 10.60 ft below land-surface datum, Apr. 14, 1985; lowest, 16.57 ft below land-surface datum, Sept. 9, 2000.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	15.65	15.80	15.97	16.12	16.28	16.43	16.11	16.05	14.89	15.52	15.55	15.91
10	15.67	15.82	16.01	16.15	16.31	16.35	16.08	15.90	14.96	15.39	15.58	15.73
15	15.69	15.86	16.05	16.19	16.34	16.20	16.07	15.40	15.04	15.37	15.89	15.62
20	15.71	15.89	16.07	16.22	16.37	16.13	16.06	15.08	15.06	15.63	16.03	15.62
25	15.73	15.91	16.08	16.26	16.40	16.11	16.06	14.92	15.11	15.60	16.16	15.62
EOM	15.76	15.93	16.11	16.30	16.41	16.11	16.08	14.86	15.29	15.56	16.10	15.61
MIN	15.63	15.77	15.94	16.11	16.28	16.10	16.06	14.86	14.88	15.30	15.54	15.61
WTR YR	2003	HIGH 14.86 MAY 30										

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	15.65	15.80	15.97	16.13	16.29	16.43	16.13	16.07	14.90	15.55	15.55	15.95
10	15.67	15.83	16.02	16.16	16.32	16.38	16.09	15.95	14.96	15.42	15.62	15.76
15	15.70	15.86	16.05	16.19	16.35	16.22	16.07	15.49	15.05	15.38	15.90	15.64
20	15.71	15.89	16.07	16.23	16.38	16.14	16.07	15.13	15.07	15.71	16.11	15.62
25	15.73	15.92	16.10	16.27	16.40	16.11	16.07	14.94	15.19	15.61	16.18	15.62
EOM	15.77	15.94	16.12	16.31	16.42	16.11	16.09	14.88	15.30	15.57	16.13	15.61
MAX	15.77	15.94	16.12	16.31	16.42	16.45	16.13	16.08	15.30	15.73	16.22	16.10
WTR YR	2003	LOW 16.45 MAR 7										



ELKHART COUNTY

414514085505001. Local number, EH 7.

LOCATION.--Lat 41°45'14", long 85°50'50", in SW¹/₄SE¹/₄SW¹/₄ sec.9, T.38 N., R.6 E., Elkhart County, Hydrologic Unit 04050001, (BRISTOL, IN quadrangle), 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.

REMARKS.--Water level slightly affected by irrigation pumpage.

PERIOD OF RECORD.--June 1981 to October 2003 (discontinued).

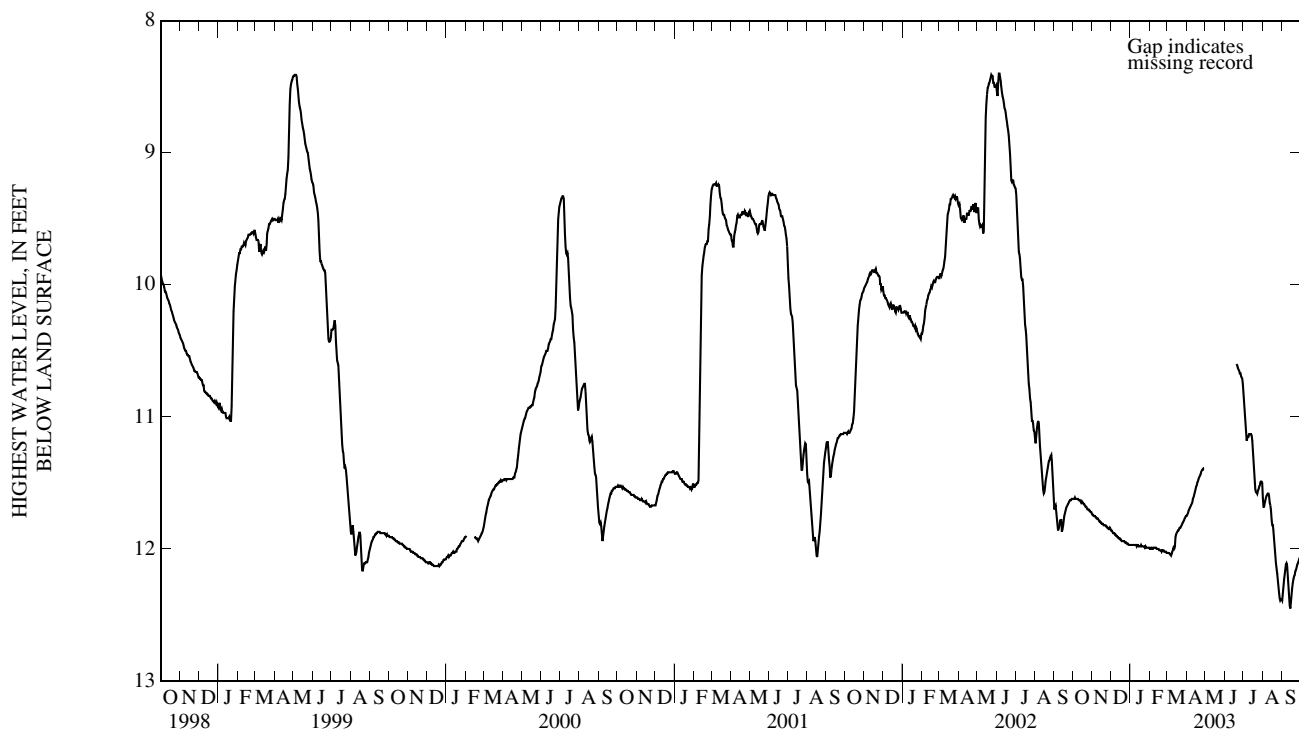
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 5.50 ft below land-surface datum, Feb. 24, 1985; lowest, 12.73 ft below land-surface datum, Aug. 5, 6, 1988.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	11.62	11.75	11.88	11.97	12.00	12.04	11.70	---	---	11.11	11.63	12.19
10	11.63	11.77	11.90	11.97	11.99	12.01	11.65	---	---	11.13	11.58	12.19
15	11.64	11.80	11.92	11.98	12.00	11.89	11.55	---	---	11.18	11.78	12.39
20	11.67	11.82	11.94	11.98	12.02	11.85	11.47	---	10.60	11.55	11.99	12.21
25	11.70	11.84	11.95	11.98	12.02	11.81	11.41	---	10.67	11.55	12.24	12.12
EOM	11.73	11.85	11.97	11.99	12.03	11.75	---	---	10.75	11.50	12.38	12.06
MIN	11.61	11.74	11.86	11.97	11.99	11.75	11.39	---	10.60	10.82	11.58	12.06
WTR YR	2003	HIGH 10.60 JUN 20										

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	11.62	11.76	11.88	11.98	12.00	12.05	11.72	---	---	11.18	11.65	12.24
10	11.63	11.78	11.91	11.98	12.00	12.03	11.66	---	---	11.17	11.61	12.26
15	11.65	11.81	11.93	11.98	12.01	11.92	11.57	---	---	11.26	11.83	12.45
20	11.68	11.83	11.94	11.98	12.02	11.86	11.51	---	10.63	11.58	12.05	12.25
25	11.70	11.84	11.96	11.99	12.03	11.82	11.45	---	10.70	11.58	12.29	12.14
EOM	11.74	11.86	11.97	12.00	12.04	11.76	---	---	10.82	11.61	12.40	12.07
MAX	11.74	11.86	11.97	12.00	12.04	12.07	11.75	---	10.82	11.61	12.41	12.49
WTR YR	2003	LOW 12.49 SEP 14										



ELKHART COUNTY

414419085595801. Local number, EH 9.

LOCATION.--Lat 41°44'19", long 85°59'58", in NE¹/₄NW¹/₄NW¹/₄ sec.19, T.38 N., R.5 E., Elkhart County, Hydrologic Unit 04050001, (ELKHART, IN quadrangle), 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. Measuring point: Top of casing, 2.80 ft above land-surface datum.

REMARKS.--Water level affected by public water supply pumpage.

PERIOD OF RECORD.--July 1990 to October 2003 (discontinued).

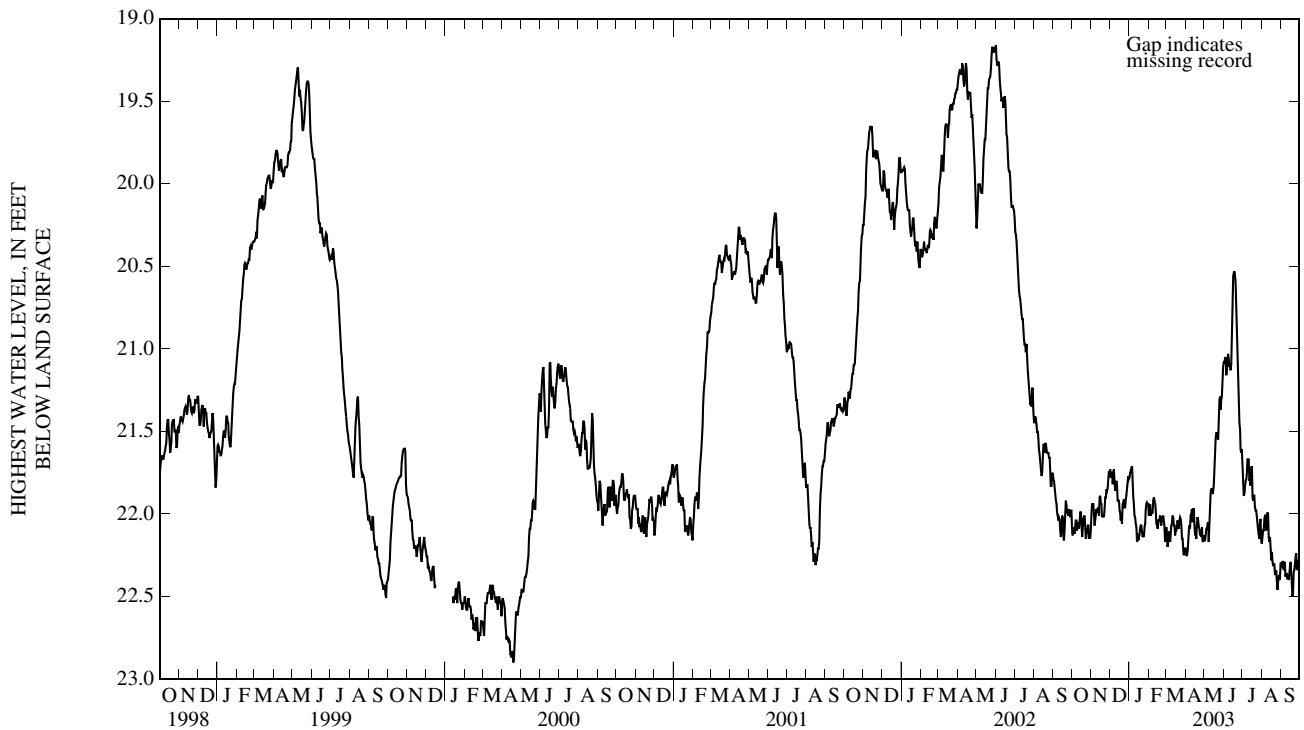
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 16.09 ft below land-surface datum, Jan. 16, 1991; lowest, 22.94 ft below land-surface datum, Aug. 19, 2000.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	22.12	22.01	21.82	21.71	22.00	22.11	22.17	22.09	21.16	21.83	22.03	22.34
10	22.05	21.98	21.82	22.02	21.92	22.06	22.00	21.99	21.11	21.67	21.99	22.38
15	21.99	21.89	21.92	22.16	22.09	22.13	22.07	21.86	20.69	21.72	22.21	22.32
20	22.02	22.01	22.06	22.07	22.06	22.06	22.02	21.51	20.60	21.89	22.31	22.48
25	22.11	21.85	21.96	22.08	22.05	22.07	22.11	21.31	21.31	22.06	22.41	22.24
EOM	22.10	21.77	21.79	21.94	22.12	22.21	22.13	21.11	21.61	22.16	22.30	22.28
MIN	21.99	21.74	21.73	21.71	21.90	22.01	21.97	21.11	20.53	21.67	21.99	22.24
WTR YR	2003	HIGH	20.53	JUN 18								

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	22.19	22.07	21.89	21.80	22.09	22.24	22.27	22.14	21.21	21.92	22.15	22.41
10	22.16	22.03	21.94	22.11	21.98	22.15	22.07	22.07	21.18	21.72	22.07	22.44
15	22.06	21.95	22.02	22.23	22.13	22.18	22.17	21.95	20.86	21.89	22.28	22.39
20	22.06	22.09	22.11	22.13	22.09	22.19	22.08	21.58	20.82	22.00	22.40	22.52
25	22.14	21.90	22.05	22.15	22.12	22.17	22.19	21.41	21.45	22.12	22.49	22.34
EOM	22.19	21.82	21.91	22.05	22.17	22.31	22.17	21.21	21.72	22.21	22.40	22.34
MAX	22.21	22.13	22.11	22.23	22.27	22.35	22.37	22.27	21.72	22.22	22.52	22.52
WTR YR	2003	LOW	22.52	AUG 26								



FOUNTAIN COUNTY

401200087121701. Local number, FO 3.

LOCATION.--Lat 40°12'00", long 87°12'17", in NW¹/₄NW¹/₄NW¹/₄ sec.10, T.20 N., R.7 W., Fountain County, Hydrologic Unit 05120108, (MELLOTT, IN quadrangle), 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 artesian 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 October 2003 (discontinued).

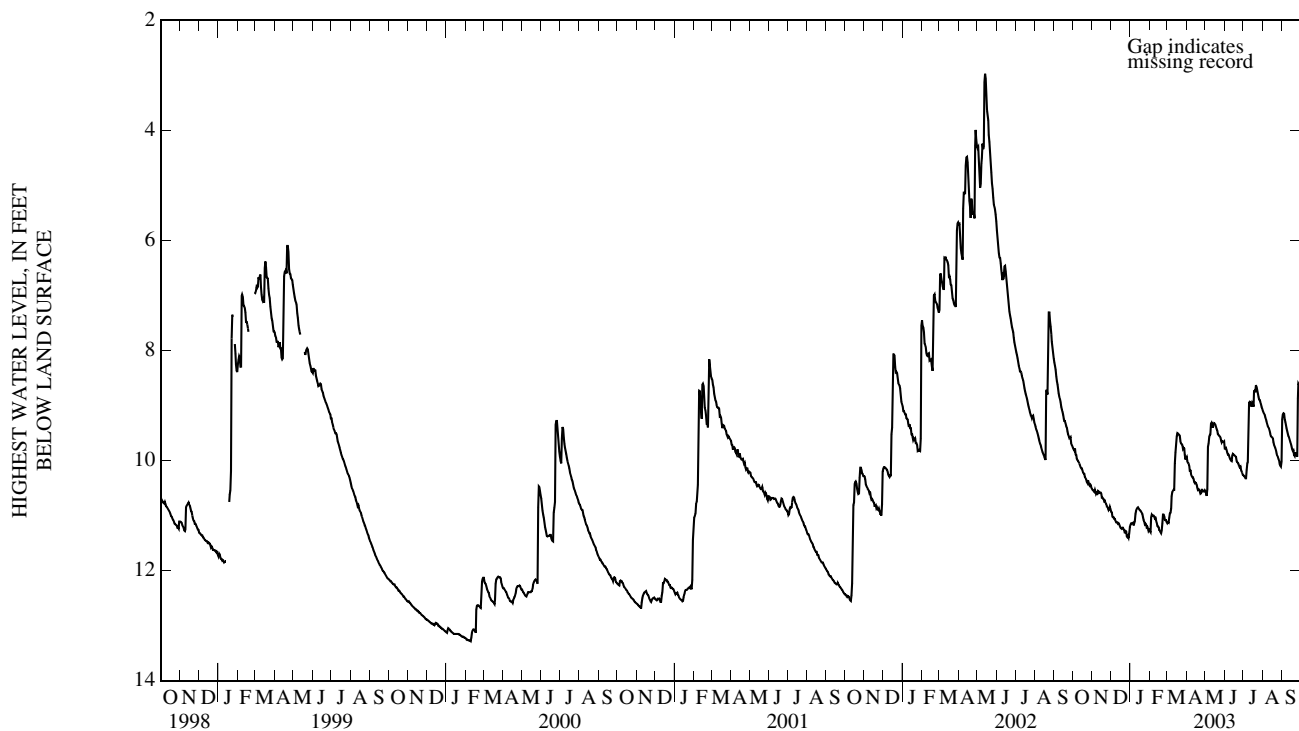
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.97 ft below land-surface datum, May 13, 2002; lowest, 13.53 ft below land-surface datum, Dec. 21, 22, 25-27, 1988.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.89	10.53	11.03	11.13	11.00	10.96	10.09	9.75	9.86	10.32	9.22	9.25
10	10.03	10.55	11.12	10.91	11.04	10.55	10.30	9.33	9.98	8.95	9.40	9.51
15	10.14	10.60	11.19	10.89	11.21	9.71	10.40	9.32	9.89	8.95	9.57	9.70
20	10.30	10.74	11.22	10.97	11.27	9.53	10.52	9.45	10.00	8.74	9.74	9.90
25	10.36	10.85	11.29	11.15	11.08	9.72	10.53	9.58	10.12	8.84	9.93	9.93
EOM	10.51	10.88	11.21	11.26	11.12	9.95	10.54	9.65	10.26	9.05	10.02	8.84
MIN	9.77	10.53	10.93	10.85	10.98	9.50	9.93	9.31	9.77	8.63	9.09	8.60
WTR YR	2003	HIGH 8.60 SEP 27										

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.95	10.60	11.06	11.18	11.00	11.04	10.23	10.52	9.90	10.37	9.25	9.30
10	10.05	10.60	11.13	10.97	11.10	10.58	10.32	9.55	10.00	9.37	9.43	9.56
15	10.19	10.67	11.22	10.92	11.27	9.85	10.43	9.35	9.91	9.06	9.58	9.75
20	10.32	10.75	11.25	11.03	11.36	9.57	10.54	9.53	10.03	8.74	9.77	9.94
25	10.42	10.87	11.38	11.17	11.10	9.79	10.59	9.63	10.14	8.89	9.97	9.96
EOM	10.53	10.96	11.32	11.28	11.16	10.01	10.57	9.79	10.28	9.09	10.16	8.90
MAX	10.53	10.96	11.41	11.29	11.36	11.17	10.63	10.66	10.28	10.37	10.16	10.02
WTR YR	2003	LOW 11.41 DEC 29										



FRANKLIN COUNTY

392416085004301. Local number, FR 5.

LOCATION.--Lat 39°24'16", long 85°00'43", in SE¹/₄NE¹/₄NW¹/₄ sec.32, T.9 N., R.2 W., Franklin County, Hydrologic Unit 05080003, (BROOKVILLE, IN quadrangle), 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 October 2003 (discontinued).

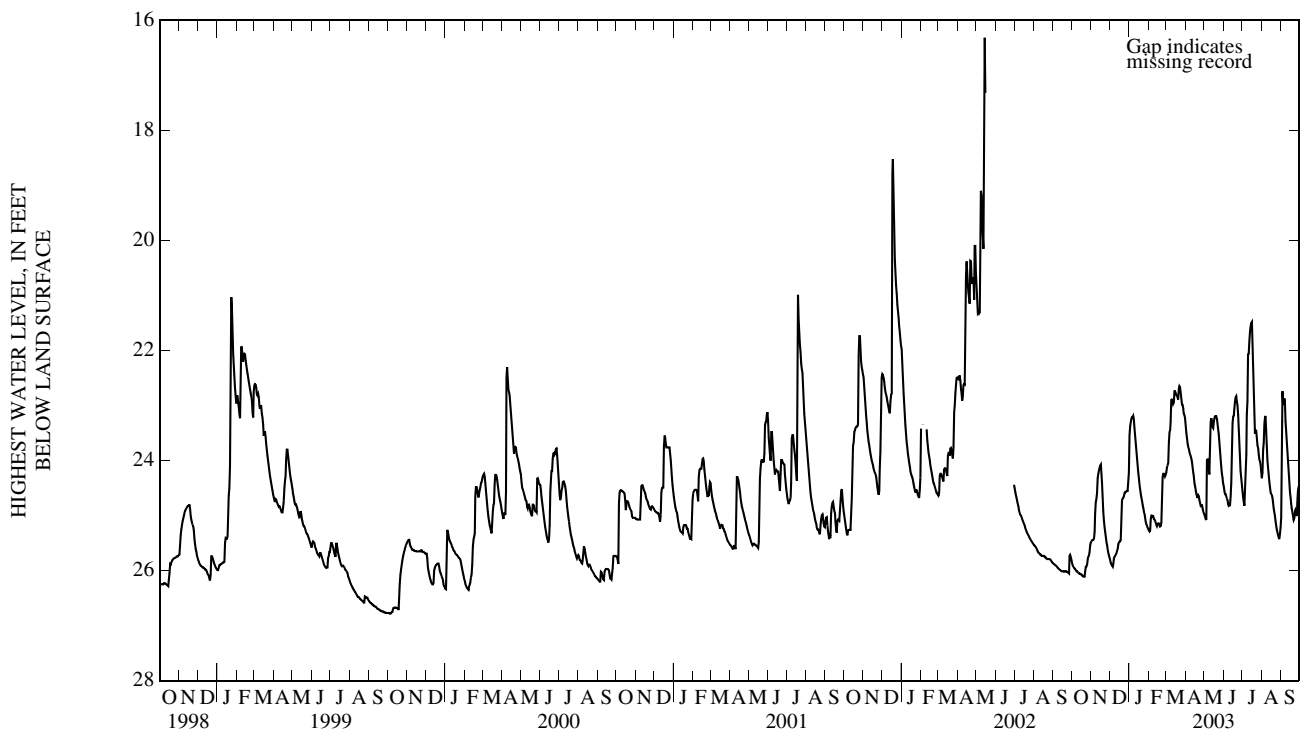
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 11.95 ft below land-surface datum, May 24, 1968; lowest, 27.32 ft below land-surface datum, Feb. 1, 1977.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	25.96	25.42	25.93	23.21	25.00	23.67	23.75	23.99	24.65	24.50	23.33	22.94
10	26.03	24.59	25.71	23.53	25.07	22.89	23.96	23.91	24.81	22.07	24.00	23.73
15	26.07	24.09	25.49	24.23	25.15	22.74	24.41	23.41	23.32	21.50	24.58	24.58
20	26.11	24.93	24.73	24.67	25.19	22.89	24.68	23.19	22.85	23.29	24.87	25.01
25	25.89	25.48	24.57	24.97	24.24	22.89	24.82	23.68	23.50	23.73	25.26	24.92
EOM	25.49	25.76	24.22	25.24	24.26	23.23	24.95	24.41	24.46	24.20	25.22	24.45
MIN	25.49	24.07	24.22	23.19	24.24	22.65	23.36	23.19	22.83	21.48	23.19	22.74
WTR YR	2003	HIGH 21.48	JUL 16									

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	25.97	25.44	25.96	23.24	25.05	24.05	23.80	25.11	24.69	24.88	23.67	23.16
10	26.04	25.01	25.73	23.67	25.09	22.90	24.02	24.33	24.82	22.93	24.13	23.97
15	26.07	24.13	25.52	24.33	25.21	22.77	24.47	23.52	23.90	21.56	24.61	24.68
20	26.11	25.09	25.11	24.73	25.21	22.95	24.72	23.27	22.94	23.51	24.94	25.08
25	25.93	25.54	24.59	25.05	24.25	23.01	24.86	23.82	23.79	23.78	25.31	25.01
EOM	25.54	25.81	24.39	25.27	24.33	23.36	24.98	24.47	24.57	24.32	25.34	24.48
MAX	26.11	25.81	25.98	25.27	25.31	24.26	24.98	25.11	24.85	24.89	25.45	25.22
WTR YR	2003	LOW 26.11	OCT 18									



FULTON COUNTY

405829086175801. Local number, FU 7.

LOCATION.--Lat 40°58'29", long 86°17'58", in NW¹/₄NW¹/₄SW¹/₄ sec.10, T.29 N., R.2 E., Fulton County, Hydrologic Unit 05120106, (FULTON, IN quadrangle), 2.5 mi northwest of Fulton.
 Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 102 ft, cased to 96 ft, screened to 102 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 776.45 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of floor of shelter, 2.50 ft above land-surface datum.

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

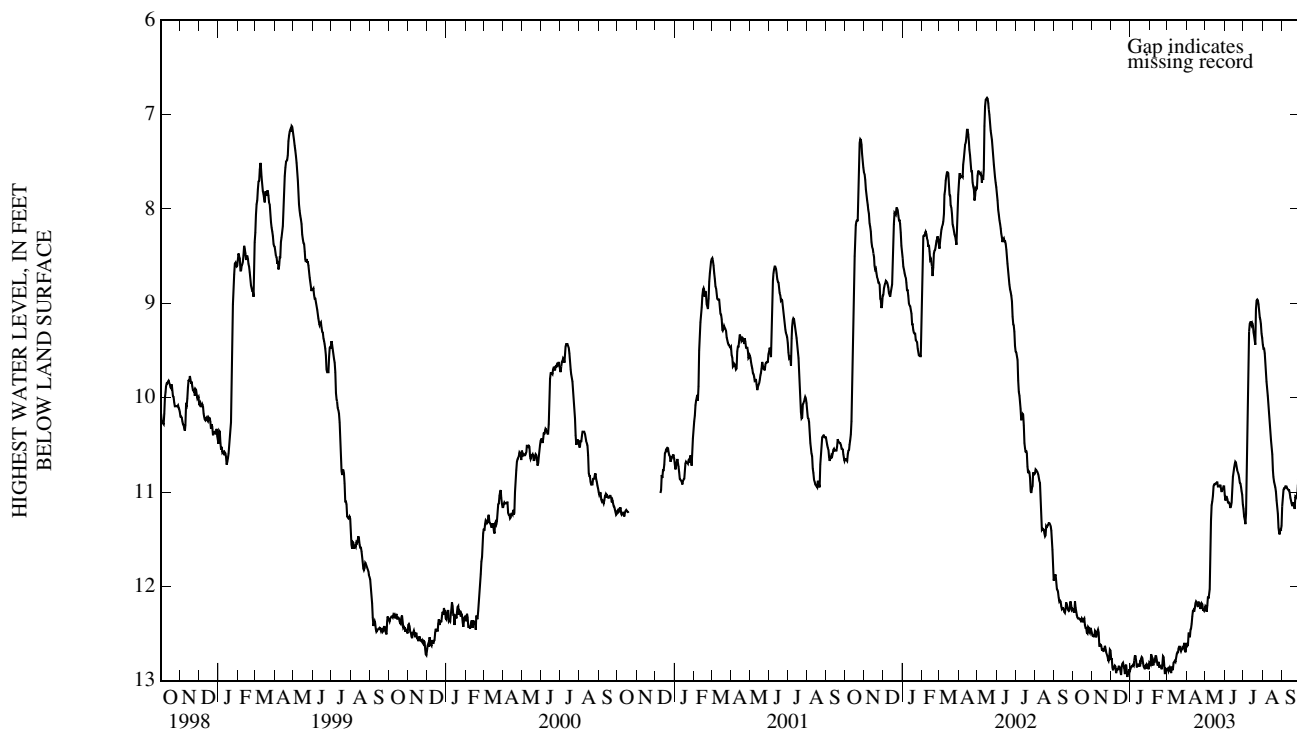
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 6.35 ft below land-surface datum, Apr. 23-27, 1973; lowest, 13.21 ft below land-surface datum, Oct. 13, 1988.

 HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	12.23	12.47	12.86	12.83	12.83	12.86	12.50	12.11	11.07	11.23	9.64	10.96
10	12.34	12.46	12.89	12.79	12.74	12.88	12.32	11.30	11.17	9.30	10.09	10.97
15	12.34	12.63	12.87	12.85	12.80	12.76	12.18	10.92	10.79	9.21	10.52	11.09
20	12.41	12.69	12.81	12.76	12.88	12.64	12.17	10.89	10.73	9.44	10.92	11.14
25	12.43	12.74	12.83	12.84	12.93	12.65	12.18	10.93	10.90	9.01	11.23	11.06
EOM	12.49	12.68	12.90	12.81	12.89	12.65	12.24	10.94	11.13	9.37	11.36	10.77
MIN	12.16	12.46	12.77	12.74	12.72	12.60	12.16	10.89	10.68	8.96	9.44	10.77
WTR YR	2003	HIGH 8.96 JUL 23										

 LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	12.31	12.54	12.89	12.84	12.85	12.88	12.59	12.20	11.11	11.39	9.76	10.97
10	12.35	12.49	12.92	12.85	12.79	12.90	12.40	11.61	11.20	9.57	10.19	10.99
15	12.38	12.67	12.91	12.86	12.88	12.80	12.23	10.94	10.84	9.26	10.60	11.12
20	12.44	12.71	12.84	12.81	12.90	12.68	12.22	10.94	10.79	9.46	10.95	11.18
25	12.50	12.78	12.91	12.88	12.94	12.67	12.22	10.97	10.92	9.08	11.38	11.10
EOM	12.52	12.78	12.91	12.88	12.90	12.70	12.28	11.03	11.18	9.45	11.45	10.80
MAX	12.52	12.79	12.97	12.91	12.94	12.93	12.65	12.32	11.20	11.45	11.46	11.36
WTR YR	2003	LOW 12.97 DEC 16										



GRANT COUNTY

402322085481901. Local number, GT 8.

LOCATION.--Lat 40°23'22", long 85°48'19", in NW¹/₄SW¹/₄NW¹/₄ sec.1, T.22 N., R.6 E., Grant County, Hydrologic Unit 05120107, (POINT ISABEL, IN quadrangle), 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.

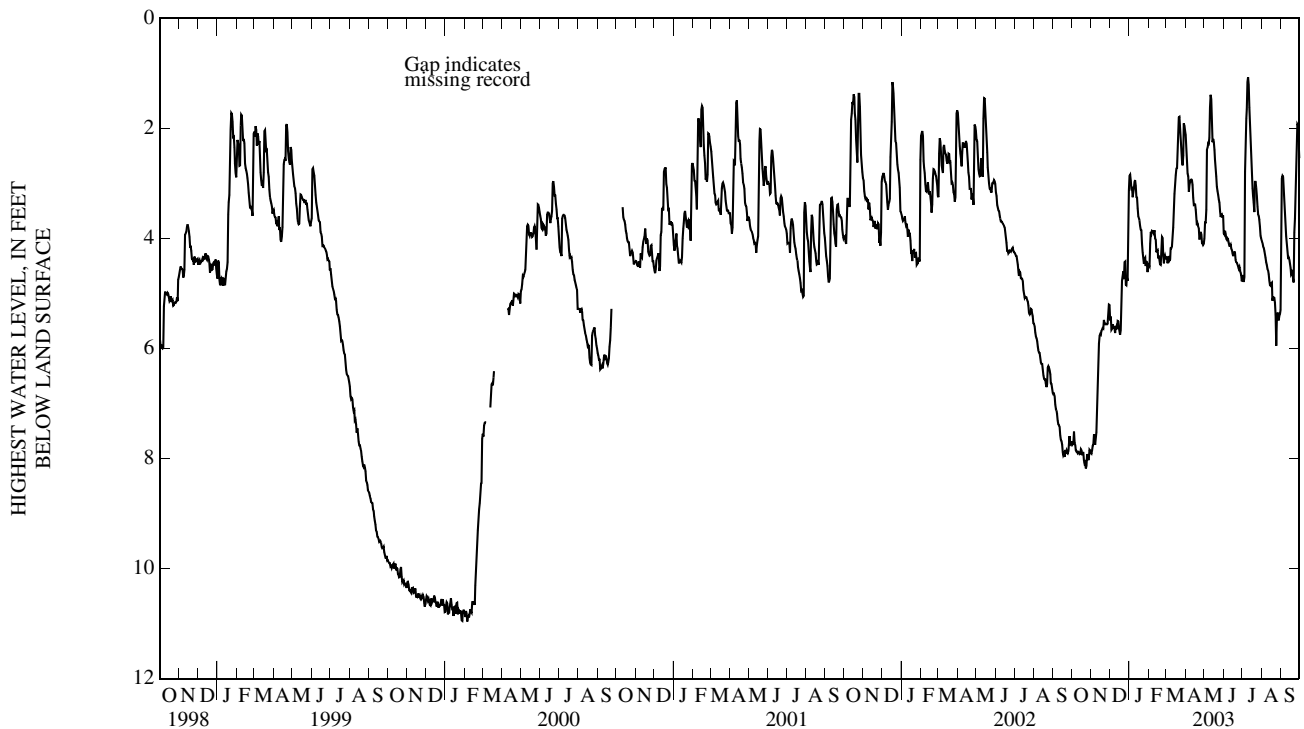
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.07 ft below land-surface datum, July 10, 2003; lowest, 11.01 ft below land-surface datum, Jan. 13, 14, 27, Feb. 5, 2000.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.71	7.56	5.56	3.09	3.91	4.32	2.87	2.39	4.01	2.79	4.23	3.15
10	7.90	6.85	5.61	2.94	3.85	4.15	2.93	1.62	4.13	1.07	4.55	4.08
15	7.83	5.74	5.63	3.60	4.21	3.01	3.38	2.19	4.27	2.55	4.86	4.46
20	8.03	5.64	4.77	3.85	4.48	2.20	3.73	2.87	4.39	3.52	5.07	4.74
25	7.92	5.56	4.42	4.37	4.45	2.36	3.88	3.35	4.55	3.42	5.46	2.64
EOM	7.90	5.21	3.13	4.47	4.36	2.04	4.10	3.58	4.78	4.00	5.30	2.54
MIN	7.51	5.20	3.13	2.84	3.85	1.79	2.12	1.39	3.86	1.07	4.04	1.92
WTR YR	2003	HIGH 1.07 JUL 10										

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.97	7.84	5.64	3.25	3.97	4.49	3.19	3.48	4.11	4.70	4.51	3.82
10	8.03	7.52	5.74	3.04	4.03	4.23	2.98	2.18	4.27	1.21	4.86	4.36
15	7.95	5.83	5.72	3.73	4.43	3.19	3.43	2.35	4.43	2.82	5.11	4.72
20	8.26	5.77	5.17	4.09	4.59	2.48	3.78	3.07	4.67	3.66	5.34	4.95
25	8.15	5.65	4.84	4.46	4.55	2.60	3.95	3.63	4.86	3.59	6.10	3.22
EOM	8.09	5.56	4.09	4.64	4.45	2.16	4.15	3.91	5.14	4.13	5.80	2.79
MAX	8.39	7.99	5.88	4.67	4.59	4.56	4.18	4.14	5.14	5.27	6.12	5.30
WTR YR	2003	LOW 8.39 OCT 24										



GRANT COUNTY

403836085374401. Local number, GT 10.

LOCATION.--Lat 40°38'36", long 85°37'44", in NE $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.4, T.25 N., R.8 E., Grant County, Hydrologic Unit 05120103, (LA FOUNTAINE, IN quadrangle), 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 shelf, 3.20 ft above land-surface datum.

REMARKS.--Water level affected by pumpage from water-supply well field.

PERIOD OF RECORD.--August 1987 to October 2003 (discontinued).

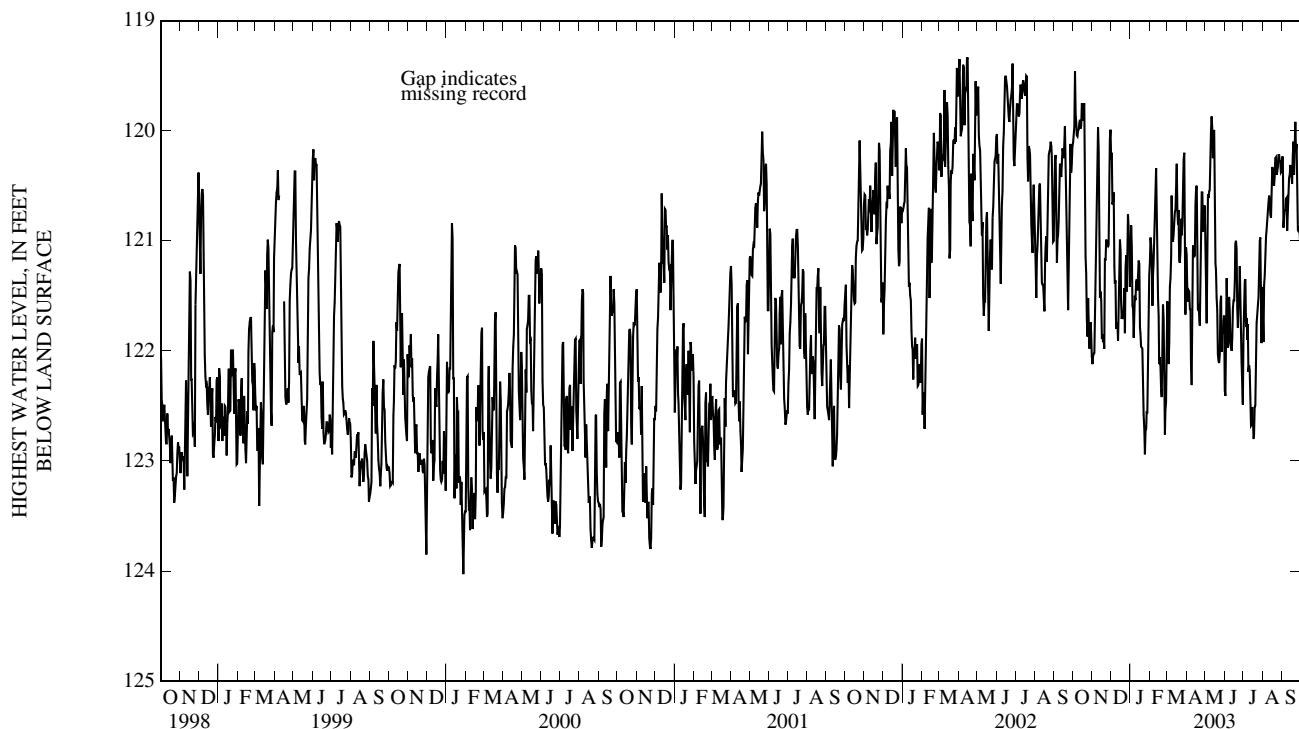
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 107.39 ft below land-surface datum, Apr. 6, 1988; lowest, 124.24 ft below land-surface datum, Feb. 16 - 17, 2000.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	119.85	121.65	120.56	121.62	121.59	121.42	121.46	120.58	121.68	121.78	121.10	120.72
10	119.99	119.97	121.76	121.38	120.49	121.01	121.44	120.00	121.89	122.13	120.66	120.78
15	119.75	121.54	120.99	121.21	121.69	120.54	120.67	120.00	121.54	122.51	120.56	120.38
20	120.70	121.98	121.71	121.98	122.42	121.17	121.60	121.63	121.07	122.50	120.42	120.40
25	121.52	121.04	121.13	122.72	122.76	120.84	120.56	121.56	121.23	121.51	120.33	120.61
EOM	122.05	119.99	121.42	121.31	122.23	121.06	120.68	121.68	122.49	121.42	120.37	121.10
MIN	119.46	119.97	120.20	120.86	120.34	120.20	120.50	119.87	121.00	120.97	120.22	119.92
WTR YR	2003	HIGH	119.46	OCT	4							

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	120.61	122.16	121.23	121.88	122.16	121.93	122.38	120.93	122.03	122.17	121.31	120.83
10	120.05	120.20	121.86	121.88	120.75	121.55	122.39	120.31	121.99	122.24	120.78	120.91
15	119.95	121.89	121.31	121.90	122.19	120.72	121.13	120.79	121.95	122.69	120.80	120.44
20	121.14	122.18	121.99	122.37	122.62	121.25	121.69	122.03	121.61	122.68	120.53	120.53
25	121.87	121.20	121.46	122.94	122.96	121.33	120.84	122.17	121.52	121.61	120.40	121.06
EOM	122.15	120.50	121.74	121.78	122.59	121.84	121.07	122.36	122.60	122.08	120.57	121.72
MAX	122.15	122.22	122.26	123.22	122.96	122.35	122.48	122.36	122.60	122.92	122.18	121.72
WTR YR	2003	LOW	123.22	JAN	27							



HAMILTON COUNTY

40000086023201. Local number, HA 7.

LOCATION.--Lat 40°00'00", long 86°02'30", in NE¹/₄NE¹/₄NW¹/₄ 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, Conner Prairie Farm.

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 755.17 ft above sea level. Measuring point: Top of casing, 3.50 ft above land-surface datum. (GPS elevation provided by Hamilton County Surveyor's office).

REMARKS.--Replacement well for Hamilton 5. Well affected by pumpage.

PERIOD OF RECORD.--September 2002 to September 30, 2003.

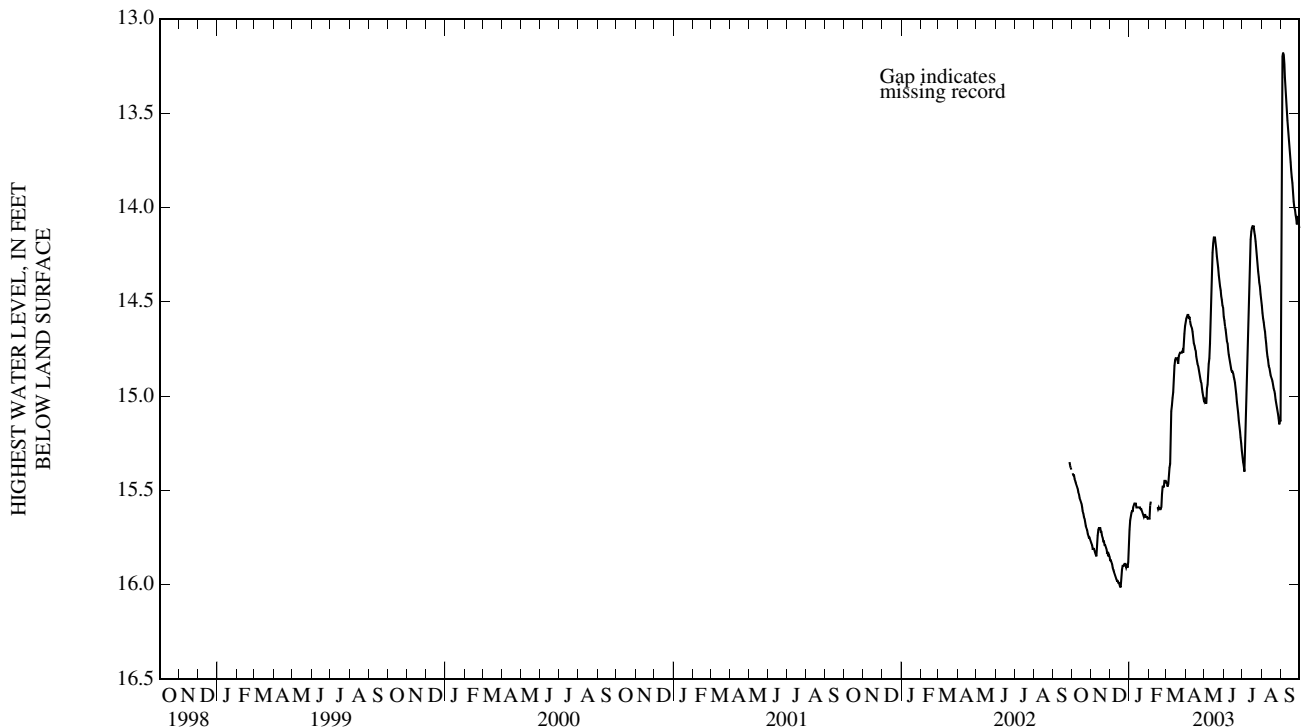
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 13.18 ft below land-surface datum, Sept. 4, 2003; lowest, 16.02 ft below land-surface datum, Dec. 18, 2002.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	15.44	15.81	15.91	15.61	---	15.43	14.57	14.96	14.68	15.32	14.64	13.19
10	15.49	15.80	15.96	15.57	---	15.05	14.63	14.72	14.80	14.58	14.79	13.48
15	15.56	15.70	15.99	15.59	15.59	14.81	14.73	14.19	14.87	14.13	14.89	13.72
20	15.64	15.77	15.92	15.60	15.60	14.83	14.83	14.22	14.96	14.13	14.96	13.92
25	15.71	15.81	15.89	15.63	15.48	14.77	14.92	14.39	15.13	14.30	15.06	14.06
EOM	15.77	15.85	15.80	15.65	15.45	14.63	15.02	14.53	15.29	14.49	15.13	14.11
MIN	15.41	15.70	15.80	15.57	15.45	14.63	14.57	14.16	14.58	14.10	14.52	13.18
WTR YR	2003	HIGH 13.18 SEP 4										

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	15.45	15.82	15.92	15.62	---	15.47	14.61	15.04	14.71	15.44	14.66	13.24
10	15.51	15.86	15.97	15.58	---	15.08	14.64	14.80	14.82	14.76	14.81	13.54
15	15.57	15.72	16.00	15.60	15.60	14.84	14.75	14.24	14.88	14.17	14.90	13.76
20	15.65	15.77	15.97	15.61	15.61	14.84	14.84	14.26	14.99	14.15	14.97	13.97
25	15.73	15.83	15.90	15.64	15.48	14.78	14.93	14.42	15.16	14.34	15.08	14.09
EOM	15.78	15.87	15.88	15.66	15.46	14.67	15.04	14.58	15.32	14.52	15.13	14.13
MAX	15.78	15.87	16.02	15.80	15.66	15.48	15.04	15.05	15.32	15.44	15.16	15.13
WTR YR	2003	LOW 16.02 DEC 18										



HARRISON COUNTY

382323086044501. Local number, HR 8.

LOCATION.--Lat 38°23'23", long 86°04'45", in NW $\frac{1}{4}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.33, T.1 S., R.4 E., Harrison County, Hydrologic Unit 05140104, (PALMYRA, IN quadrangle) 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.

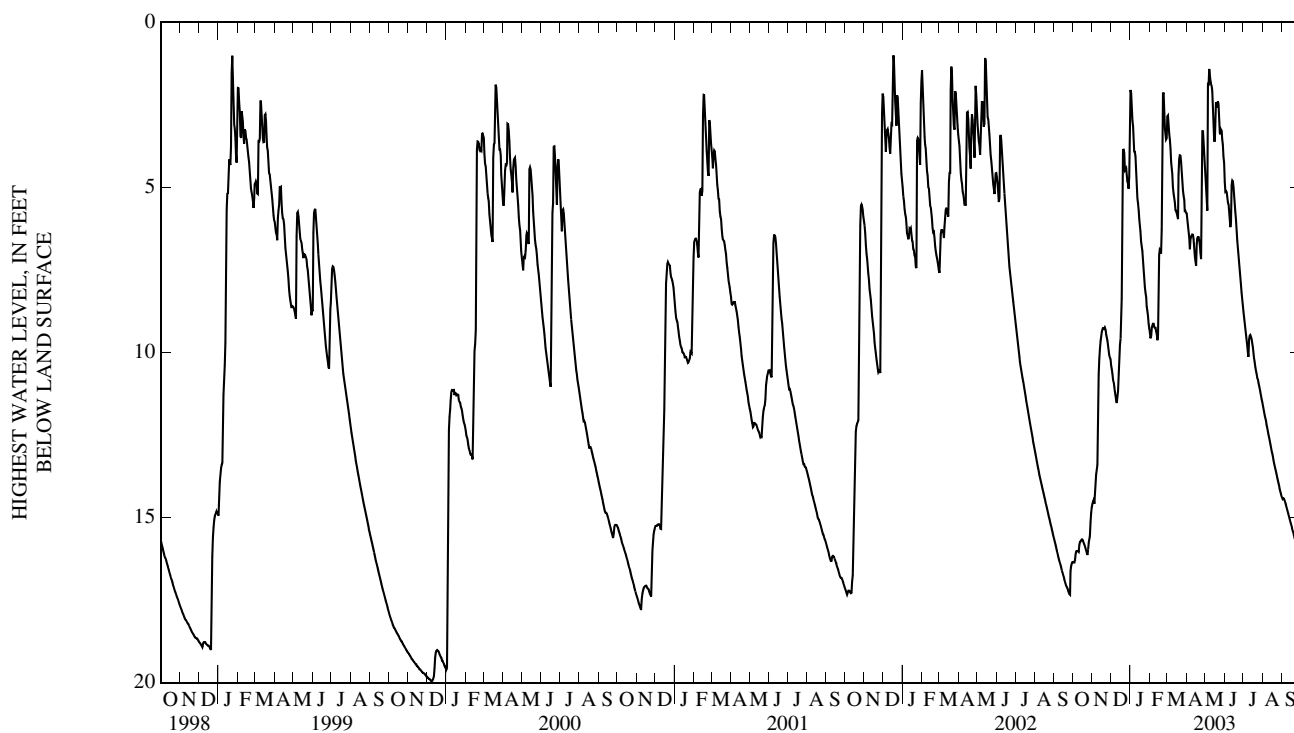
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.56 ft below land-surface datum, June 7, 1990, and Apr. 29, 1996; lowest, 20.29 ft below land-surface datum, Dec. 17, 1992.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	16.10	14.25	10.90	3.15	9.18	3.55	6.52	1.87	5.29	9.45	11.99	14.49
10	16.04	11.77	11.53	4.50	9.25	4.99	6.43	1.86	6.20	9.61	12.48	14.83
15	15.66	9.51	9.77	5.98	7.82	5.71	7.24	3.59	5.00	9.73	12.98	15.19
20	15.86	9.28	3.87	6.93	6.27	4.15	6.50	2.58	6.27	10.44	13.44	15.56
25	15.96	9.65	4.42	8.20	3.23	4.76	4.90	3.39	7.57	10.92	13.87	15.69
EOM	14.68	10.19	2.93	9.27	3.51	5.76	4.33	4.25	8.59	11.49	14.35	15.91
MIN	14.68	9.24	2.93	2.05	2.15	2.82	3.30	1.41	4.79	8.77	11.60	14.40
WTR YR	2003	HIGH 1.41	MAY 7									

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	16.28	14.59	11.05	3.57	9.25	3.86	6.87	5.72	5.46	9.64	12.07	14.55
10	16.05	13.41	11.60	4.96	9.37	5.18	6.49	2.16	6.37	10.32	12.58	14.90
15	15.68	9.65	10.13	6.20	9.48	5.79	7.37	3.78	5.26	9.85	13.06	15.25
20	15.93	9.32	5.18	7.21	7.11	4.62	6.59	3.11	6.60	10.55	13.53	15.63
25	16.19	9.82	4.65	8.33	3.36	5.11	7.27	3.86	7.79	11.01	13.96	15.76
EOM	14.85	10.40	4.66	9.39	4.01	5.84	4.64	4.83	8.77	11.60	14.40	15.96
MAX	16.38	14.68	11.60	9.39	9.74	6.11	7.53	5.81	8.77	11.60	14.40	15.96
WTR YR	2003	LOW 16.38	OCT 3									



HENDRICKS COUNTY

394025086400801. Local number, HD 4.

LOCATION.--Lat 39°40'25", long 86°40'08", in NW¹/₄NW¹/₄NW¹/₄ sec.8, T.14 N., R.2 W., Hendricks County, Hydrologic Unit 05120203, (COATESVILLE, IN quadrangle), at the intersection of State Highway 75 and County Road 600 South on county right-of-way, and 1.0 mi south of Coatesville.
Owner: U.S. Geological Survey.

AQUIFER.--Sandstone of Mississippian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 85 ft, cased to 70 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 860 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of floor of shelter, 1.92 ft above land-surface datum.

REMARKS.--Water level affected by pumpage.

PERIOD OF RECORD.--October 1966 to September 1971, November 1974 to current year.

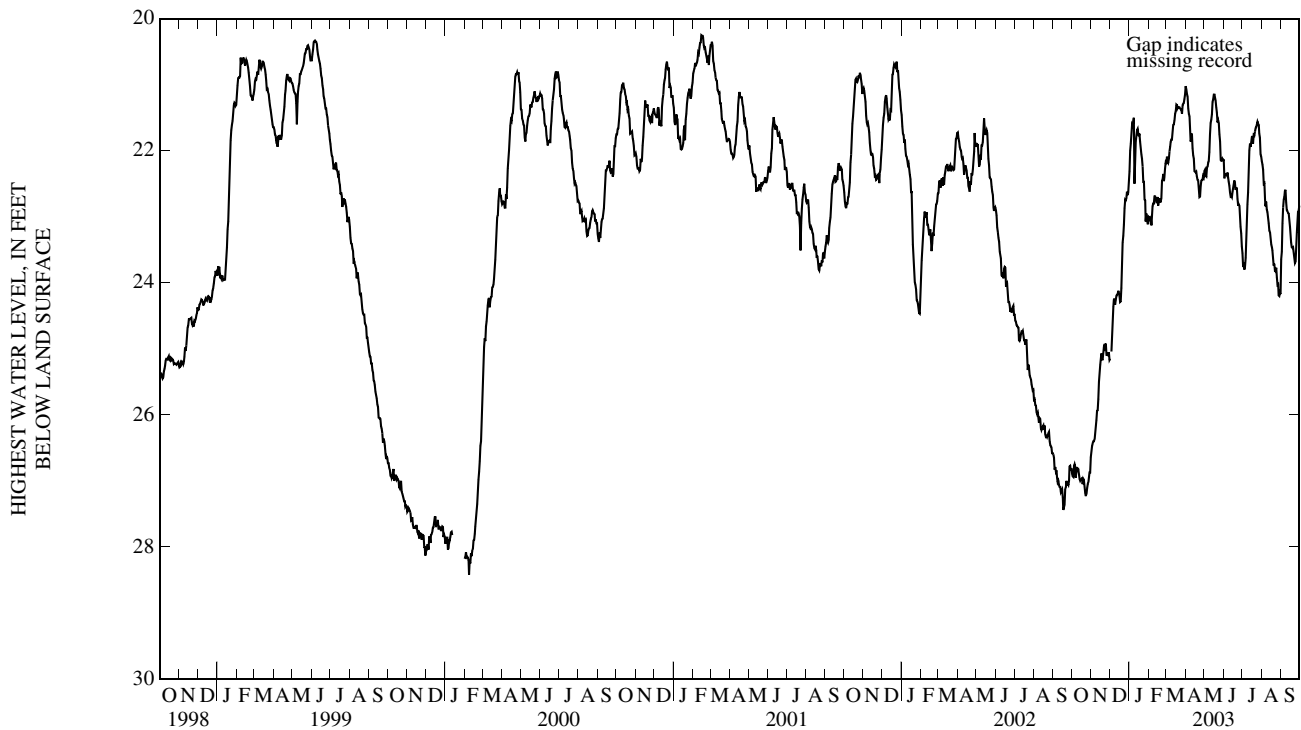
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 18.65 ft below land-surface datum, Jan. 30, 1976; lowest, 29.02 ft below land-surface datum, Nov. 30, 1988.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	26.75	26.40	24.55	21.60	23.13	22.12	21.36	22.26	22.35	23.75	22.49	22.74
10	26.84	25.94	24.26	22.10	22.69	21.83	21.82	21.75	22.53	22.63	22.93	22.90
15	26.98	25.24	24.16	21.75	22.70	21.44	22.31	21.22	22.62	21.87	23.33	23.15
20	26.99	25.06	23.74	22.05	22.77	21.34	22.44	21.34	22.59	21.77	23.74	23.46
25	27.11	25.09	22.74	22.74	22.46	21.38	22.53	21.75	22.81	21.56	23.92	23.49
EOM	26.64	25.17	22.48	23.10	22.18	21.15	22.40	22.14	23.45	22.09	24.17	22.83
MIN	26.64	24.92	22.48	21.50	22.18	21.15	21.02	21.15	22.14	21.56	22.16	22.59
WTR YR	2003	HIGH	21.02	APR	1							

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	26.95	26.53	24.76	21.75	23.32	22.21	21.47	22.51	22.48	24.10	22.87	22.87
10	27.00	26.10	24.42	22.50	22.89	22.18	21.92	22.02	22.72	22.83	23.19	23.17
15	27.30	25.40	24.27	21.91	22.93	21.64	22.55	21.44	22.82	22.13	23.56	23.57
20	27.18	25.19	24.08	22.19	22.85	21.54	22.54	21.49	22.73	21.98	23.96	23.59
25	27.22	25.18	22.87	22.85	22.56	21.62	22.74	21.99	22.95	21.71	24.16	23.74
EOM	26.87	25.32	22.81	23.33	22.32	21.27	22.55	22.24	23.61	22.21	24.39	22.98
MAX	27.39	26.74	25.81	25.58	23.32	22.36	22.88	22.58	23.61	24.10	24.39	24.17
WTR YR	2003	LOW	27.39	OCT	23							



HUNTINGTON COUNTY

404858085284301. Local number, HU 2.

LOCATION.--Lat 40°48'58", long 85°28'43", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.2, T.27 N., R.9 E., Huntington County, Hydrologic Unit 05120101, (MAJENICA, IN quadrangle), on the property of Luther Fusselman, 3.0 mi south of Huntington and 0.5 mi west of State Highway 5.
Owner: U.S. Geological Survey.

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 above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.30 ft above land-surface datum.

REMARKS.--Water level affected by pumpage from water-supply well field.

PERIOD OF RECORD.--August 1988 to October 2003 (discontinued).

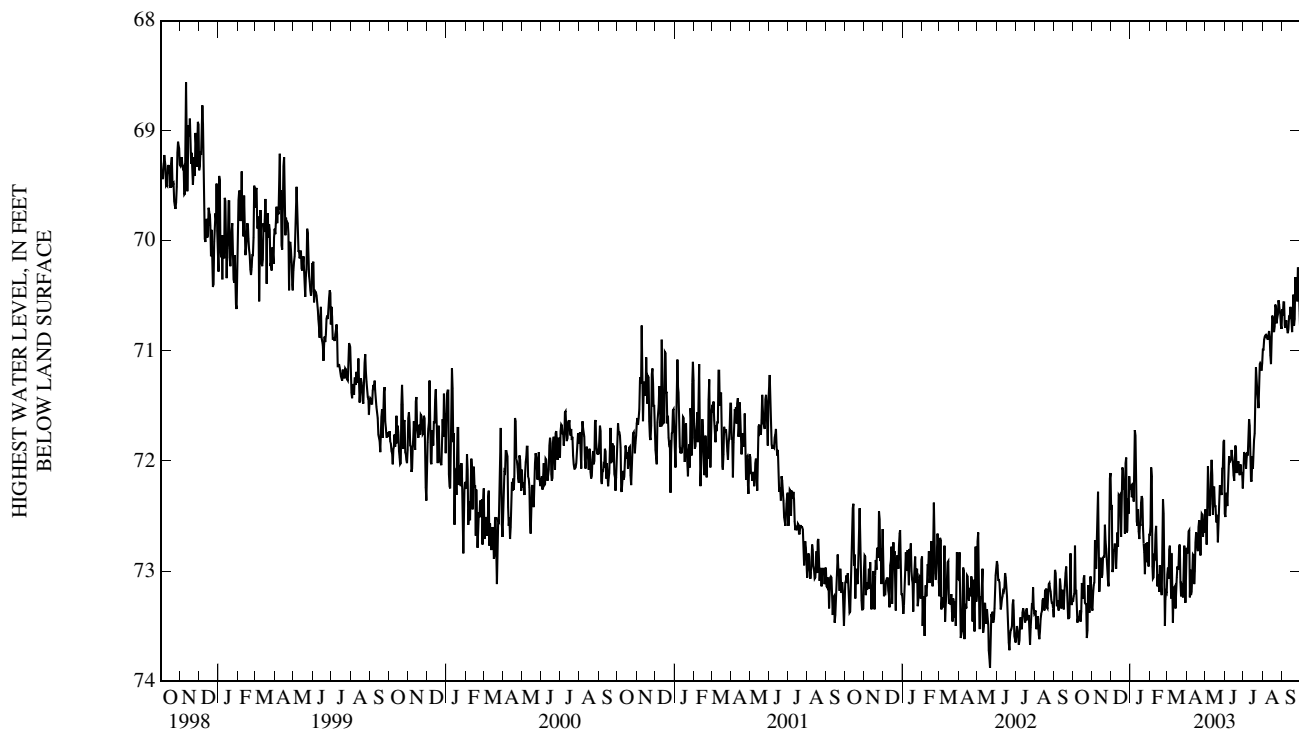
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 65.46 ft below land-surface datum, Dec. 24, 1988; lowest, 73.97 ft below land-surface datum, May 21, 2002.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	73.18	72.72	72.82	72.20	72.96	72.77	72.63	72.05	72.41	72.07	70.86	70.77
10	73.44	72.28	72.79	72.18	72.67	73.47	73.00	72.12	72.00	71.62	70.86	70.84
15	73.11	72.91	72.31	72.71	73.08	73.22	72.74	72.24	72.13	71.96	70.90	70.65
20	73.29	72.87	72.08	72.34	73.22	72.78	72.60	72.49	72.11	71.42	70.78	70.77
25	73.13	72.99	71.97	72.77	73.50	73.13	72.48	72.23	72.13	71.52	70.67	70.55
EOM	73.33	72.11	72.26	72.67	73.20	73.04	72.49	71.81	72.25	71.11	70.80	70.85
MIN	72.77	72.11	71.97	71.72	72.06	72.76	72.48	71.81	71.86	71.11	70.54	70.25
WTR YR	2003	HIGH 70.25 SEP 26										

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	73.55	73.23	72.98	72.37	73.19	73.16	73.40	72.43	72.52	72.23	70.90	70.87
10	73.51	72.57	72.98	72.56	72.99	73.63	73.21	72.42	72.23	71.84	70.94	70.86
15	73.37	73.12	72.59	72.90	73.43	73.34	73.00	72.44	72.18	72.18	71.13	70.74
20	73.43	73.08	72.25	72.62	73.43	73.06	72.82	72.78	72.21	71.75	70.87	70.95
25	73.54	73.25	72.65	73.03	73.70	73.30	72.60	72.29	72.27	71.59	70.72	70.75
EOM	73.38	72.64	72.37	72.96	73.31	73.40	72.70	72.48	72.33	71.21	70.98	70.94
MAX	73.72	73.44	73.32	73.28	73.70	73.63	73.46	72.88	72.66	72.27	71.21	70.95
WTR YR	2003	LOW 73.72 OCT 13										



JASPER COUNTY

410249087011201. Local number, JP 4.

LOCATION.--Lat 41°02'49", long 87°01'12", in SW¹/₄NE¹/₄SW¹/₄ sec.17, T.30 N., R.5 W., Jasper County, Hydrologic Unit 07120002, (GIFFORD, IN quadrangle), 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 affected by irrigation pumpage.

PERIOD OF RECORD.--July 1956 to October 2003 (discontinued).

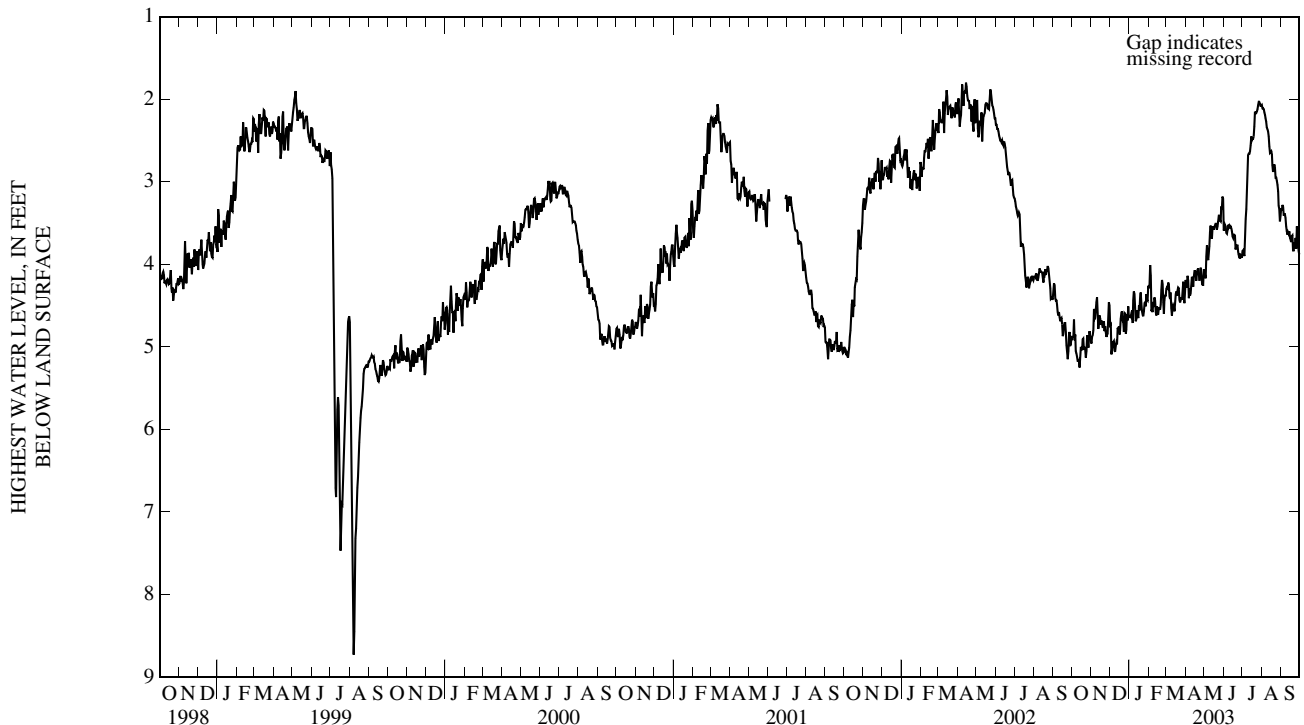
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.95 ft below land-surface datum, Apr. 9, 1962; lowest, 40.17 ft below land-surface datum, July 25, 1980.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.92	4.54	4.95	4.56	4.57	4.25	4.20	3.77	3.62	3.67	2.16	3.41
10	5.17	4.40	4.99	4.54	4.40	4.62	4.24	3.61	3.53	2.68	2.36	3.60
15	5.00	4.66	4.75	4.65	4.59	4.46	4.08	3.55	3.66	2.45	2.64	3.68
20	5.03	4.76	4.57	4.47	4.49	4.28	4.07	3.51	3.82	2.33	2.84	3.83
25	4.86	4.88	4.60	4.47	4.60	4.40	4.04	3.41	3.89	2.12	2.99	3.81
EOM	4.92	4.50	4.64	4.26	4.39	4.31	4.07	3.20	3.92	2.08	3.41	3.88
MIN	4.67	4.40	4.51	4.26	4.01	4.21	4.04	3.18	3.52	2.03	2.07	3.28
WTR YR	2003	HIGH 2.03 JUL 27										

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.12	4.92	5.11	4.71	4.63	4.44	4.56	3.93	3.75	3.94	2.26	3.55
10	5.27	4.58	5.10	4.71	4.62	4.70	4.35	3.78	3.68	2.87	2.52	3.73
15	5.11	4.85	4.93	4.78	4.82	4.62	4.27	3.71	3.80	2.58	2.74	3.74
20	5.15	4.94	4.75	4.60	4.69	4.44	4.16	3.70	3.91	2.48	2.95	3.98
25	5.11	4.95	4.84	4.57	4.69	4.51	4.18	3.51	4.04	2.29	3.14	3.96
EOM	5.05	4.95	4.81	4.51	4.51	4.54	4.34	3.59	4.08	2.20	3.60	3.95
MAX	5.39	5.08	5.28	4.81	4.82	4.82	4.58	4.31	4.10	4.00	3.60	4.01
WTR YR	2003	LOW 5.39 OCT 13										



JASPER COUNTY

410809087580801. Local number, JP 7.

LOCATION.--Lat 41°08'10", 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, (SAN PIERRE, IN quadrangle), 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 irrigation pumpage.

PERIOD OF RECORD.--May 1967 to August 1971. September 1971 to May 1978 (semi-annual tape-down readings only). June 1978 to October 2003 (discontinued).

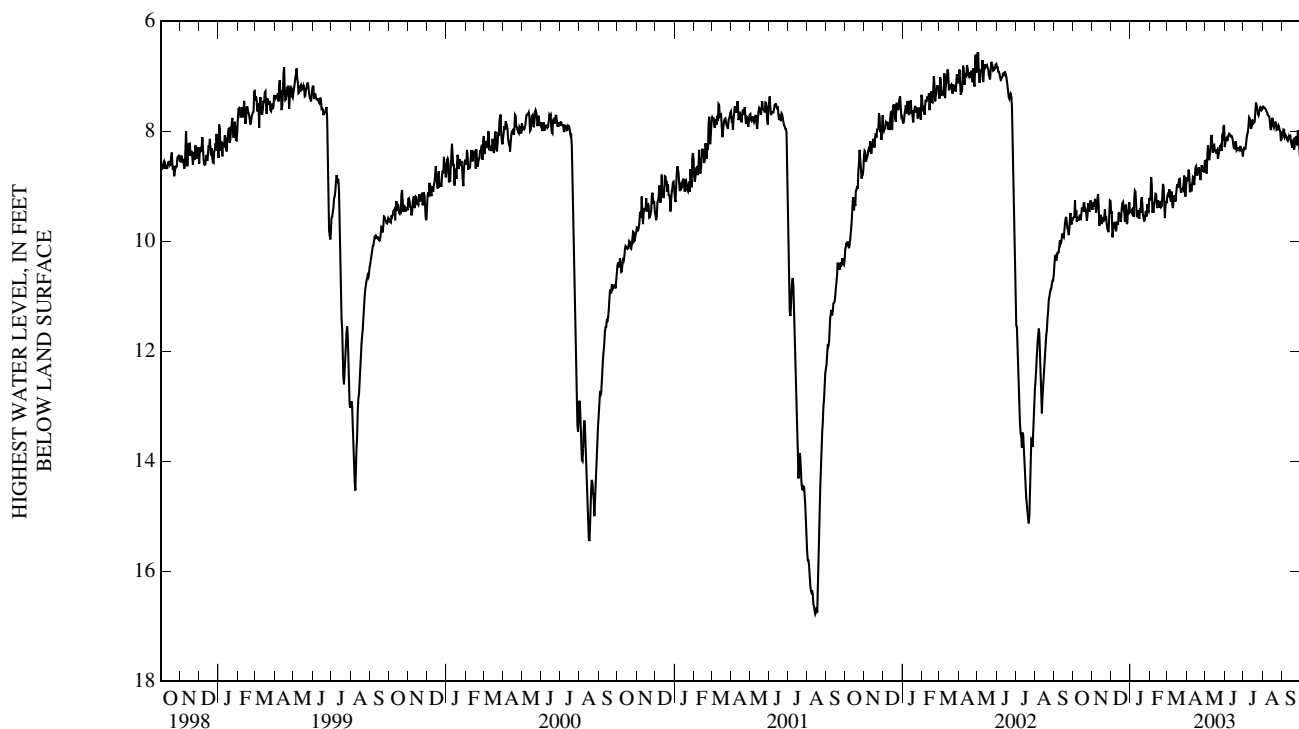
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 6.04 ft below land-surface datum, Apr. 5, 1985; lowest, 18.15 ft below land-surface datum, Aug. 30, 1988.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.57	9.23	9.71	9.39	9.48	9.09	8.77	8.26	8.18	8.24	7.60	8.12
10	9.61	9.15	9.70	9.32	9.14	9.40	8.94	8.17	8.08	7.75	7.72	8.18
15	9.39	9.57	9.49	9.59	9.36	9.15	8.67	8.25	8.28	7.79	7.87	8.20
20	9.46	9.56	9.29	9.33	9.36	8.88	8.70	8.34	8.35	7.66	7.90	8.34
25	9.31	9.78	9.35	9.47	9.58	9.05	8.62	8.26	8.31	7.71	7.96	8.26
EOM	9.38	9.27	9.45	9.22	9.31	9.00	8.55	7.89	8.46	7.60	8.15	8.50
MIN	9.26	9.15	9.29	9.08	8.84	8.81	8.55	7.89	8.03	7.48	7.54	7.97
WTR YR	2003	HIGH 7.48 JUL 21										

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.82	9.64	9.94	9.56	9.56	9.30	9.23	8.45	8.31	8.42	7.70	8.27
10	9.75	9.36	9.86	9.55	9.40	9.49	9.08	8.37	8.25	7.95	7.92	8.33
15	9.53	9.82	9.71	9.74	9.65	9.35	8.94	8.46	8.46	7.93	8.04	8.26
20	9.62	9.80	9.48	9.52	9.58	9.07	8.80	8.59	8.44	7.86	8.02	8.51
25	9.62	9.90	9.69	9.62	9.65	9.18	8.74	8.37	8.50	7.88	8.13	8.46
EOM	9.53	9.78	9.65	9.54	9.44	9.28	8.84	8.31	8.64	7.75	8.34	8.55
MAX	9.83	9.95	10.17	9.79	9.65	9.55	9.28	8.91	8.64	8.55	8.34	8.55
WTR YR	2003	LOW 10.17 DEC 3										



JASPER COUNTY

410322087163101. Local number, JP 11.

LOCATION.--Lat 41°03'22", long 87°16'31", in NW¹/₄NW¹/₄NW¹/₄ sec.18, T.30 N., R.7 W., Jasper County, Hydrologic Unit 07120002, (FAIR OAKS, IN quadrangle), 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 697.50 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of floor of shelter, 3.50 ft above land-surface datum.

REMARKS.--Water level affected by irrigation pumpage.

PERIOD OF RECORD.--March 1981 to October 2003 (discontinued).

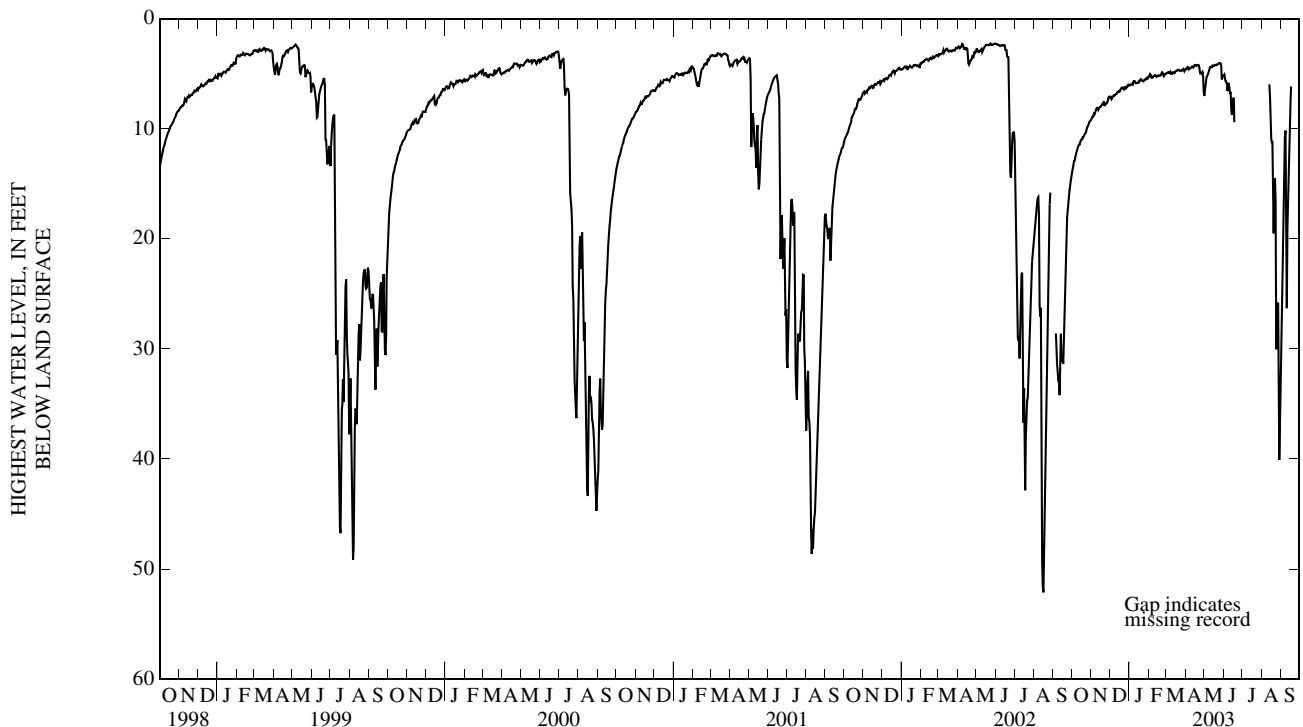
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.04 ft above land-surface datum, Apr. 3, 1982; lowest, 52.76 ft below land-surface datum, Aug. 17, 2002.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	12.91	8.61	7.09	5.92	5.36	4.85	4.44	5.23	5.73	---	---	14.10
10	11.76	8.11	6.85	5.75	5.15	5.02	4.41	4.42	6.26	---	---	26.31
15	11.07	8.02	6.57	5.84	5.21	4.85	4.24	4.25	7.80	---	9.47	8.73
20	10.68	7.65	6.26	5.53	5.15	4.64	4.20	4.17	---	---	19.50	---
25	9.86	7.71	6.21	5.55	5.21	4.71	4.91	4.03	---	---	26.90	---
EOM	9.23	7.08	6.08	5.28	5.04	4.64	6.73	5.15	---	---	33.90	---
MIN	9.23	7.08	6.01	5.28	4.87	4.55	4.19	4.03	5.09	---	5.96	6.15
WTR YR	2003	HIGH 4.03 MAY 25										

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	13.05	8.90	7.22	5.98	5.42	4.94	4.66	5.44	6.05	---	---	16.20
10	11.98	8.19	6.96	5.87	5.25	5.07	4.50	4.65	6.84	---	---	29.36
15	11.21	8.10	6.66	5.87	5.32	4.94	4.36	4.37	8.74	---	13.37	10.90
20	10.78	7.79	6.32	5.62	5.25	4.73	4.27	4.26	---	---	24.72	---
25	10.13	7.74	6.35	5.66	5.27	4.75	5.14	4.06	---	---	32.75	---
EOM	9.31	7.30	6.13	5.45	5.07	4.79	8.30	5.60	---	---	40.94	---
MAX	14.32	9.24	7.39	6.13	5.42	5.07	8.30	7.98	13.94	---	44.54	33.90
WTR YR	2003	LOW 44.54 AUG 29										



JASPER COUNTY

410145087130401. Local number, JP 12.

LOCATION.--Lat 41°01'45", long 87°13'04", in NW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.22, T.30 N., R.7 W., Jasper County, Hydrologic Unit 07120002, (PARR, IN quadrangle), 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 692.90 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of well casing, 2.6 ft above land-surface datum.

REMARKS.--Water level affected by irrigation pumpage.

PERIOD OF RECORD.--May 1982 to October 2003 (discontinued).

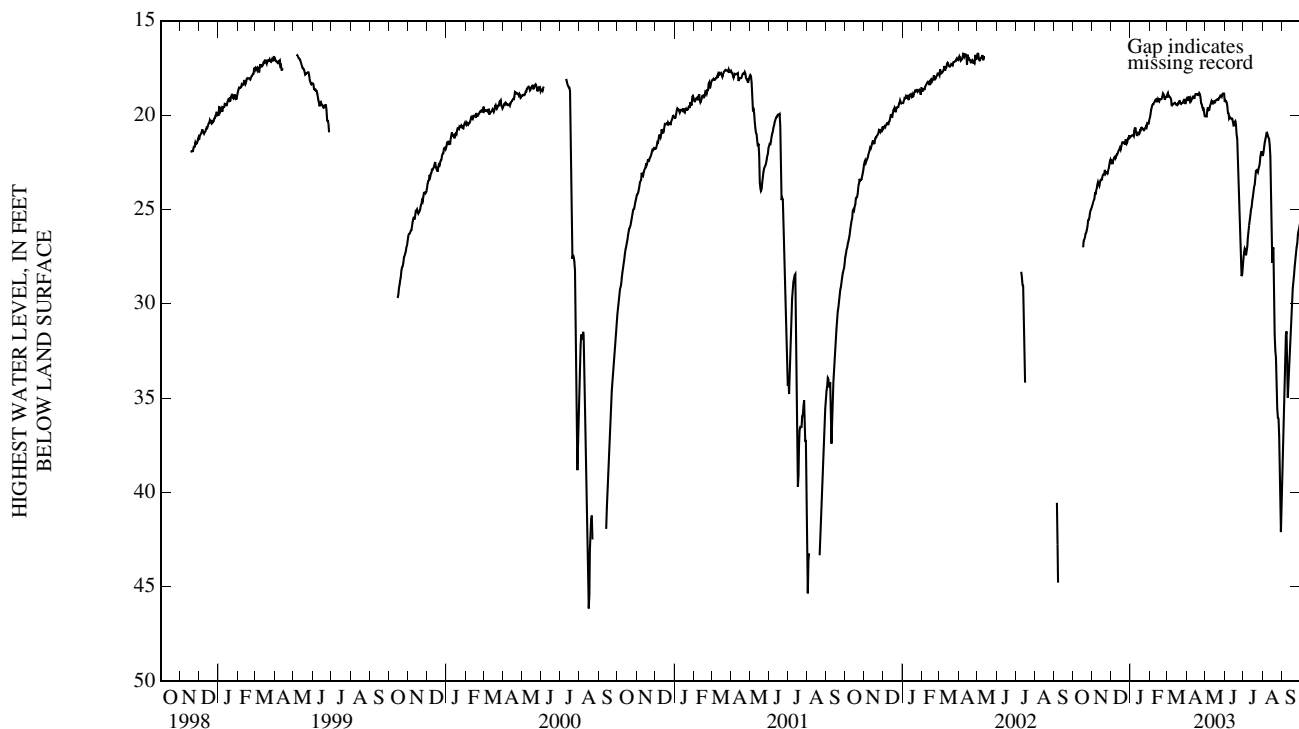
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 14.08 ft below land-surface datum, May 22, 1983; lowest, 53.41 ft below land-surface datum, Aug. 18, 1988.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	24.15	22.34	21.06	19.46	19.04	19.14	19.59	19.53	27.44	21.28	33.13
10	---	23.54	22.09	20.95	19.19	19.42	19.14	19.37	20.18	25.85	21.19	34.98
15	---	23.42	21.74	20.98	19.24	19.45	18.90	19.27	20.55	24.53	26.41	30.91
20	26.51	23.10	21.45	20.69	19.15	19.27	18.89	19.17	21.03	23.34	31.67	28.47
25	25.59	23.09	21.33	20.68	19.19	19.35	19.42	18.96	25.69	22.85	36.04	26.82
EOM	24.90	22.36	21.19	20.28	19.03	19.27	20.06	18.86	28.06	22.07	39.81	25.68
MIN	24.90	22.36	21.07	20.28	18.85	18.84	18.83	18.86	19.23	21.92	20.94	25.68
WTR YR	2003	HIGH 18.83 APR 21										

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	24.75	22.57	21.41	19.78	19.19	19.76	19.98	20.23	27.76	21.81	34.01
10	---	23.91	22.33	21.29	19.74	19.51	19.39	19.77	20.58	26.22	21.62	35.87
15	---	23.76	22.02	21.27	19.58	19.49	19.26	19.49	21.41	24.87	28.34	31.63
20	26.87	23.44	21.75	20.95	19.46	19.60	19.04	19.65	21.98	23.92	34.02	28.95
25	26.33	23.43	21.74	21.04	19.48	19.69	19.77	19.22	26.66	23.30	37.02	27.25
EOM	25.63	23.03	21.59	20.64	19.27	19.57	20.44	19.83	28.75	22.43	42.11	26.12
MAX	27.37	25.07	23.25	21.55	20.28	19.82	20.44	20.55	29.42	28.37	42.57	39.81
WTR YR	2003	LOW 42.57 AUG 30										



JASPER COUNTY

405902087141501. Local number, JP 13.

LOCATION.--Lat 40°59'02", long 87°14'15", in NW¹/₄NW¹/₄NW¹/₄ sec.9, T.29 N., R.7 W., Jasper County, Hydrologic Unit 07120002, (RENSELAER, IN quadrangle), 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 affected by irrigation pumpage.

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

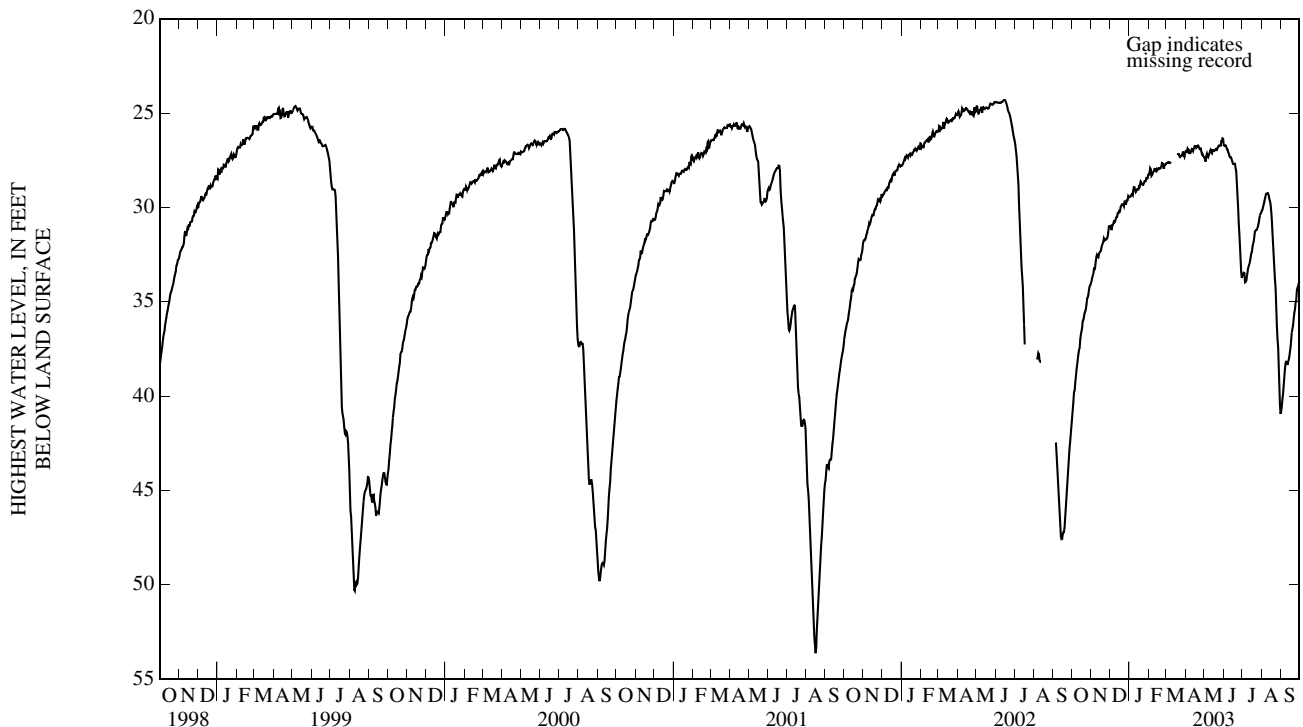
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 20.98 ft below land-surface datum, Apr. 3, 1982; lowest, 55.85 ft below land-surface datum, Aug. 19, 1988.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	39.72	33.25	30.95	29.30	28.32	27.60	26.94	27.16	26.79	33.98	29.67	39.42
10	38.12	32.51	30.61	29.07	27.97	---	27.00	27.03	27.27	33.25	29.24	38.21
15	36.75	32.35	30.21	29.05	28.00	---	26.77	26.96	27.62	32.44	29.87	37.63
20	35.83	31.83	29.84	28.68	27.92	27.17	26.73	26.90	27.92	31.56	32.38	36.26
25	34.83	31.70	29.69	28.62	27.96	27.25	26.89	26.72	30.89	31.10	36.29	34.92
EOM	34.05	31.00	29.47	28.27	27.72	27.14	27.31	26.36	33.74	30.28	40.94	33.90
MIN	34.05	31.00	29.41	28.27	27.65	27.04	26.72	26.35	26.71	30.28	29.24	33.90
WTR YR	2003	HIGH 26.35 MAY 30										

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	39.92	33.58	31.08	29.36	28.40	27.68	27.28	27.30	26.93	34.06	29.84	39.84
10	38.42	32.62	30.74	29.22	28.16	---	27.11	27.19	27.38	33.46	29.38	38.38
15	37.01	32.40	30.34	29.13	28.19	---	26.98	27.09	27.77	32.66	30.24	37.90
20	36.00	32.01	29.93	28.79	28.04	27.30	26.83	27.06	28.09	31.83	33.20	36.45
25	35.17	31.75	29.85	28.73	28.05	27.33	27.05	26.78	31.47	31.25	36.99	35.10
EOM	34.15	31.27	29.58	28.49	27.80	27.37	27.47	26.71	33.85	30.36	41.05	34.06
MAX	41.46	34.06	31.32	29.58	28.40	27.80	27.47	27.69	33.85	34.07	41.05	40.99
WTR YR	2003	LOW 41.46 OCT 1										



JASPER COUNTY

405550087092301. Local number, JP 15.

LOCATION.--Lat 40°55'50", long 87°09'23", in SE $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.30, T.29 N., R.6 W., Jasper County, Hydrologic Unit 07120002, (RENSELAER, IN quadrangle), at the Peerless Superior Cleaners in the shopping center on the west side of State Highway 231 in Rensselaer.
Owner: Department of Natural Resources

AQUIFER.--Limestone/Dolomite of Silurian/Devonian age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 8 in., depth 210 ft, cased to 25 ft, open end.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 665 ft above National Geodetic Vertical Datum of 1929 (revised), from topographic map. Measuring point: Top of shelf, 2.00 ft above land-surface datum.

REMARKS.--Water level affected by pumpage.

PERIOD OF RECORD.--Sept. 1996 to October 2003 (discontinued).

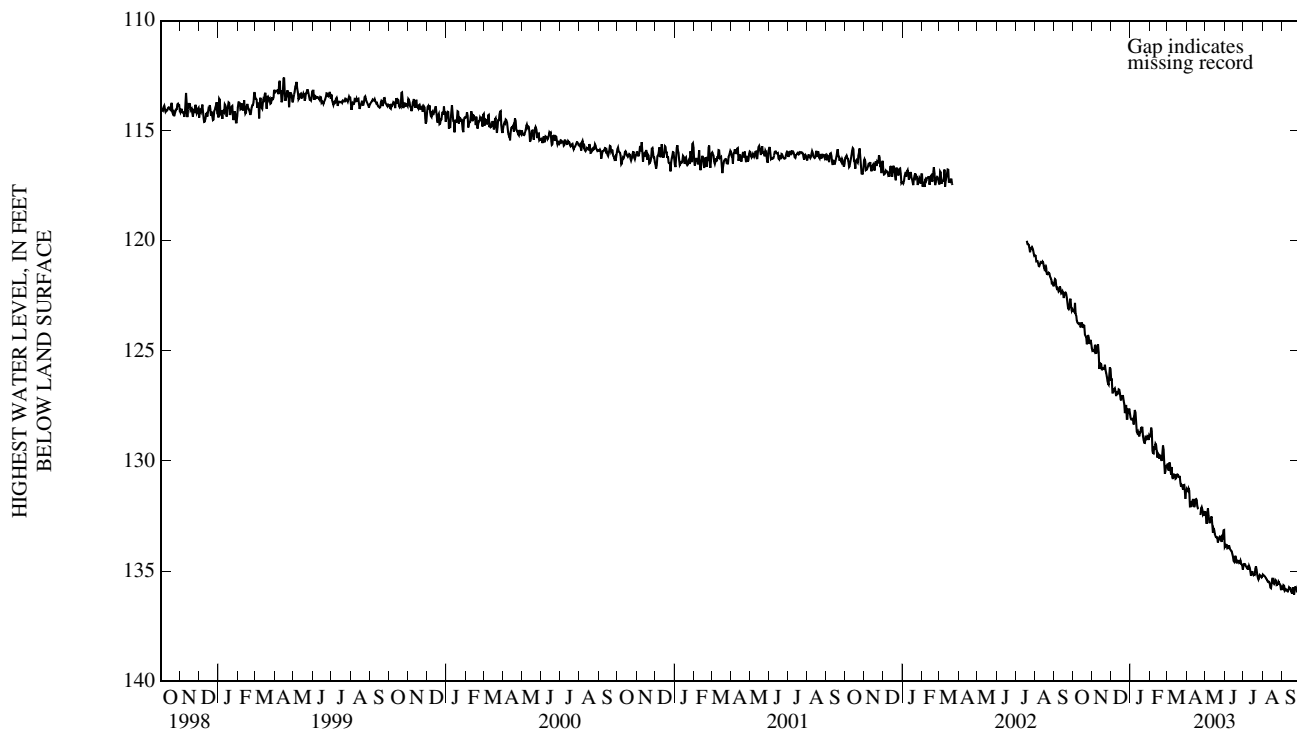
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 101.88 ft below land-surface datum, Sept. 9, 1996; lowest, 136.56 ft below land-surface datum, Oct. 2, 2003.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	123.32	124.72	126.76	128.08	129.53	130.10	131.34	132.16	133.97	134.80	135.29	135.90
10	123.78	124.70	126.90	128.25	129.22	130.82	131.85	132.59	134.03	134.76	135.48	135.93
15	123.71	125.61	126.93	128.89	129.71	130.78	131.76	133.13	134.54	135.01	135.56	135.91
20	124.25	125.86	127.05	128.49	130.00	130.72	132.14	133.47	134.65	134.91	135.52	136.08
25	124.28	126.36	127.50	128.90	130.59	131.15	132.10	133.45	134.60	135.39	135.59	135.97
EOM	124.86	125.81	127.81	128.84	130.27	131.35	132.32	133.15	134.94	135.25	135.83	136.41
MIN	122.82	124.70	126.30	127.69	128.49	130.10	131.25	132.16	133.81	134.68	135.16	135.64
WTR YR	2003	HIGH	122.82	OCT	4							

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	123.69	125.17	126.89	128.34	129.76	130.47	132.16	132.50	134.10	134.98	135.34	135.99
10	123.85	125.07	127.06	128.66	129.59	130.96	132.06	132.89	134.21	134.94	135.58	136.00
15	123.86	125.91	127.19	129.01	130.12	130.81	132.00	133.34	134.60	135.13	135.80	136.00
20	124.39	125.98	127.26	128.88	130.17	130.81	132.16	133.83	134.76	135.19	135.62	136.23
25	124.61	126.59	128.08	129.18	130.76	131.32	132.21	133.58	134.75	135.49	135.66	136.18
EOM	125.00	126.53	128.07	129.05	130.37	131.72	132.58	133.93	135.04	135.33	136.03	136.54
MAX	125.00	126.60	128.28	129.39	130.76	131.80	132.62	133.93	135.04	135.49	136.03	136.54
WTR YR	2003	LOW	136.54	SEP	30							



JEFFERSON COUNTY

384949085251901. Local number, JF 5.

LOCATION.--Lat 38°49'49", long 85°25'19", in SE¹/₄NW¹/₄SW¹/₄ sec.33, T.5 N., R.10 E., Jefferson County, Hydrologic Unit 05120207, (CLIFTY FALLS, IN quadrangle), 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 857.50 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 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.

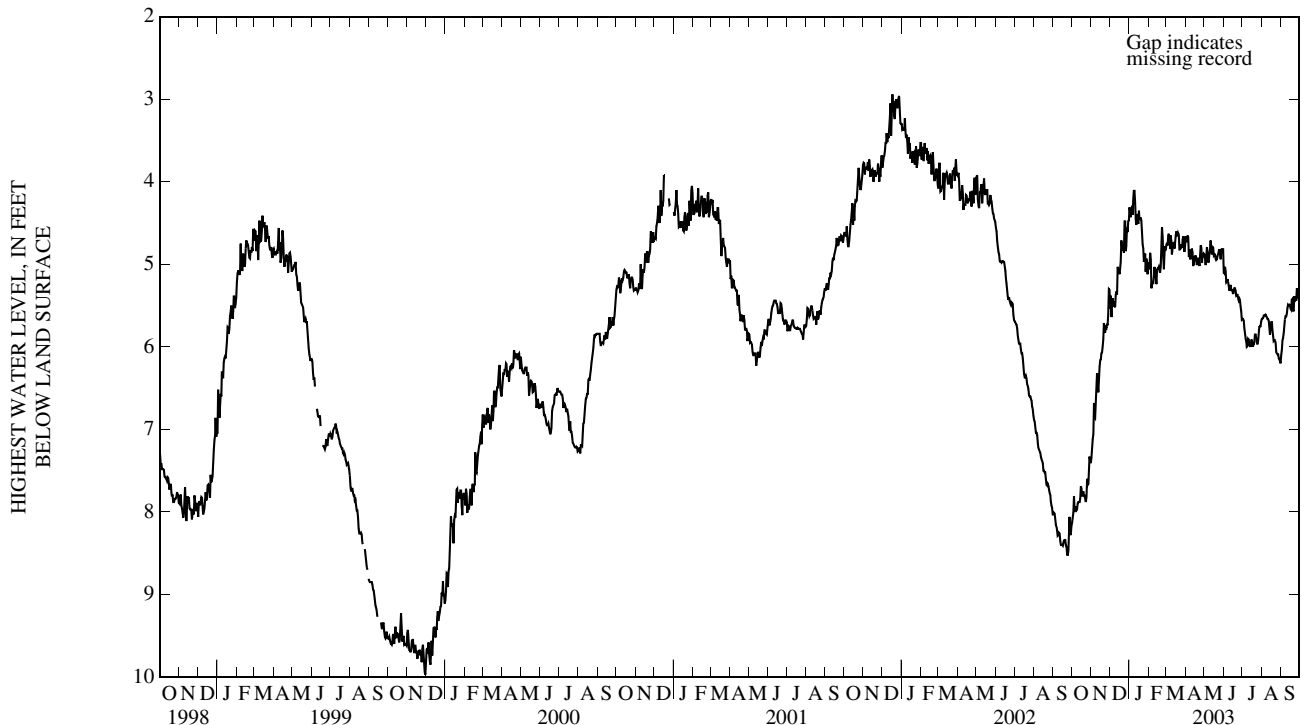
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.94 ft below land-surface datum, Dec. 17, 2001; lowest, 10.03 below land-surface datum, Nov. 30, 1999.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.00	6.68	5.41	4.29	5.29	4.63	4.67	4.79	5.22	5.84	5.62	5.83
10	7.90	6.32	5.37	4.25	5.03	4.88	4.88	4.82	5.32	5.90	5.66	5.60
15	7.69	6.16	5.09	4.51	5.05	4.73	4.92	4.80	5.33	5.92	5.77	5.50
20	7.80	5.91	4.78	4.47	5.03	4.62	4.93	4.95	5.32	5.94	5.93	5.56
25	7.60	5.77	4.48	4.90	5.06	4.76	4.77	4.82	5.44	5.97	6.08	5.44
EOM	7.41	5.31	4.47	4.98	4.83	4.78	4.87	4.81	5.67	5.69	6.20	5.40
MIN	7.33	5.30	4.47	4.11	4.55	4.60	4.65	4.71	5.03	5.66	5.61	5.29
WTR YR	2003	HIGH 4.11 JAN 8										

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.18	7.16	5.57	4.40	5.37	4.77	5.02	4.89	5.30	5.90	5.65	5.94
10	8.03	6.52	5.52	4.46	5.21	4.93	4.94	4.93	5.41	5.99	5.78	5.68
15	7.84	6.25	5.29	4.61	5.28	4.87	5.09	4.96	5.46	6.06	5.87	5.54
20	7.89	6.13	4.89	4.62	5.17	4.77	5.04	5.01	5.39	5.98	5.96	5.68
25	7.87	5.85	4.84	4.97	5.19	4.84	4.89	4.88	5.53	6.08	6.19	5.55
EOM	7.52	5.66	4.60	5.21	4.94	4.92	5.02	5.10	5.76	5.78	6.28	5.49
MAX	8.23	7.46	5.81	5.25	5.37	5.00	5.15	5.15	5.76	6.10	6.28	6.21
WTR YR	2003	LOW 8.23 OCT 1										



JENNINGS COUNTY

385601085365701. Local number, JN 3.

LOCATION.--Lat 38°56'01", long 85°36'57", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.27, T.6 N., R.8 E., Jennings County, Hydrologic Unit 05120207, (VERNON, IN quadrangle), 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 October 2003 (discontinued).

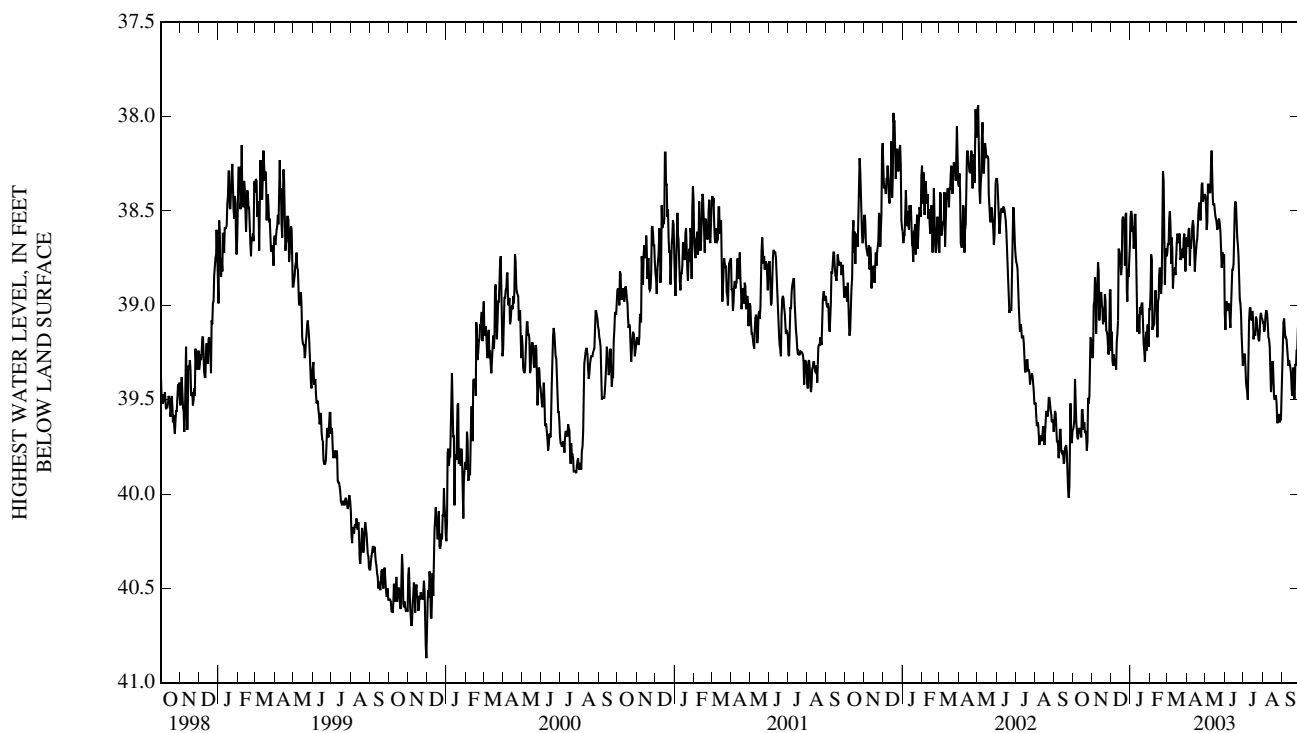
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 36.64 ft below land-surface datum, Jan. 21, 1979; lowest, 40.93 ft below land-surface datum, Nov. 30, 1999.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	39.53	38.85	39.26	38.58	39.13	38.50	38.59	38.36	39.03	39.41	39.06	39.13
10	39.67	38.77	39.19	38.73	38.92	38.91	38.58	38.26	39.12	39.08	39.17	39.28
15	39.56	38.93	38.74	39.15	38.96	38.75	38.75	38.46	38.78	39.03	39.40	39.36
20	39.67	39.08	38.53	38.99	38.88	38.63	38.50	38.60	38.55	39.16	39.50	39.49
25	39.49	39.16	38.51	39.18	38.89	38.70	38.36	38.61	38.97	39.18	39.62	39.24
EOM	39.25	38.92	38.68	39.02	38.74	38.73	38.41	38.73	39.32	39.07	39.52	39.42
MIN	39.17	38.77	38.51	38.50	38.29	38.50	38.35	38.18	38.45	39.01	39.03	39.07
WTR YR	2003	HIGH	38.18	MAY	11							

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	39.73	39.10	39.32	38.70	39.23	38.61	38.90	38.56	39.10	39.47	39.13	39.18
10	39.73	38.92	39.34	39.00	39.05	38.98	38.65	38.45	39.21	39.38	39.22	39.34
15	39.70	39.00	38.86	39.20	39.01	38.84	38.84	38.51	38.84	39.12	39.50	39.44
20	39.71	39.20	38.57	39.10	39.00	38.72	38.58	38.66	38.64	39.21	39.53	39.58
25	39.72	39.28	38.92	39.30	38.98	38.76	38.47	38.71	39.04	39.23	39.66	39.32
EOM	39.29	39.24	38.78	39.22	38.84	38.84	38.47	39.04	39.38	39.10	39.66	39.48
MAX	39.86	39.33	39.53	39.40	39.23	38.98	38.93	39.04	39.38	39.55	39.67	39.59
WTR YR	2003	LOW	39.86	OCT	13							



KNOX COUNTY

383247087361001. Local number, KN 7.

LOCATION.--Lat 38°32'47", long 87°36'10", in SE¹/₄SE¹/₄NW¹/₄ sec.2, T.1 N., R.11 W., Knox County, Hydrologic Unit 05120113, in (DECKER, IN-IL quadrangle), 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.

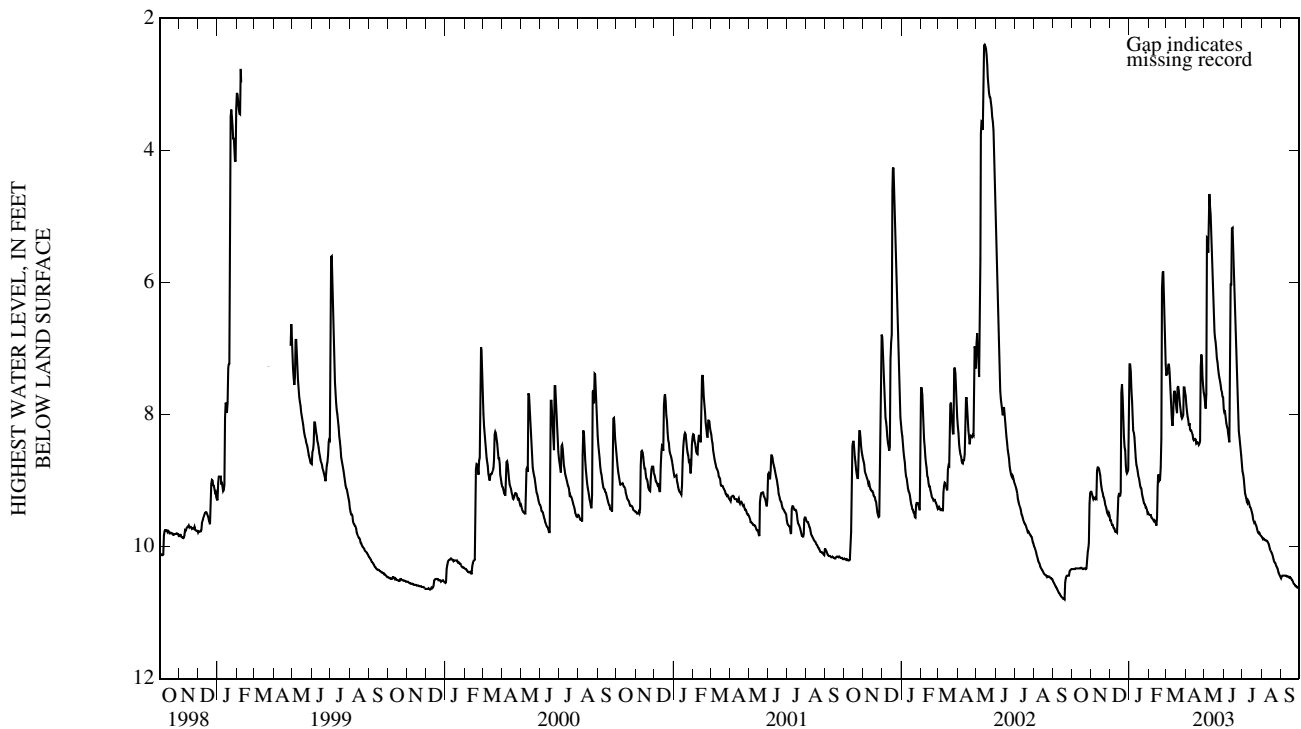
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.40 ft below land-surface datum, May 14, 2002; lowest, 11.35 ft below land-surface datum, Feb. 1-13, 1977.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.34	9.26	9.67	7.80	9.56	7.23	8.08	5.32	8.13	9.19	9.89	10.44
10	10.33	8.85	9.77	8.52	9.60	8.09	8.24	4.84	8.42	9.30	9.92	10.45
15	10.32	8.92	9.20	8.93	9.08	7.67	8.38	6.39	5.17	9.44	10.06	10.46
20	10.33	9.24	7.54	9.12	8.80	7.57	8.42	7.01	7.45	9.64	10.20	10.53
25	10.21	9.43	8.54	9.35	6.24	8.03	7.28	7.45	8.25	9.76	10.31	10.60
EOM	9.17	9.52	8.02	9.49	7.23	7.66	7.67	7.74	8.75	9.84	10.46	10.59
MIN	9.17	8.80	7.54	7.24	5.83	7.23	7.09	4.66	5.17	8.86	9.85	10.44
WTR YR	2003	HIGH 4.66	MAY 9									

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.34	9.33	9.70	8.05	9.58	7.34	8.23	7.69	8.18	9.23	9.90	10.45
10	10.33	9.27	9.78	8.66	9.64	8.17	8.27	5.04	8.46	9.36	9.94	10.45
15	10.33	9.03	9.25	8.97	9.56	7.81	8.42	6.58	5.72	9.48	10.08	10.47
20	10.34	9.26	7.73	9.20	8.98	7.64	8.46	7.15	7.64	9.64	10.23	10.56
25	10.33	9.48	8.77	9.37	6.52	8.11	8.40	7.50	8.34	9.79	10.33	10.61
EOM	9.19	9.60	8.86	9.51	7.45	7.72	7.72	7.92	8.86	9.85	10.48	10.61
MAX	10.35	9.60	9.81	9.51	9.68	8.26	8.49	7.99	8.86	9.85	10.48	10.63
WTR YR	2003	LOW 10.63	SEP 28									



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, (BICKNELL, IN quadrangle), 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, 11.86 ft below land-surface datum, Jan. 28, 1994; lowest, 15.32 ft below land-surface datum, Oct. 19, 1991.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

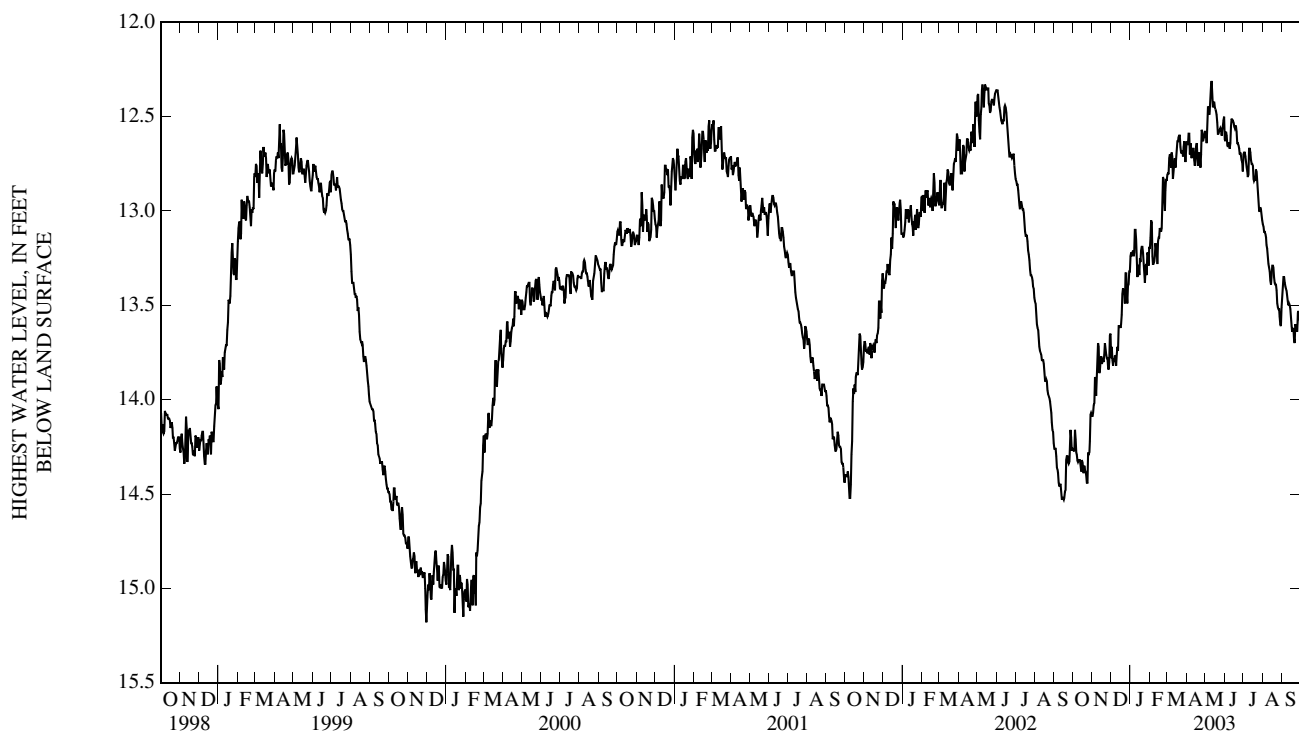
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	14.21	13.88	13.78	13.21	13.24	12.70	12.59	12.45	12.65	12.74	13.12	13.38
10	14.32	13.70	13.76	13.15	13.17	12.83	12.69	12.34	12.64	12.67	13.28	13.48
15	14.32	13.77	13.61	13.34	13.14	12.72	12.72	12.42	12.53	12.75	13.34	13.56
20	14.37	13.76	13.41	13.19	13.09	12.60	12.71	12.53	12.58	12.84	13.38	13.68
25	14.28	13.78	13.33	13.30	13.00	12.68	12.57	12.56	12.70	12.96	13.51	13.64
EOM	14.08	13.65	13.32	13.19	12.84	12.68	12.58	12.50	12.79	13.05	13.51	13.62
MIN	14.07	13.65	13.32	13.10	12.82	12.60	12.57	12.31	12.51	12.67	13.07	13.35

WTR YR 2003 HIGH 12.31 MAY 11

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	14.32	14.04	13.83	13.24	13.31	12.73	12.74	12.56	12.69	12.77	13.14	13.42
10	14.35	13.81	13.82	13.27	13.24	12.85	12.72	12.42	12.73	12.81	13.33	13.51
15	14.38	13.81	13.67	13.36	13.20	12.77	12.77	12.46	12.58	12.77	13.39	13.61
20	14.39	13.84	13.45	13.22	13.14	12.63	12.76	12.59	12.64	12.86	13.40	13.74
25	14.44	13.84	13.45	13.38	13.05	12.71	12.70	12.58	12.73	13.01	13.54	13.69
EOM	14.10	13.80	13.36	13.30	12.86	12.76	12.62	12.62	12.82	13.08	13.66	13.66
MAX	14.48	14.13	13.92	13.41	13.31	12.87	12.79	12.70	12.82	13.08	13.66	13.75

WTR YR 2003 LOW 14.48 OCT 24



KOSCIUSKO COUNTY

412556085513401. Local number, KO 9.

LOCATION.--Lat 41°25'56", long 85°51'34", in SW¹/₄NE¹/₄NW¹/₄ sec.5, T.34 N., R.6 E., Kosciusko County, Hydrologic Unit 04050001, (MILFORD, IN quadrangle), 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 casing, 3.2 ft above land-surface datum.

REMARKS.--Water level slightly affected by irrigation pumpage.

PERIOD OF RECORD.--October 1982 to October 2003 (discontinued).

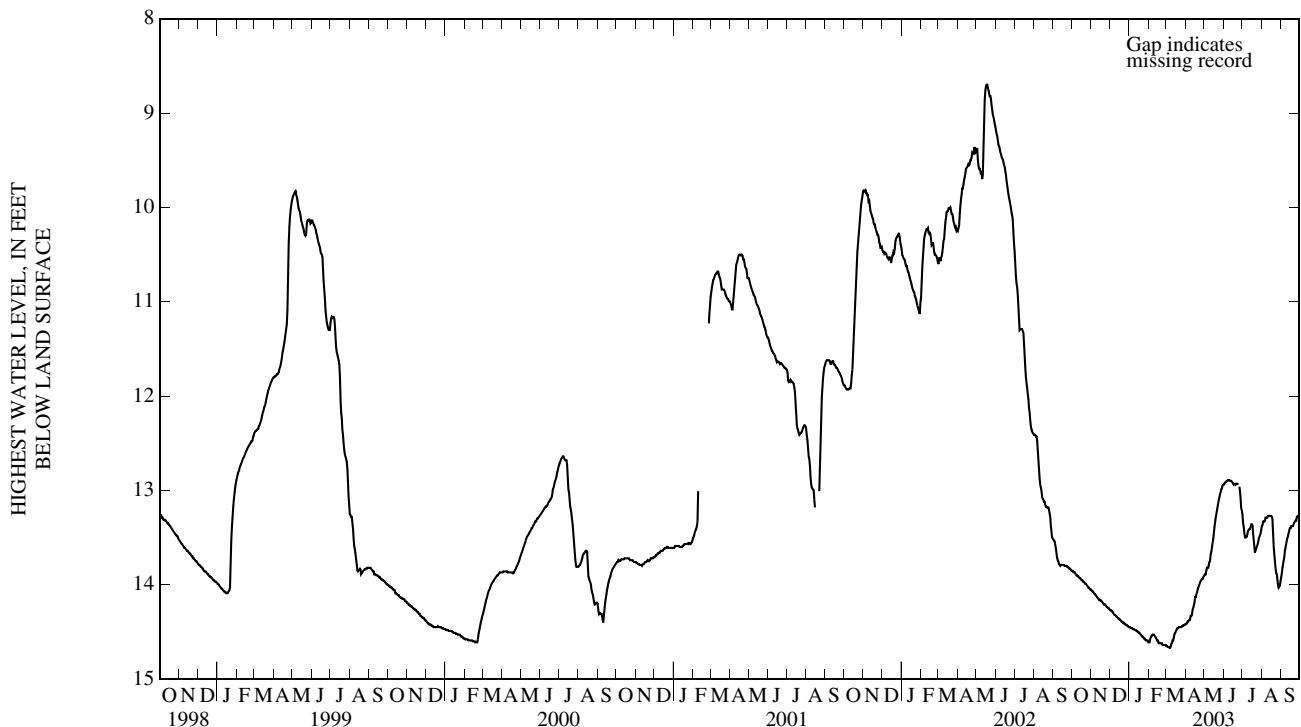
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 7.24 ft below land-surface datum, Apr. 8, 9, 1985; lowest, 14.70 ft below land-surface datum, Mar. 8, 2003.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	13.87	14.09	14.29	14.46	14.55	14.66	14.39	13.82	12.91	13.50	13.33	13.74
10	13.91	14.13	14.33	14.48	14.54	14.62	14.33	13.75	12.89	13.43	13.29	13.53
15	13.94	14.17	14.36	14.50	14.59	14.51	14.19	13.52	12.92	13.36	13.27	13.40
20	13.97	14.20	14.39	14.54	14.62	14.46	14.06	13.26	12.94	13.60	13.59	13.38
25	14.01	14.23	14.42	14.57	14.64	14.45	13.96	13.07	---	13.58	13.89	13.32
EOM	14.05	14.26	14.45	14.61	14.64	14.42	13.91	12.94	13.21	13.42	13.96	13.27
MIN	13.85	14.06	14.27	14.45	14.53	14.42	13.91	12.94	12.89	13.26	13.27	13.27
WTR YR	2003	HIGH 12.89 JUN 8										

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	13.88	14.10	14.30	14.47	14.56	14.68	14.40	13.85	12.91	13.50	13.33	13.78
10	13.91	14.14	14.34	14.48	14.55	14.63	14.33	13.76	12.90	13.46	13.29	13.57
15	13.95	14.17	14.37	14.51	14.61	14.53	14.22	13.56	12.93	13.39	13.27	13.42
20	13.98	14.21	14.40	14.55	14.63	14.46	14.09	13.30	12.95	13.67	13.68	13.38
25	14.02	14.24	14.42	14.58	14.64	14.45	13.98	13.10	---	13.60	13.96	13.32
EOM	14.06	14.27	14.45	14.61	14.65	14.43	13.93	12.95	13.26	13.46	14.01	13.27
MAX	14.06	14.27	14.45	14.61	14.65	14.70	14.42	13.91	13.26	13.67	14.03	13.96
WTR YR	2003	LOW 14.70 MAR 8										



LAGRANGE COUNTY

414318085200601. Local number, LG 2.

LOCATION.--Lat 41°43'18", long 85°20'06", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.26, T.38 N., R.10 E., Lagrange County, Hydrologic Unit 04050001, (MONGO, IN quadrangle), 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.

REMARKS.--Water level slightly affected by irrigation pumpage.

PERIOD OF RECORD.--May 1980 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 10.00 ft below land-surface datum, July 1, 2, 1993; lowest, 17.09 ft below land-surface datum, Aug. 29-30, 2003.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

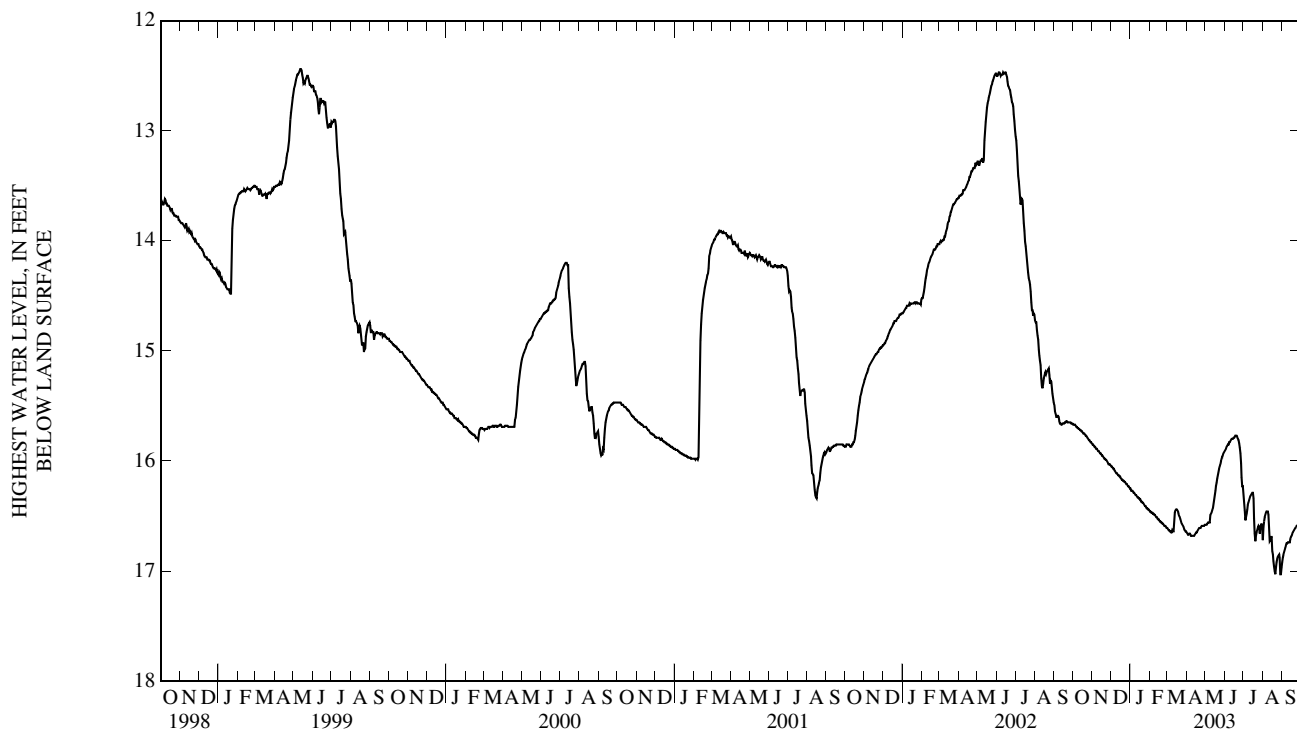
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	15.68	15.87	16.07	16.28	16.47	16.64	16.66	16.56	15.86	16.51	16.49	16.81
10	15.71	15.91	16.11	16.31	16.50	16.64	16.68	16.48	15.82	16.36	16.49	16.74
15	15.73	15.94	16.14	16.34	16.53	16.44	16.66	16.35	15.79	16.29	16.69	16.69
20	15.76	15.98	16.18	16.38	16.56	16.50	16.62	16.16	15.77	16.73	17.00	16.63
25	15.80	16.01	16.21	16.41	16.59	16.58	16.59	16.03	15.88	16.59	16.87	16.59
EOM	15.84	16.04	16.25	16.45	16.61	16.64	16.58	15.92	16.23	16.62	16.97	16.56
MIN	15.67	15.85	16.05	16.25	16.46	16.44	16.58	15.92	15.77	16.29	16.46	16.56

WTR YR 2003 HIGH 15.67 OCT 1

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	15.69	15.88	16.08	16.29	16.48	16.65	16.67	16.57	15.87	16.54	16.51	16.83
10	15.71	15.91	16.12	16.32	16.51	16.65	16.69	16.49	15.83	16.38	16.61	16.75
15	15.74	15.95	16.15	16.35	16.55	16.45	16.67	16.39	15.80	16.30	16.82	16.71
20	15.77	15.98	16.18	16.38	16.57	16.51	16.63	16.20	15.78	16.78	17.03	16.64
25	15.81	16.02	16.21	16.42	16.59	16.59	16.60	16.05	15.93	16.61	16.89	16.59
EOM	15.85	16.05	16.25	16.46	16.62	16.65	16.59	15.93	16.31	16.73	17.03	16.57
MAX	15.85	16.05	16.25	16.46	16.62	16.67	16.69	16.58	16.31	16.78	17.09	16.97

WTR YR 2003 LOW 17.09 AUG 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, (LAGRANGE, IN quadrangle), 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.

REMARKS.--Water level slightly affected by irrigation pumpage.

PERIOD OF RECORD.--June 1981 to October 2003 (discontinued).

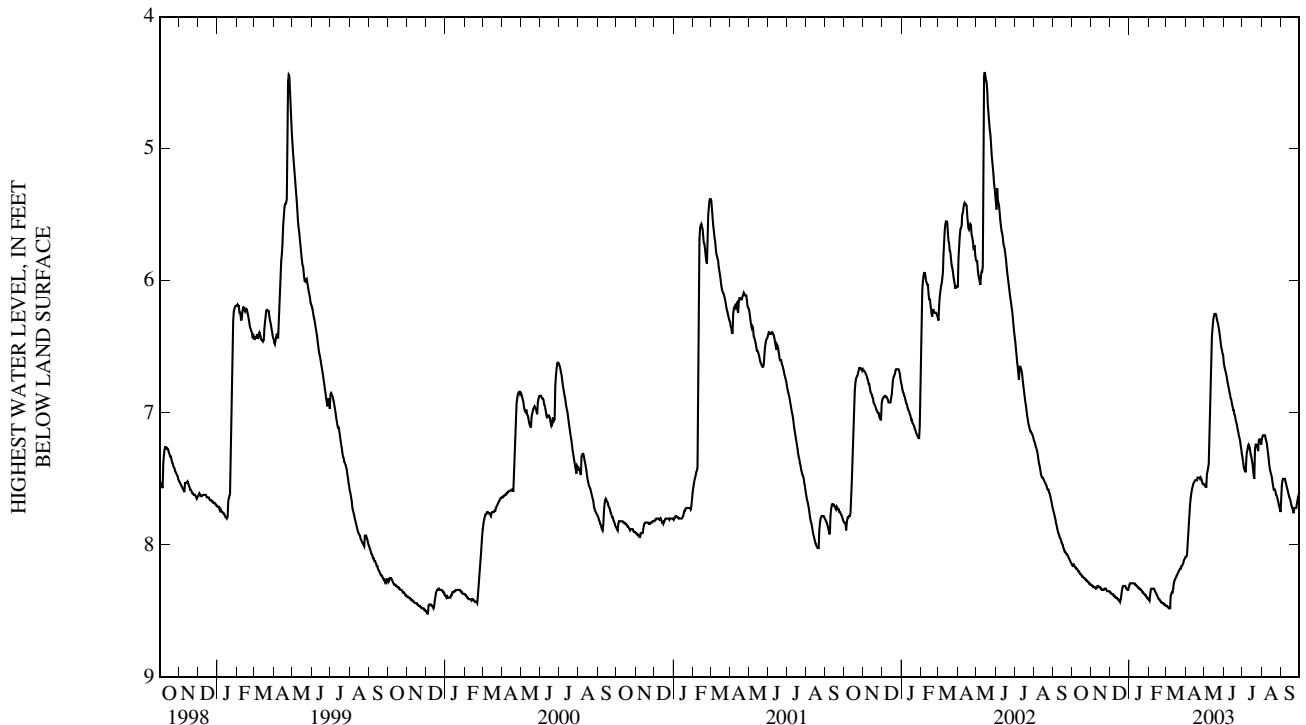
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.48 ft below land-surface datum, Mar. 21, 1982; lowest, 8.82 ft below land-surface datum, Sept. 2, 1988.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.16	8.32	8.37	8.29	8.33	8.48	7.92	7.46	6.71	7.43	7.17	7.50
10	8.19	8.32	8.40	8.30	8.34	8.36	7.61	6.84	6.84	7.25	7.27	7.56
15	8.22	8.32	8.42	8.32	8.39	8.26	7.52	6.30	6.95	7.33	7.45	7.65
20	8.25	8.34	8.34	8.34	8.43	8.21	7.49	6.26	7.05	7.50	7.58	7.74
25	8.27	8.34	8.31	8.37	8.45	8.16	7.49	6.39	7.17	7.26	7.63	7.72
EOM	8.30	8.35	8.32	8.41	8.46	8.10	7.54	6.56	7.31	7.24	7.75	7.60
MIN	8.15	8.30	8.31	8.29	8.33	8.10	7.49	6.25	6.62	7.20	7.17	7.50
WTR YR	2003	HIGH 6.25 MAY 17										

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.17	8.32	8.38	8.29	8.34	8.48	8.00	7.56	6.74	7.45	7.17	7.50
10	8.20	8.34	8.40	8.30	8.35	8.37	7.65	7.06	6.86	7.28	7.31	7.58
15	8.23	8.33	8.42	8.33	8.40	8.27	7.53	6.36	6.98	7.36	7.47	7.67
20	8.25	8.35	8.38	8.35	8.43	8.22	7.51	6.29	7.07	7.52	7.61	7.76
25	8.28	8.35	8.32	8.38	8.45	8.18	7.50	6.43	7.19	7.29	7.65	7.73
EOM	8.30	8.36	8.34	8.41	8.46	8.11	7.56	6.62	7.34	7.26	7.77	7.62
MAX	8.30	8.36	8.43	8.41	8.46	8.49	8.10	7.57	7.34	7.52	7.77	7.77
WTR YR	2003	LOW 8.49 MAR 7										



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, (SCHNEIDER, IN quadrangle), 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 affected by pumpage.

PERIOD OF RECORD.--March 1967 to October 2003 (discontinued).

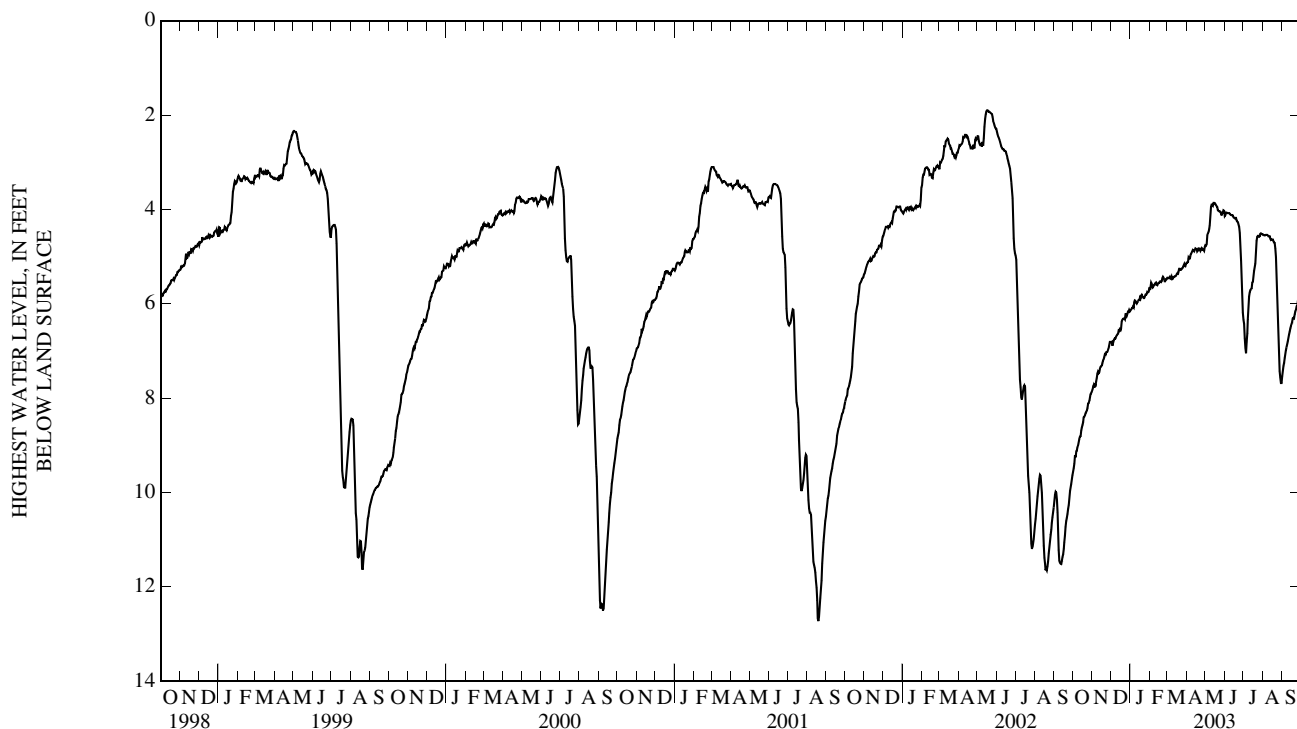
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.15 ft below land-surface datum, Jan. 12, 1973; lowest, 17.92 ft below land-surface datum, Aug. 27, 1988.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.26	7.72	6.78	6.06	5.66	5.43	5.04	4.51	4.08	7.05	4.55	7.15
10	8.94	7.44	6.67	5.98	5.56	5.47	4.89	3.95	4.11	5.85	4.57	6.80
15	8.62	7.33	6.54	5.92	5.56	5.41	4.83	3.86	4.17	5.55	4.64	6.47
20	8.37	7.13	6.32	5.84	5.52	5.26	4.83	3.95	4.23	5.15	4.71	6.31
25	8.12	7.02	6.22	5.81	5.54	5.25	4.82	4.05	4.50	4.56	6.35	6.06
EOM	7.87	6.81	6.16	5.68	5.48	5.16	4.80	4.03	6.19	4.53	7.68	5.93
MIN	7.87	6.81	6.13	5.68	5.43	5.16	4.80	3.86	4.07	4.51	4.53	5.93
WTR YR	2003	HIGH 3.86 MAY 14										

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.39	7.88	6.85	6.09	5.70	5.49	5.17	4.55	4.13	7.18	4.64	7.25
10	9.03	7.48	6.73	6.01	5.65	5.56	4.96	4.13	4.19	6.07	4.63	6.87
15	8.72	7.46	6.59	5.94	5.61	5.51	4.90	3.91	4.20	5.69	4.67	6.53
20	8.47	7.21	6.36	5.95	5.57	5.35	4.89	4.03	4.28	5.23	4.83	6.44
25	8.21	7.09	6.27	5.85	5.59	5.27	4.86	4.11	4.80	4.60	6.85	6.11
EOM	7.95	6.91	6.18	5.75	5.53	5.26	4.90	4.21	6.40	4.61	7.79	5.98
MAX	9.66	7.93	6.98	6.19	5.77	5.56	5.19	4.81	6.40	7.18	7.85	7.68
WTR YR	2003	LOW 9.66 OCT 1										



LAKE COUNTY

413559087270301. Local number, LK 13.

LOCATION.--Lat 41°35'59", long 87°27'03", in SW¹/₄NW¹/₄SW¹/₄ sec.3, T.36 N., R.9 W., Lake County, Hydrologic Unit 04040001, (HIGHLAND, IN quadrangle), 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, 3.33 ft above land-surface datum.

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

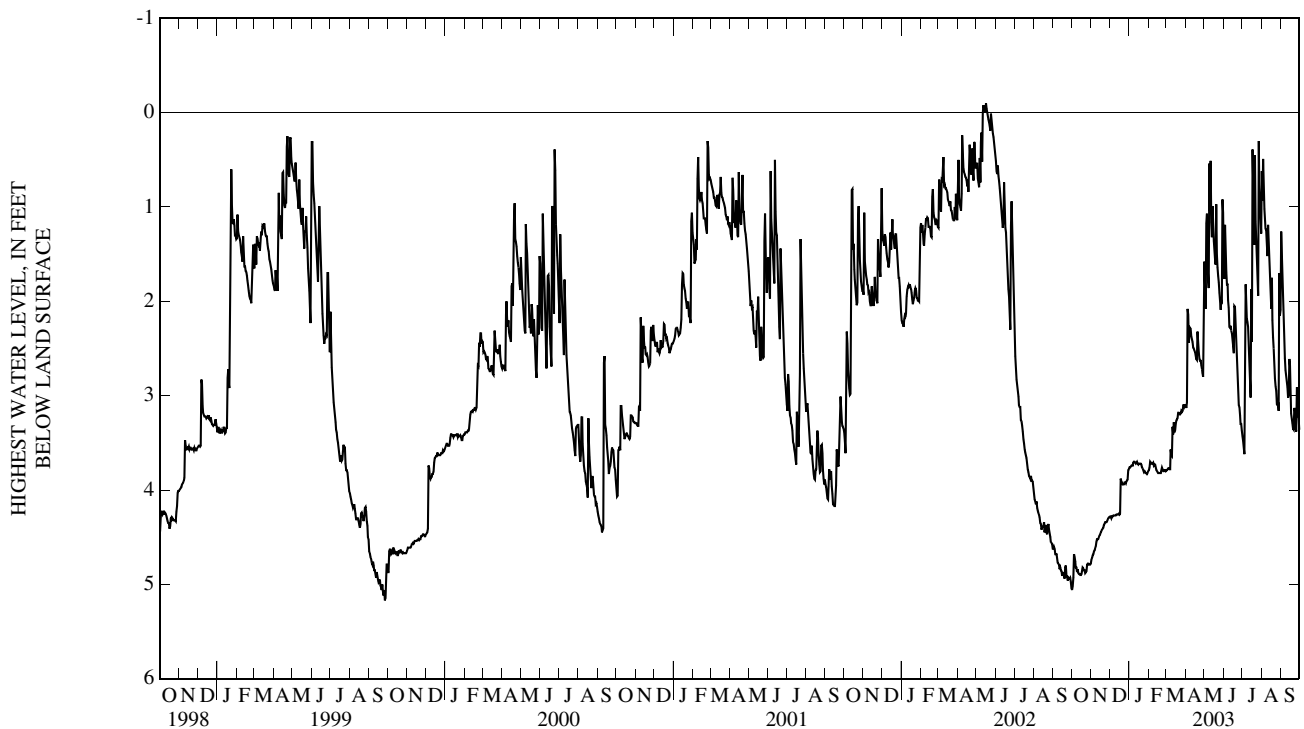
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.10 ft above land-surface datum, May 16, 2002; lowest, 5.23 ft below land-surface datum, Sept. 26, 27, 1999.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.71	4.65	4.28	3.74	3.72	3.77	2.14	1.07	1.69	2.20	1.02	2.25
10	4.84	4.52	4.27	3.71	3.73	3.64	2.37	1.04	2.27	2.27	1.52	2.85
15	4.90	4.47	4.25	3.73	3.81	3.37	2.52	1.20	2.42	1.87	1.94	2.68
20	4.85	4.40	3.92	3.73	3.82	3.18	2.32	0.97	2.42	1.40	2.50	3.35
25	4.79	4.34	3.92	3.80	3.80	3.16	2.63	1.91	3.10	1.68	3.09	3.38
EOM	4.78	4.29	3.78	3.80	3.80	3.10	2.02	1.06	3.37	1.28	2.09	3.36
MIN	4.68	4.29	3.78	3.70	3.70	3.10	2.02	0.51	1.19	0.30	0.49	1.26
WTR YR	2003	HIGH 0.30 JUL 27										

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.81	4.68	4.28	3.75	3.74	3.80	2.44	1.60	1.88	3.74	1.19	2.47
10	4.95	4.55	4.27	3.72	3.76	3.65	2.40	1.35	2.28	2.58	1.77	3.01
15	4.95	4.48	4.26	3.74	3.84	3.41	2.54	1.36	2.53	3.19	2.14	3.00
20	4.89	4.41	3.94	3.76	3.84	3.24	2.63	1.68	2.66	1.68	2.83	3.49
25	4.86	4.34	3.94	3.81	3.82	3.21	2.68	2.00	3.37	2.00	3.33	3.49
EOM	4.79	4.30	3.79	3.82	3.81	3.13	2.82	1.59	3.60	1.56	2.61	3.48
MAX	5.14	4.78	4.30	3.86	3.84	3.81	3.16	2.21	3.60	3.86	3.44	3.56
WTR YR	2003	LOW 5.14 OCT 1										



LAKE COUNTY

411146087204101. Local number, LK 14.

LOCATION.--Lat 41°11'46", long 87°20'41", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.28, T.32 N., R.8 W., Lake County, Hydrologic Unit 07120001, (SHELBY, IN quadrangle), 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.

REMARKS.-- Water level affected by irrigation pumpage.

PERIOD OF RECORD.--July 1989 to October 2003 (discontinued).

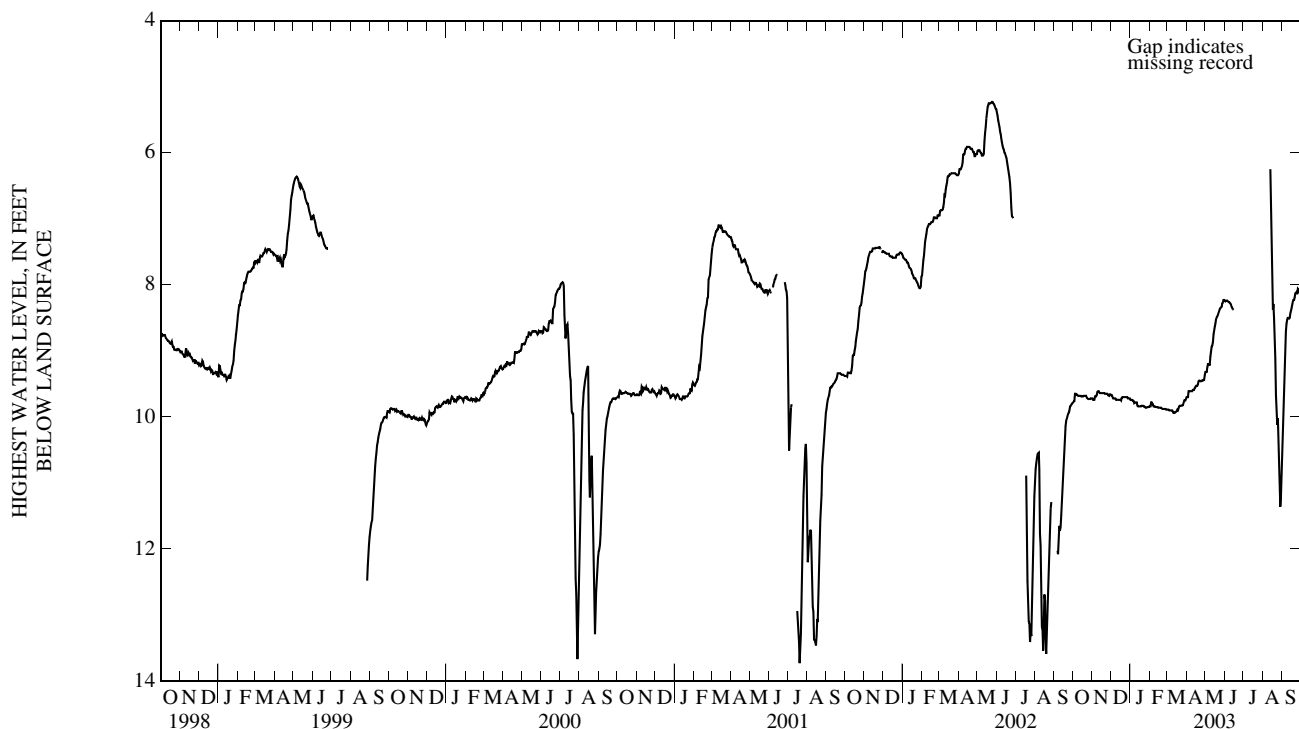
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.70 ft below land-surface datum, May 11, 12, 1998; lowest, 22.86 ft below land-surface datum, July 28, 1991.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.65	9.69	9.72	9.75	9.81	9.90	9.61	9.20	8.24	---	---	9.11
10	9.68	9.61	9.74	9.78	9.85	9.92	9.61	9.01	8.28	---	---	8.50
15	9.69	9.64	9.74	9.84	9.86	9.92	9.55	8.69	8.38	---	7.54	8.39
20	9.68	9.64	9.70	9.83	9.87	9.84	9.46	8.48	---	---	8.86	8.23
25	9.73	9.65	9.70	9.86	9.88	9.82	9.45	8.35	---	---	10.02	8.12
EOM	9.72	9.66	9.72	9.84	9.89	9.73	9.37	8.23	---	---	10.80	8.15
MIN	9.65	9.61	9.67	9.74	9.78	9.73	9.37	8.23	8.24	---	6.25	8.06
WTR YR	2003	HIGH 6.25 AUG 13										

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.66	9.74	9.72	9.76	9.81	9.90	9.61	9.25	8.25	---	---	9.37
10	9.68	9.62	9.74	9.78	9.85	9.94	9.61	9.09	8.30	---	---	8.53
15	9.70	9.64	9.74	9.84	9.86	9.93	9.56	8.75	8.41	---	7.87	8.43
20	9.68	9.65	9.70	9.83	9.88	9.88	9.51	8.50	---	---	9.12	8.24
25	9.73	9.67	9.70	9.86	9.88	9.83	9.46	8.37	---	---	10.22	8.14
EOM	9.72	9.67	9.74	9.85	9.89	9.75	9.44	8.24	---	---	11.22	8.18
MAX	9.79	9.74	9.75	9.86	9.89	9.94	9.73	9.37	8.41	---	11.55	10.80
WTR YR	2003	LOW 11.55 AUG 29										



LAPORTE COUNTY

412350086512801. Local number, LP 9.

LOCATION.--Lat 41°23'50", long 86°51'28", in SE¹/₄SW¹/₄NE¹/₄ sec.15, T.34 N., R.4 W., LaPorte County, Hydrologic Unit 07120001, (HANNA, IN quadrangle), 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 water-table 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.

REMARKS.--Water level slightly affected by irrigation pumpage

PERIOD OF RECORD.--June 1976 to current year.

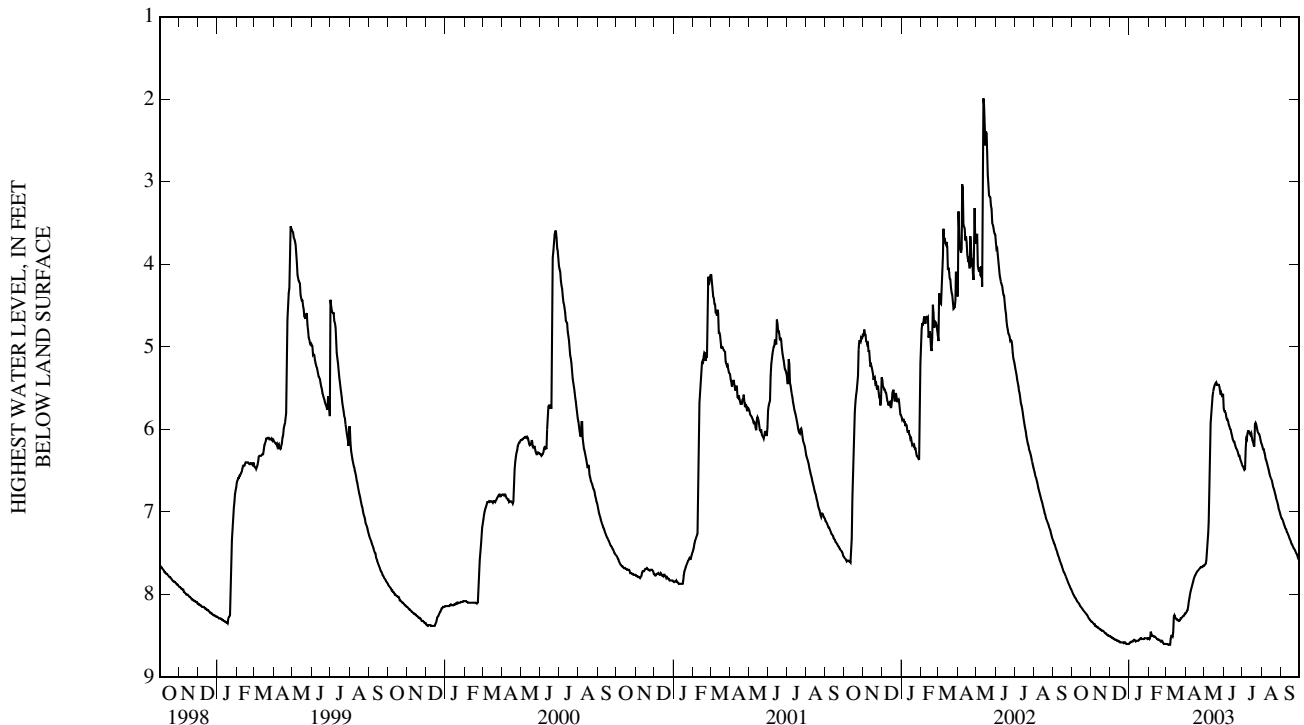
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.56 ft below land-surface datum, Apr. 5, 1985; lowest, 8.62 ft below land-surface datum, Mar. 6, 7-8, 2003.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.03	8.36	8.53	8.57	8.48	8.61	8.14	7.45	5.85	6.48	6.28	7.14
10	8.09	8.39	8.55	8.56	8.51	8.50	7.93	6.13	5.96	6.02	6.43	7.24
15	8.15	8.42	8.57	8.56	8.54	8.27	7.79	5.54	6.11	6.05	6.58	7.33
20	8.20	8.44	8.58	8.53	8.57	8.31	7.72	5.43	6.21	6.21	6.71	7.42
25	8.25	8.48	8.58	8.53	8.60	8.29	7.67	5.48	6.32	6.02	6.86	7.50
EOM	8.32	8.50	8.60	8.53	8.60	8.23	7.65	5.58	6.42	6.16	7.04	7.59
MIN	7.96	8.33	8.51	8.53	8.45	8.23	7.65	5.43	5.75	5.92	6.18	7.06
WTR YR	2003	HIGH 5.43 MAY 20										

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.04	8.36	8.53	8.57	8.50	8.61	8.19	7.59	5.88	6.53	6.31	7.16
10	8.10	8.40	8.55	8.57	8.52	8.51	7.96	6.44	5.99	6.05	6.46	7.25
15	8.16	8.43	8.57	8.56	8.55	8.29	7.81	5.60	6.13	6.10	6.60	7.35
20	8.21	8.45	8.58	8.54	8.58	8.32	7.73	5.50	6.23	6.22	6.74	7.44
25	8.26	8.49	8.59	8.54	8.60	8.30	7.68	5.54	6.33	6.04	6.90	7.52
EOM	8.33	8.51	8.60	8.54	8.60	8.25	7.66	5.75	6.44	6.19	7.06	7.60
MAX	8.33	8.51	8.60	8.60	8.60	8.62	8.23	7.65	6.44	6.53	7.06	7.60
WTR YR	2003	LOW 8.62 MAR 6										



LAPORTE COUNTY

413139086341401. Local number, LP 10.

LOCATION.--Lat 41°31'40", long 86°34'10", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.31, T.36 N., R.1 W., LaPorte County, Hydrologic Unit 07120001, (STILLWELL, IN quadrangle), 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 October 2003 (discontinued).

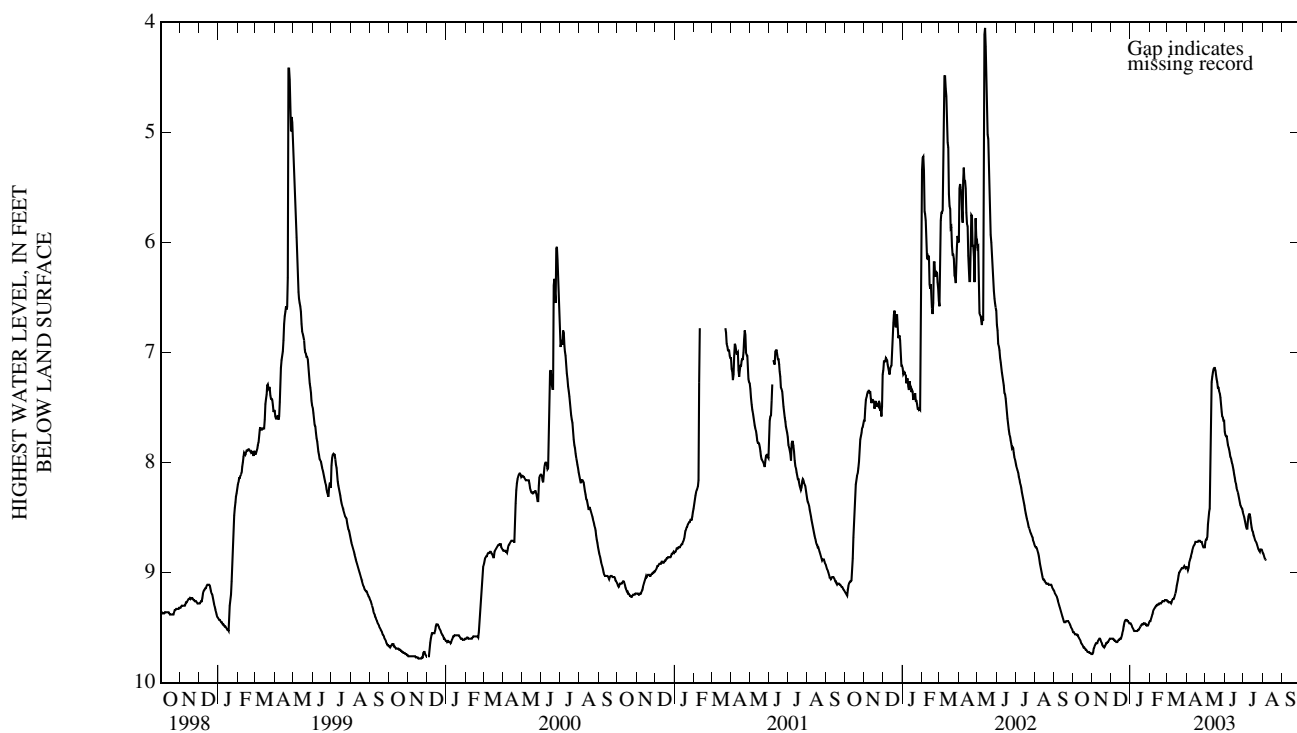
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.65 ft below land-surface datum, Dec. 29, 1990; lowest, 9.78 ft below land-surface datum, Nov. 16-24, 1999.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.56	9.66	9.61	9.51	9.38	9.27	8.91	8.56	7.80	8.58	8.88	---
10	9.59	9.62	9.63	9.53	9.31	9.24	8.80	7.43	7.95	8.47	---	---
15	9.65	9.63	9.60	9.51	9.29	9.16	8.72	7.14	8.07	8.62	---	---
20	9.69	9.68	9.53	9.47	9.27	9.00	8.71	7.27	8.23	8.71	---	---
25	9.72	9.63	9.43	9.47	9.25	8.96	8.72	7.41	8.36	8.79	---	---
EOM	9.74	9.60	9.46	9.45	9.25	8.95	8.77	7.62	8.45	8.80	---	---
MIN	9.54	9.60	9.43	9.45	9.25	8.94	8.71	7.14	7.72	8.47	8.82	---
WTR YR	2003	HIGH 7.14 MAY 15										

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.56	9.68	9.61	9.52	9.40	9.27	8.96	8.68	7.84	8.60	8.89	---
10	9.60	9.64	9.63	9.53	9.32	9.25	8.83	7.73	7.96	8.49	---	---
15	9.66	9.64	9.61	9.52	9.29	9.19	8.74	7.16	8.11	8.63	---	---
20	9.70	9.68	9.55	9.47	9.28	9.03	8.72	7.34	8.25	8.72	---	---
25	9.72	9.64	9.43	9.47	9.26	8.96	8.74	7.47	8.39	8.80	---	---
EOM	9.74	9.60	9.46	9.47	9.26	8.96	8.79	7.72	8.47	8.82	---	---
MAX	9.74	9.74	9.63	9.53	9.45	9.28	9.00	8.77	8.47	8.82	8.90	---
WTR YR	2003	LOW 9.74 OCT 29										



LAPORTE COUNTY

412839086533101. Local number, LP 11.

LOCATION.--Lat 41°28'39", long 86°53'31", in SW¹/₄SW¹/₄SW¹/₄ sec.16, T.35 N., R.4 W., LaPorte County, Hydrologic Unit 07120001, (WANATAH, IN quadrangle), 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 October 2003 (discontinued).

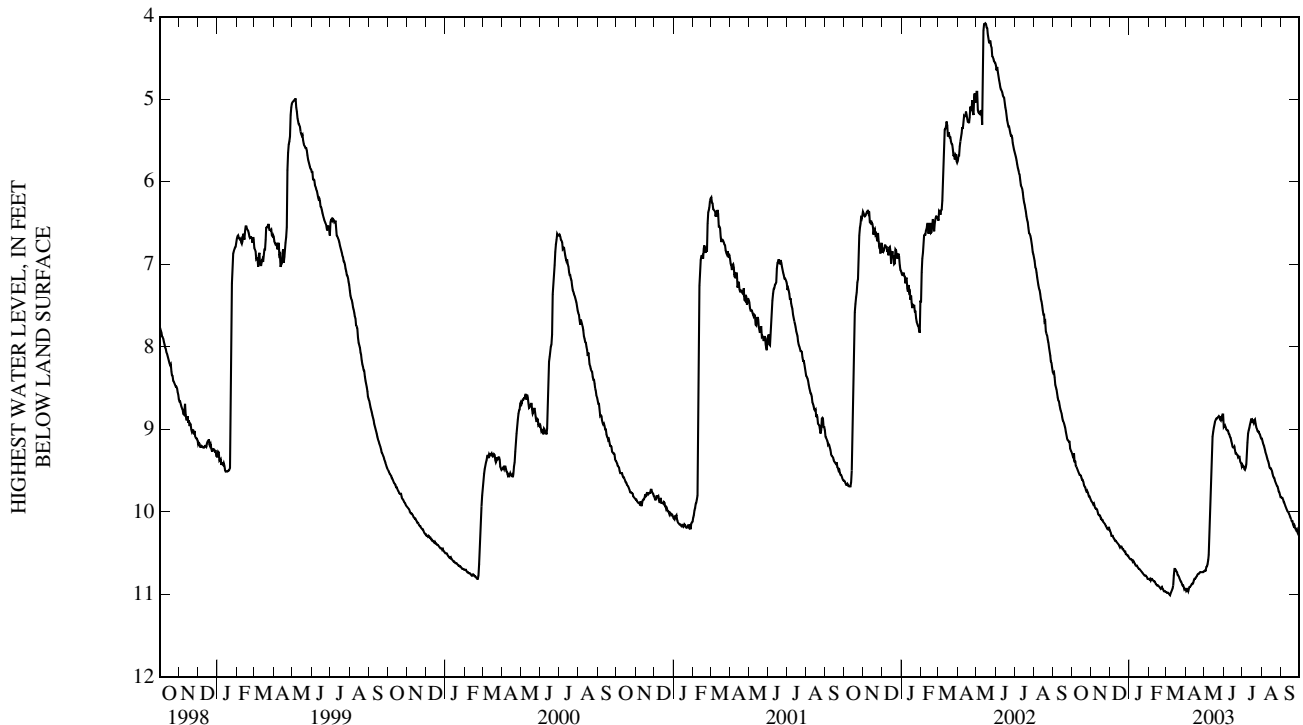
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.82 ft below land-surface datum, Dec. 30, 1990; lowest, 11.04 ft below land-surface datum, Mar. 8, 2003.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.40	9.90	10.29	10.58	10.81	10.99	10.96	10.66	9.00	9.49	9.22	9.88
10	9.49	9.97	10.35	10.63	10.84	10.95	10.89	9.92	9.06	9.05	9.36	9.97
15	9.56	10.05	10.40	10.68	10.89	10.69	10.81	9.03	9.21	8.87	9.47	10.05
20	9.67	10.12	10.43	10.72	10.93	10.77	10.76	8.87	9.29	8.89	9.58	10.15
25	9.74	10.18	10.48	10.77	10.96	10.85	10.73	8.85	9.33	9.02	9.68	10.22
EOM	9.85	10.22	10.55	10.81	10.97	10.93	10.72	8.82	9.45	9.11	9.82	10.29
MIN	9.29	9.87	10.23	10.56	10.81	10.69	10.72	8.82	8.95	8.87	9.11	9.82
WTR YR	2003	HIGH 8.82 MAY 30										

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.42	9.93	10.31	10.60	10.83	11.00	10.97	10.69	9.03	9.52	9.25	9.89
10	9.51	10.00	10.36	10.65	10.86	10.98	10.90	10.28	9.11	9.16	9.38	9.99
15	9.59	10.08	10.42	10.69	10.90	10.70	10.83	9.10	9.23	8.92	9.49	10.07
20	9.69	10.13	10.45	10.73	10.93	10.78	10.78	8.92	9.31	8.93	9.59	10.17
25	9.76	10.20	10.51	10.77	10.96	10.87	10.73	8.88	9.37	9.05	9.71	10.24
EOM	9.87	10.25	10.56	10.81	10.98	10.95	10.73	8.98	9.45	9.13	9.82	10.31
MAX	9.87	10.25	10.56	10.81	10.98	11.04	10.98	10.73	9.45	9.52	9.82	10.31
WTR YR	2003	LOW 11.04 MAR 8										



LAPORTE COUNTY

413434086434701. Local number, LP 12.

LOCATION.--Lat 41°34'34", long 86°43'47", in NE¹/₄NE¹/₄NW¹/₄ sec.14, T.36 N., R.3 W., LaPorte County, Hydrologic Unit 07120001, (LAPORTE EAST, IN quadrangle), on County Road 150 West, at LaPorte Municipal Airport, 1.6 mi south of LaPorte.
 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 October 2003 (discontinued).

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 14.96 ft below land-surface datum, Jan. 16, 1991; lowest, 24.10 ft below land-surface datum, Oct. 8, 2003.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

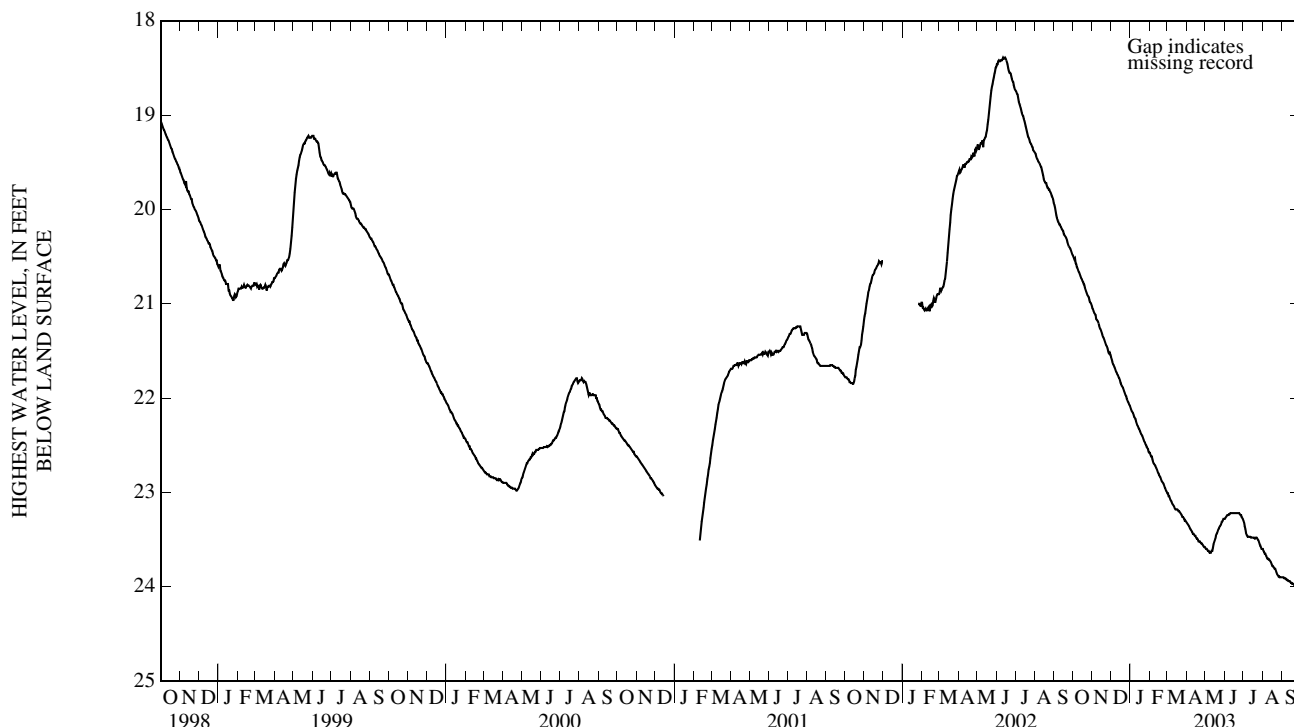
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	20.57	21.11	21.65	22.16	22.65	23.06	23.36	23.62	23.24	23.43	23.65	23.91
10	20.66	21.19	21.73	22.25	22.72	23.13	23.42	23.64	23.22	23.47	23.71	23.93
15	20.74	21.29	21.81	22.33	22.80	23.18	23.46	23.53	23.22	23.48	23.76	23.96
20	20.83	21.38	21.89	22.40	22.88	23.20	23.52	23.43	23.22	23.49	23.81	23.98
25	20.92	21.47	21.98	22.49	22.95	23.26	23.54	23.35	23.23	23.51	23.88	24.01
EOM	21.02	21.54	22.08	22.58	22.99	23.31	23.58	23.28	23.28	23.60	23.90	24.04
MIN	20.49	21.05	21.57	22.10	22.58	23.01	23.32	23.28	23.22	23.30	23.60	23.90

WTR YR 2003 HIGH 20.49 OCT 1

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	20.59	21.12	21.67	22.18	22.67	23.08	23.38	23.62	23.25	23.45	23.67	23.91
10	20.67	21.21	21.75	22.27	22.74	23.14	23.44	23.65	23.23	23.47	23.71	23.94
15	20.76	21.31	21.84	22.35	22.82	23.18	23.48	23.55	23.22	23.48	23.78	23.96
20	20.85	21.40	21.91	22.42	22.89	23.21	23.53	23.44	23.22	23.49	23.81	23.99
25	20.93	21.50	22.01	22.50	22.96	23.26	23.55	23.36	23.24	23.53	23.89	24.01
EOM	21.05	21.58	22.10	22.58	23.01	23.32	23.59	23.29	23.30	23.60	23.90	24.04
MAX	21.05	21.58	22.10	22.58	23.01	23.32	23.59	23.65	23.30	23.60	23.90	24.04

WTR YR 2003 LOW 24.04 SEP 29



MARION COUNTY

393855086120701. Local number, MA 34.

LOCATION.--Lat 39°38'55", long 86°12'07", in NE¹/₄NW¹/₄NE¹/₄ sec.21, T.14 N., R.3 E., Marion County, Hydrologic Unit 05120201, (MAYWOOD, IN quadrangle), 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.

REMARKS.--Water level affected by pumpage from water-supply well field.

PERIOD OF RECORD.--July 1986 to October 2003 (discontinued).

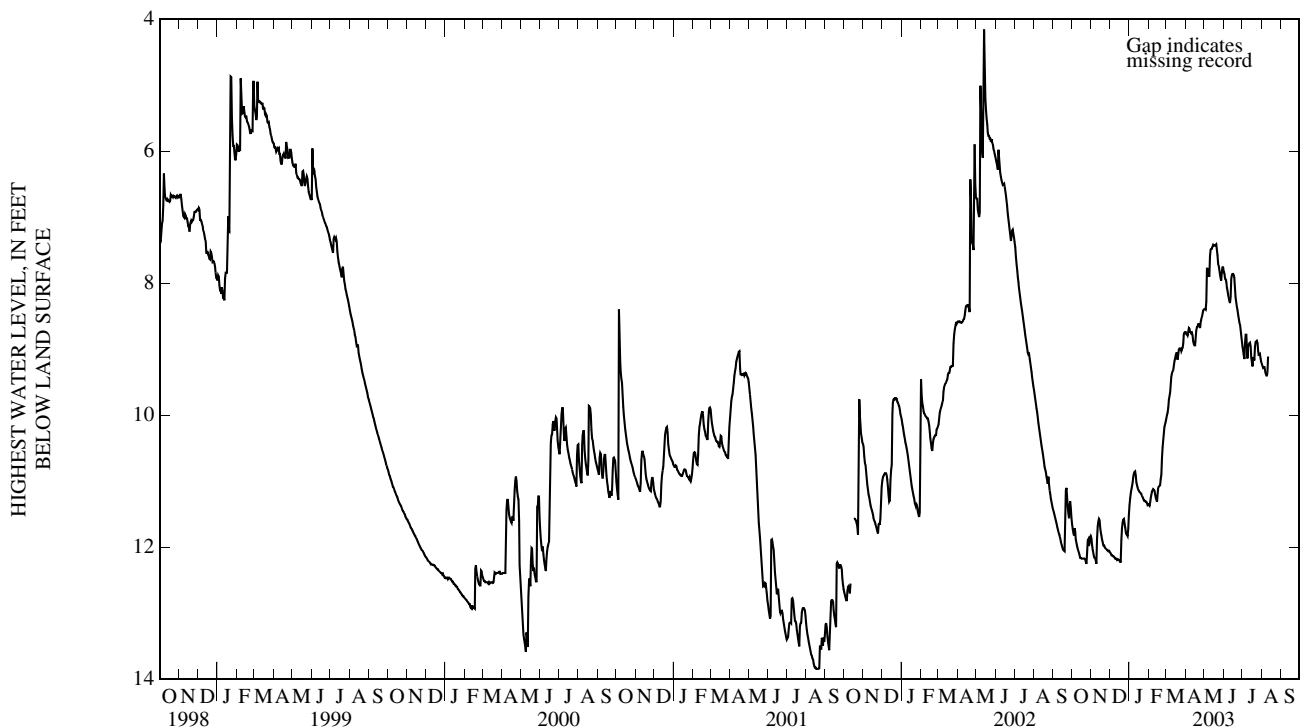
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.55 ft below land-surface datum, Nov. 17, 1993; lowest, 13.86 ft below land-surface datum, Aug. 18, 2001. An artificially created extreme of the lowest water level, 17.32 ft below land-surface datum, June 6-8, 9, 1998 was recorded during underground drainage construction in the vicinity immediately surrounding the well.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	11.71	12.14	12.13	11.07	11.20	9.77	8.74	7.78	7.98	8.90	9.27	---
10	12.02	11.87	12.17	10.85	11.14	9.37	8.76	7.59	8.27	8.96	9.35	---
15	12.16	11.71	12.19	11.13	11.18	9.14	8.94	7.42	7.86	9.13	---	---
20	12.17	11.97	11.71	11.19	10.97	9.09	8.66	7.41	8.22	9.17	---	---
25	12.08	12.03	11.70	11.29	10.26	9.03	8.59	7.81	8.54	8.90	---	---
EOM	11.83	12.06	11.51	11.35	10.10	8.74	8.40	7.76	8.88	9.19	---	---
MIN	11.65	11.57	11.51	10.85	10.10	8.74	8.40	7.41	7.83	8.78	9.11	---
WTR YR	2003	HIGH 7.41 MAY 20										

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	11.82	12.17	12.14	11.12	11.25	9.89	8.82	8.28	8.07	9.22	9.32	---
10	12.05	12.26	12.18	10.91	11.21	9.42	8.78	7.93	8.31	9.14	9.45	---
15	12.17	11.78	12.20	11.16	11.31	9.18	8.96	7.46	7.88	9.20	---	---
20	12.18	11.97	11.89	11.22	11.06	9.17	8.70	7.50	8.29	9.23	---	---
25	12.28	12.04	11.77	11.30	10.36	9.14	8.76	7.88	8.60	9.03	---	---
EOM	11.86	12.09	11.72	11.36	10.14	8.76	8.42	7.84	8.96	9.23	---	---
MAX	12.28	12.26	12.25	11.51	11.38	10.10	8.96	8.42	8.96	9.29	9.45	---
WTR YR	2003	LOW 12.28 OCT 25										



MARION COUNTY

394632086092701. Local number, MA 35.

LOCATION.--Lat 39°46'32", long 86°09'27", in NW¹/₄SW¹/₄NW¹/₄ sec.1, T.15 N., R.3 E., Marion County, Hydrologic Unit 05120201, (INDIANAPOLIS WEST, IN quadrangle), 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.

REMARKS.--Water levels are affected by pumpage.

PERIOD OF RECORD.--September 1987 to October 2003 (discontinued).

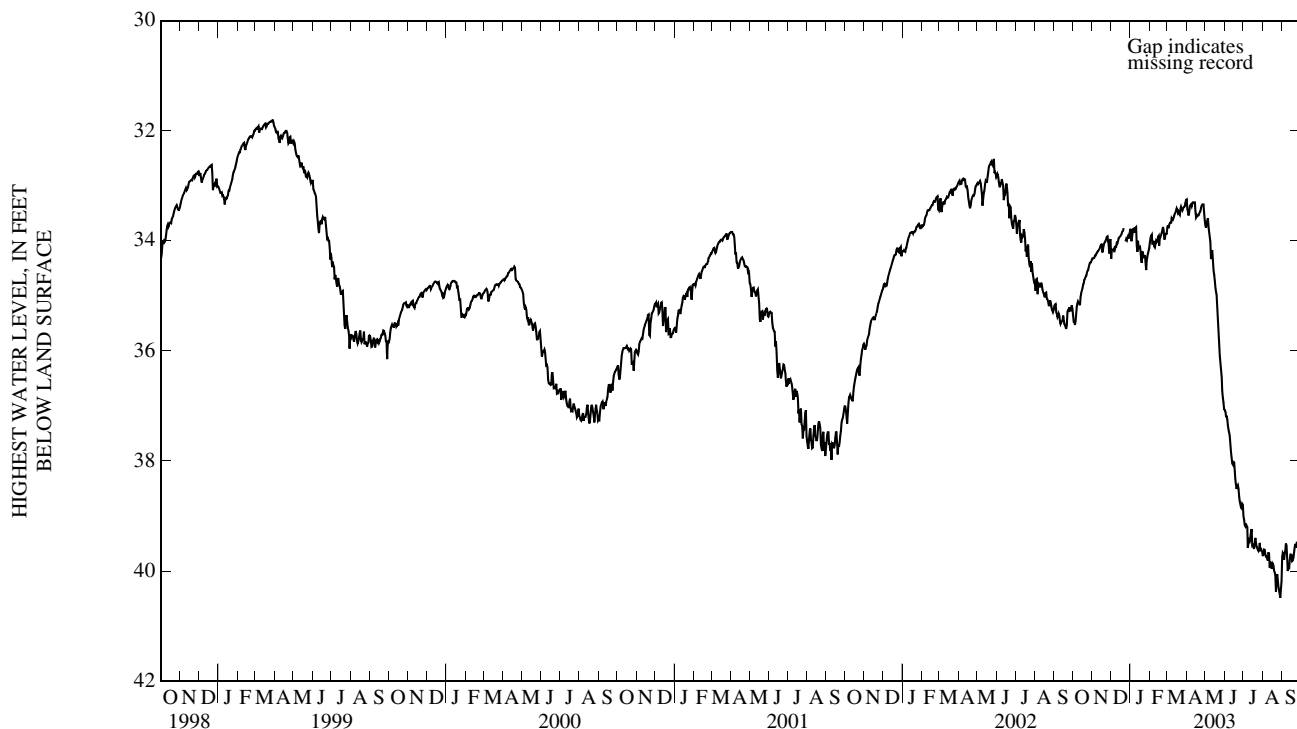
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 30.30 ft below land-surface datum, Mar. 27, 1991; lowest, 40.70 ft below land-surface datum, Aug. 29-30, 2003.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	35.45	34.27	34.18	33.79	34.07	33.68	33.48	33.59	37.25	39.14	39.71	39.68
10	35.13	34.19	34.04	33.75	34.06	33.62	33.32	34.33	37.70	39.44	39.66	40.00
15	34.91	34.08	33.92	34.12	33.91	33.45	33.47	34.62	38.02	39.54	39.96	39.70
20	34.69	34.05	33.82	34.19	33.86	33.51	33.54	35.20	38.51	39.40	40.02	39.67
25	34.53	33.92	33.97	34.41	33.96	33.45	33.36	36.23	38.74	39.64	40.18	39.53
EOM	34.35	33.97	33.84	34.13	33.87	33.26	33.63	37.06	38.80	39.65	40.18	39.19
MIN	34.35	33.92	33.77	33.75	33.75	33.26	33.25	33.59	37.07	39.01	39.61	39.19
WTR YR	2003	HIGH	33.25	APR 1								

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	35.67	34.31	34.44	33.87	34.31	33.87	33.62	33.94	37.54	39.47	40.05	39.98
10	35.38	34.33	34.17	34.09	34.31	33.88	33.46	34.60	38.04	39.74	39.93	40.14
15	35.14	34.12	34.13	34.34	34.21	33.59	33.78	34.85	38.11	39.79	40.26	40.04
20	34.77	34.22	34.01	34.45	34.05	33.76	33.75	35.51	38.77	39.76	40.34	39.89
25	34.58	34.17	34.01	34.53	34.21	33.65	33.40	36.35	39.01	39.95	40.47	39.78
EOM	34.41	34.33	33.95	34.39	34.13	33.43	33.92	37.27	39.20	40.00	40.36	39.25
MAX	35.80	34.61	34.46	34.60	34.33	34.05	33.92	37.27	39.20	40.00	40.70	40.22
WTR YR	2003	LOW	40.70	AUG 29								



MARION COUNTY

394732086115501. Local number, MA 37.

LOCATION.--Lat 39°47'32", long 86°11'55", in SE¹/₄NE¹/₄NE¹/₄ sec. 33, T.16N., R.3E., Marion County, Hydrologic Unit 05120201, (INDIANAPOLIS WEST, IN quadrangle), 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 artesian 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.

REMARKS.--Water level affected by pumpage.

PERIOD OF RECORD.--July 1988 to October 2003 (discontinued).

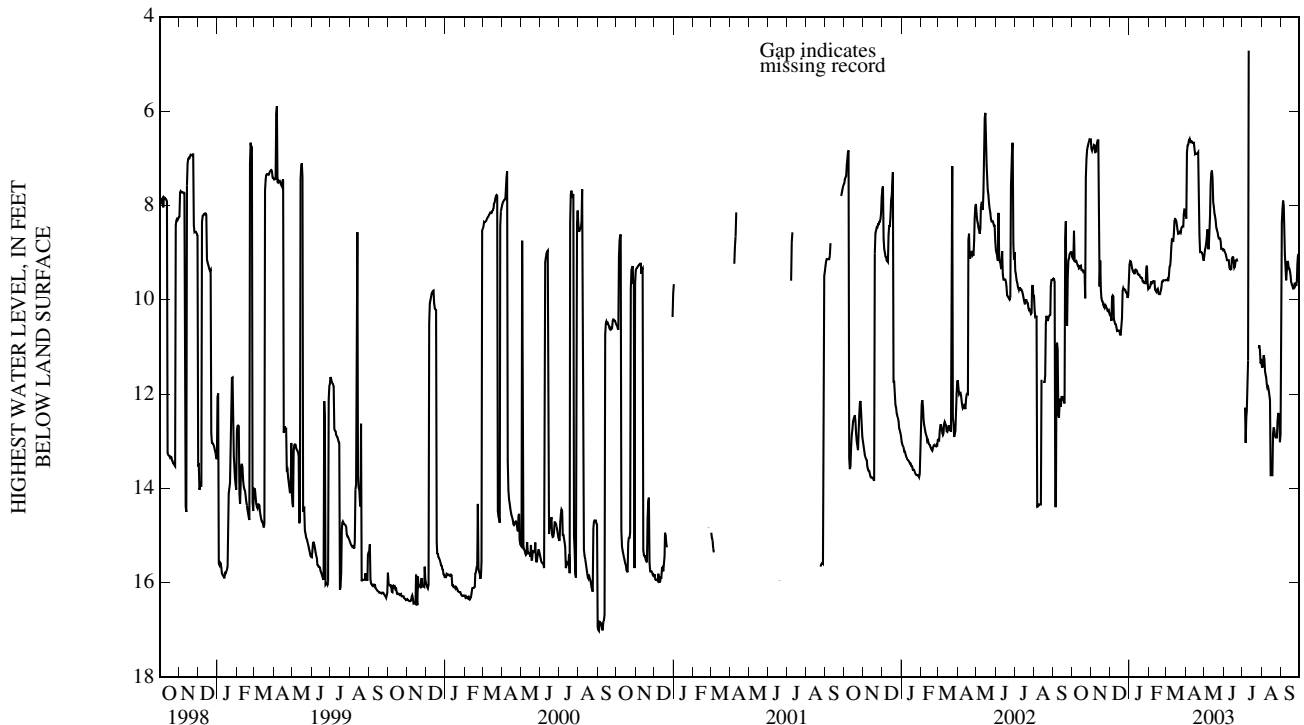
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.22 ft below land-surface datum, Mar. 20, 1991; lowest, 17.04 ft below land-surface datum, Sept. 3, 9-10, 2000.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.18	6.72	9.91	9.33	9.61	9.50	6.71	8.63	9.09	12.29	11.26	8.01
10	9.27	6.67	10.52	9.37	9.61	8.72	6.66	8.25	9.31	11.29	11.87	9.41
15	9.28	9.17	10.65	9.47	9.77	8.29	6.80	7.93	9.10	---	13.72	9.40
20	9.39	10.11	10.39	9.53	9.81	8.60	6.89	8.46	9.17	---	12.71	9.76
25	6.82	10.17	9.79	9.64	9.59	8.49	8.99	8.70	---	---	12.92	9.71
EOM	6.60	10.30	9.52	9.77	9.59	8.10	9.17	8.95	---	11.32	12.86	---
MIN	6.60	6.62	9.52	9.18	9.59	8.09	6.60	7.26	8.94	4.72	11.18	7.90
WTR YR	2003	HIGH 4.72 JUL 11										

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.20	6.79	9.94	9.38	9.66	9.61	6.73	8.78	9.17	13.71	11.52	8.66
10	9.29	6.85	10.58	9.46	9.79	8.90	6.67	9.05	9.39	11.97	11.90	9.86
15	9.38	9.87	10.70	9.47	9.84	8.33	7.20	8.09	9.13	---	13.77	9.55
20	9.41	10.20	10.56	9.54	9.88	8.60	6.91	8.52	9.29	---	12.84	9.76
25	7.01	10.19	9.84	9.64	9.59	8.71	9.03	8.70	---	---	13.09	9.80
EOM	6.80	10.35	9.91	9.85	9.63	8.21	9.21	9.01	---	11.44	13.02	---
MAX	10.11	10.35	11.05	9.85	9.88	9.67	10.01	9.22	12.03	13.71	13.81	14.21
WTR YR	2003	LOW 14.21 SEP 29										



MARION COUNTY

393950086124701. Local number, MA 38.

LOCATION.--Lat 39°39'50", long 86°12'47", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 9, T.14N., R.3E., Marion County, Hydrologic Unit 05120201, (MAYWOOD, IN quadrangle), on Southport Road, west of Highway 37 0.7 mi.

Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene Epoch.

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 675 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 3.50 ft above land-surface datum.

REMARKS.--Water level affected by pumpage from water-supply well field.

PERIOD OF RECORD.--December 1997 to October 2003 (discontinued).

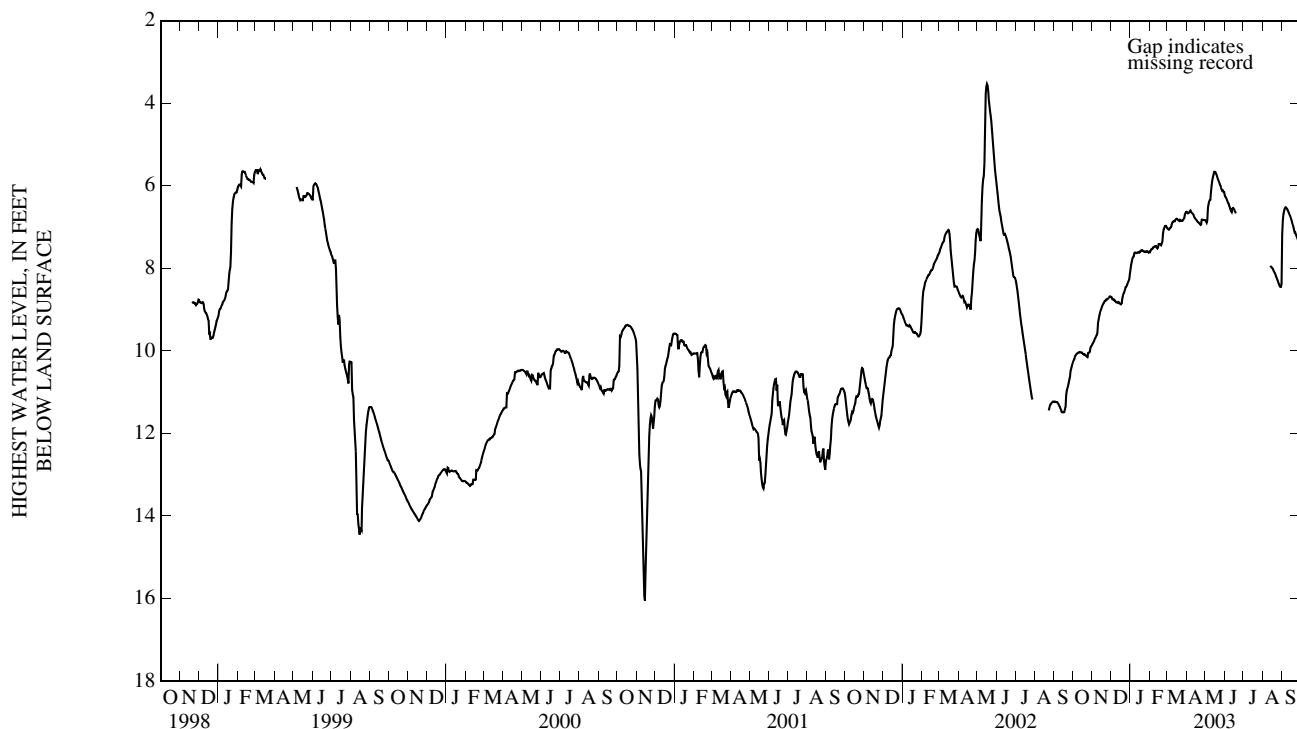
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.43 ft below land-surface datum, June 16, 1998; lowest, 16.14 ft below land-surface datum, Nov. 14, 2000.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.11	9.70	8.75	7.73	7.53	7.03	6.65	6.53	6.36	---	---	6.55
10	10.04	9.32	8.82	7.63	7.46	6.87	6.66	6.14	6.57	---	---	6.59
15	10.04	8.99	8.85	7.62	7.41	6.81	6.80	5.66	6.55	---	7.98	6.79
20	10.09	8.82	8.66	7.56	7.40	6.85	6.89	5.78	---	---	8.11	7.07
25	10.05	8.75	8.45	7.59	6.98	6.85	6.82	5.99	---	---	8.30	7.26
EOM	9.87	8.68	8.14	7.60	7.00	6.64	6.83	6.15	---	---	8.38	7.18
MIN	9.87	8.68	8.14	7.56	6.97	6.64	6.60	5.66	6.23	---	7.94	6.52
WTR YR	2003	HIGH 5.66 MAY 15										

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.13	9.75	8.78	7.76	7.55	7.08	6.68	6.83	6.41	---	---	6.61
10	10.05	9.56	8.83	7.65	7.50	6.91	6.69	6.36	6.61	---	---	6.63
15	10.06	9.03	8.87	7.63	7.49	6.83	6.82	5.73	6.57	---	7.99	6.84
20	10.11	8.85	8.72	7.60	7.45	6.88	6.91	5.83	---	---	8.14	7.13
25	10.16	8.76	8.46	7.61	7.03	6.89	6.94	6.05	---	---	8.35	7.29
EOM	9.89	8.73	8.27	7.63	7.04	6.67	6.85	6.23	---	---	8.50	7.20
MAX	10.32	9.87	8.89	8.14	7.63	7.10	6.97	6.92	6.73	---	8.50	8.38
WTR YR	2003	LOW 10.32 OCT 1										



MARTIN COUNTY

383659086545901. Local number, MT 5.

LOCATION.--Lat 38°36'59", long 86°54'59", in SE¹/₄NE¹/₄SW¹/₄ sec.12, T.2 N., R.5 W., Martin County, Hydrologic Unit 05120208, (ALFORDSVILLE, IN quadrangle), 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 casing, 2.80 ft above land-surface datum.

PERIOD OF RECORD.--May 1958 to current year.

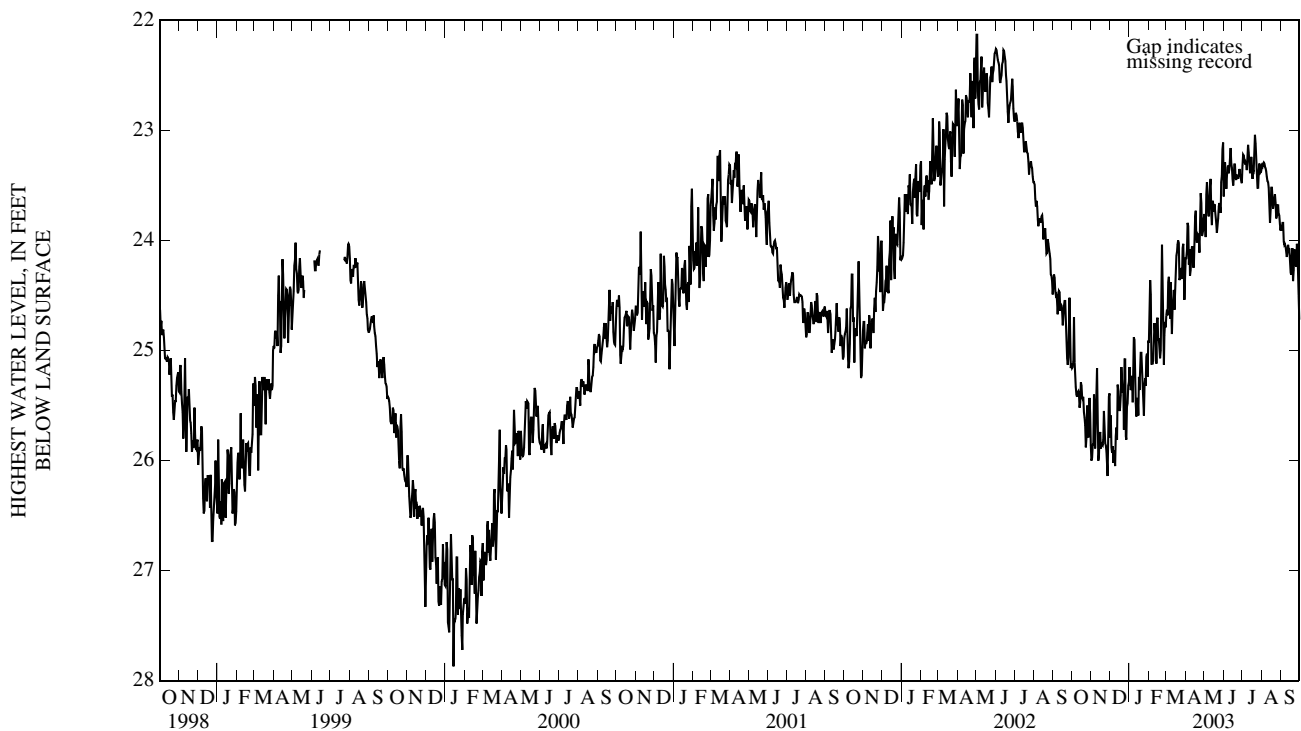
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 22.13 ft below land-surface datum, May 1-2, 2002; lowest, 34.10 ft below land-surface datum, Jan. 1, 5, 22, 23, 1960, and Dec. 18, 19, 1964.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	25.11	25.40	25.87	25.23	25.12	24.33	23.87	23.47	23.53	23.31	23.30	24.01
10	25.38	25.16	25.78	25.11	24.75	24.85	24.12	23.50	23.35	23.13	23.46	24.15
15	25.29	25.74	25.51	25.59	24.71	24.50	24.02	23.66	23.44	23.24	23.72	24.19
20	25.56	25.81	25.26	25.02	25.00	24.00	23.94	23.84	23.43	23.24	23.67	24.37
25	25.50	25.92	25.08	25.31	25.13	24.25	23.57	23.66	23.41	23.52	23.77	24.24
EOM	25.86	25.39	25.29	24.91	24.79	24.33	23.80	23.11	23.48	23.37	23.91	24.72
MIN	24.70	25.16	25.08	24.88	24.04	24.00	23.57	23.11	23.16	23.04	23.29	23.84
WTR YR	2003	HIGH	23.04	JUL 21								

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	25.41	25.91	26.02	25.47	25.32	24.54	24.48	23.58	23.63	23.39	23.34	24.08
10	25.47	25.41	26.05	25.48	25.01	25.02	24.28	23.73	23.55	23.23	23.55	24.23
15	25.47	25.89	25.70	25.69	25.00	24.63	24.24	23.75	23.52	23.40	23.90	24.31
20	25.65	26.04	25.38	25.20	25.23	24.16	24.03	24.04	23.58	23.40	23.74	24.50
25	25.79	26.14	25.78	25.59	25.38	24.36	23.76	23.70	23.55	23.62	23.85	24.43
EOM	26.00	25.91	25.41	25.24	24.90	24.59	23.95	23.60	23.58	23.43	24.01	24.83
MAX	26.00	26.22	26.26	25.82	25.38	25.02	24.52	24.07	23.69	23.63	24.01	24.83
WTR YR	2003	LOW	26.26	DEC 3								



GROUND-WATER DATA
MONTGOMERY COUNTY

400247086482101. Local number, MY 7.

LOCATION.--Lat 40°02'47", long 86°48'21", in NE¹/₄NW¹/₄SW¹/₄ sec.31, T.19 N., R.3 W., Montgomery County, Hydrologic Unit 05120110, (DARLINGTON, IN quadrangle), 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.

REMARKS.--Water level affected by pumpage from water-supply well field.

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

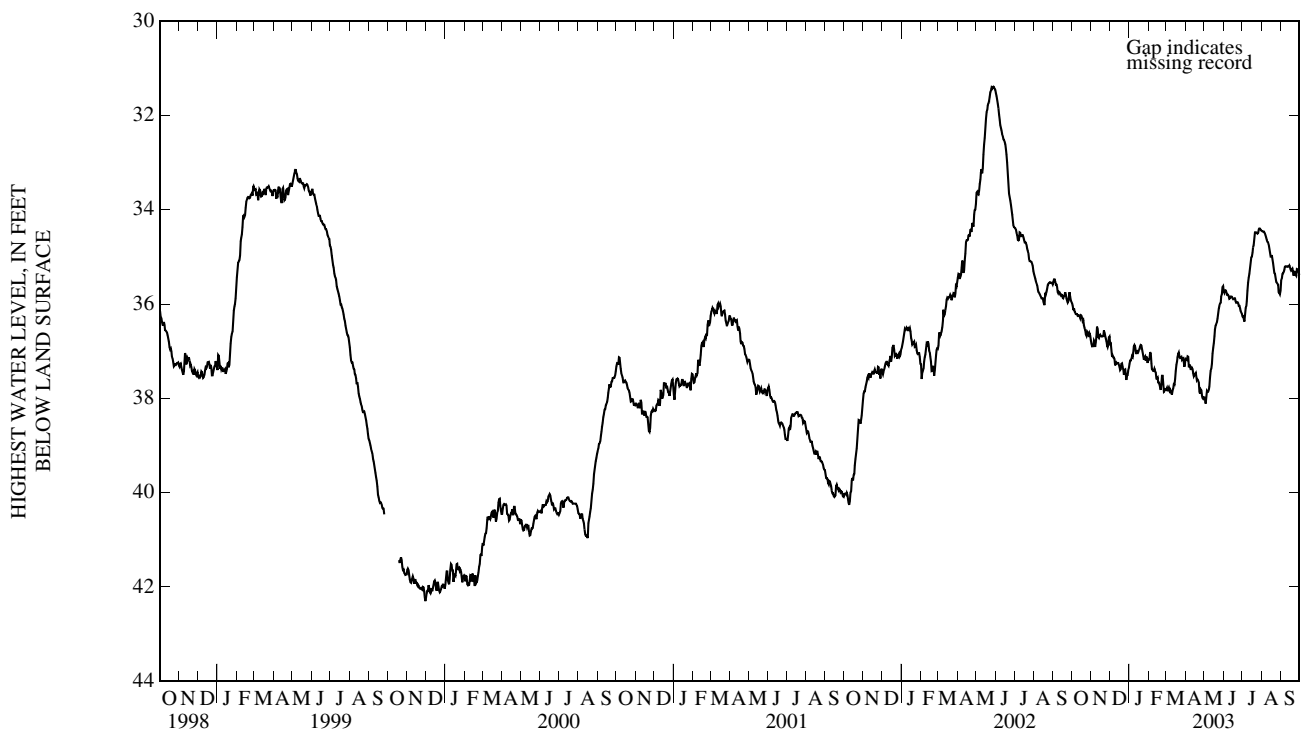
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 26.10 ft below land-surface datum, Apr. 13, 1974; lowest, 42.34 ft below land-surface datum, Nov. 30, 1999.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	36.16	36.77	37.09	37.10	37.26	37.77	37.12	37.84	35.74	36.22	34.48	35.32
10	36.25	36.48	37.27	36.90	37.37	37.92	37.38	37.56	35.89	35.55	34.68	35.20
15	36.24	36.65	37.29	37.02	37.56	37.59	37.50	36.93	35.88	35.01	34.99	35.22
20	36.45	36.68	37.26	36.88	37.82	37.06	37.60	36.43	35.94	34.62	35.23	35.33
25	36.58	36.79	37.39	37.13	37.86	37.12	37.81	36.03	36.04	34.51	35.55	35.40
EOM	36.76	36.69	37.36	37.17	37.82	37.25	37.98	35.62	36.20	34.44	35.72	35.38
MIN	35.98	36.48	36.84	36.87	37.02	37.03	37.11	35.62	35.71	34.40	34.45	35.18
WTR YR	2003	HIGH 34.40 JUL 28										

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	36.26	36.94	37.14	37.16	37.38	37.83	37.34	37.98	35.81	36.44	34.52	35.36
10	36.26	36.69	37.30	37.00	37.45	37.96	37.39	37.78	35.93	35.72	34.72	35.24
15	36.30	36.69	37.34	37.07	37.66	37.71	37.56	37.05	35.92	35.14	35.03	35.27
20	36.52	36.75	37.33	36.95	37.86	37.14	37.65	36.46	35.98	34.75	35.34	35.40
25	36.68	36.88	37.50	37.20	37.91	37.18	37.90	36.10	36.08	34.54	35.59	35.47
EOM	36.85	36.85	37.44	37.26	37.87	37.34	38.02	35.73	36.32	34.47	35.88	35.42
MAX	36.85	36.95	37.63	37.36	37.91	37.96	38.04	38.16	36.32	36.44	35.88	35.72
WTR YR	2003	LOW 38.16 MAY 3										



MORGAN COUNTY

393423086161001. Local number, MG 4.

LOCATION.--Lat 39°34'23", long 86°16'10", in NW¹/₄NW¹/₄NW¹/₄ sec.13, T.13 N., R.2 E., Morgan County, Hydrologic Unit 05120201, (MOORESVILLE EAST, IN quadrangle), 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 64 ft, cased to 60 ft, screened to 64 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.

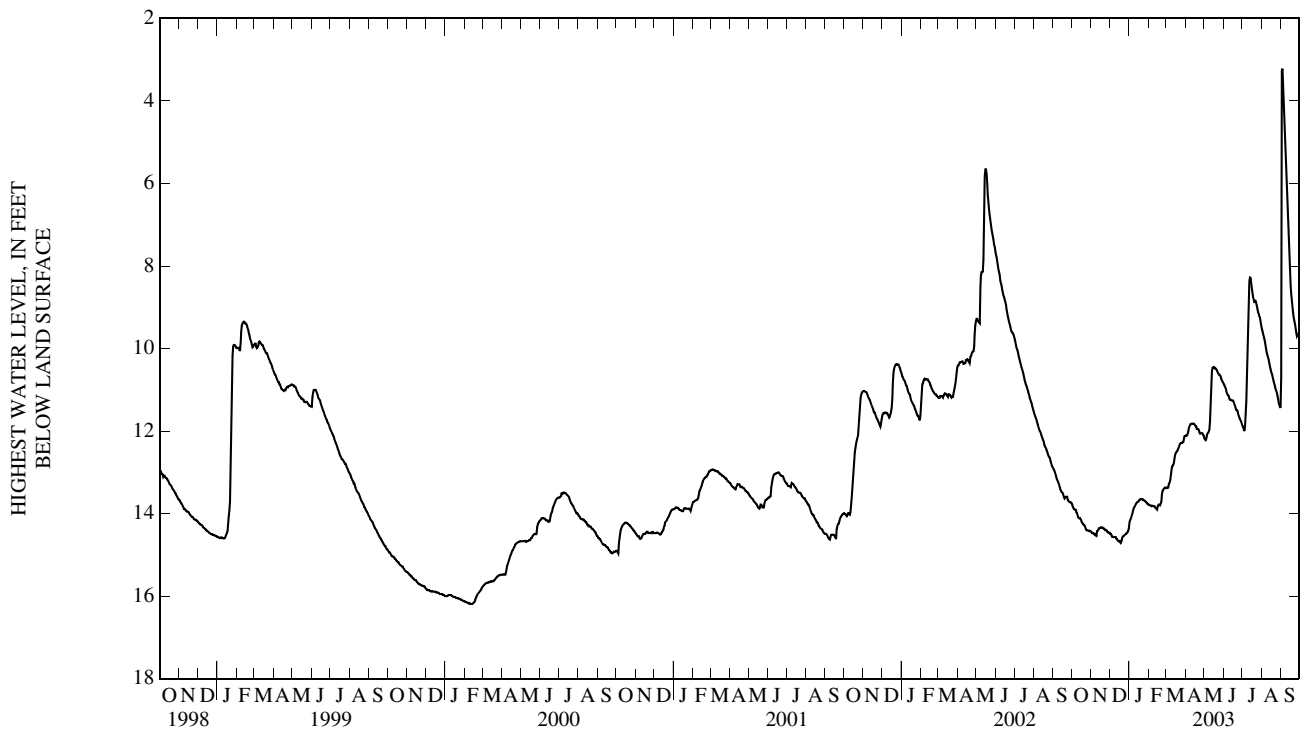
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.93 ft below land-surface datum, Jan. 1, 1991; lowest, 16.19 ft below land-surface datum, Feb. 10-14, 2000.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	13.90	14.49	14.56	14.03	13.82	13.28	12.01	12.10	11.03	11.88	9.77	4.22
10	14.04	14.43	14.57	13.81	13.82	12.88	11.83	11.76	11.22	9.51	10.16	7.05
15	14.14	14.35	14.66	13.71	13.83	12.58	11.84	10.45	11.26	8.44	10.51	8.28
20	14.27	14.36	14.61	13.65	13.77	12.43	11.95	10.50	11.43	8.87	10.80	9.12
25	14.41	14.40	14.51	13.69	13.40	12.29	12.05	10.63	11.63	9.05	11.07	9.61
EOM	14.43	14.46	14.35	13.77	13.38	12.12	12.11	10.82	11.82	9.44	11.44	9.68
MIN	13.77	14.33	14.35	13.65	13.37	12.12	11.82	10.45	10.86	8.28	9.52	3.22
WTR YR	2003	HIGH 3.22	SEP 3									

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	13.90	14.51	14.57	14.08	13.83	13.37	12.08	12.19	11.08	12.04	9.85	4.86
10	14.09	14.56	14.62	13.84	13.85	12.99	11.83	11.98	11.25	10.46	10.21	7.38
15	14.19	14.36	14.67	13.72	13.92	12.67	11.86	10.47	11.26	8.55	10.58	8.47
20	14.29	14.36	14.68	13.65	13.83	12.47	11.95	10.52	11.49	8.91	10.85	9.25
25	14.43	14.43	14.52	13.69	13.42	12.29	12.08	10.65	11.67	9.12	11.15	9.70
EOM	14.45	14.49	14.42	13.79	13.38	12.13	12.19	10.86	11.88	9.52	11.45	9.77
MAX	14.45	14.56	14.73	14.35	13.92	13.39	12.19	12.24	11.88	12.04	11.45	11.44
WTR YR	2003	LOW 14.73	DEC 18									



NEWTON COUNTY

405105087173301. Local number, NE 6.

LOCATION.--Lat 40°51'05", long 87°17'33", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec.23, T.28 N., R.8 W., Newton County, Hydrologic Unit 07120002, (GOODLAND, IN quadrangle), 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.

REMARKS.--Water level may be affected by pumpage.

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

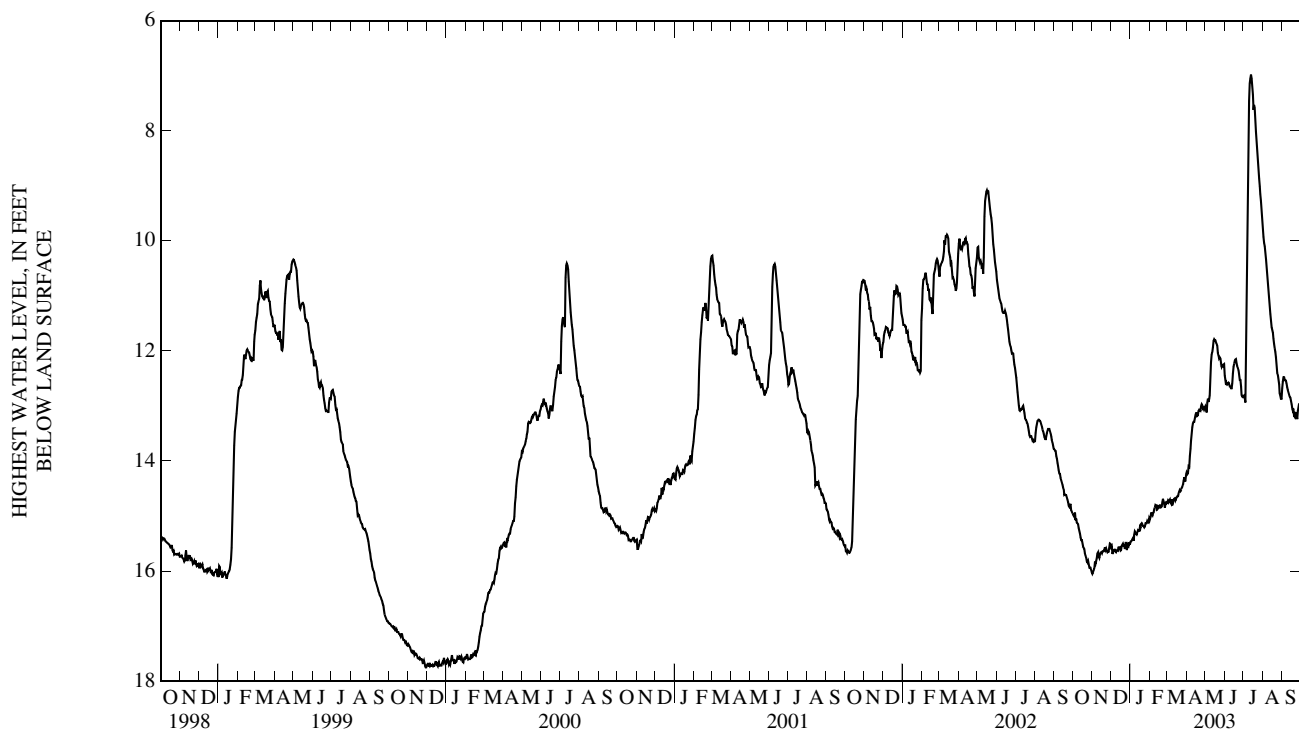
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 6.98 ft below land-surface datum, July. 13, 2003; lowest, 18.82 ft below land-surface datum, Oct. 29, 1988.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	15.08	15.83	15.63	15.40	14.99	14.70	14.11	12.87	12.61	12.20	10.21	12.53
10	15.22	15.66	15.63	15.33	14.80	14.77	13.39	12.21	12.66	7.46	10.89	12.71
15	15.44	15.66	15.58	15.27	14.83	14.69	13.17	11.79	12.29	7.18	11.57	12.91
20	15.68	15.62	15.50	15.15	14.83	14.56	13.09	11.90	12.23	7.80	11.95	13.18
25	15.82	15.66	15.49	15.13	14.85	14.47	12.97	12.14	12.53	8.66	12.44	13.24
EOM	16.02	15.51	15.52	15.04	14.77	14.26	13.04	12.24	12.84	9.60	12.87	12.96
MIN	14.94	15.50	15.48	15.04	14.69	14.26	12.97	11.79	12.15	6.98	9.75	12.48
WTR YR	2003	HIGH 6.98 JUL 13										

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	15.13	15.98	15.67	15.45	15.05	14.79	14.16	12.95	12.65	13.00	10.35	12.56
10	15.27	15.73	15.66	15.39	14.93	14.82	13.52	12.54	12.73	8.37	11.03	12.77
15	15.52	15.74	15.66	15.30	14.93	14.73	13.24	11.86	12.41	7.34	11.63	12.97
20	15.75	15.69	15.57	15.20	14.90	14.63	13.17	12.06	12.30	8.04	12.04	13.24
25	15.88	15.70	15.62	15.19	14.91	14.50	13.03	12.26	12.59	8.87	12.57	13.28
EOM	16.08	15.68	15.55	15.12	14.83	14.37	13.12	12.48	12.88	9.77	12.95	12.98
MAX	16.08	16.10	15.74	15.54	15.09	14.84	14.28	13.16	12.88	13.01	12.95	13.28
WTR YR	2003	LOW 16.10 NOV 1										



NEWTON COUNTY

405959087282901. Local number, NE 7.

LOCATION.--Lat 40°59'59", long 87°28'29", in SE¹/₄SW¹/₄SE¹/₄ sec.32, T.30 N., R.9 W., Newton County, Hydrologic Unit 07120002, (MOROCCO, IN quadrangle), 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.

REMARKS.--Water level affected by irrigation pumpage.

PERIOD OF RECORD.--February 1976 to October 2003 (discontinued).

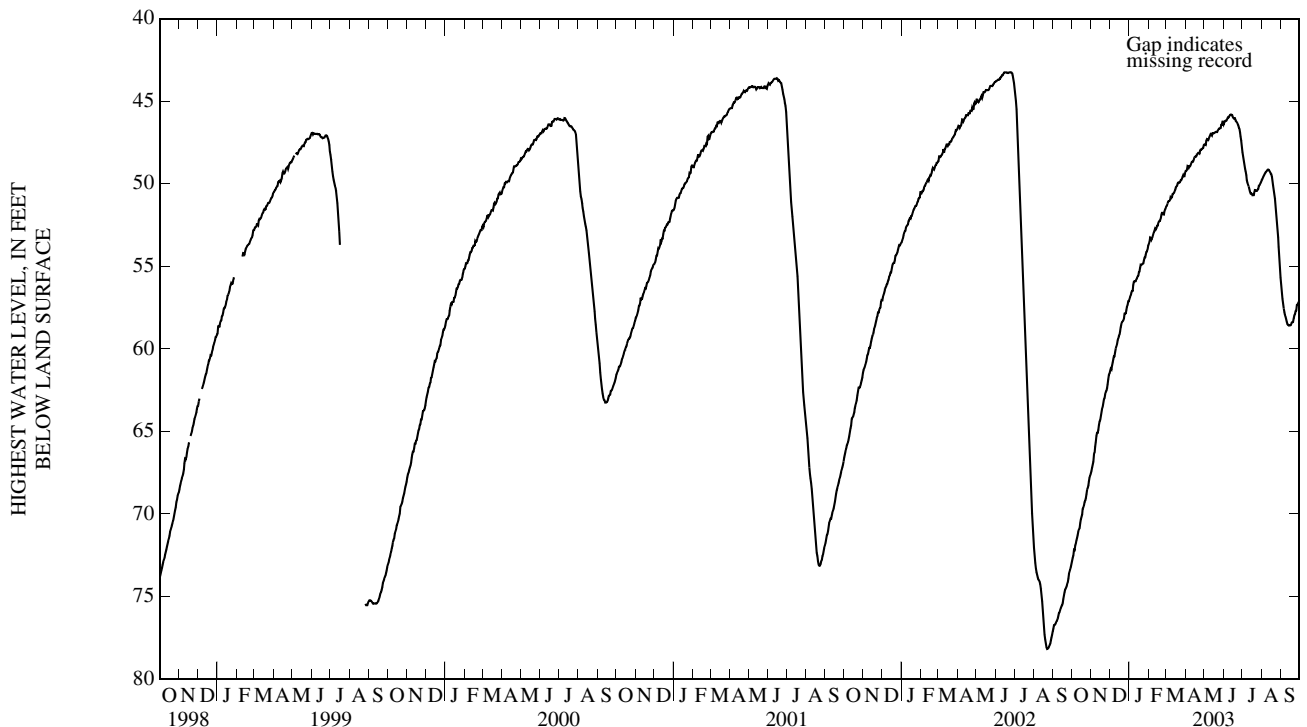
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 34.65 ft below land-surface datum, Apr. 14, 1980; lowest, 97.33 ft below land-surface datum, Aug. 29, 30, 1988.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	72.19	66.39	60.82	56.49	53.39	51.06	48.94	47.30	46.18	49.08	49.45	57.56
10	71.28	65.09	59.99	55.91	52.86	50.82	48.77	47.09	45.90	50.04	49.16	58.36
15	70.32	64.31	59.21	55.57	52.54	50.38	48.41	46.92	45.91	50.57	49.36	58.57
20	69.51	63.31	58.39	54.91	52.12	49.94	48.18	46.86	46.13	50.52	50.34	58.37
25	68.53	62.54	57.87	54.47	51.86	49.77	47.93	46.65	46.57	50.38	52.30	57.68
EOM	67.55	61.49	57.12	53.74	51.50	49.37	47.67	46.24	47.77	49.88	55.69	57.07
MIN	67.55	61.49	57.12	53.74	51.50	49.37	47.67	46.24	45.81	48.10	49.14	56.13
WTR YR	2003	HIGH 45.81 JUN 12										

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	72.28	66.83	61.01	56.59	53.48	51.11	49.13	47.40	46.21	49.26	49.53	57.78
10	71.46	65.28	60.20	55.96	52.95	50.88	48.88	47.18	46.00	50.16	49.25	58.51
15	70.55	64.40	59.38	55.63	52.59	50.50	48.57	46.99	46.01	50.62	49.41	58.62
20	69.63	63.54	58.51	54.97	52.30	50.05	48.26	46.92	46.23	50.68	50.61	58.42
25	68.81	62.62	57.87	54.64	51.94	49.79	48.01	46.67	46.67	50.47	52.78	57.78
EOM	67.69	61.59	57.15	53.98	51.59	49.55	47.85	46.42	48.10	49.97	56.13	57.19
MAX	73.04	67.55	61.58	57.12	53.77	51.52	49.37	47.71	48.10	50.76	56.13	58.63
WTR YR	2003	LOW 73.04 OCT 1										



NEWTON COUNTY

410428087231501. Local number, NE 8.

LOCATION.--Lat 41°04'28", long 87°25'44", in NW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.2, T.30 N., R.9 W., Newton County, Hydrologic Unit 07120001, (ENOS, IN quadrangle), 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 affected by irrigation pumpage.

PERIOD OF RECORD.--February 1976 to October 2003 (discontinued).

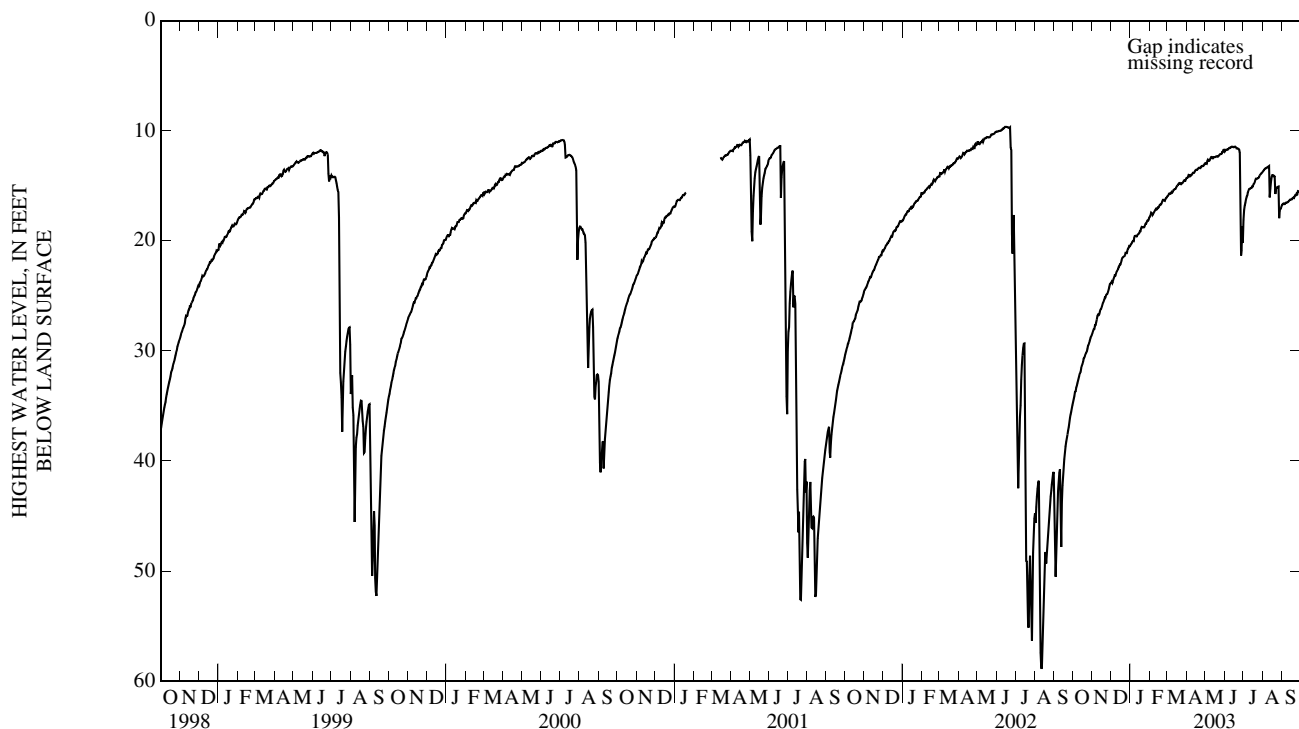
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.04 ft below land-surface datum, May 31, 1976; lowest, 98.40 ft below land-surface datum, July 29, 1988.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	33.69	27.69	23.44	20.01	17.66	15.69	14.05	12.64	11.72	16.21	13.43	16.65
10	32.48	26.71	22.79	19.59	17.16	15.54	13.92	12.42	11.50	15.32	13.25	16.49
15	31.36	26.18	22.15	19.31	16.95	15.18	13.60	12.39	11.49	15.04	14.23	16.25
20	30.49	25.36	21.49	18.78	16.60	14.76	13.40	12.30	11.59	14.52	14.17	16.11
25	29.50	24.81	21.08	18.46	16.38	14.76	13.21	12.12	12.00	14.28	15.11	15.77
EOM	28.58	23.88	20.49	17.87	16.09	14.40	12.99	11.73	20.20	13.80	16.88	15.55
MIN	28.58	23.88	20.47	17.87	16.09	14.40	12.99	11.73	11.44	13.80	13.21	15.50
WTR YR	2003	HIGH 11.44 JUN 18										

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	33.83	28.04	23.64	20.08	17.74	15.76	14.25	12.75	11.76	16.54	13.51	16.73
10	32.73	26.84	22.97	19.65	17.27	15.63	14.01	12.56	11.61	15.47	13.35	16.56
15	31.57	26.24	22.30	19.39	17.02	15.29	13.73	12.46	11.56	15.23	14.61	16.30
20	30.65	25.56	21.59	18.81	16.73	14.89	13.48	12.41	11.62	14.72	15.75	16.18
25	29.80	24.88	21.13	18.63	16.49	14.79	13.28	12.16	15.00	14.36	15.19	15.85
EOM	28.71	24.04	20.55	18.10	16.17	14.58	13.16	11.92	24.24	13.88	17.10	15.61
MAX	34.92	28.58	24.04	20.53	17.93	16.12	14.40	13.08	27.64	20.20	19.08	16.88
WTR YR	2003	LOW 34.92 OCT 1										



NEWTON COUNTY

405959087282902. Local number, NE 9.

LOCATION.--Lat 40°59'59", long 87°28'29", in SE¹/₄SW¹/₄SE¹/₄ sec.32, T.30 N., R.9 W., Newton County, Hydrologic Unit 07120002, (MOROCCO, IN quadrangle), 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: Bottom lip of "Y" in well casing, 3.10 ft above land-surface datum.

PERIOD OF RECORD.--May 1978 to October 2003 (discontinued). Fragmentary record prior to March 1981.

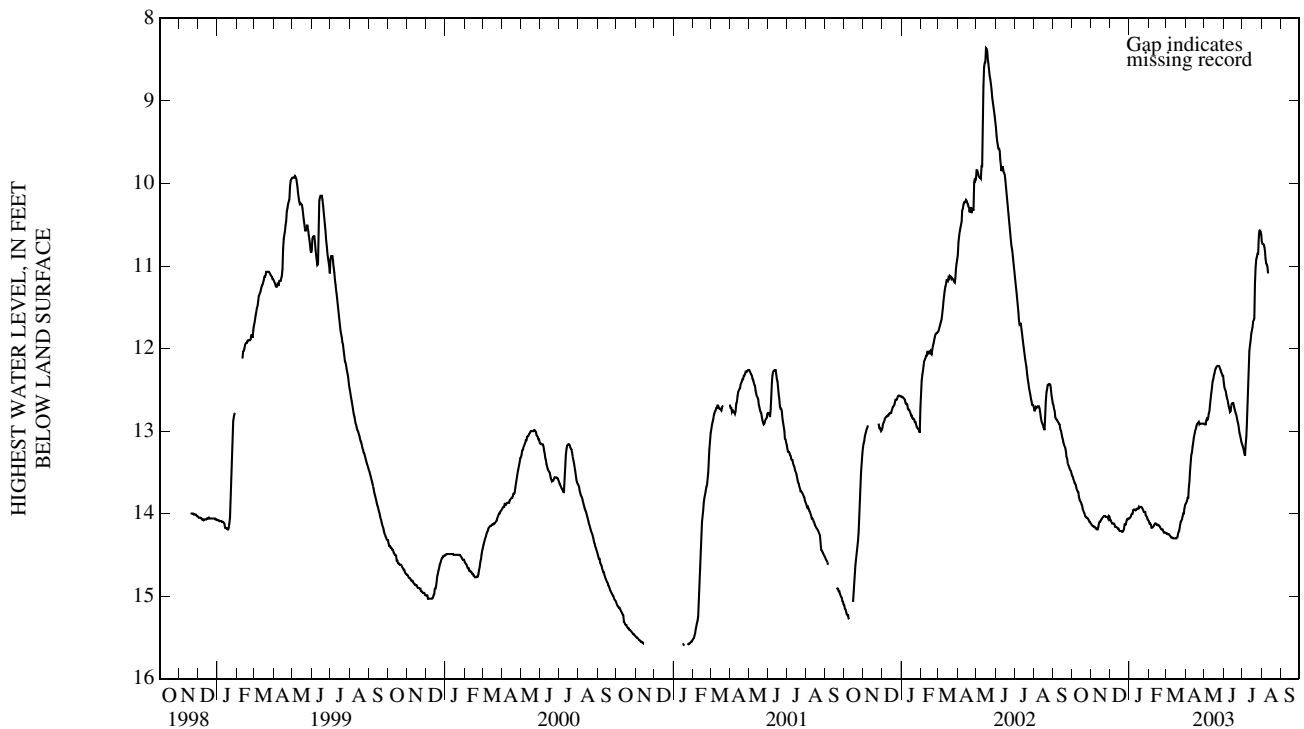
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.07 ft below land-surface datum, May 3, 1978; lowest, 15.60 ft below land-surface datum, Jan. 17-23, 2001.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	13.63	14.16	14.12	14.00	14.17	14.25	13.81	12.85	12.56	13.30	10.77	---
10	13.73	14.19	14.16	13.95	14.13	14.29	13.29	12.68	12.73	12.34	11.01	---
15	13.86	14.10	14.19	13.94	14.14	14.30	13.04	12.38	12.66	11.82	---	---
20	13.98	14.04	14.22	13.92	14.18	14.24	12.91	12.23	12.78	11.64	---	---
25	14.05	14.04	14.13	13.98	14.23	14.09	12.91	12.22	12.96	10.85	---	---
EOM	14.12	14.04	14.06	14.08	14.23	13.90	12.91	12.33	13.15	10.62	---	---
MIN	13.54	14.03	14.06	13.92	14.09	13.90	12.89	12.21	12.41	10.57	10.71	---
WTR YR	2003	HIGH	10.57	JUL 29								

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	13.64	14.16	14.12	14.01	14.17	14.26	13.82	12.87	12.60	13.34	10.83	---
10	13.74	14.19	14.16	13.96	14.15	14.30	13.39	12.77	12.77	12.64	11.09	---
15	13.88	14.10	14.21	13.94	14.14	14.31	13.08	12.42	12.68	11.90	---	---
20	14.00	14.05	14.22	13.93	14.19	14.28	12.92	12.24	12.80	11.66	---	---
25	14.06	14.04	14.13	13.98	14.23	14.11	12.91	12.24	13.02	10.89	---	---
EOM	14.13	14.08	14.06	14.09	14.24	13.94	12.92	12.41	13.17	10.71	---	---
MAX	14.13	14.20	14.22	14.09	14.24	14.31	13.90	12.92	13.17	13.34	11.14	---
WTR YR	2003	LOW	14.31	MAR 14								



NEWTON COUNTY

410428087231502. Local number, NE 10.

LOCATION.--Lat 41°04'28", long 87°25'44", in NW¹/₄SW¹/₄SW¹/₄ sec.2, T.30 N., R.9 W., Newton County, Hydrologic Unit 07120001, (ENOS, IN quadrangle), 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 662.60 ft above National Geodetic Vertical Datum of 1929. Measuring point: Bottom lip of "Y" in well casing, 2.65 ft above land-surface datum.

PERIOD OF RECORD.--May 1978 to October 2003 (discontinued). Fragmentary record prior to March 1981.

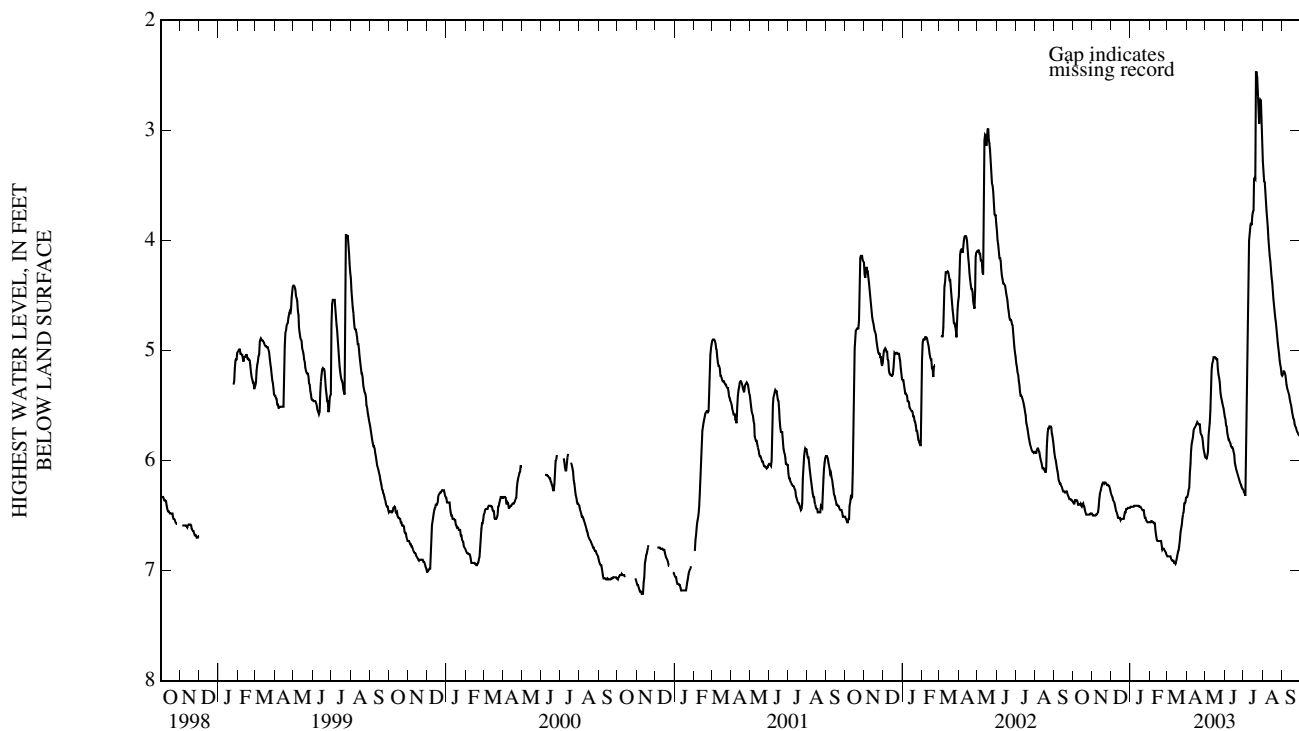
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.03 ft below land-surface datum, Mar. 16, 1982; lowest, 7.23 ft below land-surface datum, Nov. 8-9, 2000.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.36	6.50	6.37	6.42	6.56	6.87	6.25	5.92	5.75	5.98	3.56	5.20
10	6.40	6.47	6.47	6.41	6.64	6.91	5.82	5.33	5.84	4.00	3.99	5.36
15	6.42	6.25	6.52	6.42	6.73	6.92	5.69	5.06	5.92	3.78	4.34	5.49
20	6.45	6.21	6.53	6.45	6.77	6.78	5.67	5.08	6.09	3.44	4.65	5.63
25	6.49	6.22	6.44	6.52	6.82	6.53	5.77	5.38	6.19	2.81	4.94	5.74
EOM	6.48	6.28	6.43	6.56	6.86	6.34	5.95	5.56	6.26	3.11	5.22	5.78
MIN	6.36	6.20	6.30	6.41	6.55	6.34	5.65	5.06	5.60	2.47	3.28	5.19
WTR YR	2003	HIGH 2.47 JUL 21										

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.36	6.50	6.38	6.42	6.56	6.88	6.27	5.96	5.78	6.34	3.65	5.23
10	6.40	6.48	6.49	6.41	6.68	6.92	5.85	5.55	5.87	4.29	4.06	5.38
15	6.42	6.28	6.54	6.42	6.73	6.94	5.70	5.07	5.94	3.91	4.39	5.53
20	6.48	6.22	6.53	6.45	6.81	6.82	5.69	5.17	6.11	3.53	4.71	5.67
25	6.49	6.23	6.47	6.54	6.83	6.59	5.79	5.42	6.21	2.94	4.99	5.75
EOM	6.49	6.30	6.43	6.56	6.88	6.38	5.97	5.60	6.27	3.28	5.24	5.79
MAX	6.50	6.51	6.54	6.57	6.88	6.94	6.34	5.99	6.27	6.34	5.24	5.79
WTR YR	2003	LOW 6.94 MAR 11										



NEWTON COUNTY

410235087305901. Local number, NE 11.

LOCATION.--Lat 41°02'35", long 87°30'59", in SW¹/₄SW¹/₄SE¹/₄ sec.13, T.30 N., R.10 W., Newton County, Hydrologic Unit 07120001, (LEESVILLE, IN-IL quadrangle), 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.

REMARKS.--Water level affected by irrigation pumpage.

PERIOD OF RECORD.--October 1981 to October 2003 (discontinued).

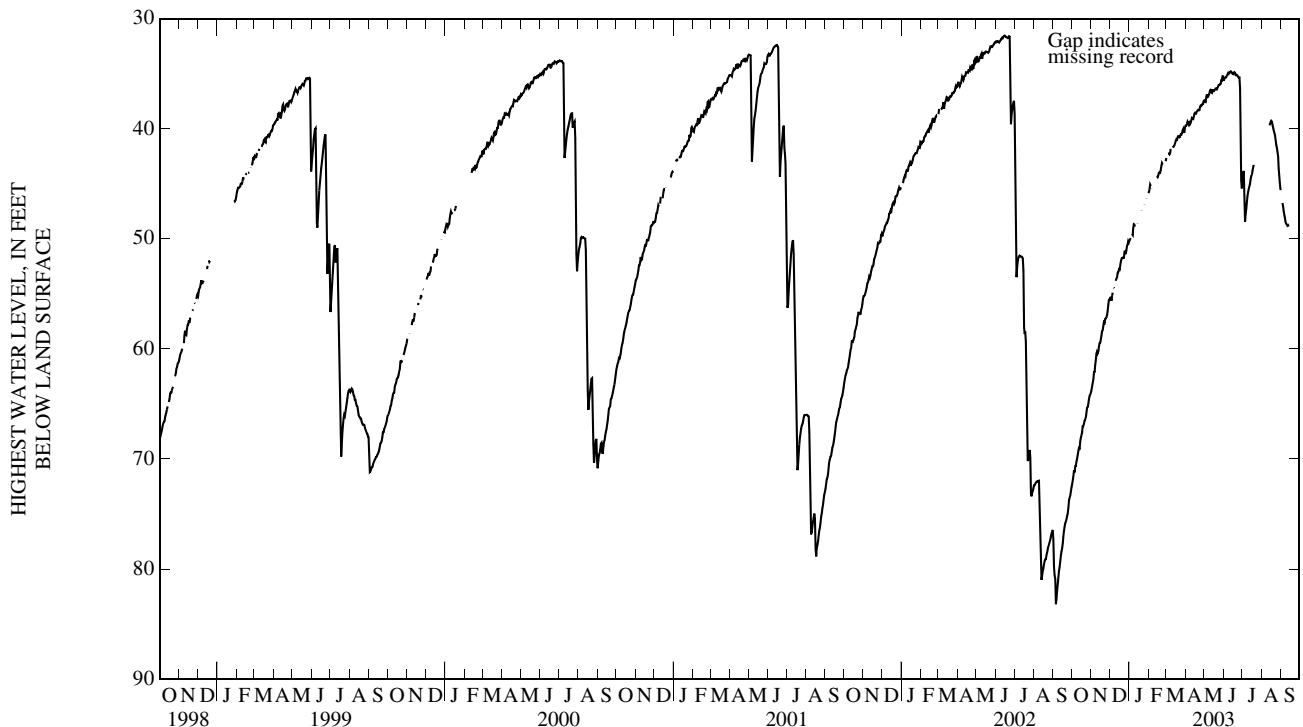
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 22.78 ft below land-surface datum, May 6, 1982; lowest recorded, 98.83 ft below land-surface datum, Aug. 5, 6, 1988.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	71.24	62.11	54.89	49.58	---	42.23	39.47	36.88	35.33	48.45	---	47.53
10	69.66	60.26	53.82	48.89	---	---	39.24	36.52	34.86	45.76	---	48.69
15	68.06	59.45	52.77	---	44.40	41.33	38.63	36.52	35.00	44.28	39.40	---
20	66.85	57.94	51.75	47.47	43.78	40.67	38.34	36.35	35.12	---	40.12	---
25	65.33	57.14	51.16	46.85	---	40.54	37.89	36.00	35.37	---	41.73	---
EOM	64.02	55.48	50.36	45.84	42.94	39.87	37.46	35.24	45.42	---	45.58	---
MIN	64.02	55.48	50.21	45.84	42.94	39.87	37.46	35.24	34.79	43.28	39.28	46.76
WTR YR	2003	HIGH 34.79 JUN 12										

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	71.48	62.79	55.17	49.67	---	42.44	39.92	37.11	35.42	49.35	---	47.91
10	70.00	60.47	54.16	49.04	---	---	39.48	36.86	35.10	46.19	---	48.87
15	68.41	59.52	53.01	---	44.58	41.54	38.94	36.66	35.09	44.62	39.65	---
20	67.07	58.35	51.90	47.65	44.08	40.91	38.46	36.59	35.22	---	40.32	---
25	65.80	57.27	51.49	47.20	---	40.61	37.99	36.07	35.51	---	42.13	---
EOM	64.19	55.91	50.50	46.19	43.05	40.32	37.79	35.74	46.37	---	45.68	---
MAX	72.62	64.02	55.91	50.38	45.97	42.98	39.97	37.69	46.83	49.46	45.68	48.96
WTR YR	2003	LOW 72.62 OCT 1										



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, (SCHNEIDER, IN quadrangle), 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 above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.30 ft above land-surface datum.

REMARKS.--Water level affected by irrigation pumpage.

PERIOD OF RECORD.--August 1985 to October 2003 (discontinued).

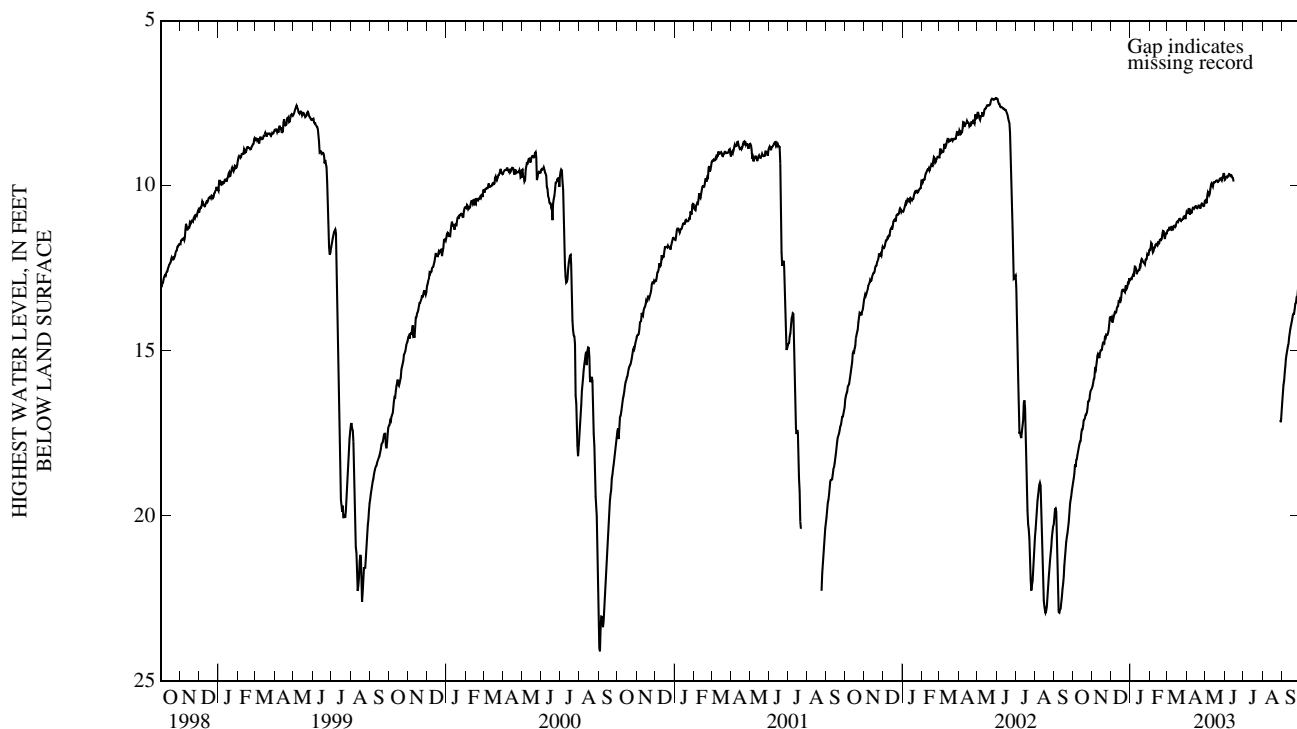
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 6.18 ft below land-surface datum, Mar. 27, 1991; lowest, 31.19 ft below land-surface datum, Aug. 26, 1988.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	18.52	15.56	13.96	12.70	11.95	11.27	10.70	10.19	9.74	---	---	15.65
10	17.94	15.09	13.73	12.51	11.78	11.35	10.73	9.97	9.70	---	---	14.88
15	17.39	14.98	13.44	12.55	11.73	11.17	10.62	9.89	9.87	---	---	14.23
20	17.04	14.77	13.15	12.24	11.61	11.01	10.60	9.84	---	---	---	13.88
25	16.54	14.52	13.04	12.24	11.61	11.02	10.54	9.78	---	---	---	13.41
EOM	16.15	13.98	12.87	11.95	11.44	10.89	10.47	9.64	---	---	16.89	13.14
MIN	16.15	13.98	12.80	11.95	11.37	10.89	10.47	9.64	9.65	---	16.89	13.14
WTR YR	2003	HIGH 9.64 MAY 30										

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	18.58	15.86	14.07	12.75	12.04	11.33	10.89	10.29	9.77	---	---	15.86
10	18.06	15.15	13.83	12.68	11.89	11.37	10.81	10.10	9.76	---	---	14.99
15	17.52	15.02	13.52	12.57	11.80	11.25	10.65	9.92	9.91	---	---	14.33
20	17.11	14.84	13.20	12.29	11.68	11.08	10.66	9.90	---	---	---	13.95
25	16.75	14.54	13.11	12.38	11.62	11.04	10.59	9.82	---	---	---	13.46
EOM	16.20	14.16	12.91	12.10	11.47	11.02	10.62	9.82	---	---	17.18	13.18
MAX	19.12	16.16	14.19	12.91	12.07	11.47	10.92	10.57	9.92	---	17.20	16.89
WTR YR	2003	LOW 19.12 OCT 1										



NOBLE COUNTY

411922085221801. Local number, NO 8.

LOCATION.--Lat 41°19'22", long 85°22'18", in SE¹/₄SW¹/₄SE¹/₄ sec.9, T.33 N., R.10 E., Noble County, Hydrologic Unit 04050001, (EGE, IN quadrangle), 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 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 October 2003 (discontinued).

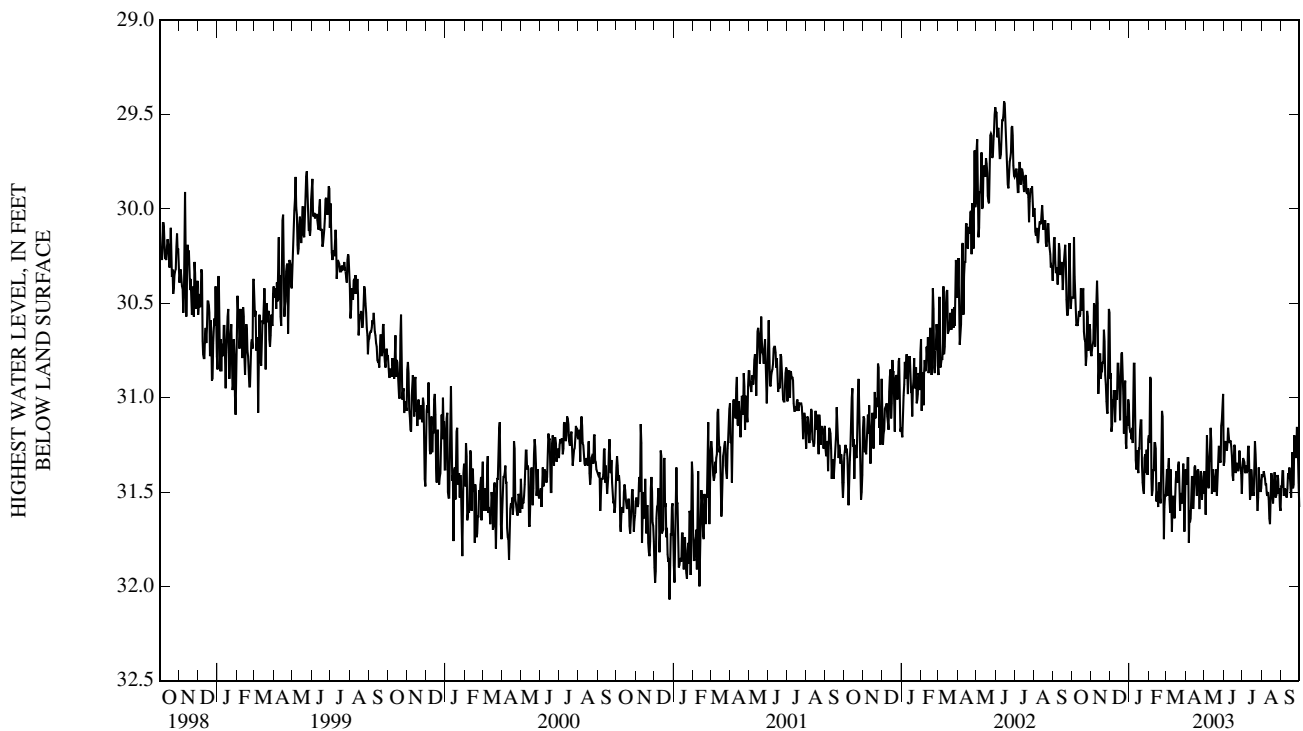
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 27.88 ft below land-surface datum, Feb. 14, 1991; lowest, 32.49 ft below land-surface datum, Jan. 18, 1967.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	30.36	30.50	31.02	31.16	31.43	31.32	31.32	31.20	31.26	31.40	31.41	31.52
10	30.62	30.38	31.01	31.07	31.24	31.71	31.51	31.27	31.24	31.26	31.52	31.53
15	30.42	30.77	30.89	31.40	31.52	31.54	31.37	31.38	31.41	31.38	31.52	31.42
20	30.65	30.82	30.76	31.12	31.56	31.36	31.39	31.38	31.40	31.38	31.50	31.48
25	30.54	31.02	30.91	31.32	31.75	31.51	31.39	31.26	31.36	31.60	31.50	31.32
EOM	30.76	30.55	31.04	31.22	31.52	31.55	31.42	30.98	31.51	31.48	31.60	31.58
MIN	30.15	30.38	30.76	30.82	30.89	31.32	31.32	30.98	31.16	31.23	31.39	31.16
WTR YR	2003	HIGH	30.15	OCT	4							

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	30.67	30.82	31.15	31.24	31.60	31.54	31.80	31.40	31.36	31.43	31.44	31.58
10	30.64	30.50	31.13	31.33	31.42	31.80	31.64	31.36	31.36	31.39	31.57	31.56
15	30.56	30.96	30.98	31.49	31.74	31.64	31.52	31.46	31.46	31.51	31.67	31.48
20	30.73	30.94	30.88	31.36	31.67	31.48	31.52	31.55	31.48	31.54	31.57	31.60
25	30.78	31.15	31.24	31.51	31.86	31.57	31.46	31.35	31.45	31.66	31.54	31.49
EOM	30.81	30.95	31.20	31.41	31.59	31.71	31.56	31.36	31.56	31.51	31.72	31.61
MAX	30.88	31.15	31.40	31.62	31.86	31.80	31.87	31.69	31.56	31.66	31.72	31.61
WTR YR	2003	LOW	31.87	APR	6							



NOBLE COUNTY

413106085232701. Local number, NO 9.

LOCATION.--Lat 41°31'06", long 85°23'27", in NW $\frac{1}{4}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.5, T.35 N., R.10 E., Noble County, Hydrologic Unit 04050001, (OLIVER LAKE, IN quadrangle), 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.

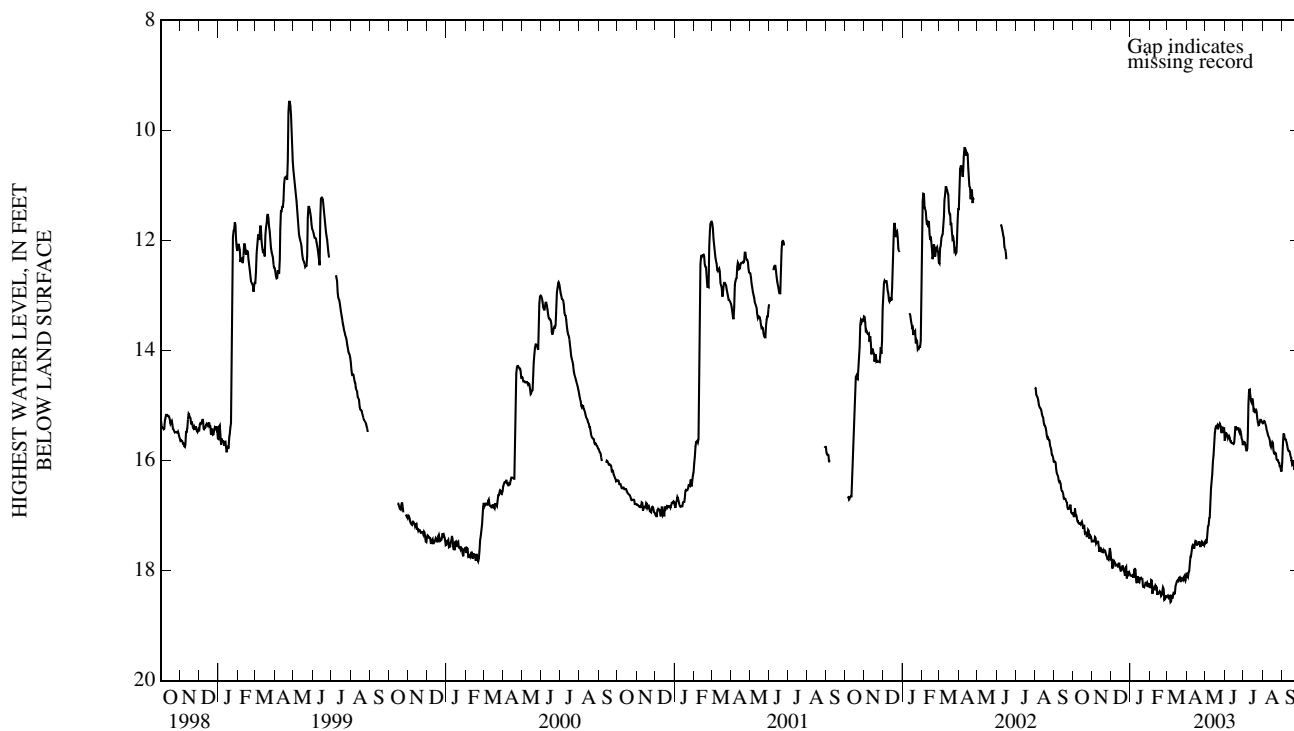
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 8.37 ft below land-surface datum, Jan. 5, 1993; lowest, 18.61 ft below land-surface datum, Mar. 6-7, 2003.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	16.98	17.39	17.82	18.08	18.42	18.46	18.01	17.20	15.55	15.78	15.33	15.60
10	17.14	17.46	17.89	18.17	18.27	18.48	17.56	16.51	15.65	14.72	15.56	15.79
15	17.11	17.61	17.95	18.21	18.41	18.25	17.46	15.71	15.70	14.87	15.69	15.94
20	17.32	17.67	17.92	18.15	18.44	18.13	17.48	15.36	15.45	15.12	15.88	16.15
25	17.26	17.79	17.93	18.22	18.52	18.15	17.47	15.36	15.50	15.36	15.99	16.13
EOM	17.47	17.67	18.06	18.25	18.48	18.11	17.48	15.40	15.72	15.31	16.20	15.76
MIN	16.87	17.39	17.80	17.97	18.17	18.10	17.46	15.33	15.39	14.71	15.28	15.52
WTR YR	2003	HIGH 14.71	JUL 11									

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	17.15	17.54	17.85	18.13	18.47	18.58	18.08	17.35	15.63	15.83	15.37	15.64
10	17.15	17.55	17.90	18.24	18.40	18.55	17.65	16.76	15.73	14.97	15.59	15.82
15	17.16	17.72	18.00	18.25	18.50	18.29	17.51	15.90	15.72	14.94	15.75	16.01
20	17.34	17.72	18.00	18.29	18.51	18.18	17.52	15.48	15.51	15.16	15.90	16.25
25	17.36	17.83	18.14	18.27	18.60	18.19	17.49	15.45	15.55	15.41	16.04	16.24
EOM	17.48	17.91	18.13	18.30	18.53	18.18	17.57	15.64	15.76	15.33	16.25	15.82
MAX	17.48	17.91	18.18	18.38	18.60	18.61	18.15	17.53	15.76	15.85	16.25	16.25
WTR YR	2003	LOW 18.61	MAR 6									



NOBLE COUNTY

412405085154501. Local number, NO 11.

LOCATION.--Lat 41°24'05", long 85°15'45", in NW¼NE¼SW¼ sec.16, T.34 N., R.11 E., Noble County, Hydrologic Unit 04100003, (KENDALLVILLE, IN quadrangle), 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 October 2003 (discontinued).

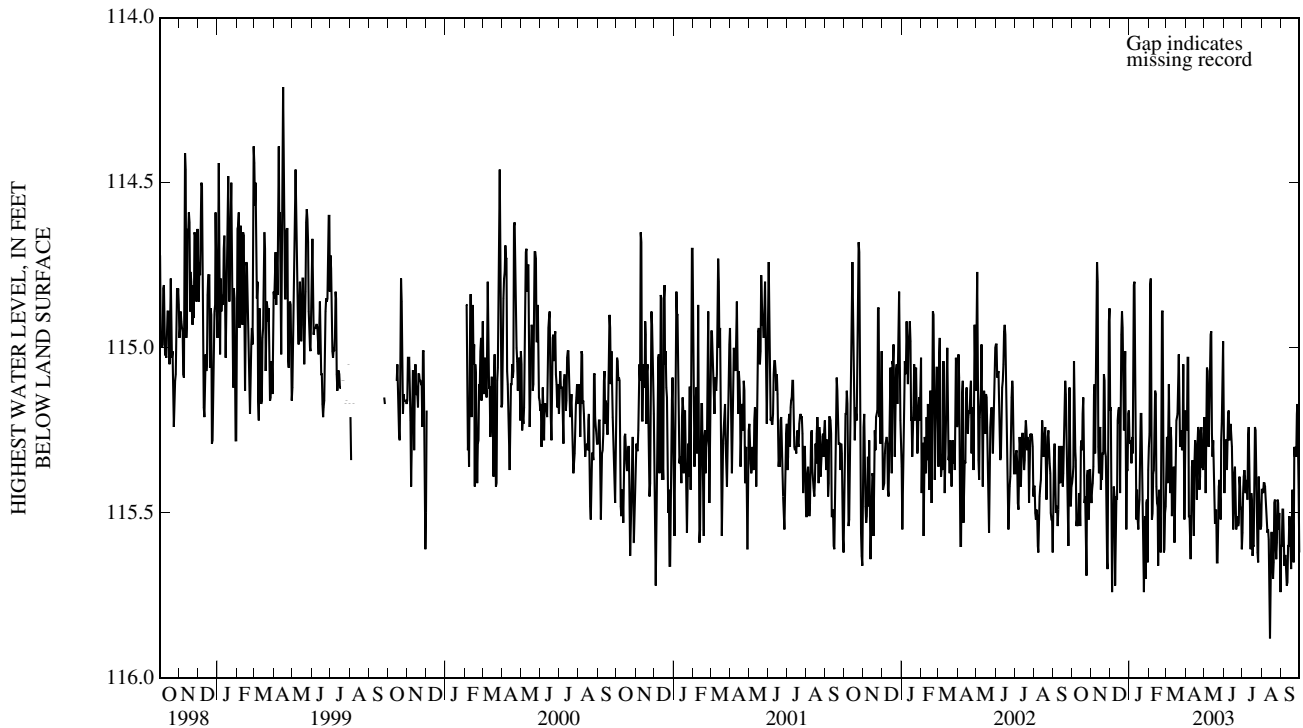
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 113.24 ft below land-surface datum, Nov. 6, 1988; lowest, 115.94 ft below land-surface datum, Aug. 14, 2003.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	115.13	115.14	115.56	115.27	115.21	115.11	115.03	115.06	115.28	115.39	115.41	115.58
10	115.54	114.74	115.54	114.94	115.20	115.51	115.52	115.11	115.28	115.27	115.56	115.72
15	115.30	115.24	115.18	115.55	115.48	115.46	115.35	115.28	115.44	115.44	115.76	115.54
20	115.31	115.32	114.89	115.20	115.62	115.08	115.29	115.49	115.49	115.42	115.65	115.55
25	115.39	115.47	115.01	115.55	115.62	115.25	115.26	115.40	115.53	115.62	115.59	115.33
EOM	115.44	114.88	115.19	115.37	115.48	115.44	115.26	114.98	115.61	115.54	115.74	115.62
MIN	115.04	114.74	114.89	114.80	114.79	115.02	115.03	114.95	115.19	115.24	115.41	115.17
WTR YR	2003	HIGH 114.74	NOV 10									

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	115.49	115.49	115.74	115.35	115.52	115.29	115.51	115.33	115.41	115.46	115.43	115.67
10	115.55	114.96	115.72	115.24	115.37	115.65	115.64	115.22	115.39	115.46	115.61	115.76
15	115.54	115.43	115.27	115.68	115.73	115.59	115.57	115.35	115.55	115.61	115.91	115.60
20	115.47	115.43	114.96	115.40	115.69	115.22	115.46	115.65	115.60	115.61	115.72	115.74
25	115.69	115.65	115.27	115.78	115.81	115.31	115.39	115.46	115.62	115.72	115.64	115.51
EOM	115.50	115.19	115.32	115.65	115.54	115.57	115.45	115.27	115.71	115.59	115.83	115.72
MAX	115.75	115.69	115.86	115.84	115.81	115.68	115.71	115.78	115.71	115.74	115.94	115.78
WTR YR	2003	LOW 115.94	AUG 14									



NOBLE COUNTY

412405085154504. Local number, NO 14.

LOCATION.--Lat 41°24'05", long 85°15'45", in NW $\frac{1}{4}$ NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.16, T.34 N., R.11 E., Noble County, Hydrologic Unit 04100003, (KENDALLVILLE, IN quadrangle), 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 October 2003 (discontinued).

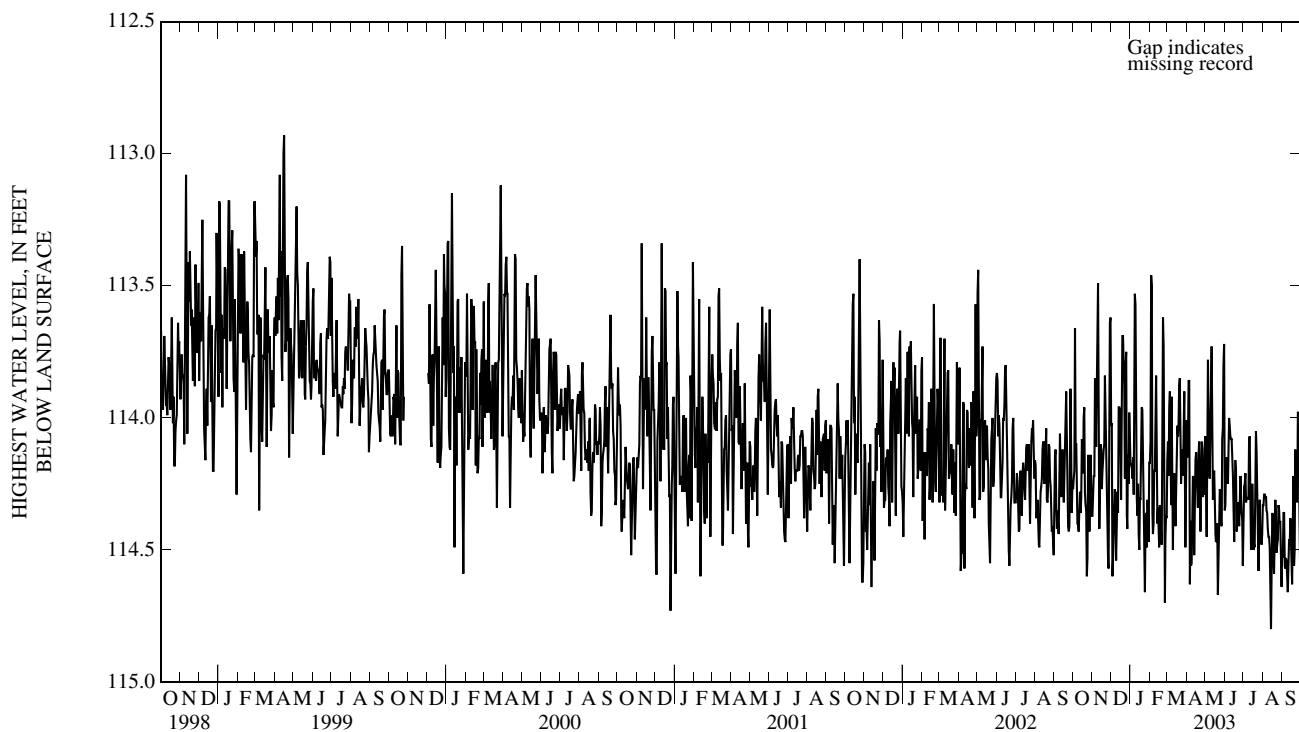
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 112.21 ft below land-surface datum, Dec. 15, 1987; lowest, 114.93 ft below land-surface datum, Dec. 25, 2000.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	114.10	113.85	114.39	114.15	114.36	113.90	113.86	113.78	114.23	114.32	114.30	114.56
10	114.43	113.49	114.36	113.96	113.96	114.50	114.36	113.91	114.07	114.08	114.45	114.66
15	114.08	114.12	113.97	114.50	114.42	114.29	114.16	114.20	114.39	114.25	114.58	114.45
20	114.28	114.10	113.69	113.97	114.48	113.88	114.14	114.40	114.43	114.23	114.50	114.56
25	114.14	114.40	113.75	114.38	114.70	114.13	114.09	114.29	114.31	114.58	114.46	114.32
EOM	114.37	113.62	114.06	114.17	114.38	114.24	114.10	113.72	114.56	114.44	114.64	114.62
MIN	113.66	113.49	113.69	113.53	113.46	113.85	113.86	113.72	114.00	114.05	114.29	113.98
WTR YR	2003	HIGH 113.46	FEB 3									

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	114.49	114.39	114.53	114.29	114.58	114.29	114.68	114.09	114.39	114.47	114.34	114.65
10	114.49	113.72	114.54	114.31	114.30	114.66	114.58	114.14	114.29	114.31	114.51	114.69
15	114.30	114.42	114.16	114.68	114.77	114.41	114.42	114.35	114.48	114.47	114.80	114.53
20	114.42	114.34	113.81	114.38	114.69	114.11	114.34	114.73	114.55	114.49	114.61	114.72
25	114.53	114.65	114.37	114.66	114.90	114.28	114.21	114.40	114.50	114.68	114.50	114.50
EOM	114.44	114.25	114.30	114.47	114.49	114.52	114.36	114.35	114.63	114.49	114.77	114.71
MAX	114.72	114.67	114.90	114.88	114.90	114.72	114.80	114.81	114.63	114.68	114.89	114.73
WTR YR	2003	LOW 114.90	DEC 3									



PARKE COUNTY

393619087043001. Local number, PA 6.

LOCATION.--Lat 39°36'19", long 87°04'30", in SE¹/₄SW¹/₄SE¹/₄ sec.33, T.14 N., R.6 W., Parke County, Hydrologic Unit 05120111, (BRAZIL EAST, IN quadrangle), 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 703.24 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of shelf, 2.40 ft above land-surface datum.

PERIOD OF RECORD.--July 1967 to August 1971, September 1971 to September 1981 (well taped semi-annually). October 1981 to current year.

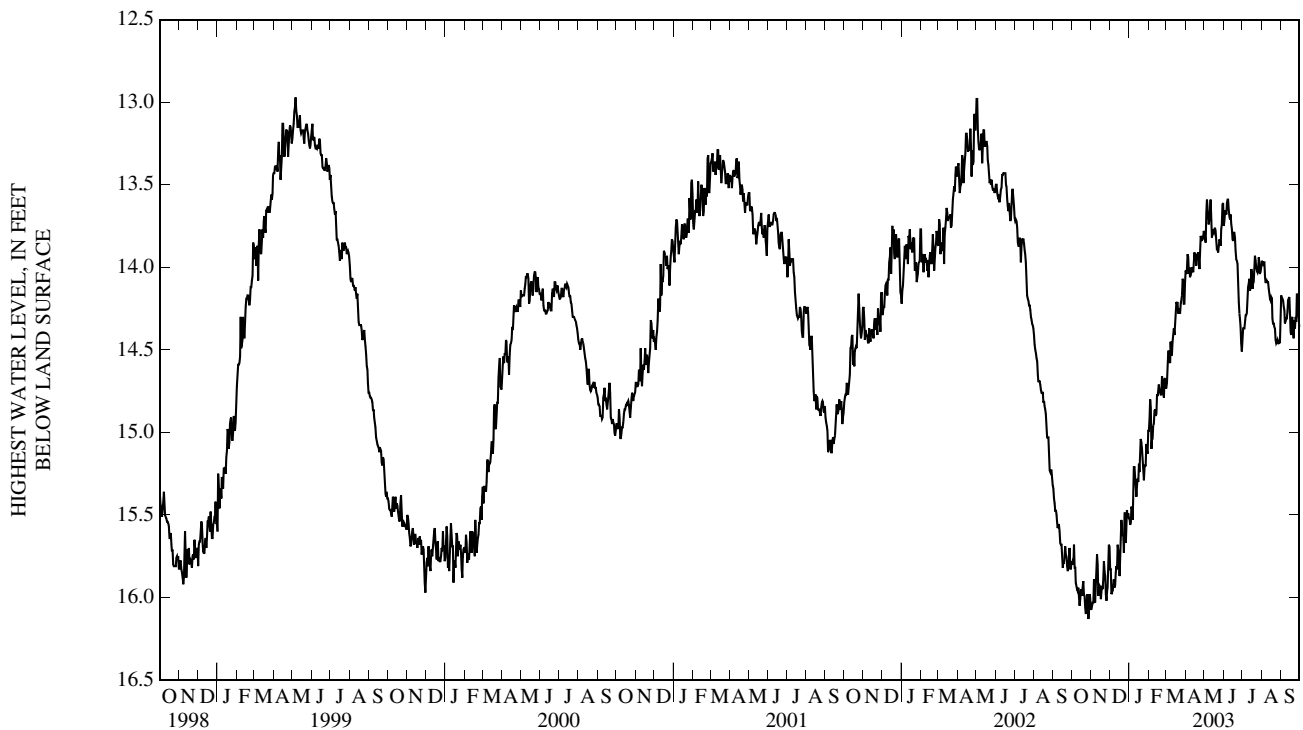
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 11.53 ft below land-surface datum, Apr. 19, 1970; lowest, 16.87 ft below land-surface datum, Oct. 30, 1988.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	15.82	15.89	15.96	15.47	15.10	14.51	13.94	13.59	13.68	14.33	13.97	14.24
10	15.96	15.74	15.85	15.26	14.87	14.53	14.03	13.66	13.69	14.12	14.09	14.31
15	15.95	15.94	15.77	15.30	14.78	14.34	13.91	13.78	13.83	14.01	14.20	14.28
20	15.98	15.89	15.58	15.06	14.77	14.28	13.92	13.83	13.90	14.02	14.34	14.38
25	15.98	16.02	15.49	15.21	14.79	14.20	13.81	13.83	14.21	14.03	14.45	14.33
EOM	16.07	15.69	15.52	14.99	14.73	14.09	13.78	13.61	14.51	14.00	14.29	14.36
MIN	15.68	15.68	15.47	14.99	14.66	14.07	13.78	13.59	13.59	13.93	13.96	14.16
WTR YR	2003	HIGH	13.59	MAY	5							

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	15.91	16.10	16.02	15.53	15.17	14.60	14.13	13.67	13.72	14.47	14.06	14.30
10	16.01	15.85	15.93	15.33	14.97	14.58	14.06	13.77	13.75	14.21	14.17	14.37
15	16.01	16.03	15.87	15.35	14.88	14.44	14.01	13.85	13.88	14.13	14.23	14.39
20	16.04	16.02	15.66	15.10	14.83	14.35	13.96	13.91	13.95	14.10	14.36	14.44
25	16.12	16.05	15.67	15.29	14.87	14.22	13.92	13.87	14.32	14.09	14.52	14.41
EOM	16.12	15.90	15.60	15.16	14.81	14.25	13.87	13.77	14.58	14.06	14.48	14.39
MAX	16.18	16.13	16.10	15.64	15.17	14.81	14.14	13.95	14.58	14.51	14.54	14.50
WTR YR	2003	LOW	16.18	OCT	27							



POSEY COUNTY

380758087551001. Local number, PY 3.

LOCATION.--Lat 38°07'58", long 87°55'10", in NW $\frac{1}{4}$ NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec.31, T.4 S., R.13 W., Posey County, Hydrologic Unit 05120113, (NEW HARMONY, IN-IL quadrangle) 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 380.55 (revised) 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 Wabash River floods.

PERIOD OF RECORD.--April 1967 to September 1971, September 1974 to current year.

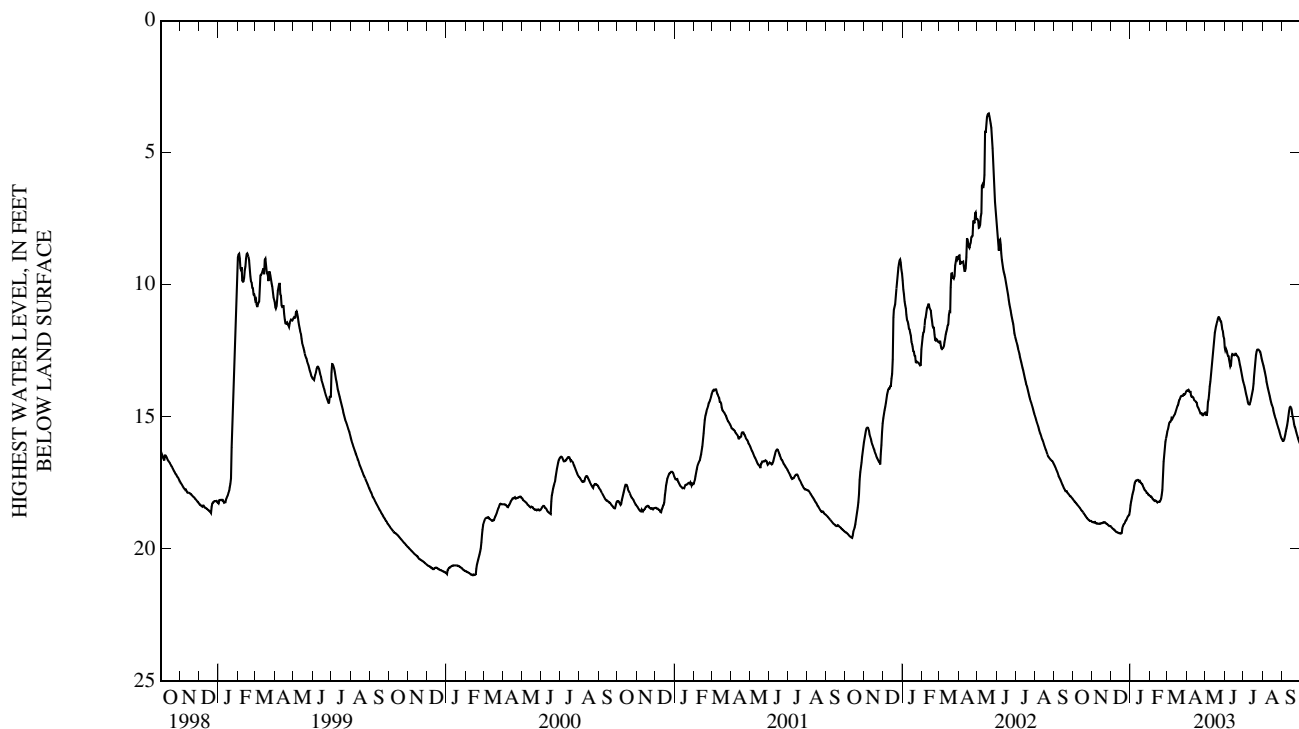
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.51 ft below land-surface datum, May 19, 2002; lowest, 21.40 ft below land-surface datum, Nov. 4, 8-15, 1988.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	18.25	18.98	19.26	17.84	18.09	15.19	14.04	14.44	12.60	14.12	13.40	15.76
10	18.39	19.04	19.36	17.41	18.17	15.03	14.23	13.41	13.09	14.53	14.01	15.16
15	18.55	19.03	19.41	17.45	18.21	14.76	14.41	12.05	12.65	14.08	14.52	14.64
20	18.72	18.99	19.14	17.55	17.96	14.37	14.67	11.40	12.66	12.93	14.95	15.26
25	18.88	19.07	18.92	17.80	16.16	14.20	14.86	11.37	13.01	12.45	15.36	15.70
EOM	18.97	19.13	18.57	17.97	15.70	14.05	14.85	12.02	13.61	12.88	15.82	16.02
MIN	18.13	18.98	18.57	17.39	15.70	14.05	13.98	11.23	12.37	12.45	12.97	14.62
WTR YR	2003	HIGH 11.23 MAY 22										

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	18.27	19.01	19.27	17.94	18.12	15.24	14.17	14.81	12.68	14.22	13.53	15.87
10	18.42	19.05	19.37	17.44	18.21	15.08	14.28	13.67	13.20	14.56	14.11	15.31
15	18.58	19.05	19.41	17.47	18.24	14.84	14.44	12.30	12.67	14.20	14.58	14.73
20	18.75	19.01	19.22	17.61	18.11	14.47	14.73	11.48	12.72	13.21	15.03	15.37
25	18.90	19.09	18.94	17.82	16.42	14.24	14.93	11.44	13.11	12.48	15.44	15.79
EOM	18.98	19.17	18.71	17.99	15.81	14.12	14.89	12.37	13.70	12.97	15.85	16.03
MAX	18.98	19.17	19.44	18.57	18.25	15.70	14.99	15.01	13.70	14.56	15.85	16.03
WTR YR	2003	LOW 19.44 DEC 18										



POSEY COUNTY

380546087474301. Local number, PY 5.

LOCATION.--Lat 38°05'46", long 87°47'43", in NE¹/₄NW¹/₄NE¹/₄ sec. 18, T.5S., R.12W., Posey County, Hydrologic Unit 05120113, (WADESVILLE, IN quadrangle), 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 above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.60 ft above land-surface datum.

REMARKS.--Water level record may be affected by pumpage.

PERIOD OF RECORD.--September 1988 to October 2003 (discontinued).

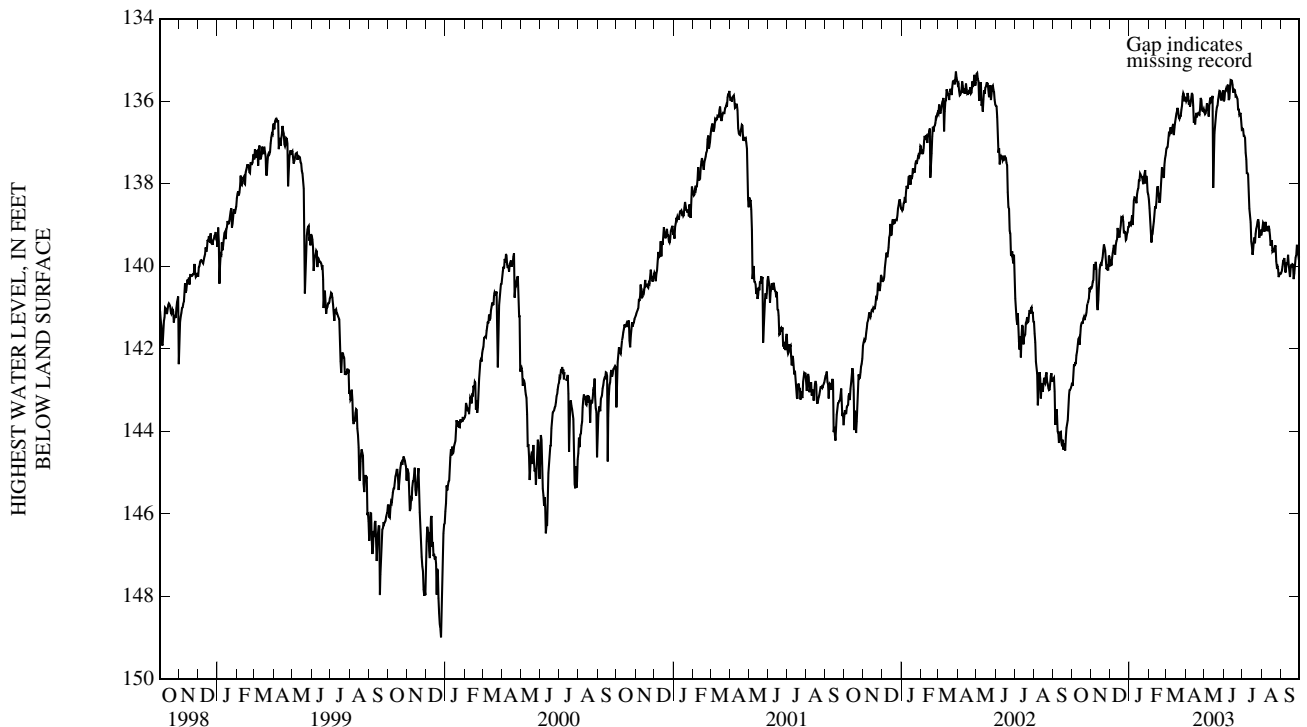
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 132.83 ft below land-surface datum, Mar. 27, 1991; lowest, 151.99 ft below land-surface datum, Sept. 18, 1999.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	142.42	139.95	139.68	138.76	139.42	136.78	135.89	136.05	135.68	136.88	139.16	139.85
10	141.91	140.93	139.49	138.34	138.74	136.75	135.92	135.97	135.94	137.77	139.15	139.92
15	141.45	139.97	139.28	138.12	138.06	136.51	136.42	138.10	135.61	139.40	139.50	140.26
20	141.23	139.61	138.82	137.82	138.15	136.24	136.31	136.26	135.88	139.30	139.66	139.96
25	140.95	140.07	139.17	137.75	137.86	136.21	135.92	135.75	136.18	138.92	140.02	139.74
EOM	140.52	139.77	139.04	138.26	137.31	135.91	136.19	135.74	136.68	139.25	140.16	139.76
MIN	140.52	139.47	138.80	137.67	137.31	135.80	135.80	135.74	135.49	136.66	138.92	139.50
WTR YR	2003	HIGH 135.49 JUN 12										

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	142.64	140.44	139.92	139.14	139.69	136.98	136.43	136.36	136.07	137.69	140.03	140.32
10	142.21	141.41	139.78	138.56	139.00	137.05	136.20	136.16	136.38	138.73	139.50	140.55
15	141.74	140.16	139.52	138.41	138.47	136.80	140.64	142.65	136.04	140.06	140.33	140.68
20	141.53	139.89	139.03	138.03	138.53	136.49	136.49	136.50	136.21	140.76	139.95	140.90
25	141.32	140.21	139.38	138.08	138.20	136.43	136.21	135.99	136.85	139.10	140.37	139.92
EOM	140.73	140.17	139.44	138.55	137.58	136.24	136.50	136.46	136.94	139.68	140.53	139.94
MAX	143.40	141.41	140.35	139.36	139.69	137.37	140.64	142.65	137.51	141.26	142.85	141.56
WTR YR	2003	LOW 143.40 OCT 2										



PULASKI COUNTY

405916086530701. Local number, PU 6.

LOCATION.--Lat 40°59'16", long 86°53'07", in NW $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.4, T.29 N., R.4 W., Pulaski County, Hydrologic Unit 05120106, (FRANCESVILLE, IN quadrangle), on private property at the north edge of Francesville.
Owner: Earl Overmeyer.

AQUIFER.--Limestone of Devonian age.

WELL CHARACTERISTICS.--Drilled water-table 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 casing, 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 October 2003 (discontinued).

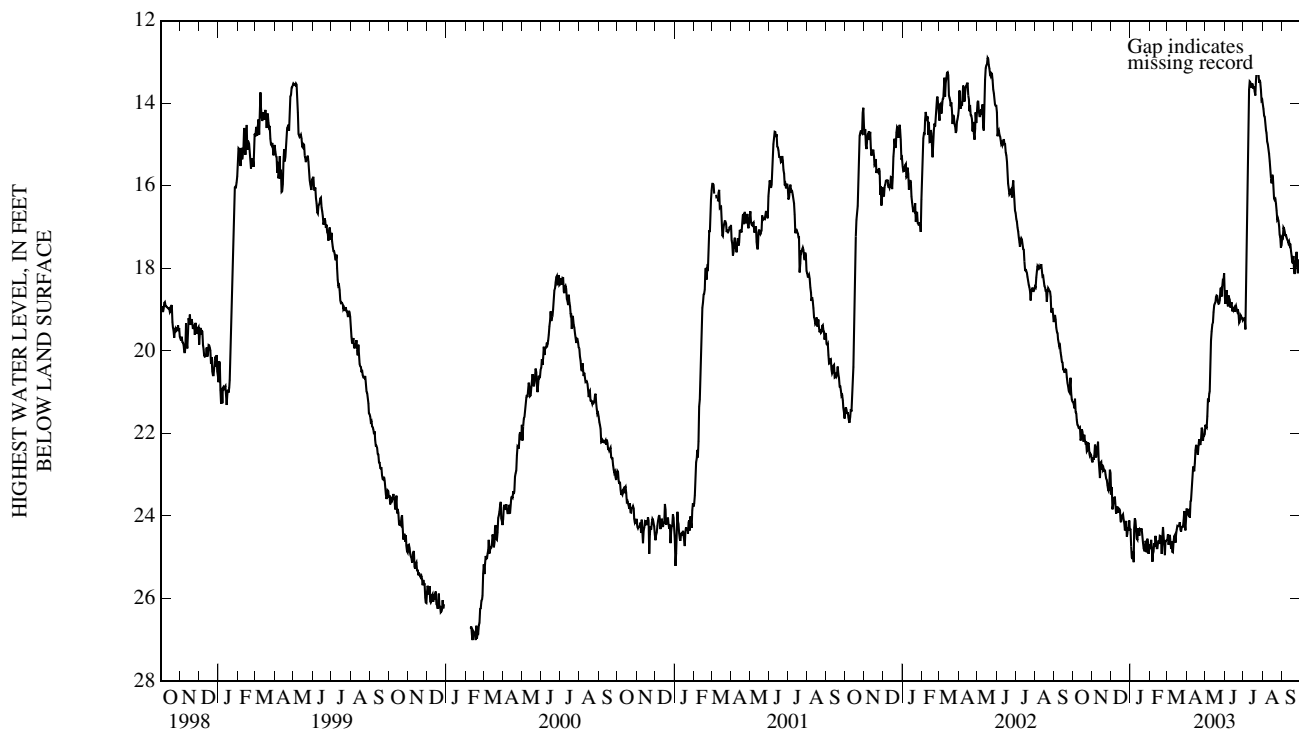
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.03 ft below land-surface datum, June 15, 1958; lowest, 27.91 ft below land-surface datum, Apr. 5, 1996.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	21.48	22.27	23.55	24.87	25.11	24.46	23.91	21.16	18.82	18.67	14.49	17.12
10	21.87	22.20	23.84	24.34	24.48	24.88	23.14	19.75	18.95	13.67	15.12	17.33
15	21.90	22.69	23.86	24.48	24.59	24.44	22.41	18.89	19.01	13.52	15.94	17.58
20	22.17	22.93	23.96	24.47	24.92	24.24	22.30	18.67	18.99	13.81	16.34	18.05
25	22.24	23.26	24.12	24.60	24.95	24.26	21.86	18.49	19.29	13.30	16.79	17.98
EOM	22.64	22.96	24.33	24.69	24.59	24.11	22.02	18.12	19.26	13.92	17.45	18.12
MIN	21.16	22.20	23.30	24.06	24.27	23.88	21.86	18.12	18.53	13.12	14.03	17.01
WTR YR	2003	HIGH 13.12 JUL 23										

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	22.08	22.86	23.97	25.38	25.40	24.98	24.57	21.66	19.27	19.54	14.82	17.48
10	22.21	22.76	24.06	24.88	25.09	25.18	23.54	20.51	19.35	14.46	15.51	17.76
15	22.26	23.24	24.45	24.93	25.11	24.84	23.03	19.28	19.43	13.93	16.23	17.97
20	22.64	23.35	24.42	25.00	25.50	24.66	22.72	19.17	19.47	14.10	16.72	18.44
25	22.62	23.70	24.69	24.96	25.26	24.66	22.27	18.96	19.70	13.79	17.22	20.53
EOM	23.07	23.86	24.88	25.10	24.96	24.68	22.54	18.98	19.71	14.37	17.80	18.41
MAX	23.07	25.17	24.88	25.48	25.50	25.22	24.57	22.34	19.71	19.90	17.81	20.53
WTR YR	2003	LOW 25.50 FEB 20										



PULASKI COUNTY

410739086365201. Local number, PU 7.

LOCATION.--Lat 41°07'39", long 86°36'52", in NE¹/₄NE¹/₄NW¹/₄ sec.23, T.31 N., R.2 W., Pulaski County, Hydrologic Unit 05120106, (BASS LAKE, IN quadrangle), 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.

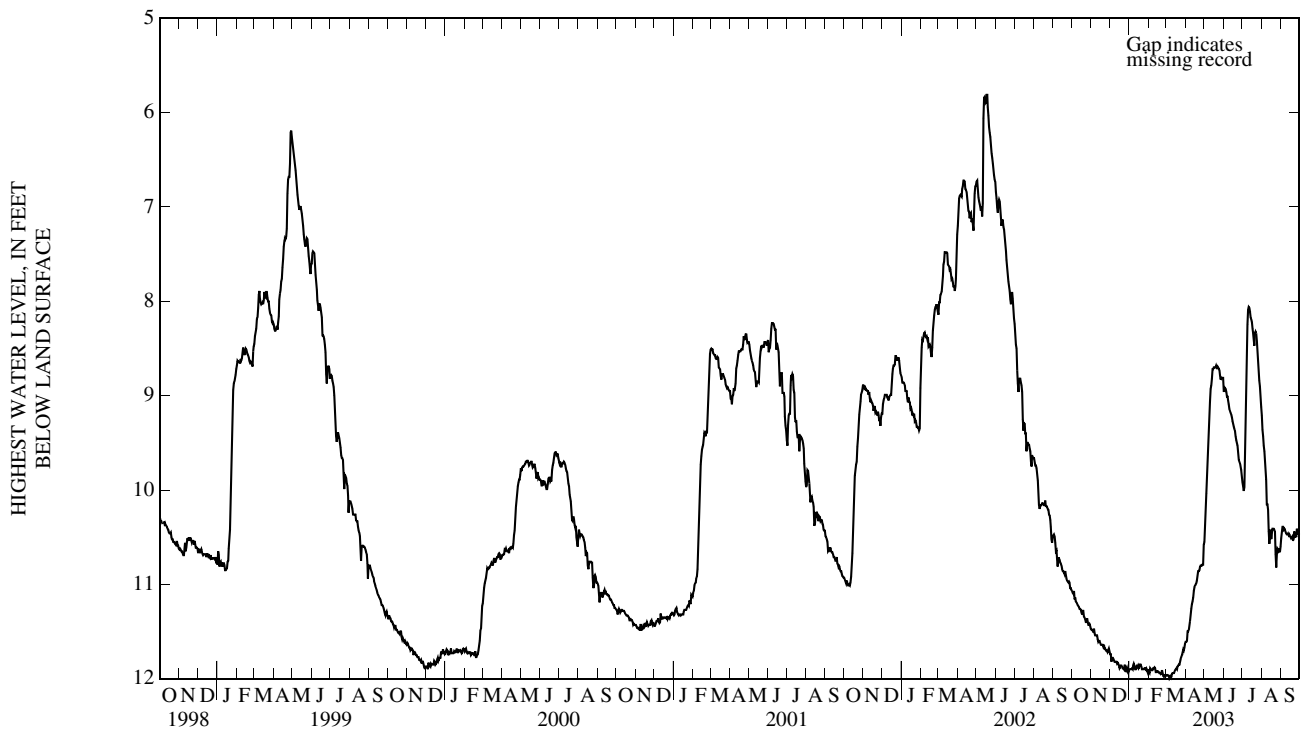
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.69 ft below land-surface datum, June 15, 1981; lowest, 12.01 ft below land-surface datum, Mar. 9, 2003.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	11.16	11.47	11.78	11.89	11.91	11.97	11.50	9.93	8.96	9.68	9.59	10.42
10	11.22	11.54	11.82	11.90	11.88	11.95	11.26	9.06	9.14	8.09	10.15	10.47
15	11.27	11.62	11.86	11.89	11.92	11.91	11.03	8.72	9.27	8.19	10.42	10.49
20	11.34	11.66	11.87	11.87	11.95	11.86	10.91	8.68	9.43	8.47	10.41	10.54
25	11.36	11.70	11.86	11.89	11.98	11.77	10.80	8.73	9.68	8.54	10.68	10.50
EOM	11.47	11.71	11.92	11.90	11.97	11.63	10.58	8.81	9.85	9.12	10.60	10.46
MIN	11.07	11.47	11.74	11.84	11.88	11.63	10.58	8.68	8.92	8.06	9.21	10.39
WTR YR	2003	HIGH 8.06 JUL 11										

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	11.19	11.54	11.80	11.90	11.94	12.00	11.56	10.04	9.01	9.98	9.70	10.44
10	11.23	11.58	11.82	11.91	11.94	11.98	11.33	9.31	9.16	8.25	10.22	10.48
15	11.30	11.65	11.89	11.89	11.97	11.93	11.08	8.74	9.30	8.22	10.52	10.50
20	11.37	11.67	11.89	11.90	11.96	11.88	10.96	8.73	9.47	8.50	10.42	10.56
25	11.40	11.72	11.93	11.90	11.99	11.79	10.81	8.79	9.71	8.66	10.85	10.54
EOM	11.49	11.79	11.93	11.93	11.99	11.67	10.79	8.95	9.92	9.21	10.68	10.48
MAX	11.49	11.79	11.93	11.94	11.99	12.01	11.63	10.64	9.92	10.02	10.86	10.60
WTR YR	2003	LOW 12.01 MAR 9										



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,(REDKEY, IN quadrangle), 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 969.67 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of floor of shelter, 3.85 ft above land-surface datum.

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

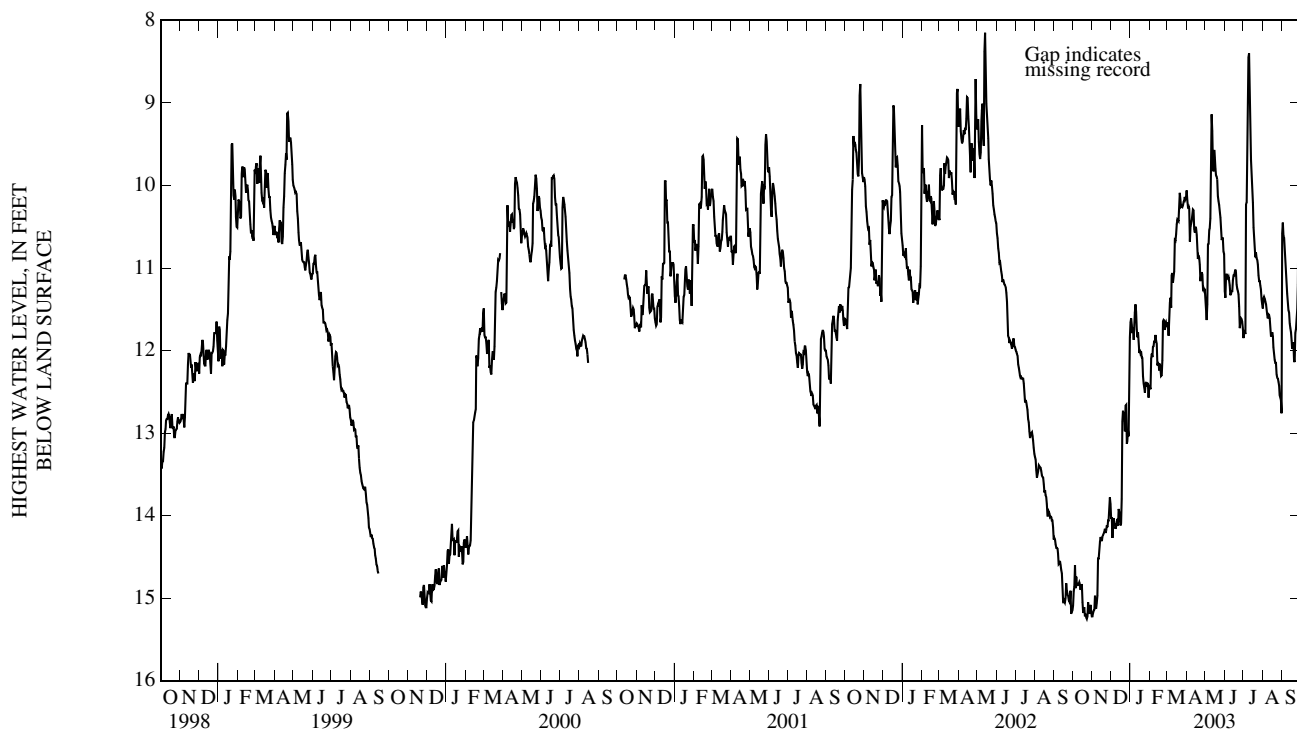
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 7.68 ft below land-surface datum, Dec. 30, 1990; lowest, 15.32 ft below land-surface datum, Oct. 22-23, 2002.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	14.88	14.97	14.03	11.72	12.08	11.42	10.28	10.72	11.12	10.23	11.41	10.79
10	14.83	14.52	14.07	11.53	11.81	11.18	10.36	9.75	11.33	8.40	11.56	11.41
15	14.84	14.28	14.02	12.03	12.16	10.59	10.50	9.57	11.09	10.06	11.81	11.78
20	15.22	14.20	12.73	12.09	12.30	10.25	10.85	9.93	11.20	10.87	12.11	12.12
25	15.05	14.14	12.66	12.40	11.75	10.26	11.05	10.39	11.73	11.09	12.34	11.50
EOM	15.22	13.86	11.84	12.43	11.70	10.15	11.25	10.83	11.73	11.44	12.76	10.76
MIN	14.60	13.78	11.84	11.44	11.63	10.09	10.06	9.14	11.02	8.40	11.35	10.40
WTR YR	2003	HIGH 8.40 JUL 10										

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	14.97	15.20	14.13	11.87	12.17	11.66	10.76	11.44	11.20	11.82	11.44	10.92
10	14.88	14.97	14.15	11.74	12.01	11.30	10.44	10.42	11.40	8.92	11.61	11.51
15	15.05	14.38	14.13	12.17	12.32	10.72	10.59	9.83	11.19	10.21	11.88	11.88
20	15.28	14.33	12.86	12.31	12.46	10.43	10.89	10.13	11.29	10.93	12.17	12.24
25	15.23	14.19	13.13	12.51	11.91	10.38	11.09	10.54	11.81	11.18	12.44	11.65
EOM	15.28	14.20	12.34	12.58	11.84	10.29	11.36	11.28	11.88	11.51	12.85	10.83
MAX	15.32	15.29	14.37	12.66	12.54	11.92	11.36	11.72	11.88	11.90	12.85	12.76
WTR YR	2003	LOW 15.32 OCT 22										



ST. JOSEPH COUNTY

413120086055601. Local number, SJ 31.

LOCATION.--Lat 41°31'20", long 86°05'56", in SE¹/₄SE¹/₄SE¹/₄ sec.31, T.36 N., R.4 E., St. Joseph County, Hydrologic Unit 07120001, (WAKARUSA, IN quadrangle), 4 mi west of Wakarusa.
 Owner: U.S. Geological Survey.

AQUIFER.--Sand and gravel of Pleistocene age.

WELL CHARACTERISTICS.--Drilled artesian 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 October 2003 (discontinued).

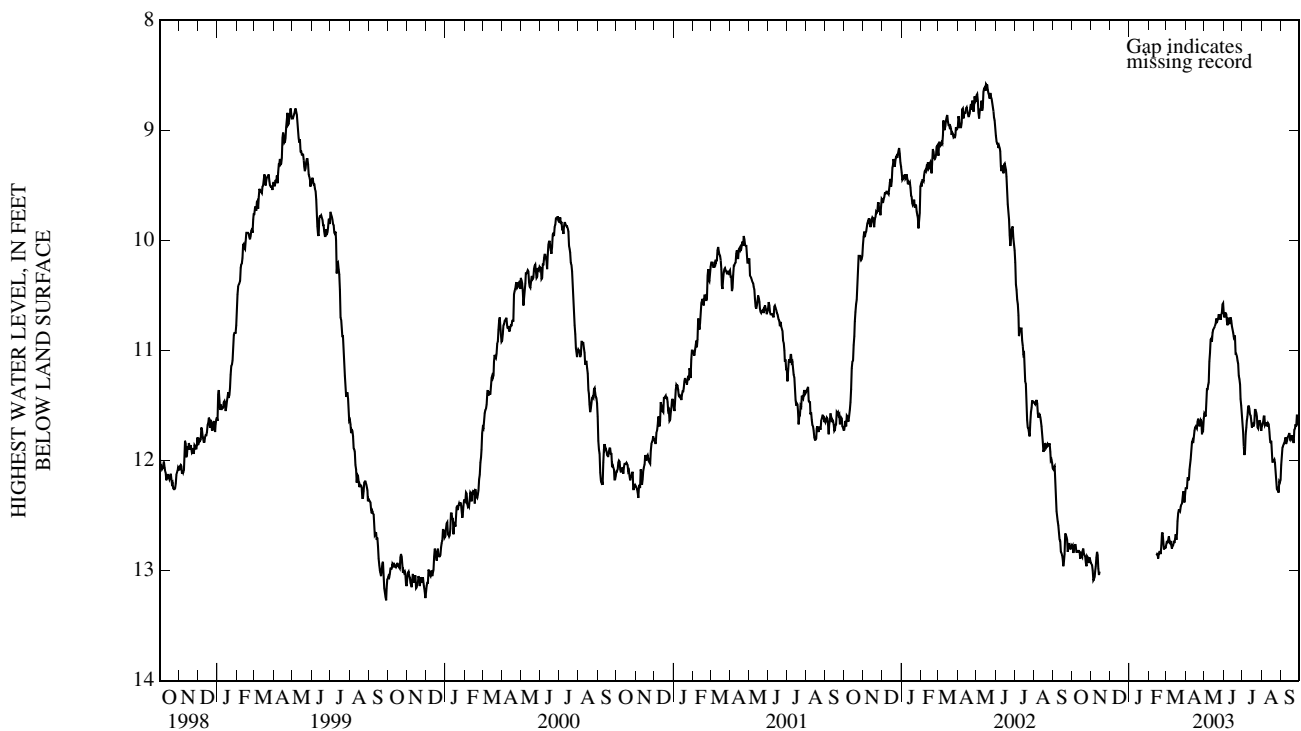
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 7.71 ft below land-surface datum, Jan. 23, 1991; lowest, 13.29 ft below land-surface datum, Sept. 28, 1999.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	12.79	13.08	---	---	---	12.69	12.16	11.35	10.67	11.91	11.60	11.85
10	12.83	12.83	---	---	---	12.80	11.91	11.02	10.76	11.52	11.69	11.83
15	12.83	---	---	---	12.86	12.71	11.73	10.81	10.81	11.64	11.84	11.80
20	12.85	---	---	---	12.85	12.48	11.65	10.71	11.03	11.66	12.00	11.81
25	12.87	---	---	---	12.80	12.40	11.63	10.70	11.23	11.70	12.26	11.69
EOM	12.93	---	---	---	12.79	12.31	11.62	10.57	11.59	11.73	12.18	11.64
MIN	12.76	12.83	---	---	12.66	12.28	11.62	10.57	10.66	11.50	11.60	11.59
WTR YR	2003	HIGH 10.57	MAY 31									

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	12.84	13.18	---	---	---	12.75	12.23	11.47	10.74	12.00	11.69	11.88
10	12.84	12.88	---	---	---	12.84	11.99	11.10	10.78	11.60	11.73	11.86
15	12.89	---	---	---	12.93	12.75	11.80	10.84	10.86	11.73	11.87	11.87
20	12.90	---	---	---	12.89	12.56	11.71	10.78	11.12	11.71	12.02	11.88
25	12.98	---	---	---	12.85	12.46	11.67	10.73	11.44	11.75	12.39	11.74
EOM	12.96	---	---	---	12.82	12.39	11.79	10.71	11.67	11.80	12.24	11.64
MAX	13.16	13.18	---	---	12.96	12.84	12.32	11.64	11.67	12.07	12.41	12.19
WTR YR	2003	LOW 13.18	NOV 4									



SHELBY COUNTY

393943085490901. Local number, SH 2.

LOCATION.--Lat 39°39'43", long 85°49'09", in SW¹/₄SW¹/₄NW¹/₄ sec.13, T.14 N., R.6 E., Shelby County, Hydrologic Unit 05120204, (FOUNTAIN TOWN, IN quadrangle), 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.

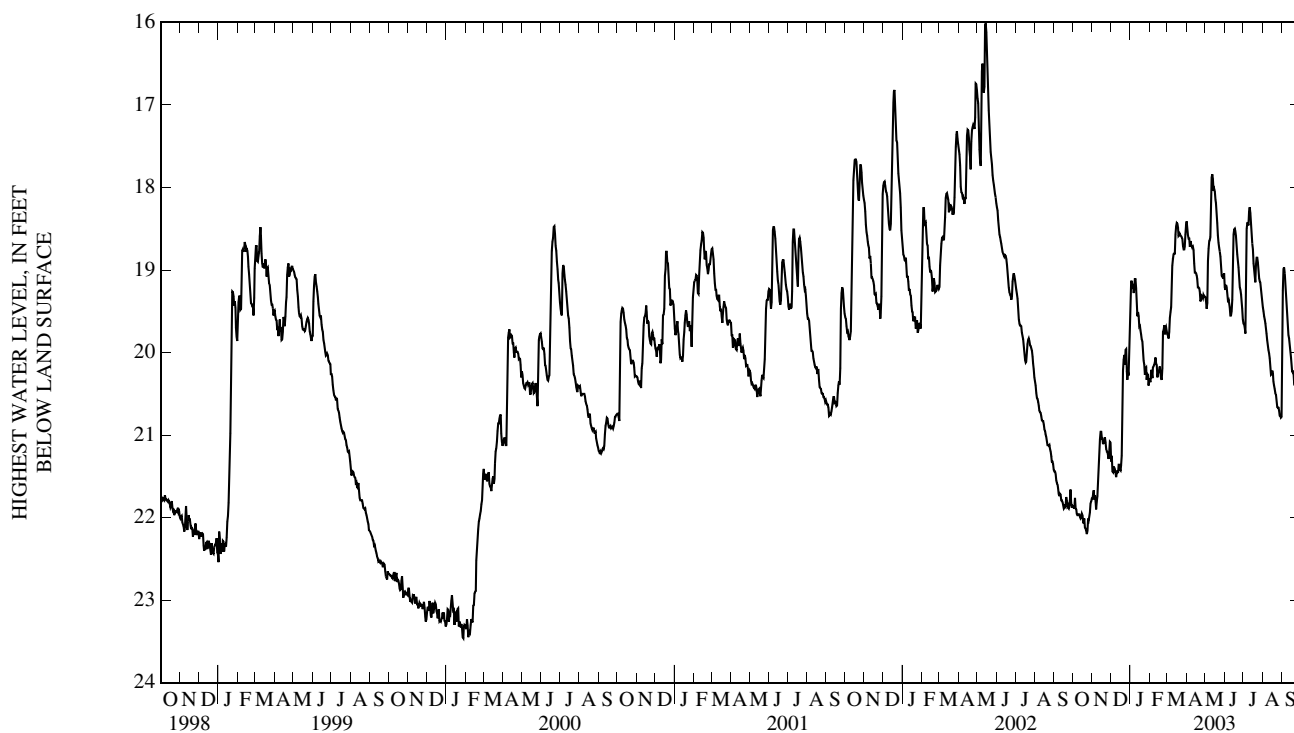
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 15.90 ft below land-surface datum, May 27, 1968; lowest, 23.51 ft below land-surface datum, Jan. 28, 2000.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	21.89	21.73	21.38	19.17	20.31	19.58	18.62	18.89	19.29	18.85	19.65	19.04
10	21.96	21.50	21.46	19.22	20.06	18.87	18.73	18.30	19.55	18.29	19.97	19.68
15	21.95	20.96	21.42	19.69	20.24	18.47	19.03	18.02	18.57	18.68	20.26	20.06
20	22.12	21.09	20.22	19.86	20.33	18.58	19.21	18.43	18.69	19.15	20.44	20.35
25	22.01	21.21	19.96	20.19	19.78	18.62	19.31	18.84	19.21	19.01	20.67	20.38
EOM	21.77	21.09	19.70	20.33	19.74	18.46	19.32	19.04	19.60	19.38	20.78	19.80
MIN	21.76	20.96	19.70	19.11	19.67	18.43	18.41	17.84	18.50	18.24	19.45	18.97
WTR YR	2003	HIGH 17.84	MAY 12									

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	22.00	21.90	21.45	19.28	20.37	19.75	18.77	19.40	19.40	19.83	19.73	19.19
10	22.00	21.74	21.52	19.41	20.15	18.95	18.76	18.66	19.61	18.49	20.04	19.80
15	22.01	21.05	21.50	19.78	20.31	18.57	19.09	18.09	18.82	18.75	20.31	20.15
20	22.17	21.16	20.64	19.99	20.40	18.67	19.25	18.58	18.82	19.23	20.50	20.43
25	22.17	21.29	20.23	20.27	19.84	18.72	19.36	18.95	19.29	19.12	20.70	20.47
EOM	21.83	21.33	20.07	20.44	19.83	18.57	19.38	19.21	19.69	19.46	20.87	19.84
MAX	22.23	21.97	21.60	20.45	20.41	19.94	19.43	19.54	19.69	19.87	20.87	20.79
WTR YR	2003	LOW 22.23	OCT 22									



STARKE COUNTY

411342086365601. Local number, SK 2.

LOCATION.--Lat 41°13'42", long 86°36'56", in NW¹/₄NE¹/₄NW¹/₄ sec.14, T.32 N., R.2 W., Starke County, Hydrologic Unit 07120001, (BASS LAKE, IN quadrangle), 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 October 2003 (discontinued).

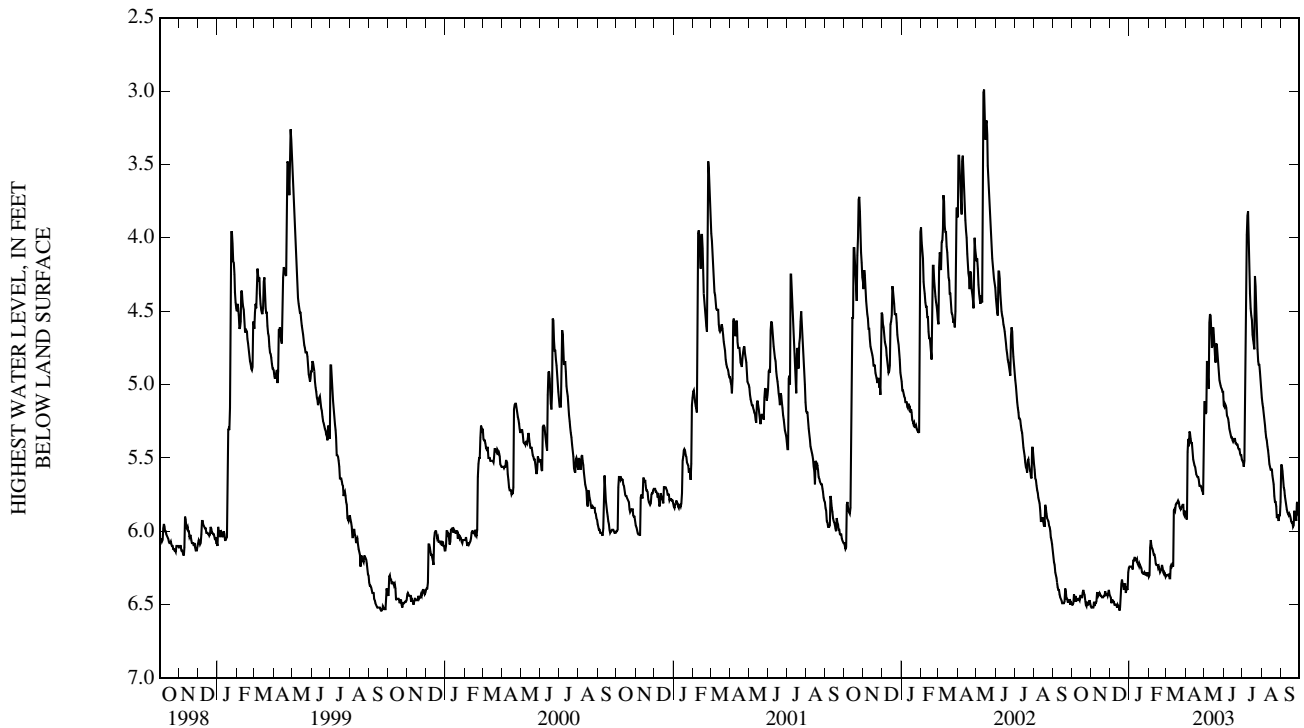
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.83 ft below land-surface datum, June 17, 1949; lowest, 6.99 ft below land-surface datum, Aug. 2, 1939, Sept. 17, 18, 1988.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.48	6.48	6.47	6.24	6.10	6.29	5.37	4.84	5.16	5.25	5.24	5.70
10	6.47	6.42	6.50	6.18	6.16	6.24	5.40	4.52	5.30	3.82	5.42	5.85
15	6.44	6.43	6.52	6.23	6.23	5.86	5.55	4.61	5.38	4.53	5.58	5.89
20	6.42	6.45	6.33	6.25	6.27	5.79	5.63	4.72	5.40	4.76	5.68	5.97
25	6.48	6.43	6.36	6.28	6.29	5.84	5.69	4.97	5.44	4.76	5.91	5.93
EOM	6.51	6.43	6.25	6.28	6.31	5.87	5.30	5.05	5.51	5.04	5.80	5.89
MIN	6.40	6.40	6.25	6.18	6.06	5.79	5.30	4.52	5.13	3.82	5.09	5.55
WTR YR	2003	HIGH 3.82 JUL 10										

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.49	6.54	6.48	6.26	6.11	6.33	5.46	5.19	5.21	5.52	5.28	5.73
10	6.48	6.48	6.50	6.20	6.21	6.25	5.41	4.58	5.32	3.99	5.45	5.87
15	6.45	6.46	6.54	6.25	6.27	5.88	5.56	4.73	5.39	4.56	5.58	5.91
20	6.43	6.48	6.36	6.28	6.29	5.81	5.64	4.88	5.41	4.80	5.76	5.98
25	6.51	6.44	6.42	6.30	6.32	5.87	5.71	4.99	5.45	4.84	5.94	5.94
EOM	6.52	6.48	6.28	6.31	6.32	5.90	5.77	5.14	5.52	5.09	5.93	5.90
MAX	6.52	6.54	6.54	6.33	6.32	6.34	5.94	5.30	5.52	5.59	5.97	5.98
WTR YR	2003	LOW 6.54 NOV 4										



STEUBEN COUNTY

414204085054002. Local number, SB 6.

LOCATION.--Lat 41°42'04", long 85°05'40", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.36, T.38 N., R.12 E., Steuben County, Hydrologic Unit 04050001, (ANGOLA WEST, IN quadrangle), 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 artesian 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 October 2003 (discontinued).

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 14.46 ft below land-surface datum, June 14, 2002; lowest, 19.30 ft below land-surface datum, Mar. 1, 2, 1995.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

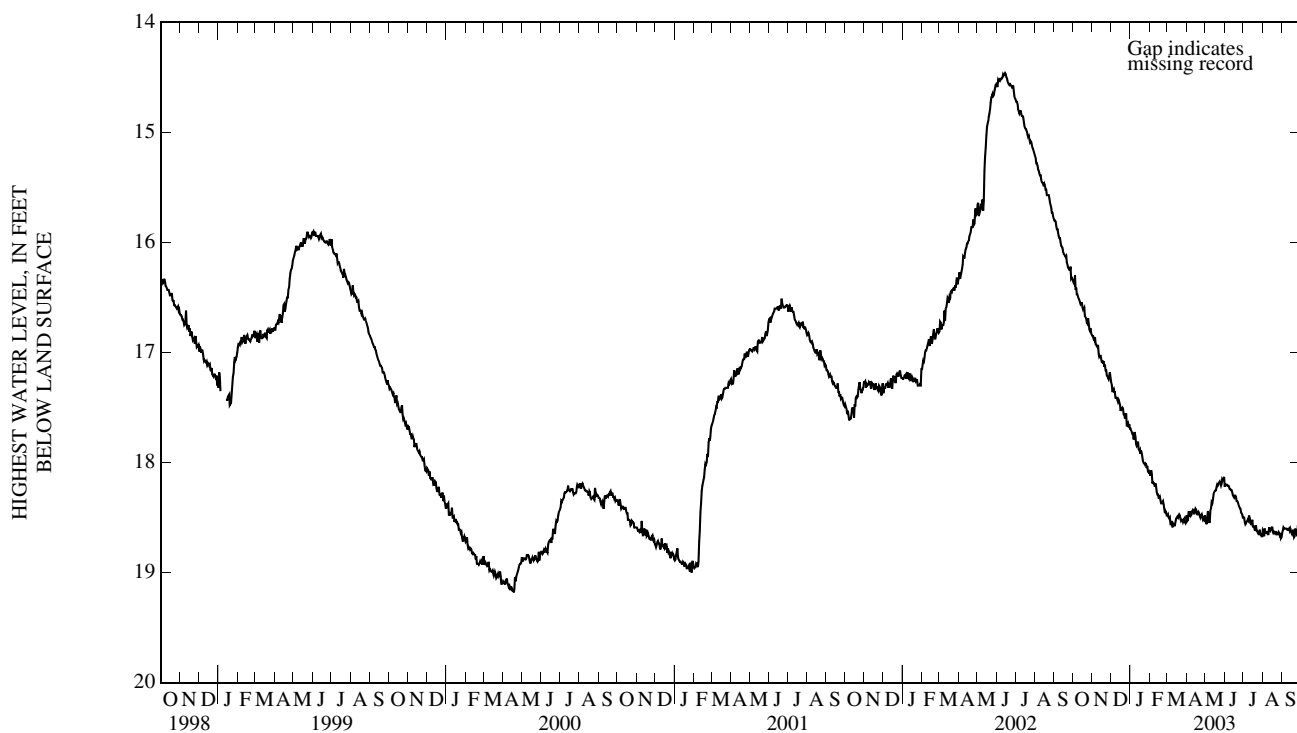
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	16.43	16.86	17.33	17.74	18.19	18.50	18.45	18.44	18.21	18.55	18.64	18.60
10	16.51	16.93	17.41	17.83	18.19	18.58	18.44	18.42	18.24	18.48	18.65	18.61
15	16.55	17.06	17.47	17.89	18.32	18.51	18.42	18.27	18.31	18.52	18.59	18.62
20	16.67	17.13	17.51	17.95	18.37	18.47	18.45	18.20	18.35	18.61	18.64	18.68
25	16.69	17.22	17.56	18.01	18.46	18.52	18.47	18.19	18.41	18.65	18.64	18.67
EOM	16.84	17.23	17.69	18.08	18.48	18.52	18.48	18.13	18.50	18.67	18.68	18.66
MIN	16.30	16.85	17.27	17.69	18.07	18.47	18.42	18.13	18.20	18.48	18.59	18.57

WTR YR 2003 HIGH 16.30 OCT 4

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	16.49	16.95	17.38	17.79	18.22	18.58	18.57	18.54	18.26	18.58	18.65	18.64
10	16.53	17.01	17.43	17.87	18.29	18.62	18.47	18.48	18.28	18.55	18.68	18.63
15	16.60	17.11	17.54	17.94	18.39	18.54	18.46	18.31	18.35	18.58	18.62	18.64
20	16.71	17.16	17.57	18.00	18.40	18.52	18.48	18.26	18.36	18.63	18.66	18.71
25	16.75	17.25	17.67	18.03	18.49	18.55	18.51	18.23	18.46	18.68	18.68	18.71
EOM	16.87	17.34	17.74	18.12	18.51	18.58	18.55	18.24	18.52	18.70	18.72	18.68
MAX	16.87	17.34	17.74	18.13	18.51	18.63	18.57	18.59	18.52	18.70	18.73	18.71

WTR YR 2003 LOW 18.73 AUG 30



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, (OTTERBEIN, IN quadrangle), 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.

REMARKS.--The hydrograph reflects a large change in water levels following a redevelopment of the well in July 2001. A June 2001 slug test indicated well-screen degradation had occurred and was potentially affecting measurement accuracy.

PERIOD OF RECORD.--August 1989 to October 2003 (discontinued).

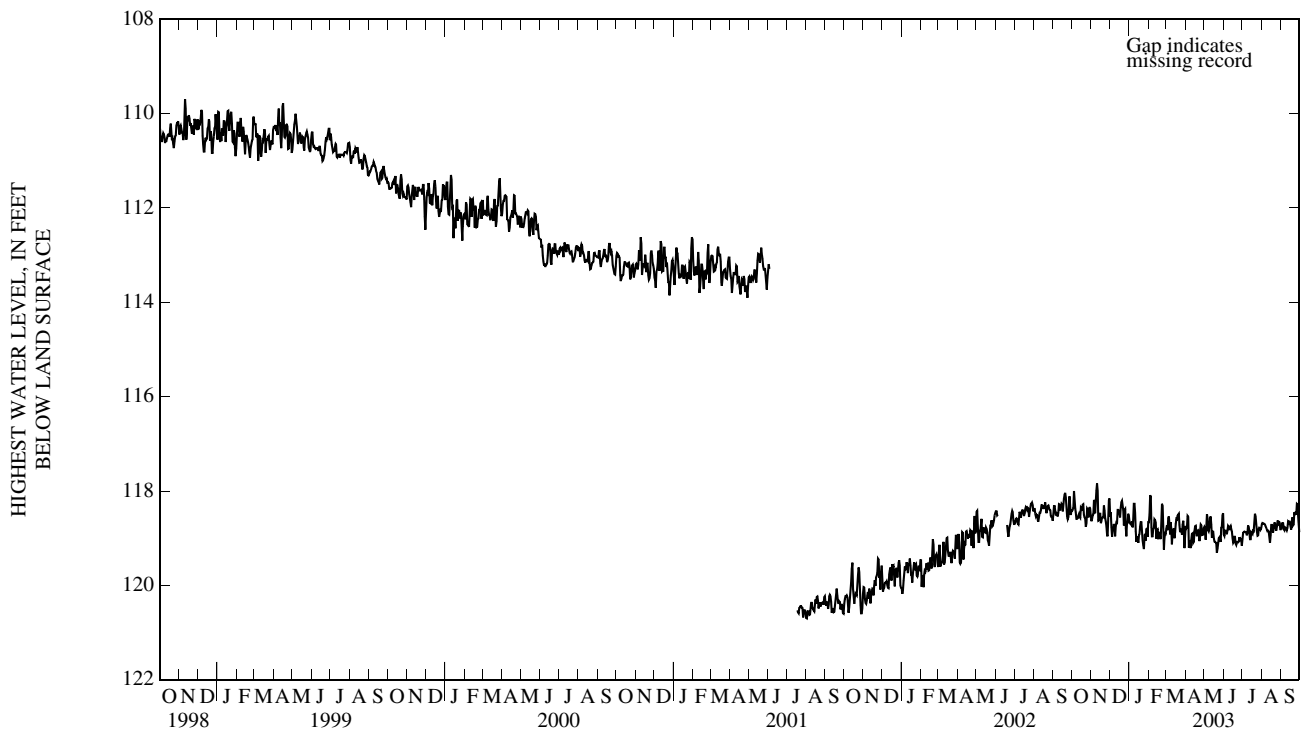
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 109.69 ft below land-surface datum, Nov. 10, 1998; lowest, 121.28 ft below land-surface datum, Aug. 18, 1989.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	118.21	118.19	118.84	118.64	118.77	118.54	118.55	118.49	118.90	118.87	118.70	118.81
10	118.58	117.84	118.75	118.46	118.60	119.13	119.03	118.60	118.83	118.73	118.85	118.83
15	118.35	118.48	118.42	119.10	118.81	118.87	118.85	118.86	119.00	118.87	118.94	118.70
20	118.50	118.56	118.21	118.66	119.02	118.50	118.85	119.10	119.11	118.68	118.80	118.73
25	118.37	118.76	118.38	118.94	119.24	118.82	118.71	118.98	119.07	118.95	118.76	118.50
EOM	118.53	118.16	118.53	118.66	118.91	118.99	118.79	118.47	119.16	118.79	118.83	118.87
MIN	118.00	117.84	118.21	118.27	118.09	118.48	118.53	118.47	118.74	118.48	118.64	118.27
WTR YR	2003	HIGH	117.84	NOV	10							

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	118.59	118.59	118.97	118.77	119.01	118.75	119.22	118.74	119.02	118.94	118.73	118.88
10	118.61	118.00	118.96	118.85	118.79	119.23	119.21	118.77	118.94	118.89	118.91	118.88
15	118.57	118.68	118.55	119.17	119.09	119.00	119.07	119.00	119.11	119.02	119.10	118.78
20	118.60	118.71	118.31	118.87	119.16	118.59	118.96	119.32	119.24	118.86	118.88	118.88
25	118.68	118.96	118.79	119.23	119.38	118.93	118.85	119.02	119.17	119.03	118.84	118.70
EOM	118.64	118.61	118.72	118.97	118.97	119.22	118.97	118.92	119.23	118.84	118.98	118.97
MAX	118.87	118.99	119.19	119.37	119.38	119.26	119.34	119.39	119.24	119.18	119.15	118.97
WTR YR	2003	LOW	119.39	MAY	21							



TIPPECANOE COUNTY

402734087033402. Local number, TC 18.

LOCATION.--Lat 40°27'34", long 87°03'34", NW $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.11, T.23 N., R.6 W., Tippecanoe County, Hydrologic Unit 05120108, (OTTERBEIN, IN quadrangle), 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.

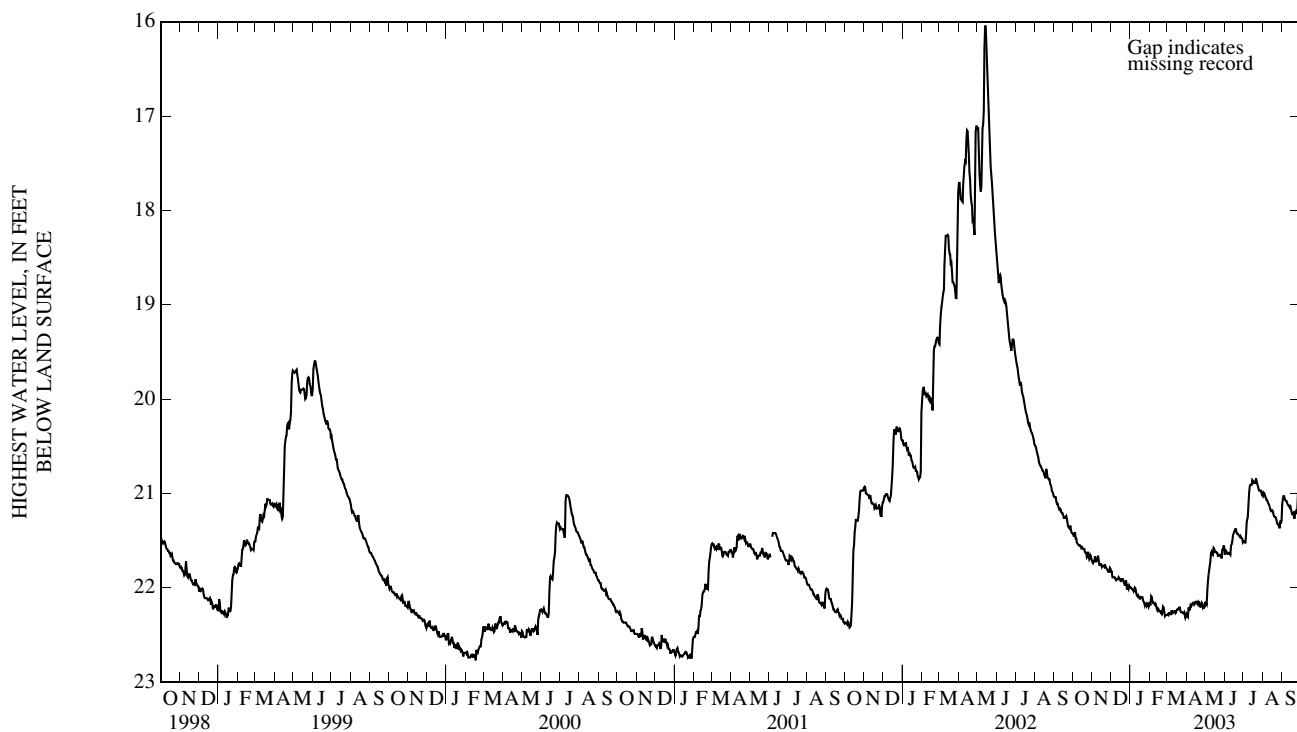
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 16.05 ft below land-surface datum, May 13-14, 2002; lowest, 22.79 ft below land-surface datum, Feb. 16-17, 2000.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	21.48	21.67	21.89	22.02	22.15	22.27	22.23	21.93	21.64	21.44	21.04	21.06
10	21.55	21.66	21.91	22.05	22.17	22.27	22.17	21.64	21.65	21.00	21.11	21.12
15	21.57	21.75	21.91	22.11	22.23	22.26	22.15	21.59	21.43	20.86	21.19	21.17
20	21.62	21.78	21.91	22.10	22.28	22.21	22.15	21.63	21.42	20.89	21.25	21.26
25	21.62	21.81	21.93	22.17	22.30	22.26	22.16	21.65	21.46	20.95	21.33	21.19
EOM	21.71	21.80	22.00	22.17	22.29	22.30	22.20	21.56	21.52	21.02	21.29	20.84
MIN	21.41	21.66	21.83	22.00	22.09	22.21	22.15	21.56	21.38	20.84	20.99	20.84
WTR YR	2003	HIGH	20.84	JUL 21								

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	21.52	21.73	21.90	22.04	22.16	22.28	22.28	22.03	21.66	21.56	21.05	21.08
10	21.55	21.71	21.92	22.08	22.21	22.27	22.19	21.74	21.67	21.11	21.13	21.14
15	21.58	21.78	21.93	22.12	22.26	22.27	22.18	21.62	21.45	20.91	21.20	21.20
20	21.63	21.80	21.94	22.13	22.29	22.23	22.19	21.67	21.43	20.91	21.26	21.29
25	21.67	21.83	22.01	22.19	22.31	22.28	22.19	21.67	21.48	20.97	21.34	21.22
EOM	21.73	21.85	22.02	22.20	22.30	22.32	22.23	21.65	21.53	21.03	21.38	20.85
MAX	21.73	21.85	22.02	22.22	22.31	22.33	22.32	22.21	21.67	21.56	21.38	21.29
WTR YR	2003	LOW	22.33	MAR 29								



GROUND-WATER DATA
VANDERBURGH COUNTY

380608087395901. Local number, VA 6.

LOCATION.--Lat 38°06'08", long 87°39'59", in SE¹/₄SW¹/₄NW¹/₄ sec.8, T.5 S., R.11 W., Vanderburgh County, Hydrologic Unit 05120113, (KASSON, IN quadrangle), 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.

REMARKS.--Water level may be affected by pumpage.

PERIOD OF RECORD.--May 1965 to October 2003 (discontinued).

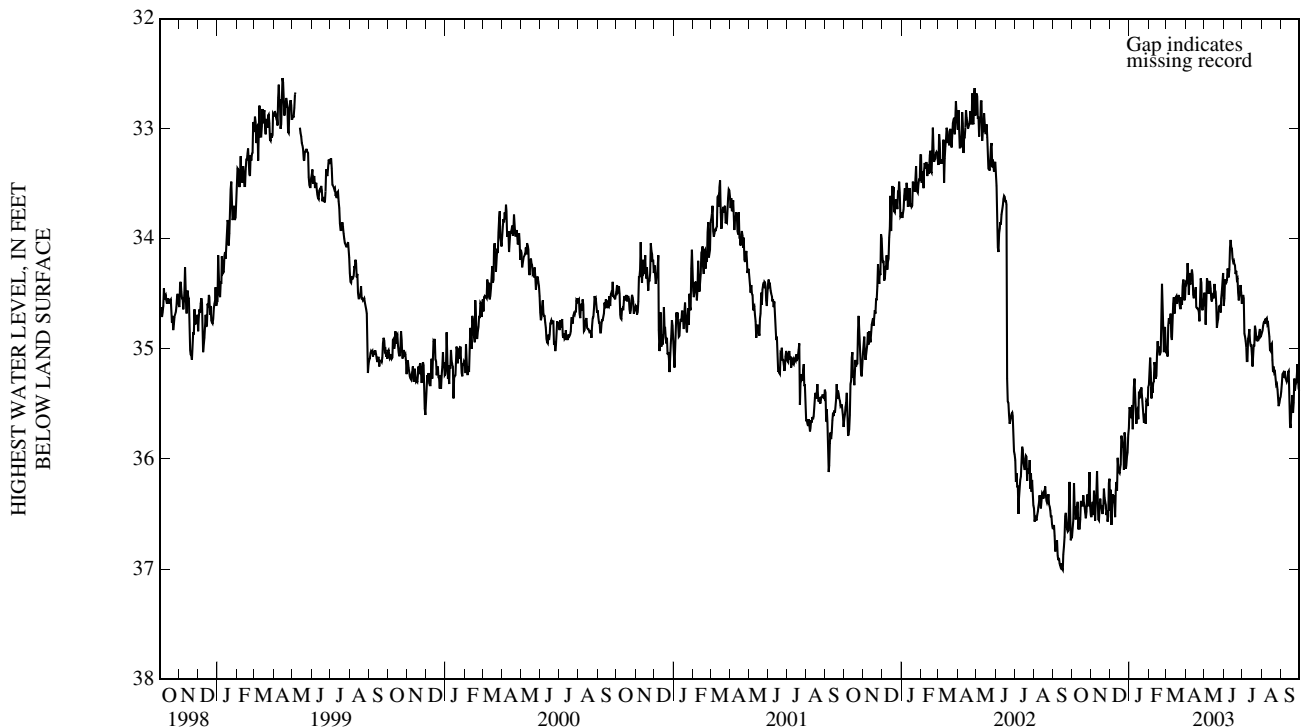
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 24.88 ft below land-surface datum, Apr. 3, 4, 1968; lowest, 37.18 ft below land-surface datum, Sept. 13, 15, 2002.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	36.44	36.29	36.32	35.51	35.45	34.72	34.33	34.36	34.40	34.89	34.75	35.26
10	36.39	36.11	36.29	35.42	35.12	34.92	34.35	34.39	34.28	34.91	34.78	35.30
15	36.39	36.36	36.12	35.64	34.93	34.60	34.49	34.50	34.18	34.97	35.02	35.68
20	36.40	36.45	35.82	35.35	35.03	34.55	34.63	34.59	34.32	34.97	35.16	35.58
25	36.33	36.51	35.81	35.64	35.03	34.53	34.36	34.64	34.56	34.91	35.32	35.31
EOM	36.51	36.18	35.72	35.35	34.98	34.54	34.56	34.31	34.59	34.88	35.44	35.38
MIN	36.12	36.11	35.72	35.27	34.41	34.37	34.22	34.31	34.01	34.51	34.72	35.14
WTR YR	2003	HIGH 34.01 JUN 12										

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	36.68	36.71	36.55	35.84	35.55	34.84	34.70	34.56	34.58	35.10	34.90	35.33
10	36.71	36.35	36.54	35.62	35.33	34.99	34.48	34.56	34.47	35.15	34.97	35.48
15	36.55	36.55	36.32	35.79	35.27	34.79	34.72	34.70	34.33	35.21	35.15	35.80
20	36.60	36.68	35.99	35.53	35.21	34.75	34.84	34.87	34.43	35.12	35.42	35.75
25	36.58	36.65	36.15	35.85	35.21	34.68	34.57	34.81	34.70	35.02	35.54	35.43
EOM	36.62	36.69	35.95	35.68	35.22	34.76	34.73	34.68	34.74	35.08	35.58	35.53
MAX	36.79	36.76	36.81	35.96	35.55	35.36	34.91	35.02	34.78	35.42	35.69	35.81
WTR YR	2003	LOW 36.81 DEC 3										



VANDERBURGH COUNTY

380626087344401. Local number, VA 7.

LOCATION.--Lat 38°06'26", long 87°34'44", in NE¹/₄NW¹/₄NW¹/₄ sec.7, T.5 S., R.10 W., Vanderburgh County, Hydrologic Unit 05120113, (EVANSVILLE NORTH, IN quadrangle), 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.

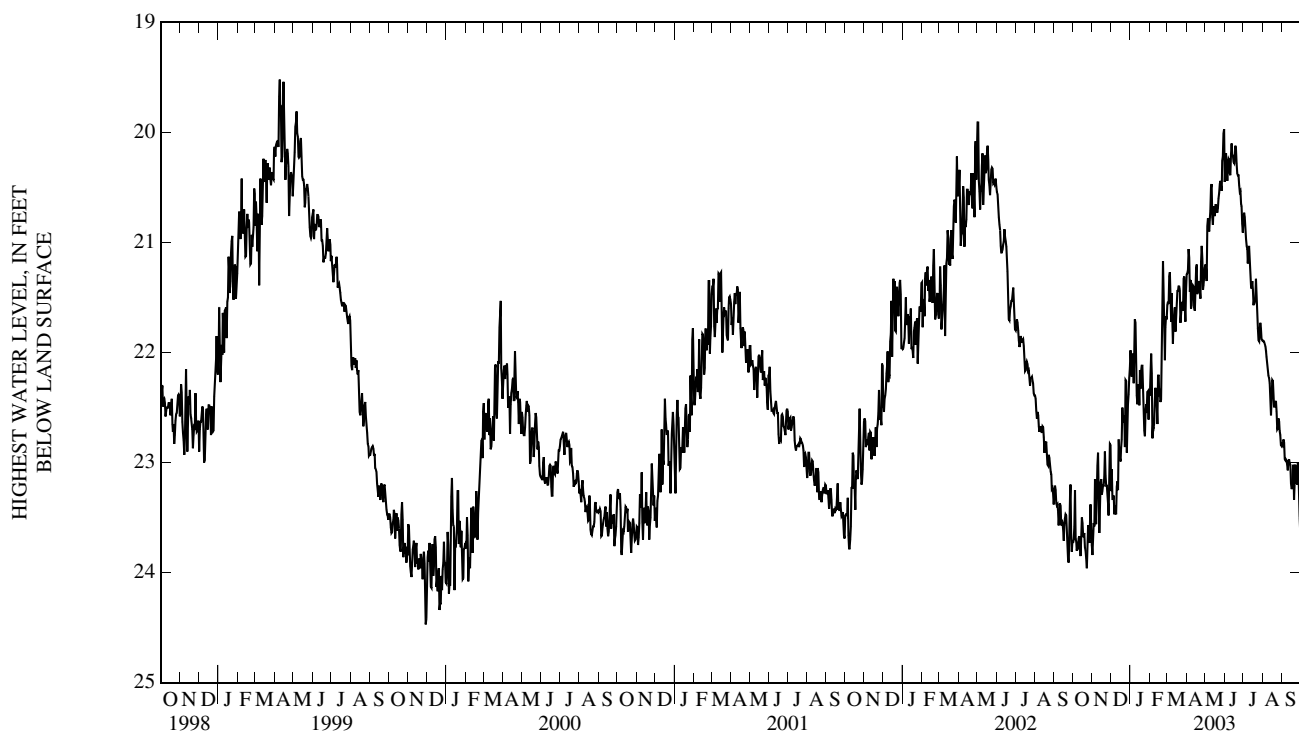
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 19.27 ft below land-surface datum, June 19, 1997; lowest, 25.06 ft below land-surface datum, Oct. 29, 1988.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	23.69	23.15	23.30	22.01	22.78	21.27	21.14	20.78	20.44	20.97	21.94	22.97
10	23.69	22.91	23.22	22.02	22.32	21.92	21.43	20.50	20.39	21.03	22.21	23.07
15	23.50	23.15	22.96	22.48	22.21	21.70	21.44	20.70	20.27	21.35	22.43	23.19
20	23.77	23.13	22.63	22.12	22.19	21.40	21.35	20.73	20.28	21.51	22.49	23.34
25	23.57	23.29	22.26	22.53	22.07	21.54	21.03	20.44	20.54	21.89	22.69	23.20
EOM	23.75	22.84	22.14	22.34	21.70	21.44	21.23	19.97	20.91	21.89	22.85	23.65
MIN	23.25	22.83	22.14	21.70	21.17	21.27	21.03	19.97	20.10	20.73	21.89	22.79
WTR YR	2003	HIGH 19.97	MAY 31									

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	23.95	23.61	23.50	22.28	22.93	21.49	21.74	20.87	20.51	21.04	21.99	23.04
10	23.80	23.20	23.47	22.39	22.59	22.09	21.58	20.71	20.56	21.14	22.30	23.14
15	23.65	23.31	23.17	22.61	22.47	21.81	21.63	20.78	20.33	21.45	22.61	23.30
20	23.85	23.36	22.71	22.32	22.51	21.55	21.45	20.85	20.44	21.60	22.55	23.44
25	23.81	23.48	22.91	22.76	22.38	21.67	21.17	20.50	20.65	21.97	22.76	23.40
EOM	23.84	23.38	22.32	22.61	21.80	21.74	21.36	20.45	20.98	21.95	22.96	23.68
MAX	24.08	23.94	23.70	22.96	22.93	22.09	21.76	21.43	20.98	21.99	22.96	23.68
WTR YR	2003	LOW 24.08	OCT 13									



VIGO COUNTY

392820087242601. Local number, VI 7.

LOCATION.--Lat 39°28'20", long 87°24'26", in SE¹/₄SE¹/₄NE¹/₄ sec.21, T.12 N., R.9 W., Vigo County, Hydrologic Unit 05120111, (TERRE HAUTE, IN quadrangle), 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.

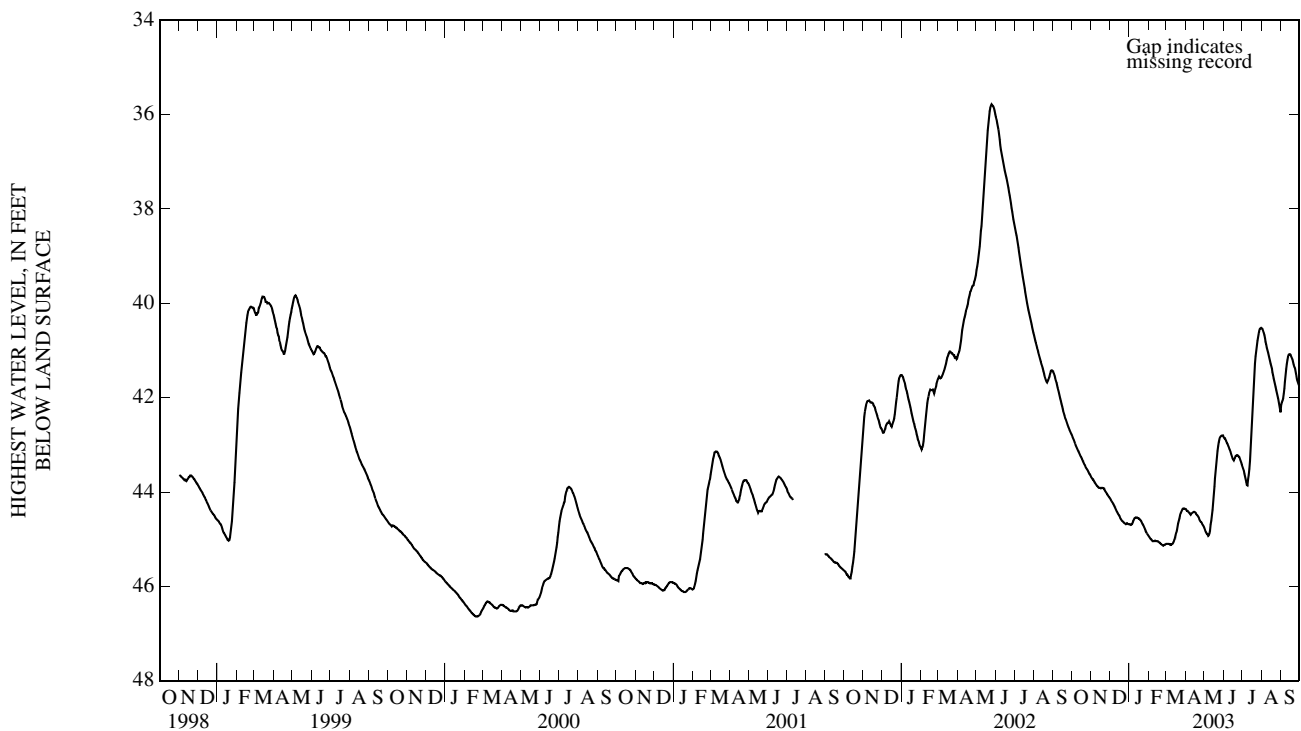
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 35.78 ft below land-surface datum, May. 25, 2002; lowest, 51.90 ft below land-surface datum, Sept. 29 to Oct. 1, 1972.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	42.94	43.77	44.23	44.68	45.01	45.10	44.42	44.89	42.92	43.67	40.67	41.92
10	43.10	43.87	44.36	44.55	45.04	45.11	44.46	44.82	43.08	43.73	40.99	41.29
15	43.25	43.91	44.49	44.56	45.04	44.96	44.42	44.22	43.28	42.85	41.28	41.08
20	43.39	43.92	44.61	44.62	45.10	44.66	44.50	43.40	43.24	41.49	41.59	41.24
25	43.52	44.02	44.67	44.76	45.13	44.42	44.63	42.88	43.25	40.79	41.90	41.52
EOM	43.66	44.12	44.68	44.92	45.11	44.36	44.73	42.80	43.42	40.52	42.31	41.70
MIN	42.80	43.69	44.14	44.54	44.94	44.35	44.36	42.80	42.84	40.52	40.53	41.08
WTR YR	2003	HIGH	40.52	JUL 31								

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	42.98	43.79	44.25	44.69	45.02	45.11	44.44	44.90	42.96	43.73	40.74	42.02
10	43.13	43.88	44.39	44.56	45.04	45.12	44.48	44.92	43.11	43.86	41.04	41.40
15	43.27	43.92	44.51	44.56	45.05	45.01	44.43	44.38	43.31	43.12	41.33	41.09
20	43.42	43.92	44.62	44.65	45.11	44.74	44.52	43.55	43.28	41.72	41.65	41.30
25	43.54	44.04	44.68	44.79	45.14	44.45	44.64	42.94	43.27	40.89	41.96	41.60
EOM	43.69	44.14	44.69	44.94	45.12	44.36	44.76	42.84	43.46	40.53	42.37	41.73
MAX	43.69	44.14	44.69	44.94	45.14	45.12	44.76	44.95	43.46	43.88	42.37	42.36
WTR YR	2003	LOW	45.14	FEB 23								



WABASH COUNTY

404424085422801. Local number, WB 3.

LOCATION.--Lat 40°44'24", long 85°42'28", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec.35, T.27 N., R.7 E., Wabash County, Hydrologic Unit 05120101, (LA FONTAINE, IN quadrangle), 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.

REMARKS.--Water level may be affected by pumpage.

PERIOD OF RECORD.--August 1986 to October 2003 (discontinued).

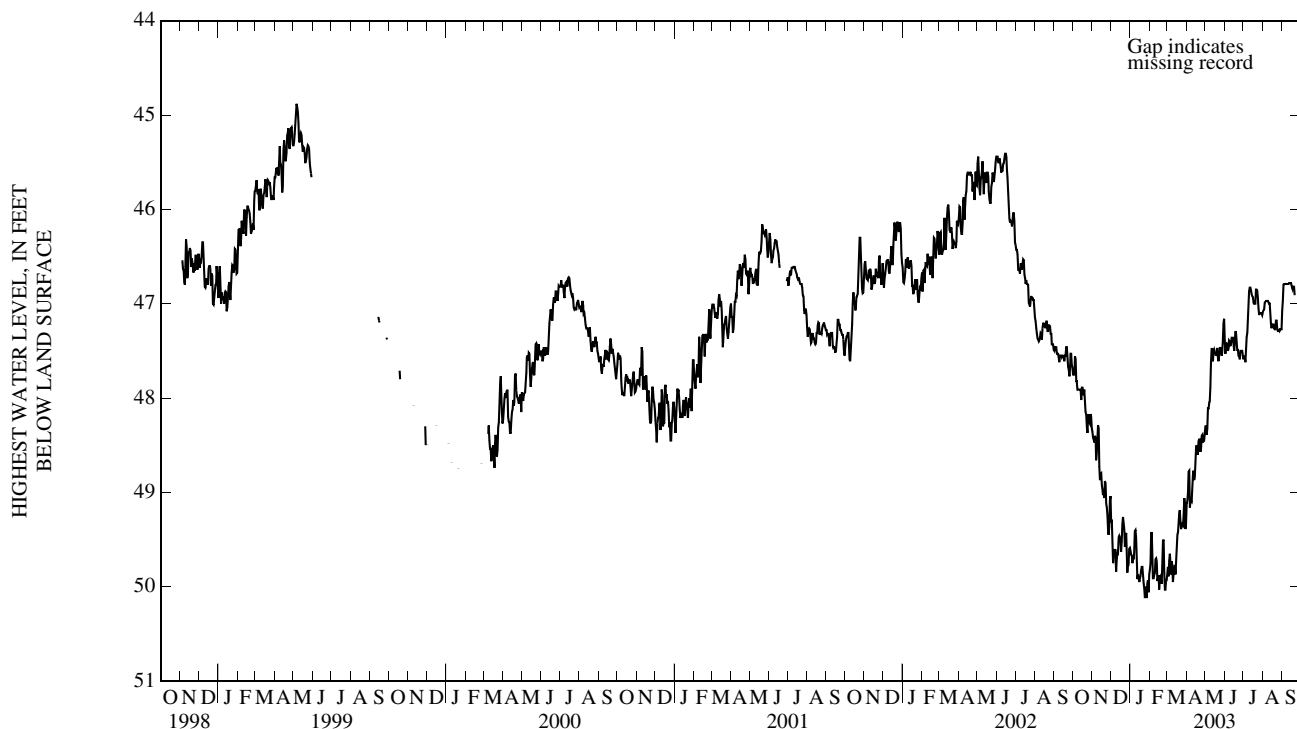
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 43.85 ft below land-surface datum, Mar. 27, 1991 and Apr. 1, 1993; lowest, 50.18 ft below land-surface datum, Jan. 24, 2003.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	47.59	48.40	49.64	49.67	49.77	49.65	48.77	48.11	47.43	47.49	46.98	46.79
10	47.91	48.29	49.71	49.48	49.71	49.95	48.98	47.62	47.45	46.87	46.98	46.79
15	47.89	48.80	49.48	49.95	49.88	49.75	48.65	47.49	47.43	46.92	47.26	46.78
20	48.04	49.06	49.26	49.79	49.97	49.23	48.46	47.47	47.39	47.00	47.27	46.82
25	48.18	49.25	49.43	50.04	50.03	49.34	48.40	47.47	47.59	47.05	47.29	---
EOM	48.32	49.04	49.59	49.87	49.93	49.33	48.38	47.16	47.55	47.12	47.27	---
MIN	47.56	48.29	49.26	49.40	49.43	49.06	48.38	47.16	47.30	46.83	46.97	46.78
WTR YR	2003	HIGH 46.78 SEP 12										

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	47.86	48.61	49.75	49.75	49.91	49.75	49.16	48.32	47.52	47.62	46.99	46.80
10	47.91	48.46	49.84	49.70	49.86	50.03	49.10	47.89	47.53	47.04	47.00	46.80
15	48.02	48.93	49.56	50.06	50.07	49.87	48.83	47.52	47.50	46.95	47.26	46.81
20	48.15	49.10	49.34	49.88	50.02	49.35	48.60	47.57	47.49	47.00	47.27	46.91
25	48.37	49.41	49.64	50.17	50.14	49.37	48.53	47.47	47.65	47.12	47.29	---
EOM	48.36	49.32	49.67	50.08	49.97	49.43	48.48	47.39	47.60	47.12	47.32	---
MAX	48.41	49.50	49.92	50.18	50.14	50.03	49.33	48.50	47.68	47.73	47.35	47.27
WTR YR	2003	LOW 50.18 JAN 24										



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, (LA FONTAINE, IN quadrangle), on America Road, 1.3 mi southeast of La Fountaine.
 Owner: U.S. Geological Survey

AQUIFER.--Sand and gravel of the Pleistocene age.

WELL CHARACTERISTICS.--Drilled artesian well, diameter 6 in., depth 118 ft, cased to 113 ft, screened to 118 ft.

INSTRUMENTATION.--Water-level recorder.

DATUM.--Elevation of land-surface datum is 837.40 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.30 ft above land-surface datum.

REMARKS.--Water level affected by public water supply pumpage.

PERIOD OF RECORD.--August 1988 to October 2003 (discontinued).

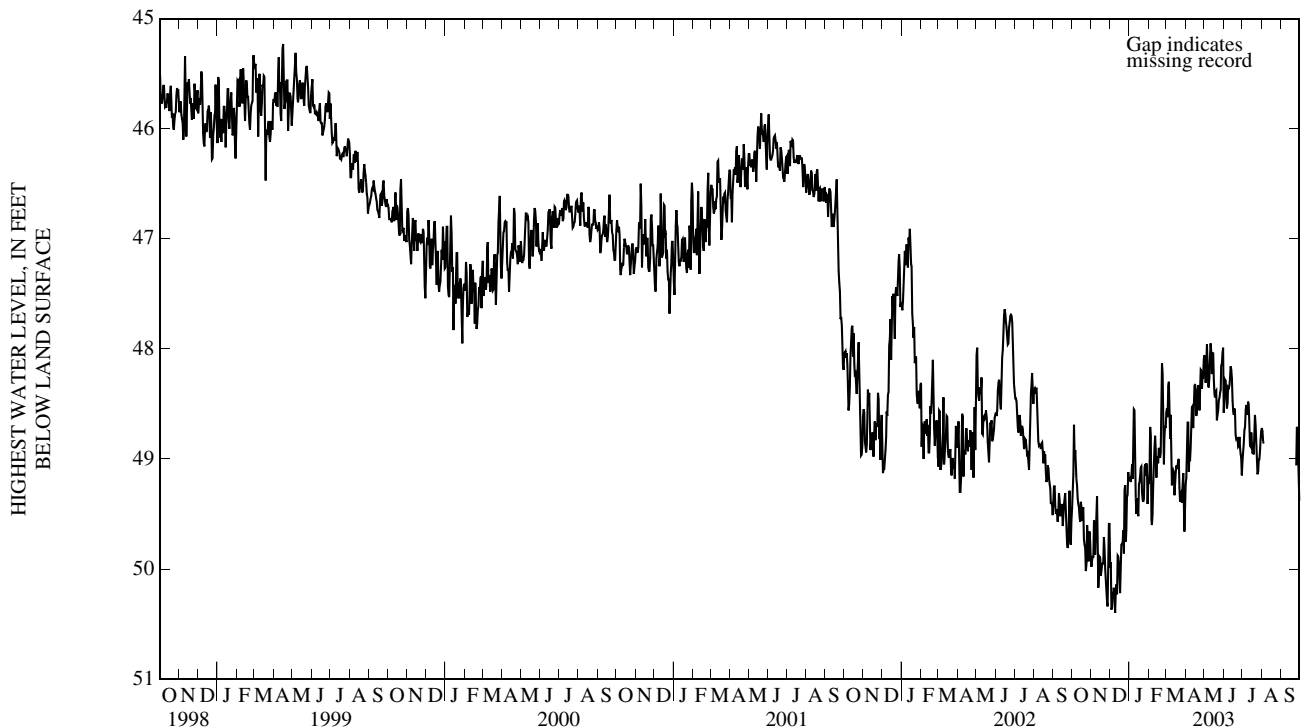
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 38.19 ft below land-surface datum, Nov. 5, 1988; lowest, 50.64 ft below land-surface datum, Dec. 3-4, 2002.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	48.99	49.56	50.23	49.05	49.55	48.30	48.67	47.96	48.43	48.71	---	---
10	49.36	49.34	50.21	48.91	48.90	49.24	48.68	48.07	48.34	48.48	---	---
15	49.39	49.90	49.96	49.52	49.00	49.24	48.34	48.04	48.47	48.76	---	---
20	49.73	49.95	49.77	49.07	48.94	49.02	48.38	48.38	48.78	48.77	---	---
25	49.60	50.21	49.24	49.08	49.05	49.30	48.19	48.45	48.88	49.14	---	49.06
EOM	49.92	49.59	49.19	49.22	48.72	49.41	48.10	47.99	49.15	48.75	---	49.38
MIN	48.69	49.34	49.12	48.55	48.13	48.30	48.10	47.95	48.16	48.48	48.72	48.71
WTR YR	2003	HIGH 47.95 MAY 11										

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	49.27	50.00	50.35	49.18	49.77	48.58	49.30	48.17	48.60	48.85	---	---
10	49.43	49.56	50.40	49.36	49.13	49.40	48.91	48.35	48.49	48.61	---	---
15	49.57	50.14	50.12	49.61	49.26	49.34	48.58	48.28	48.57	48.89	---	---
20	49.84	50.16	49.82	49.30	49.15	49.17	48.58	48.65	48.91	48.98	---	---
25	49.95	50.40	49.75	49.36	49.25	49.43	48.33	48.50	49.00	49.24	---	49.26
EOM	50.00	50.12	49.33	49.41	48.80	49.67	48.30	48.58	49.21	48.83	---	49.48
MAX	50.10	50.42	50.64	49.80	49.77	49.74	49.41	48.74	49.21	49.24	48.89	49.48
WTR YR	2003	LOW 50.64 DEC 3										



WARRICK COUNTY

380624087164801. Local number, WK 4.

LOCATION.--Lat 38°06'24", long 87°16'48", in SE¹/₄SW¹/₄SW¹/₄ sec.2, T.5 S., R.8 W., Warrick County, Hydrologic Unit 05140201, (BOONVILLE, IN quadrangle), 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.

REMARKS.--The hydrograph indicates the natural aquifer condition was impacted by anthropogenic activities in April 2003.

PERIOD OF RECORD.--June 1986 to October 2003 (discontinued).

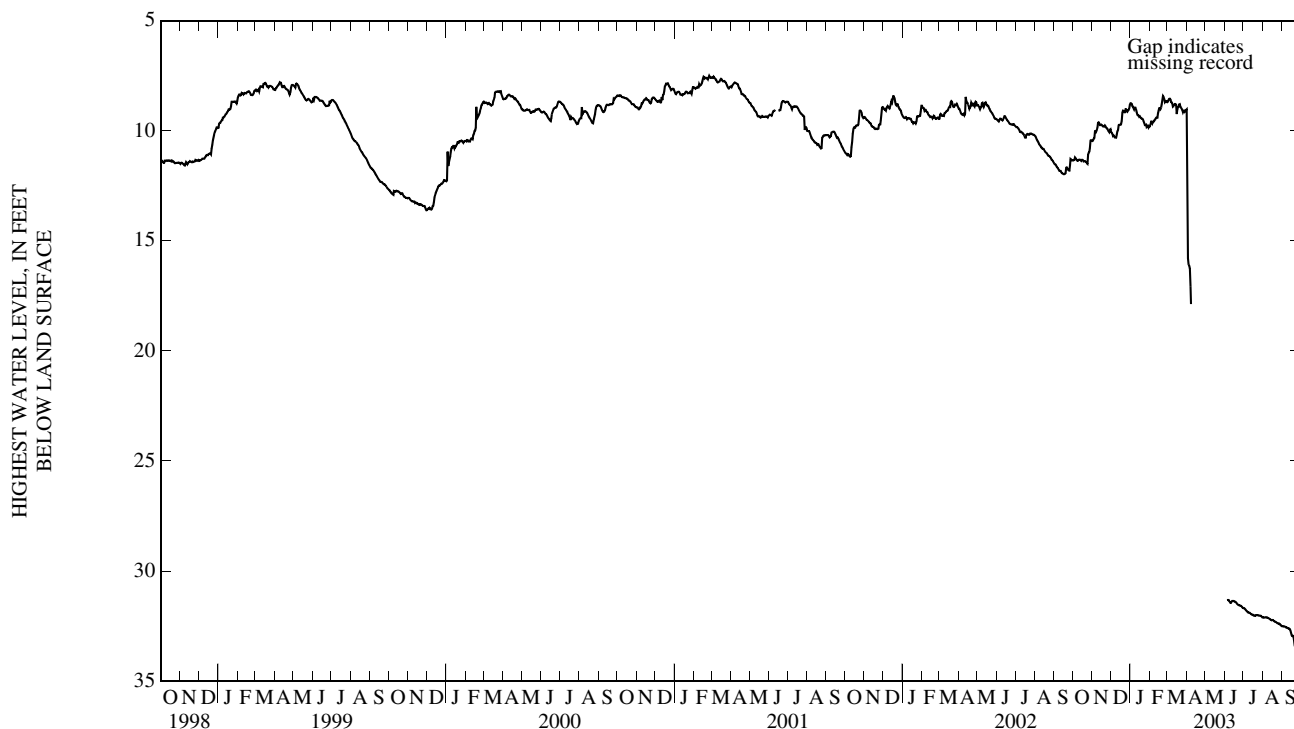
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 6.85 ft below land-surface datum, June 17, 1997; lowest, 34.77 ft below land-surface datum, Oct. 7, 2003.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	11.25	10.02	10.22	8.91	9.66	8.54	16.13	---	31.33	31.79	32.11	32.53
10	11.33	9.64	10.18	9.04	9.46	8.90	---	---	31.45	31.89	32.14	32.60
15	11.32	9.72	9.73	9.37	9.08	8.82	---	---	31.36	31.99	32.24	32.80
20	11.38	9.81	9.09	9.45	8.80	8.81	---	---	31.46	32.04	32.30	33.16
25	11.08	9.91	9.02	9.74	8.71	9.06	---	---	31.57	32.02	32.38	33.64
EOM	10.44	9.93	8.82	9.81	8.66	9.05	---	---	31.68	32.10	32.50	34.35
MIN	10.43	9.62	8.82	8.75	8.42	8.54	9.02	---	31.32	31.69	32.10	32.51
WTR YR	2003	HIGH 8.42 FEB 22										

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	11.32	10.33	10.27	8.99	9.71	8.59	16.26	---	31.35	31.82	32.12	32.55
10	11.38	9.88	10.31	9.17	9.50	8.96	---	---	31.48	31.90	32.16	32.62
15	11.37	9.74	9.74	9.41	9.20	9.58	---	---	31.38	32.00	32.25	32.91
20	11.40	9.84	9.19	9.48	8.94	8.97	---	---	31.50	32.05	32.31	33.39
25	11.50	9.99	9.12	9.77	8.76	9.17	---	---	31.59	32.04	32.39	33.81
EOM	10.46	10.07	9.00	9.88	8.79	9.12	---	---	31.69	32.11	32.51	34.50
MAX	11.50	10.49	10.34	9.89	9.83	9.58	22.44	---	31.69	32.11	32.51	34.50
WTR YR	2003	LOW 34.50 SEP 30										



GROUND-WATER DATA
WASHINGTON COUNTY

383012086124501. Local number, WA 2.

LOCATION.--Lat 38°30'12", long 86°12'45", IN NE¹/₄SW¹/₄SW¹/₄ sec.20, T.1 N., R.3 E., Washington County, Hydrologic Unit 05140104, (BECKS MILL, IN quadrangle), 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 October 2003 (discontinued).

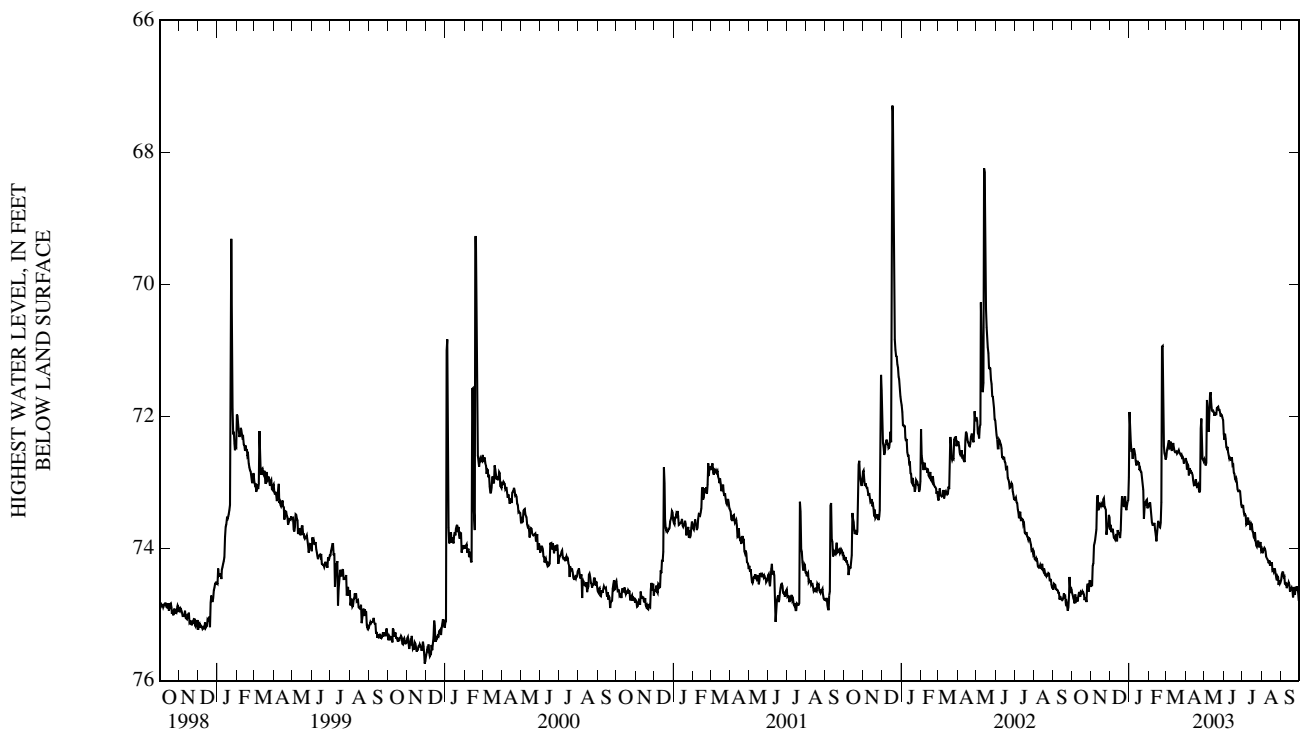
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 61.14 ft below land-surface datum, Apr. 30, 1996; lowest, 75.95 ft below land-surface datum, Nov. 29, 1999.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	74.83	73.95	73.70	72.52	73.52	72.36	72.74	71.75	72.46	73.48	73.99	74.43
10	74.80	73.26	73.81	72.58	73.61	72.52	72.84	71.68	72.64	73.53	74.16	74.60
15	74.65	73.33	73.77	72.72	73.66	72.54	73.02	71.91	72.74	73.62	74.23	74.65
20	74.69	73.26	73.21	72.84	73.61	72.53	73.05	71.98	72.96	73.84	74.35	74.74
25	74.58	73.79	73.22	73.38	72.45	72.57	72.18	71.90	73.13	73.92	74.48	74.62
EOM	74.58	73.52	72.92	73.31	72.65	72.67	72.68	72.05	73.37	74.03	74.51	74.75
MIN	74.49	73.19	72.92	71.93	70.93	72.36	72.03	71.63	72.26	73.34	73.99	74.36
WTR YR	2003	HIGH 70.93	FEB 23									

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	74.92	74.30	73.85	72.65	73.66	72.54	72.99	72.70	72.54	73.52	74.05	74.53
10	74.98	73.71	73.96	72.74	73.80	72.67	72.90	71.96	72.72	73.76	74.31	74.69
15	74.83	73.44	73.88	72.87	73.81	72.67	73.16	72.02	72.87	73.79	74.38	74.76
20	74.91	73.41	73.41	72.95	73.76	72.63	73.10	72.12	73.00	73.92	74.41	74.85
25	74.91	73.99	73.38	73.55	72.62	72.71	73.12	72.04	73.24	74.04	74.60	74.76
EOM	74.66	73.77	73.39	73.56	72.75	72.83	72.78	72.31	73.55	74.14	74.62	74.84
MAX	75.01	74.68	73.98	73.73	74.02	72.85	73.21	72.83	73.55	74.14	74.83	74.89
WTR YR	2003	LOW 75.01	OCT 3									



WAYNE COUNTY

394426085080601. Local number, WE 6.

LOCATION.--Lat 39°44'26", long 85°08'06", in SE $\frac{1}{4}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec.24, T.15 N., R.12 E., Wayne County, Hydrologic Unit 05080003, (CONNERSVILLE, IN quadrangle), 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.

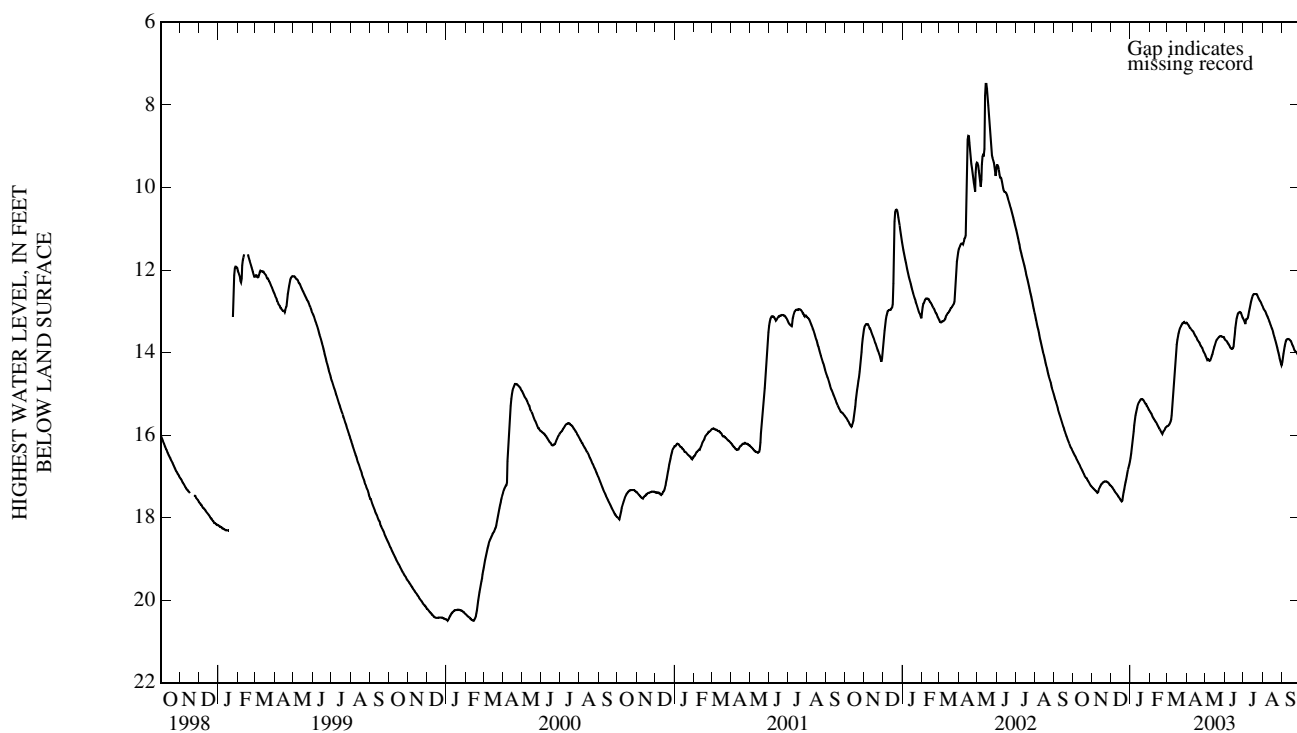
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 7.09 ft below land-surface datum, May 8 and 9, 1996; lowest, 21.68 ft below land-surface datum, Feb. 1, 1977.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	16.52	17.33	17.32	16.05	15.54	15.72	13.36	14.16	13.74	13.20	13.00	13.84
10	16.68	17.39	17.43	15.45	15.67	15.02	13.47	14.15	13.88	13.00	13.18	13.67
15	16.84	17.20	17.54	15.19	15.81	13.97	13.60	13.87	13.86	12.65	13.40	13.72
20	17.00	17.13	17.48	15.13	15.95	13.48	13.73	13.68	13.18	12.58	13.65	13.91
25	17.11	17.14	17.07	15.24	15.86	13.30	13.87	13.60	13.02	12.68	13.95	14.02
EOM	17.25	17.22	16.65	15.40	15.80	13.29	14.03	13.63	13.16	12.86	14.31	13.80
MIN	16.41	17.12	16.65	15.13	15.42	13.26	13.28	13.60	13.02	12.58	12.89	13.67
WTR YR	2003	HIGH	12.58	JUL 18								

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	16.56	17.35	17.34	16.19	15.57	15.75	13.40	14.19	13.78	13.36	13.04	13.94
10	16.71	17.43	17.45	15.53	15.69	15.30	13.48	14.20	13.90	13.09	13.22	13.68
15	16.87	17.23	17.57	15.22	15.83	14.16	13.62	13.94	13.90	12.71	13.43	13.76
20	17.02	17.14	17.59	15.14	15.98	13.54	13.75	13.70	13.30	12.58	13.70	13.95
25	17.14	17.15	17.14	15.25	15.89	13.33	13.89	13.61	13.03	12.71	14.01	14.05
EOM	17.27	17.24	16.72	15.42	15.81	13.30	14.06	13.68	13.19	12.89	14.36	13.84
MAX	17.27	17.43	17.62	16.65	16.01	15.80	14.06	14.21	13.92	13.36	14.36	14.37
WTR YR	2003	LOW	17.62	DEC 18								



WELLS COUNTY

404331085064701. Local number, WL 4.

LOCATION.--Lat 40°43'31", long 85°06'47", in SE¹/₄NW¹/₄NE¹/₄ sec.12, T.26 N., R.12 E., Wells County, Hydrologic Unit 05120101, (LINN GROVE, IN quadrangle), 3.5 mi southeast of Bluffton on Hwy 316 to entrance of Quabache State Park.
 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 August 1971. September 1971 to December 1981 (semi-annual tape-down readings only). January 1982 to current year.

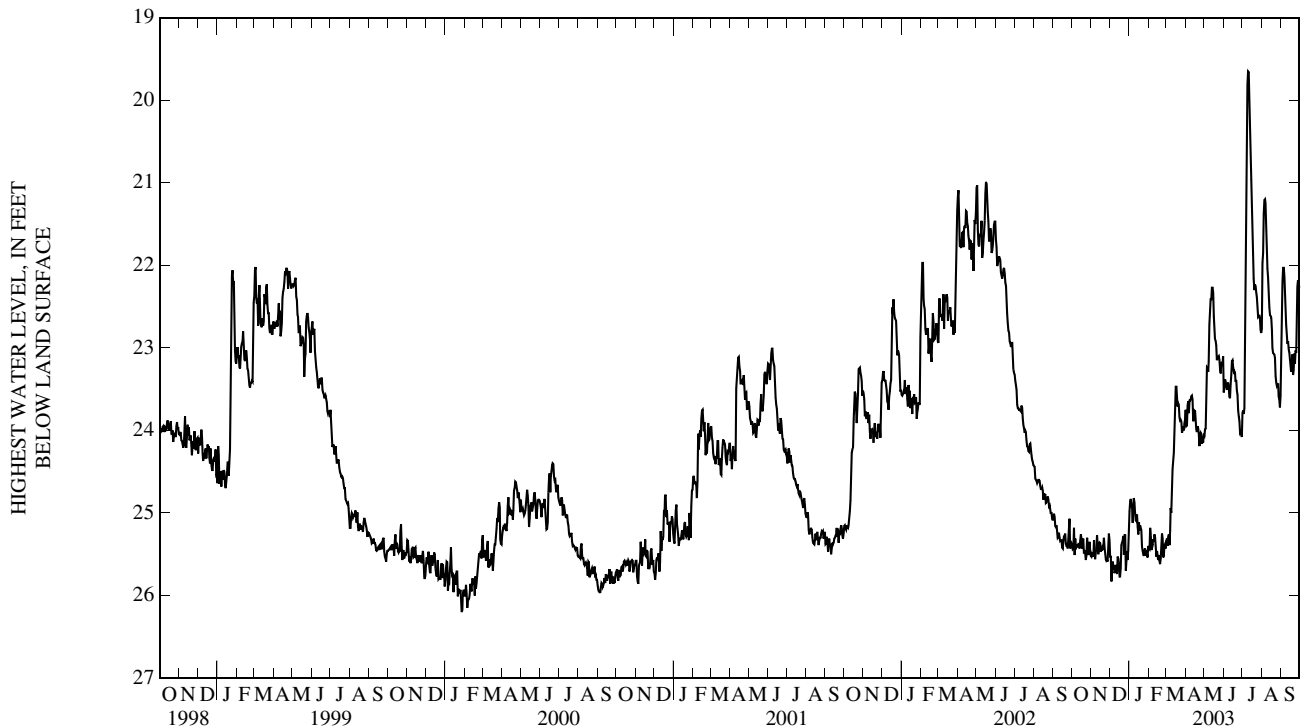
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 17.70 ft below land-surface datum, Apr. 4, 1973; lowest, 26.27 ft below land-surface datum, Jan. 27, Feb. 4, 16, 2000.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	25.51	25.33	25.59	24.93	25.45	25.26	23.65	23.23	23.46	22.30	21.21	22.03
10	25.40	25.27	25.64	25.01	25.26	24.75	23.59	22.59	23.59	19.65	22.04	22.83
15	25.26	25.37	25.63	25.26	25.53	23.64	23.76	22.33	23.15	20.96	22.61	23.14
20	25.49	25.42	25.36	25.21	25.55	23.67	23.95	22.97	23.41	22.30	22.07	23.33
25	25.30	25.58	25.27	25.45	25.50	23.89	24.03	23.15	23.83	22.52	23.46	23.06
EOM	25.52	25.33	25.18	25.40	25.43	23.87	24.06	23.10	24.08	22.82	23.58	22.27
MIN	25.18	25.25	25.18	24.82	25.18	23.47	23.58	22.27	23.15	19.65	21.20	22.03
WTR YR	2003	HIGH 19.65 JUL 10										

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	25.65	25.65	25.71	25.12	25.61	25.51	23.95	23.76	23.54	23.73	21.37	22.14
10	25.46	25.41	25.73	25.13	25.51	25.01	23.69	22.81	23.67	19.81	22.20	22.99
15	25.35	25.55	25.77	25.36	25.74	23.88	23.89	22.62	23.27	21.31	22.72	23.23
20	25.57	25.56	25.43	25.43	25.77	23.79	24.02	23.18	23.44	22.43	23.13	23.41
25	25.52	25.69	25.70	25.52	25.68	24.04	24.08	23.29	23.96	22.68	23.55	23.18
EOM	25.59	25.72	25.52	25.55	25.51	24.01	24.20	23.57	24.18	22.97	23.78	22.41
MAX	25.65	25.72	25.93	25.73	25.77	25.62	24.30	24.18	24.19	24.08	23.82	23.58
WTR YR	2003	LOW 25.93 DEC 3										



WHITE COUNTY

404914086403001. Local number, WT 4.

LOCATION.--Lat 40°49'14", long 86°40'30", in NW¹/₄SW¹/₄NW¹/₄ sec.5, T.27 N., R.2 W., White County, Hydrologic Unit 05120106, (IDAVILLE, IN quadrangle), 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 artesian 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.

REMARKS.--Water level affected by irrigation pumpage.

PERIOD OF RECORD.--July 1986 to October 2003 (discontinued).

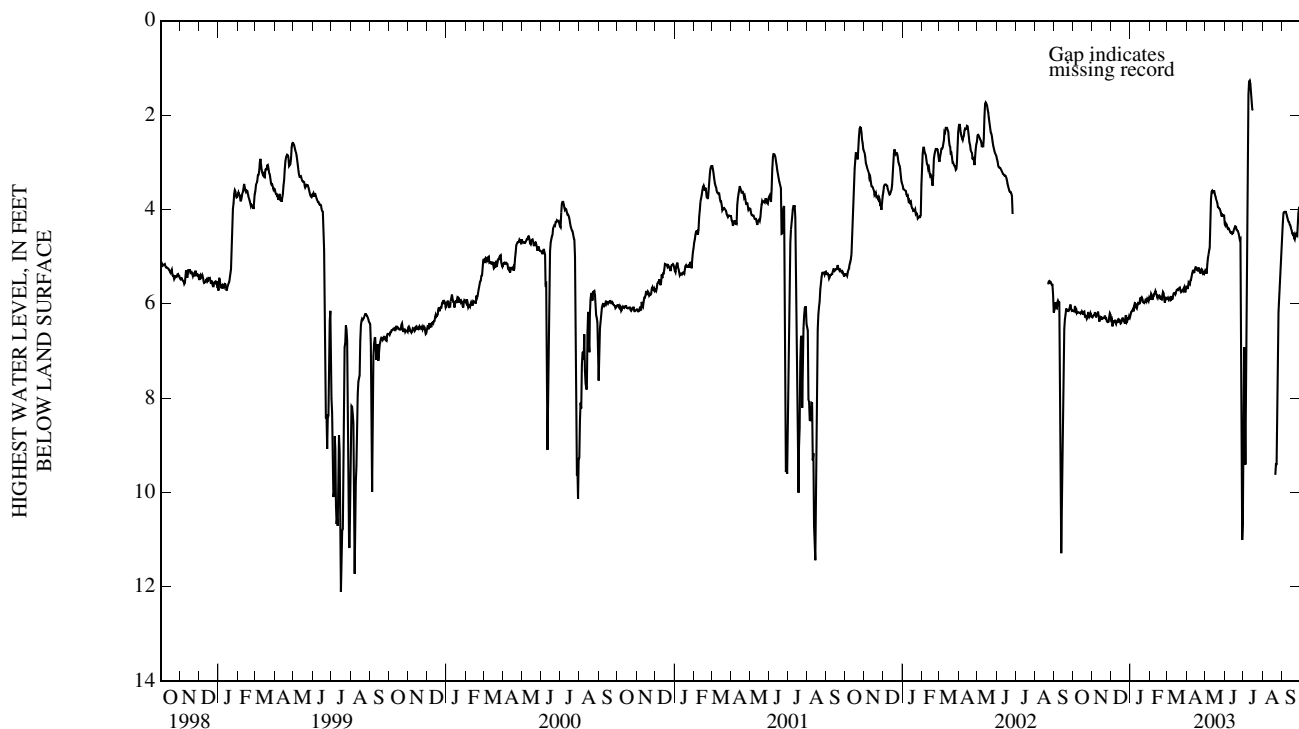
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 1.27 ft below land-surface datum, July 11, 2003; lowest, 13.66 ft below land-surface datum, Aug. 3, 1991.

HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.15	6.18	6.37	6.11	5.92	5.87	5.57	5.03	4.38	6.07	---	4.05
10	6.19	6.17	6.38	6.08	5.73	5.86	5.35	3.78	4.49	1.29	---	4.21
15	6.16	6.29	6.37	6.00	5.83	5.75	5.23	3.61	4.46	1.88	---	4.40
20	6.27	6.30	6.31	5.89	5.91	5.67	5.25	3.85	4.43	---	---	4.60
25	6.18	6.39	6.26	5.91	5.98	5.71	5.27	4.03	4.64	---	7.29	4.55
EOM	6.28	6.23	6.29	5.87	5.90	5.67	5.34	4.13	10.66	---	4.93	3.94
MIN	6.05	6.17	6.26	5.86	5.73	5.65	5.23	3.60	4.30	1.27	4.93	3.94
WTR YR	2003	HIGH 1.27 JUL 11										

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.23	6.32	6.42	6.16	5.96	5.93	5.71	5.16	4.43	10.63	---	4.08
10	6.21	6.26	6.43	6.13	5.83	5.91	5.42	4.25	4.53	1.57	---	4.27
15	6.20	6.38	6.43	6.03	5.92	5.80	5.30	3.68	4.51	1.91	---	4.44
20	6.31	6.36	6.37	5.96	5.95	5.72	5.30	3.95	4.47	---	---	4.66
25	6.29	6.42	6.39	5.97	6.01	5.75	5.30	4.09	4.67	---	7.83	4.59
EOM	6.31	6.41	6.32	5.95	5.94	5.77	5.40	4.31	11.90	---	5.16	3.96
MAX	6.34	6.42	6.53	6.32	6.01	5.98	5.71	5.39	11.90	10.66	10.16	4.93
WTR YR	2003	LOW 11.90 JUN 30										



WHITLEY COUNTY

410337085264201. Local number, WY 3.

LOCATION.--Lat 41°03'37", long 85°26'42", in NW¹/₄SE¹/₄NW¹/₄ sec.18, T.30 N., R.10 E., Whitley County, Hydrologic Unit 05120104, (LAUD, IN quadrangle), 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.

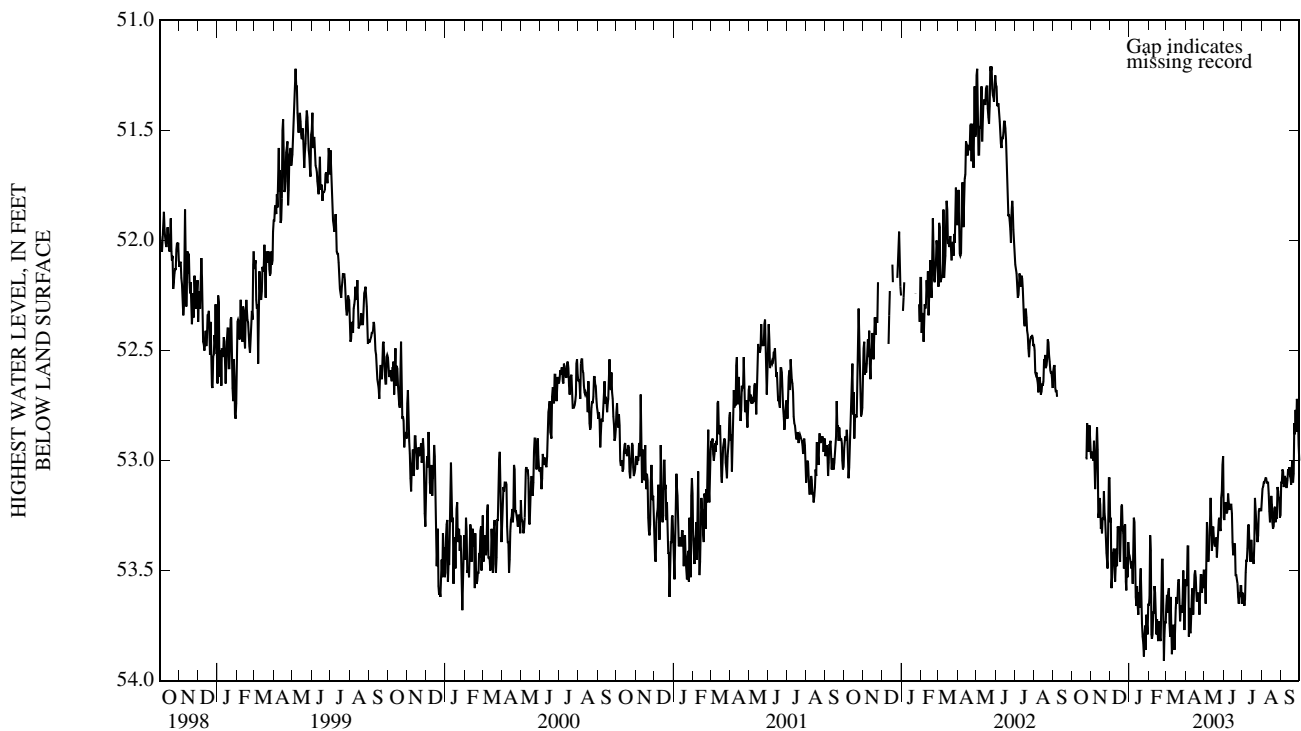
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 49.30 ft below land-surface datum, Mar. 27, 1976; lowest, 54.03 ft below land-surface datum, Mar. 13, 2003.

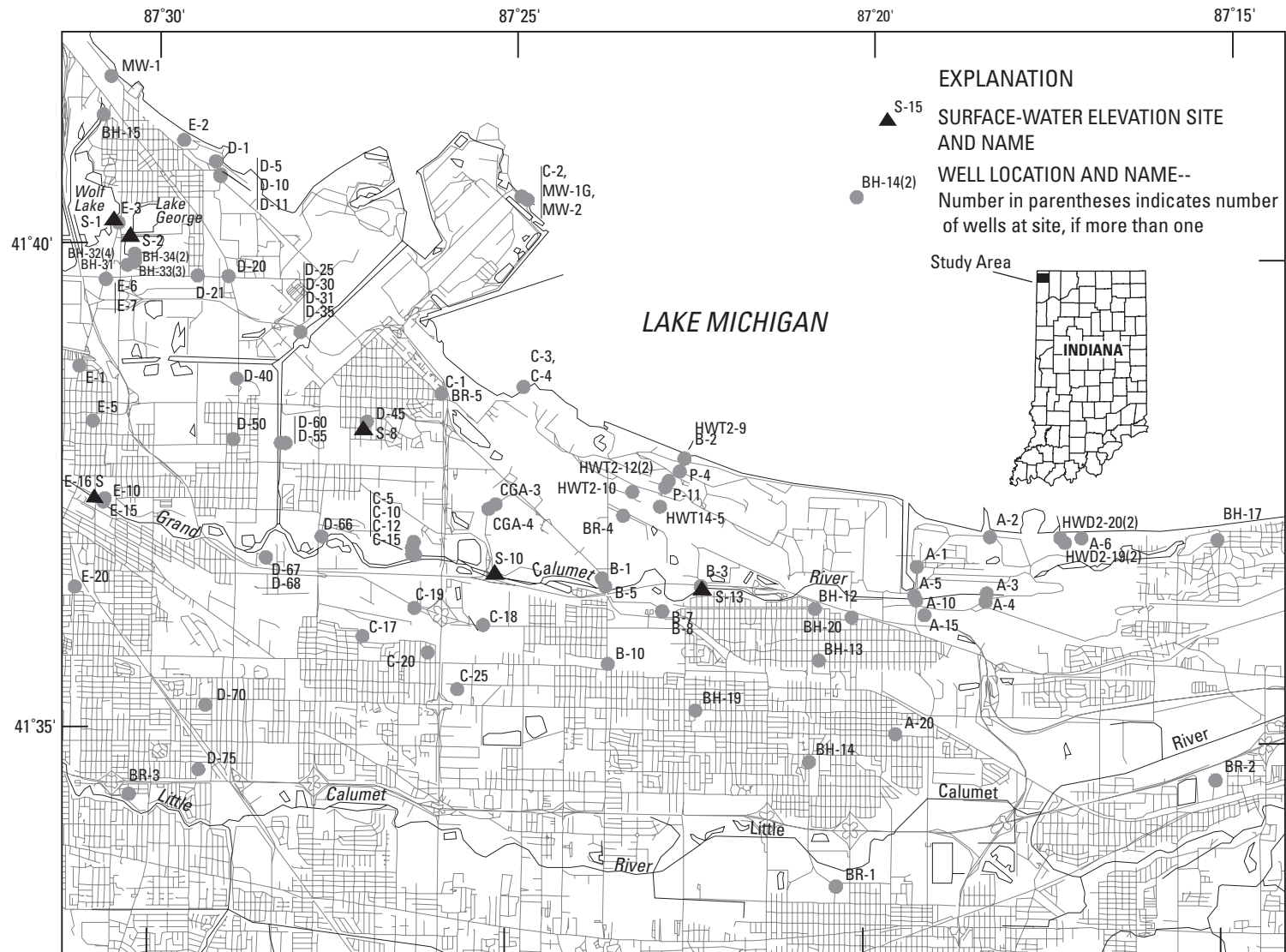
HIGHEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	52.91	53.43	53.46	53.79	53.58	53.39	53.28	53.23	53.63	53.10	53.12
10	---	52.85	53.46	53.44	53.57	53.88	53.69	53.28	53.22	53.30	53.10	53.12
15	---	53.20	53.30	53.70	53.78	53.76	53.52	53.30	53.37	53.36	53.23	53.07
20	---	53.27	53.20	53.58	53.82	53.55	53.61	53.35	53.52	53.38	53.30	53.10
25	52.83	53.42	53.29	53.79	53.91	53.66	53.52	53.26	53.65	53.37	53.26	52.87
EOM	52.97	53.08	53.42	53.65	53.74	53.68	53.50	52.98	53.65	53.23	53.25	53.00
MIN	52.83	52.85	53.20	53.26	53.34	53.50	53.39	52.98	53.15	53.17	53.08	52.72
WTR YR	2003	HIGH	52.72	SEP 26								

LOWEST WATER LEVEL, FEET BELOW LAND SURFACE
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	53.22	53.57	53.56	53.86	53.76	53.80	53.48	53.34	53.72	53.16	53.22
10	---	52.98	53.57	53.64	53.79	53.95	53.79	53.40	53.36	53.43	53.22	53.21
15	---	53.37	53.45	53.86	53.97	53.88	53.70	53.42	53.49	53.48	53.33	53.11
20	---	53.42	53.35	53.76	53.94	53.72	53.74	53.48	53.56	53.51	53.36	53.20
25	53.03	53.53	53.55	53.89	53.96	53.75	53.59	53.34	53.78	53.47	53.36	52.99
EOM	53.06	53.42	53.57	53.86	53.85	53.84	53.68	53.26	53.76	53.32	53.36	53.03
MAX	53.08	53.56	53.74	53.99	53.97	54.03	53.89	53.78	53.78	53.74	53.40	53.25
WTR YR	2003	LOW	54.03	MAR 13								





Base from U.S. Geological Survey digital data, 1:100,000, 1983
 Albers Equal-Area Conic projection
 Standard parallels 29°30' and 45°30' central meridian -86°

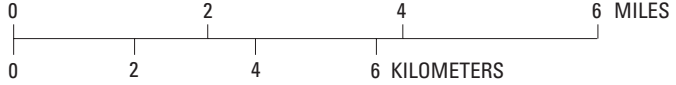


Figure 10.--Locations of wells in the Northern Lake County network.

MISCELLANEOUS PROJECT DATA

GROUND-WATER AND SURFACE-WATER LEVELS IN NORTHERN LAKE COUNTY, IN

The following tables (1-5) list characteristics of water wells, surface-water-stage measurement sites, and results of miscellaneous measurements of ground-water level and surface-water stage in Northern Lake County, Indiana. Data presented here have been collected periodically since 1985 to provide a base of information to evaluate ground-water-flow directions and ground-water/surface-water interactions. Locations of wells and surface-water sites are shown in figure 10.

Table 1. Characteristics of observation wells in the Northern Lake County network.

USGS, U.S. Geological Survey; Auger, hollow-stem auger; SS, stainless steel; CA, Calumet aquifer; USEPA, U.S. Environmental Protection Agency; PVC, polyvinyl chloride; n.a., not applicable; ?, not known; GAA, Gary Airport Authority; USX, USX Corporation; ISPAT, ISPAT Inland Incorporated.

Well name	Well owner	Latitude/longitude	USGS site identifier	Date drilled (month-year)	Method of installation	Land surface, in feet above sea level	Open interval, in feet below land surface	Screen and casing material	Aquifer and relative vertical position of open interval in aquifer
A-1	USGS	41°36' 47"/87°19' 19"	413647087191901	07-85	Auger	604	18-21	SS 304	CA Top
A-2	USGS	41°37' 06"/87°18' 18"	413706087181800	06-87	Auger	603	34-39	SS 316L	CA Middle
A-3	USGS	41°36' 31"/87°18' 20"	413631087182000	06-87	Hand driven	590	3-6	SS 316L	CA Top
A-4	USGS	41°36' 30"/87°18' 16"	413630087182100	06-87	Auger	603	18-23	SS 316L	CA Middle
A-5	USGS	41°36' 29"/87°19' 21"	413629087192102	12-85	Auger	601	18-21	SS 304	CA Top
A-6	USGS	41°37' 06"/87°17' 01"	413706087170101	06-87	Hand driven	588	4-7	SS 316L	CA Top
A-10	USGS	41°36' 26"/87°19' 19"	413626087191901	07-85	Hand driven	590	12-15	SS 304	CA Top
A-15	USGS	41°36' 17"/87°19' 12"	413617087191201	07-85	Hand driven	591	2-5	SS 304	CA Top
A-20	USGS	41°35' 03"/87°19' 35"	413503087193501	12-85	Auger	614	21-24	SS 304	CA Top
B-1	USGS	41°36' 37"/87°23' 43"	413637087234301	08-85	Hand driven	585	9-12	SS 304	CA Top
B-2	USGS	41°37' 52"/87°22' 35"	413752087223500	06-87	Auger	608	43-48	SS 316L	CA Middle
B-3	USGS	41°36' 33"/87°22' 20"	413633087222000	06-87	Auger	594	18-23	SS 316L	CA Middle
B-5	USGS	41°36' 32"/87°23' 40"	413632087234001	08-85	Hand driven	589	8-11	SS 304	CA Top
B-7	USGS	41°36' 16"/87°22' 51"	413617087225202	06-87	Hand driven	596	8-11	SS 316L	CA Top
B-8	USGS	41°36' 17"/87°22' 51"	413617087225201	06-87	Auger	596	32-37	SS 316L	CA Bottom
B-10	USGS	41°35' 44"/87°23' 37"	413544087233700	12-85	Auger	607	17-20	SS 304	CA Top
BH-12	USEPA	41°36' 20"/87°20' 44"	413620087204401	06-92	Mud rotary	601	10-20	PVC	CA Top
BH-13	USEPA	41°35' 48"/87°20' 40"	413548087204001	06-92	Mud rotary	603	9-19	PVC	CA Top
BH-14	USEPA	41°34' 45"/87°20' 47"	413445087204701	06-92	Mud rotary	610	9-19	PVC	CA Top
BH-15	USEPA	41°41' 20"/87°30' 47"	414120087304701	06-92	Mud rotary	585	10-15	PVC	CA Top

MISCELLANEOUS PROJECT DATA

GROUND-WATER AND SURFACE-WATER LEVELS IN NORTHERN LAKE COUNTY, IN--Continued

Table 1. Characteristics of observation wells in the Northern Lake County network.--Continued

Well name	Well owner	Latitude/longitude	USGS site identifier	Date drilled (month-year)	Method of installation	Land surface, in feet above sea level	Open interval, in feet below land surface	Screen and casing material	Aquifer and relative vertical position of open interval in aquifer
BH-17	USEPA	41°37' 06"/87°15' 07"	413706087150701	06-92	Mud rotary	599	10-20	PVC	CA Top
BH-19	USEPA	41°35' 16"/87°22' 23"	413516087222301	06-92	Mud rotary	602	10-20	PVC	CA Top
BH-20	USEPA	41°36' 15"/87°20' 13"	413615087201301	06-92	Mud rotary	600	14-24	PVC	CA Top
BH-31	USEPA	41°39' 47"/87°30' 25"	413947087302501	04-93	Mud rotary	598	18-28	PVC	CA Top
BH-32-D	USGS	41°39' 49"/87°30' 19"	413949087301901	07-96	Auger	597	36-38.5	PVC	CA Bottom
BH-32-I	USGS	41°39' 49"/87°30' 19"	413949087301902	07-96	Auger	597	26.4-28.9	PVC	CA Middle
BH-32-SH	USGS	41°39' 49"/87°30' 19"	413949087301903	07-96	Auger	597	21.6-23.1	PVC	CA Top
BH-32-SL	USGS	41°39' 49"/87°30' 19"	413949087301904	07-96	Auger	597	7.4-19.9	PVC	Slag Bottom
BH-33-I	USGS	41°39' 51"/87°30' 19"	413951087301901	07-96	Auger	585	11.5-14	PVC	CA Middle
BH-33-SH	USGS	41°39' 51"/87°30' 19"	413951087301902	07-96	Auger	585	7.6-10.1	PVC	CA Top
BH-33-SL	USGS	41°39' 51"/87°30' 19"	413951087301903	07-96	Auger	585	2.5-5	PVC	Slag Bottom
BH-34-D	USGS	41°39' 54"/87°30' 19"	413954087301901	07-96	Hand driven	580	4.4-6.4	PVC	CA Top
BH-34-SH	USGS	41°39' 54"/87°30' 19"	413954087301902	07-96	Hand driven	581	1.8-3.8	PVC	Slag Bottom
BR-1	USGS	41°33' 28"/87°20' 24"	413328087202301	12-93	Mud rotary	595	135-145	PVC	Devonian
BR-2	USGS	41°34' 37"/87°15' 06"	413437087150601	12-93	Mud rotary	600	136-146	PVC	Silurian
BR-3	USGS	41°34' 19"/87°30' 17"	413419087301701	11-94	Mud rotary	595	137-147	PVC	Silurian
BR-4	USGS	41°37' 17"/87°23' 26"	413716087232601	11-94	Mud rotary	595	138-148	PVC	Silurian
BR-5	USEPA	41°37' 32"/87°25' 58"	413732087255801	06-95	Mud rotary	587	146-156	PVC	Silurian
C-1	USGS	41°38' 30"/87°26' 00"	413830087260000	12-85	Auger	587	4-7	SS 304	CA Top
C-2	USGS	41°40' 30"/87°24' 51"	414031087245000	06-87	Auger	594	13-18	SS 316L	CA Top
C-3	USGS	41°38' 27"/87°25' 16"	413828087251301	06-87	Auger	589	23-28	SS 316L	CA Middle
C-4	USGS	41°38' 27"/87°25' 16"	413828087251302	06-87	Auger	589	8-13	SS 316L	CA Top
C-5	USGS	41°36' 55"/87°26' 20"	413655087275202	07-85	Hand driven	584	2-5	SS 304	CA Top
C-10	USGS	41°36' 50"/87°26' 20"	413652087274901	07-85	Hand driven	584	1-4	SS 304	CA Top
C-12	USGS	41°36' 50"/87°26' 20"	413650087262000	06-87	Auger	584	13-18	SS 316L	CA Middle

MISCELLANEOUS PROJECT DATA

GROUND-WATER AND SURFACE-WATER LEVELS IN NORTHERN LAKE COUNTY, IN--Continued

Table 1. Characteristics of observation wells in the Northern Lake County network.--Continued

Well name	Well owner	Latitude/longitude	USGS site identifier	Date drilled (month-year)	Method of installation	Land surface, in feet above sea level	Open interval, in feet below land surface	Screen and casing material	Aquifer and relative vertical position of open interval in aquifer
C-15	USGS	41°36' 48"/87°26' 20"	413650087274802	07-85	Hand driven	583	1-4	SS 304	CA Top
C-17	USGS	41°35' 59"/87°27' 03"	413559087270301	07-86	Mud rotary	592	18-23	?	CA Bottom
C-18	USGS	41°36' 07"/87°25' 22"	413607087252200	06-87	Auger	595	17-22	SS 316L	CA Bottom
C-19	USGS	41°36' 17"/87°26' 20"	413617087262001	12-86	Hand driven	592	2-5	SS 304	CA Top
C-20	USGS	41°35' 57"/87°26' 11"	413557087283901	07-85	Hand driven	593	3-6	SS 304	CA Top
C-25	USGS	41°35' 27"/87°25' 43"	413527087270301	07-85	Hand driven	599	2-5	SS 304	CA Top
CGA-3	GAA	41°37' 22"/87°25' 13"	413722087251301	pre-1985	?	590	?	PVC	CA ?
CGA-4	GAA	41°37' 19"/87°25' 19"	413719087251901	pre-1985	?	591	?	PVC	CA ?
D-1	USGS	41°40' 52"/87°29' 12"	414052087291201	07-85	Hand driven	590	8-11	SS 304	CA Top
D-5	USGS	41°40' 44"/87°29' 08"	414044087290801	07-85	Hand driven	588	2-7	SS 304	CA Top
D-10	USGS	41°40' 43"/87°29' 08"	414043087290802	07-85	Hand driven	588	7-10	SS 304	CA Top
D-11	USGS	41°40' 43"/87°29' 08"	414043087290801	06-87	Auger	588	17-22	SS 316L	CA Middle
D-20	USGS	41°39' 41"/87°29' 00"	413941087290000	07-85	Hand	588	6-9	SS 304	CA Top
D-21	USGS	41°39' 41"/87°29' 26"	413941087292600	06-87	Auger	584	13-18	SS 316L	CA Middle
D-25	USGS	41°39' 09"/87°28' 03"	413804087291102	07-85	Hand driven	588	5-8	SS 304	CA Top
D-30	USGS	41°39' 07"/87°27' 58"	413758087290702	07-85	Hand driven	586	6-9	SS 304	CA Top
D-31	USGS	41°39' 07"/87°27' 58"	413907087275901	06-87	Auger	586	12-17	SS 316L	CA Middle
D-35	USGS	41°39' 06"/87°27' 57"	413757087290601	07-85	Hand driven	586	4-7	SS 304	CA Top
D-40	USGS	41°38' 35"/87°28' 51"	413835087245101	07-85	Hand driven	584	4-7	SS 304	CA Top
D-45	USGS	41°38' 12"/87°27' 02"	413812087270201	07-85	Hand driven	586	6-9	SS 304	CA Top
D-50	USGS	41°38' 00"/87°28' 54"	413800087285401	12-85	Hand driven	585	9-12	SS 304	CA Top
D-55	USGS	41°37' 58"/87°28' 14"	413758087281401	07-85	Hand driven	585	5-8	SS 304	CA Top
D-60	USGS	41°37' 58"/87°28' 10"	413758087281001	07-85	Hand driven	587	5-8	SS 304	CA Top
D-66	USGS	41°36' 54"/87°27' 40"	413654087274000	06-87	Auger	587	17-22	SS 316L	CA Middle
D-67	USGS	41°36' 47"/87°28' 25"	413647087282502	06-87	Hand driven	589	4-7	SS 316L	CA Top

MISCELLANEOUS PROJECT DATA

GROUND-WATER AND SURFACE-WATER LEVELS IN NORTHERN LAKE COUNTY, IN--Continued

Table 1. Characteristics of observation wells in the Northern Lake County network.--Continued

Well name	Well owner	Latitude/longitude	USGS site identifier	Date drilled (month-year)	Method of installation	Land surface, in feet above sea level	Open interval, in feet below land surface	Screen and casing material	Aquifer and relative vertical position of open interval in aquifer
D-68	USGS	41°36' 47"/87°28' 25"	413647087282501	06-87	Auger	589	18-23	SS 316L	CA Middle
D-70	USGS	41°35' 15"/87°29' 15"	413515087291401	07-85	Hand driven	603	6-9	SS 304	CA Top
D-75	USGS	41°34' 34"/87°29' 19"	413435087291901	07-85	Hand driven	601	5-8	SS 304	CA Top
E-1	USGS	41°38' 44"/87°31' 04"	413844087310401	07-85	Hand driven	582	5-8	SS 304	CA Top
E-2	USGS	41°41' 05"/87°29' 39"	414105087293900	06-87	Hand driven	585	3-6	SS 316L	CA Top
E-3	USGS	41°40' 13"/87°30' 33"	414013087303300	06-87	Auger	585	8-13	SS 316L	CA Middle
E-5	USGS	41°38' 10"/87°30' 52"	413810087305201	07-85	Hand driven	587	9-12	SS 304	CA Top
E-6	USGS	41°39' 38"/87°30' 43"	413938087304301	06-87	Auger	586	17-22	SS 316L	CA Bottom
E-7	USGS	41°39' 38"/87°30' 43"	413938087304302	06-87	Hand driven	586	2-5	SS 316L	CA Top
E-10	USGS	41°37' 22"/87°30' 41"	413722087304101	07-85	Hand driven	586	6-9	SS 304	CA Top
E-15	USGS	41°37' 20"/87°30' 42"	413720087 304201	07-85	Hand driven	584	11-14	SS 304	CA Top
E-20	USGS	41°36' 27"/87°31' 05"	413627087310500	07-85	Hand driven	592	5-8	SS 304	CA Top
HWD2-19D	USX	41°37' 06"/87°17' 19"	413706087171901	12-93	Auger	598	47-57	PVC	CA Bottom
HWD2-19S	USX	41°37' 06"/87°17' 19"	413706087171902	12-93	Auger	598	6-21	PVC	CA Top
HWD2-20D	USX	41°37' 03"/87°17' 15"	413703087171501	12-93	Auger	617	62-72	PVC	CA Middle
HWD2-20S	USX	41°37' 03"/87°17' 15"	413703087171502	12-93	Auger	617	23-38	PVC	CA Middle
HWT2-9	USX	41°37' 52"/87°22' 35"	413752087223501	04-84	Auger	608	50-70	PVC	Slag + CA
HWT2-10	USX	41°37' 32"/87°23' 22"	413732087232201	04-84	Auger	589	24-44	PVC	CA Top
HWT2-12D	USX	41°37' 38"/87°22' 48"	413738087224803	03-91	Auger	600	49-59	PVC	CA Bottom
HWT2-12S	USX	41°37' 38"/87°22' 48"	413738087224801	03-91	Auger	601	14-29	PVC	Slag and CA
HWT14-05	USX	41°37' 22"/87°22' 55"	413722087225501	04-84	Auger	589	37-47	PVC	CA Bottom
P-4	USX	41°37' 44"/87°22' 39"	413744087223901	04-84	Auger	603	25-35	PVC	Slag
P-11	USX	41°37' 34"/87°22' 51"	413734087225101	04-84	Auger	596	15-25	PVC	CA Top
MW-1	USEPA	41°41' 44"/87°30' 41"	414144087304101	?	Auger	591	21-24	SS 304	CA Bottom
MW1G	ISPAT	41°40' 33"/87°24' 55"	414033087245501	?	Drilled	594	?-13	PVC	Slag
MW-02	ISPAT	41°40' 33"/87°24' 55"	414033087245502	?	Drilled	594	?-124	PVC	Silurian

¹ This well also is known as LK-13, a continuous recording water-level well operated by the USGS as part of a statewide ground-water-data network. Water levels for LK-13 are published in the U.S. Geological Survey water data reports, IN-87-1 to IN-02-1, and on page 534 of this report.

MISCELLANEOUS PROJECT DATA

GROUND-WATER AND SURFACE-WATER LEVELS IN NORTHERN LAKE COUNTY, IN--Continued

Table 2. Period of record for observation wells in the Northern Lake County network.

Well name	Period of Record		Well name	Period of Record	
	Beginning (month-year)	End (month-year)		Beginning (month-year)	End (month-year)
A-1	10-1985	07-2003	C-19	12-1986	04-2003
A-2	06-1987	07-2003	C-20	08-1985	04-2003
A-3	06-1987	03-1998	C-25	12-1985	07-2003
A-4	06-1987	07-2003	CGA-3	10-1985	03-1999
A-5	12-1985	07-2003	CGA-4	10-1985	08-1999
A-06	07-1987	07-2003	D-1	08-1985	07-2003
A-10	10-1985	07-2003	D-5	08-1985	07-2003
A-15	10-1985	07-2003	D-10	08-1985	07-2003
A-20	01-1986	07-2003	D-11	06-1987	07-2003
B-1	08-1985	09-1999	D-20	08-1985	01-1995
B-2	06-1987	07-2003	D-21	07-1987	07-2003
B-3	07-1987	06-2000	D-25	12-1985	07-2003
B-5	08-1985	07-2003	D-30	12-1985	07-2003
B-7	06-1987	07-2003	D-31	07-1987	07-2003
B-8	07-1987	07-2003	D-35	12-1985	06-2001
B-10	12-1985	07-2003	D-40	10-1985	07-2003
BH-12	06-1992	07-2003	D-45	10-1985	07-2003
BH-13	06-1992	07-2003	D-50	12-1985	07-2003
BH-14	06-1992	07-2003	D-55	10-1985	01-1995
BH-15	06-1992	07-2003	D-60	10-1985	07-2003
BH-17	06-1992	07-2003	D-66	07-1987	07-2003
BH-19	06-1992	07-2003	D-67	07-1987	07-2003
BH-20	06-1992	09-1998	D-68	07-1987	07-2003
BH-31	04-1993	09-1998	D-70	01-1986	07-2003
BH-32-D	07-1996	09-2001	D-75	01-1986	07-2003
BH-32-I	07-1996	09-2001	E-1	12-1985	07-2003
BH-32-SH	07-1996	09-2001	E-2	06-1987	07-2003
BH-32-SL	07-1996	09-2001	E-3	06-1987	07-2003
BH-33-I	07-1996	07-2003	E-5	08-1985	07-2003
BH-33-SH	07-1996	07-2003	E-6	06-1987	07-2003
BH-33-SL	07-1996	07-2003	E-7	06-1987	07-2003
BH-34-D	06-1996	07-1998	E-10	10-1985	07-2003
BH-34-SH	06-1996	07-1998	E-15	10-1985	07-2003
BR-1	01-1995	07-2003	E-20	08-1985	07-2003
BR-2	01-1995	07-2003	HWD2-19D	07-1995	07-2003
BR-3	07-1995	07-2003	HWD2-19S	07-1995	07-2003
BR-4	07-1995	07-2003	HWD2-20D	07-1996	07-2003
BR-5	07-1995	07-2003	HWD2-20S	07-1996	07-2003
C-1	12-1985	07-2003	HWT2-9	12-1985	07-2003
C-2	07-1987	07-2003	HWT2-10	12-1985	12-1997
C-3	06-1987	07-2003	HWT2-12D	12-1992	12-1998
C-4	06-1987	07-2003	HWT2-12S	06-1992	12-1998
C-5	10-1985	07-2003	HWT14-5	12-1985	07-2003
C-10	10-1985	07-2003	P-4	12-1985	07-2003
C-12	08-1987	07-2003	P-11	10-1985	07-2003
C-15	10-1985	03-1998	MW-1	06-1992	07-2003
C-17	07-1986	09-2001	MW-1G	10-1992	07-2003
C-18	06-1987	06-2000	MW-2	10-1992	09-2002

MISCELLANEOUS PROJECT DATA

GROUND-WATER AND SURFACE-WATER LEVELS IN NORTHERN LAKE COUNTY, IN--Continued

Table 3. Water-level records for observation wells in the Northern Lake County network, collected during water year 2003 and summary statistics.

SITE ID NUMBER: 413647087191901

STATION NAME: USGS WELL A-1 @ USX NR. BOAT SLIP, GARY, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL
APR 10	20.04	JUL 09	19.52

WATER YEAR 2003	HIGHEST	19.52	JUL 09, 2003	LOWEST	20.04	APR 10, 2003
PERIOD OF RECORD	HIGHEST	15.72	SEP 08, 1993	LOWEST	20.12	MAR 29, 2000
				RECORD AVAILABLE FROM	OCT 24, 1985	TO JUL 09, 2003
					60	ENTRIES

SITE ID NUMBER: 413706087181800

STATION NAME: USGS WELL A-2 @ USX, NR. LAKE, GARY, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL
APR 10	19.42	JUL 09	18.35

WATER YEAR 2003	HIGHEST	18.35	JUL 09, 2003	LOWEST	19.42	APR 10, 2003
PERIOD OF RECORD	HIGHEST	14.83	SEP 08, 1993	LOWEST	19.42	APR 10, 2003
				RECORD AVAILABLE FROM	JUN 26, 1987	TO JUL 09, 2003
					49	ENTRIES

SITE ID NUMBER: 413629087192102

STATION NAME: USGS WELL A-5 @ USX, N OF GCR, @ GARY HARBOR

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL
APR 10	15.44	JUL 09	14.78

WATER YEAR 2003	HIGHEST	14.78	JUL 09, 2003	LOWEST	15.44	APR 10, 2003
PERIOD OF RECORD	HIGHEST	13.64	SEP 08, 1993	JUN 29, 2000	LOWEST	15.63
				RECORD AVAILABLE FROM	DEC 17, 1985	TO JUL 09, 2003
					55	ENTRIES

SITE ID NUMBER: 413706087170101

STATION NAME: USGS WELL A-6, E OF USX IN DUNES NAT LKSH, GARY, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL
APR 07	4.70	JUL 07	3.80

WATER YEAR 2003	HIGHEST	3.80	JUL 07, 2003	LOWEST	4.70	APR 07, 2003
PERIOD OF RECORD	HIGHEST	2.65	JUN 10, 1993	LOWEST	4.86	OCT 12, 1988
				RECORD AVAILABLE FROM	JUL 14, 1987	TO JUL 07, 2003
					29	ENTRIES

MISCELLANEOUS PROJECT DATA

GROUND-WATER AND SURFACE-WATER LEVELS IN NORTHERN LAKE COUNTY, IN--Continued

Table 3. Water-level records for observation wells in the Northern Lake County network, collected during water year 2003 and summary statistics.--Continued

SITE ID NUMBER: 413626087191901

STATION NAME: USGS WELL A-10 @ USX, N OF GCR, @ GARY HARBOR

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL			
APR 10	5.09	JUL 09	3.96			
WATER YEAR 2003	HIGHEST	3.96	JUL 09, 2003	LOWEST	5.09	APR 10, 2003
PERIOD OF RECORD	HIGHEST	3.89	JUN 26, 1987	LOWEST	5.77	AUG 29, 2000
		RECORD AVAILABLE FROM OCT 24, 1985 TO JUL 09, 2003				53 ENTRIES

SITE ID NUMBER: 413617087191201

STATION NAME: USGS WELL A15 @ GARY, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM (READINGS ABOVE LAND-SURFACE INDICATED BY "+")

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL			
APR 07	1.49	JUL 07	.73			
WATER YEAR 2003	HIGHEST	.73	JUL 07, 2003	LOWEST	1.49	APR 07, 2003
PERIOD OF RECORD	HIGHEST	+ .99	MAR 19, 1991	LOWEST	1.73	JAN 03, 2000
		RECORD AVAILABLE FROM OCT 24, 1985 TO APR 07, 2003				57 ENTRIES

SITE ID NUMBER: 413503087193501

STATION NAME: USGS WELL A20 @ GARY, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL			
APR 07	18.40	JUL 07	17.92			
WATER YEAR 2003	HIGHEST	17.92	JUL 07, 2003	LOWEST	18.40	APR 07, 2003
PERIOD OF RECORD	HIGHEST	17.32	JUL 12, 1996	JUL 01, 1997	LOWEST	19.07 MAR 06, 1986
		RECORD AVAILABLE FROM JAN 03, 1986 TO JUL 07, 2003				65 ENTRIES

SITE ID NUMBER: 413752087223500

STATION NAME: USGS WELL B2 @ USXBY HWT-2-9 @ GARY, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL			
APR 10	29.04	JUL 09	28.88			
WATER YEAR 2003	HIGHEST	28.88	JUL 09, 2003	LOWEST	29.04	APR 10, 2003
PERIOD OF RECORD	HIGHEST	25.92	JUN 25, 1987	LOWEST	29.53	MAR 29, 2000
		RECORD AVAILABLE FROM JUN 25, 1987 TO JUL 09, 2003				48 ENTRIES

MISCELLANEOUS PROJECT DATA

GROUND-WATER AND SURFACE-WATER LEVELS IN NORTHERN LAKE COUNTY, IN--Continued

Table 3. Water-level records for observation wells in the Northern Lake County network, collected during water year 2003 and summary statistics.--Continued

SITE ID NUMBER: 413632087234001
STATION NAME: USGS WELL B5 AT GARY, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL			
APR 09	5.55	JUL 08	5.10			
WATER YEAR 2003	HIGHEST	5.10	JUL 08, 2003	LOWEST	5.55	APR 09, 2003
PERIOD OF RECORD	HIGHEST	2.77	JUN 09, 1993	LOWEST	7.66	OCT 11, 1988
		RECORD AVAILABLE FROM AUG 28, 1985 TO JUL 08, 2003				68 ENTRIES

SITE ID NUMBER: 413617087225202
STATION NAME: USGS WELL B7 SHALLOW @ CHASE ST. @ GARY, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL			
APR 07	9.56	JUL 07	8.59			
WATER YEAR 2003	HIGHEST	8.59	JUL 07, 2003	LOWEST	9.56	APR 07, 2003
PERIOD OF RECORD	HIGHEST	6.84	JUN 09, 1993	LOWEST	9.56	APR 07, 2003
		RECORD AVAILABLE FROM JUN 22, 1987 TO JUL 07, 2003				52 ENTRIES

SITE ID NUMBER: 413617087225201
STATION NAME: USGS WELL B8 DEEP @ CHASE ST. @ GARY, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL			
APR 07	9.57	JUL 07	8.61			
WATER YEAR 2003	HIGHEST	8.61	JUL 07, 2003	LOWEST	9.57	APR 07, 2003
PERIOD OF RECORD	HIGHEST	6.88	JUN 09, 1993	LOWEST	9.57	APR 07, 2003
		RECORD AVAILABLE FROM JUL 14, 1987 TO JUL 07, 2003				53 ENTRIES

SITE ID NUMBER: 413544087233700
STATION NAME: USGS WELL B10 @ BRUNSWICK @ GARY, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL			
APR 08	15.16	JUL 08	13.92			
WATER YEAR 2003	HIGHEST	13.92	JUL 08, 2003	LOWEST	15.16	APR 08, 2003
PERIOD OF RECORD	HIGHEST	11.47	MAR 20, 1991	LOWEST	15.16	APR 08, 2003
		RECORD AVAILABLE FROM DEC 10, 1985 TO JUL 08, 2003				66 ENTRIES

MISCELLANEOUS PROJECT DATA

GROUND-WATER AND SURFACE-WATER LEVELS IN NORTHERN LAKE COUNTY, IN--Continued

Table 3. Water-level records for observation wells in the Northern Lake County network, collected during water year 2003 and summary statistics.--Continued

SITE ID NUMBER: 413620087204401

STATION NAME: USEPA WELL BH-12 AT GARY, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL			
APR 07	13.17	JUL 07	12.47			
WATER YEAR 2003	HIGHEST	12.47	JUL 07, 2003	LOWEST	13.17	APR 07, 2003
PERIOD OF RECORD	HIGHEST	10.80	SEP 08, 1993	LOWEST	13.27	MAR 28, 1996
		RECORD AVAILABLE FROM JUN 23, 1992 TO JUL 07, 2003				33 ENTRIES

SITE ID NUMBER: 413548087204001

STATION NAME: USEPA WELL BH-13 AT GARY, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL			
APR 07	11.24	JUL 07	10.53			
WATER YEAR 2003	HIGHEST	10.53	JUL 07, 2003	LOWEST	11.24	APR 07, 2003
PERIOD OF RECORD	HIGHEST	9.61	MAR 24, 1998	LOWEST	11.29	SEP 03, 2002
		RECORD AVAILABLE FROM JUN 23, 1992 TO JUL 07, 2003				34 ENTRIES

SITE ID NUMBER: 413445087204701

STATION NAME: USEPA WELL BH-14 AT GARY, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL			
APR 08	7.80	JUL 07	6.75			
WATER YEAR 2003	HIGHEST	6.75	JUL 07, 2003	LOWEST	7.80	APR 08, 2003
PERIOD OF RECORD	HIGHEST	2.59	JUL 12, 1996	LOWEST	9.49	MAR 27, 2000
		RECORD AVAILABLE FROM JUN 23, 1992 TO JUL 07, 2003				32 ENTRIES

SITE ID NUMBER: 414120087304701

STATION NAME: USEPA WELL BH-15 AT HAMMOND, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL			
APR 09	2.30	JUL 08	2.50			
WATER YEAR 2003	HIGHEST	2.30	APR 09, 2003	LOWEST	2.50	JUL 08, 2003
PERIOD OF RECORD	HIGHEST	1.28	MAR 29, 1996	LOWEST	2.50	JUL 08, 2003
		RECORD AVAILABLE FROM JUN 23, 1992 TO JUL 08, 2003				32 ENTRIES

MISCELLANEOUS PROJECT DATA

GROUND-WATER AND SURFACE-WATER LEVELS IN NORTHERN LAKE COUNTY, IN--Continued

Table 3. Water-level records for observation wells in the Northern Lake County network, collected during water year 2003 and summary statistics.--Continued

 SITE ID NUMBER: 413706087150701
 STATION NAME: USEPA WELL BH-17 AT GARY, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL		WATER LEVEL
OCT 16	12.88	APR 07	13.19	JUL 07	12.07
WATER YEAR 2003	HIGHEST	12.07	JUL 07, 2003	LOWEST	13.19 APR 07, 2003
PERIOD OF RECORD	HIGHEST	10.00	SEP 08, 1993	LOWEST	13.23 OCT 11, 2001
		RECORD AVAILABLE FROM JUN 23, 1992 TO JUL 07, 2003 36 ENTRIES			

 SITE ID NUMBER: 413516087222301
 STATION NAME: USEPA WELL BH-19 AT GARY, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL		WATER LEVEL
APR 07	11.34	JUL 07	12.00		
WATER YEAR 2003	HIGHEST	11.34	APR 07, 2003	LOWEST	12.00 JUL 07, 2003
PERIOD OF RECORD	HIGHEST	6.03	MAR 25, 2002	LOWEST	12.00 JUL 07, 2003
		RECORD AVAILABLE FROM JUN 23, 1992 TO JUL 07, 2003 21 ENTRIES			

 SITE ID NUMBER: 413951087301901
 STATION NAME: USGS WELL BH-33-I @ BAIRSTOW SLAG DUMP

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL		WATER LEVEL
APR 09	1.90	JUL 08	3.14		
WATER YEAR 2003	HIGHEST	1.90	APR 09, 2003	LOWEST	3.14 JUL 08, 2003
PERIOD OF RECORD	HIGHEST	1.07	JUN 05, 2001	LOWEST	5.73 JUN 24, 1997
		RECORD AVAILABLE FROM JUL 17, 1996 TO JUL 08, 2003 20 ENTRIES			

 SITE ID NUMBER: 413951087301902
 STATION NAME: USGS WELL BH-33-SH @ BAIRSTOW SLAG DUMP

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL		WATER LEVEL
APR 09	1.75	JUL 08	2.99		
WATER YEAR 2003	HIGHEST	1.75	APR 09, 2003	LOWEST	2.99 JUL 08, 2003
PERIOD OF RECORD	HIGHEST	1.53	JUL 31, 1996	LOWEST	4.66 JUN 24, 1997
		RECORD AVAILABLE FROM JUL 17, 1996 TO JUL 08, 2003 18 ENTRIES			

MISCELLANEOUS PROJECT DATA

GROUND-WATER AND SURFACE-WATER LEVELS IN NORTHERN LAKE COUNTY, IN--Continued

Table 3. Water-level records for observation wells in the Northern Lake County network, collected during water year 2003 and summary statistics.--Continued

SITE ID NUMBER: 413951087301903

STATION NAME: USGS WELL BH-33-SL @ BAIRSTOW SLAG DUMP

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL				
APR 09	1.56	JUL 08	2.81				
WATER YEAR 2003	HIGHEST	1.56	APR 09, 2003	LOWEST	2.81	JUL 08, 2003	
PERIOD OF RECORD	HIGHEST	1.27	JUL 31, 1996	LOWEST	4.59	JUN 24, 1997	
		RECORD AVAILABLE FROM JUL 17, 1996 TO JUL 08, 2003				18 ENTRIES	

SITE ID NUMBER: 413328087202301

STATION NAME: USGS WELL BR-1, AT IU-NW CAMPUS, GARY, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM (READINGS ABOVE LAND-SURFACE INDICATED BY "+")

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL				
APR 08	.58	JUL 07	.29				
WATER YEAR 2003	HIGHEST	.29	JUL 07, 2003	LOWEST	.58	APR 08, 2003	
PERIOD OF RECORD	HIGHEST	+1.29	JUN 26, 2000	LOWEST	3.06	JAN 18, 1995	
		RECORD AVAILABLE FROM JAN 18, 1995 TO JUL 07, 2003				32 ENTRIES	

SITE ID NUMBER: 413437087150601

STATION NAME: USGS WELL BR-2 @ FOUR WINDS PARK, LAKE STATION, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM (READINGS ABOVE LAND-SURFACE INDICATED BY "+")

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL				
APR 07	7.53	JUL 07	7.49				
WATER YEAR 2003	HIGHEST	7.49	JUL 07, 2003	LOWEST	7.53	APR 07, 2003	
PERIOD OF RECORD	HIGHEST	+1.36	JUN 26, 2000	LOWEST	7.53	APR 07, 2003	
		RECORD AVAILABLE FROM JAN 24, 1995 TO JUL 07, 2003				32 ENTRIES	

SITE ID NUMBER: 413419087301701

STATION NAME: USGS WELL BR-3 AT RIVERSIDE PARK, HAMMOND, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL				
APR 08	4.56	JUL 08	1.84				
WATER YEAR 2003	HIGHEST	1.84	JUL 08, 2003	LOWEST	4.56	APR 08, 2003	
PERIOD OF RECORD	HIGHEST	1.47	JUL 09, 2002	LOWEST	9.34	JUL 21, 1995	
		RECORD AVAILABLE FROM JUL 21, 1995 TO JUL 08, 2003				17 ENTRIES	

MISCELLANEOUS PROJECT DATA

GROUND-WATER AND SURFACE-WATER LEVELS IN NORTHERN LAKE COUNTY, IN--Continued

Table 3. Water-level records for observation wells in the Northern Lake County network, collected during water year 2003 and summary statistics.--Continued

 SITE ID NUMBER: 413716087232601
 STATION NAME: USGS WELL BR-4, IDNR BONGI PROP, CLARK ST, GARY, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL		
APR 08	53.60	JUL 07	50.06		
WATER YEAR 2003	HIGHEST 50.06	JUL 07, 2003	LOWEST 53.60	APR 08, 2003	
PERIOD OF RECORD	HIGHEST 8.01	MAR 02, 1999	JUN 06, 2001	LOWEST 53.60	APR 08, 2003
	RECORD AVAILABLE FROM JUL 21, 1995 TO JUL 07, 2003				27 ENTRIES

SITE ID NUMBER: 413732087255801
 STATION NAME: USEPA WELL BR-5 @ SR-912 & US-12, EAST CHICAGO, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL		
APR 09	30.11	JUL 09	30.20		
WATER YEAR 2003	HIGHEST 30.11	APR 09, 2003	LOWEST 30.20	JUL 09, 2003	
PERIOD OF RECORD	HIGHEST 14.26	MAR 03, 1999	LOWEST 30.20	JUL 09, 2003	
	RECORD AVAILABLE FROM JUL 21, 1995 TO JUL 09, 2003				27 ENTRIES

SITE ID NUMBER: 413830087260000
 STATION NAME: USGS WELL C1 @ CLINE&GUTHRIE @ GARY, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL		
APR 09	4.84	JUL 09	4.36		
WATER YEAR 2003	HIGHEST 4.36	JUL 09, 2003	LOWEST 4.84	APR 09, 2003	
PERIOD OF RECORD	HIGHEST 2.04	JUN 11, 1993	LOWEST 5.30	OCT 11, 1988	
	RECORD AVAILABLE FROM DEC 09, 1985 TO JUL 09, 2003				67 ENTRIES

SITE ID NUMBER: 414031087245000
 STATION NAME: USGS WELL C2 @INLAND STEEL NR. EAST CHICAGO, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL		
APR 09	DRY	JUL 09	DRY		
WATER YEAR 2003	HIGHEST --	LOWEST --			
PERIOD OF RECORD	HIGHEST 7.74	DEC 10, 1997	LOWEST 10.63	AUG 04, 1987	
	RECORD AVAILABLE FROM JUL 07, 1987 TO JUL 09, 2003				30 ENTRIES

MISCELLANEOUS PROJECT DATA

GROUND-WATER AND SURFACE-WATER LEVELS IN NORTHERN LAKE COUNTY, IN--Continued

Table 3. Water-level records for observation wells in the Northern Lake County network, collected during water year 2003 and summary statistics.--Continued

SITE ID NUMBER: 413828087251301

STATION NAME: USGS WELL C3 @ BUFFINGTON HARBOR, E. CHICAGO, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL			
APR 09	10.17	JUL 09	9.73			
WATER YEAR 2003	HIGHEST	9.73	JUL 09, 2003	LOWEST	10.17	APR 09, 2003
PERIOD OF RECORD	HIGHEST	7.05	JUN 11, 1993	LOWEST	10.17	APR 09, 2003
		RECORD AVAILABLE FROM JUN 24, 1987 TO JUL 09, 2003				50 ENTRIES

SITE ID NUMBER: 413828087251302

STATION NAME: USGS WELL C4 @ BUFFINGTON HARBOR, E. CHICAGO IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL			
APR 09	10.30	JUL 09	9.88			
WATER YEAR 2003	HIGHEST	9.88	JUL 09, 2003	LOWEST	10.30	APR 09, 2003
PERIOD OF RECORD	HIGHEST	6.69	SEP 08, 1998	LOWEST	10.30	APR 09, 2003
		RECORD AVAILABLE FROM JUN 24, 1987 TO JUL 09, 2003				50 ENTRIES

SITE ID NUMBER: 413655087275202

STATION NAME: USGS WELL C-5 DUPONT PROPERTY NORTH (RPD=96)

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM (READINGS ABOVE LAND-SURFACE INDICATED BY "+")

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL					
JUL 09	1.37					
PERIOD OF RECORD	HIGHEST	+0.91	JUN 10, 1993	LOWEST	3.49	SEP 05, 2002
		RECORD AVAILABLE FROM OCT 25, 1985 TO JUL 09, 2003				38 ENTRIES

SITE ID NUMBER: 413652087274901

STATION NAME: USGS WELL C-10 DUPONT PROPERTY MIDDLE (RPD=24)

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM (READINGS ABOVE LAND-SURFACE INDICATED BY "+")

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL			
APR 08	1.68	JUL 09	1.90			
WATER YEAR 2003	HIGHEST	1.68	APR 08, 2003	LOWEST	1.90	JUL 09, 2003
PERIOD OF RECORD	HIGHEST	+0.01	NOV 27, 1985	LOWEST	3.29	AUG 29, 2000
		RECORD AVAILABLE FROM OCT 25, 1985 TO JUL 09, 2003				63 ENTRIES

MISCELLANEOUS PROJECT DATA

GROUND-WATER AND SURFACE-WATER LEVELS IN NORTHERN LAKE COUNTY, IN--Continued

Table 3. Water-level records for observation wells in the Northern Lake County network, collected during water year 2003 and summary statistics.--Continued

SITE ID NUMBER: 413650087262000
 STATION NAME: USGS WELL C12 DEEP AT EAST CHICAGO, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL		
APR 08	1.88	JUL 09	2.02		
WATER YEAR 2003	HIGHEST 1.88	APR 08, 2003	LOWEST 2.02	JUL 09, 2003	
PERIOD OF RECORD	HIGHEST .27	NOV 28, 1990	LOWEST 3.34	AUG 29, 2000	SEP 05, 2001
	RECORD AVAILABLE FROM AUG 05, 1987 TO JUL 09, 2003				48 ENTRIES

SITE ID NUMBER: 413559087270301
 STATION NAME: USGS WELL C17 AT GIBSON WOODS

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM (READINGS ABOVE LAND-SURFACE INDICATED BY "+")
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL		
APR 08	2.34	JUL 08	+ .90		
WATER YEAR 2003	HIGHEST +.90	JUL 08, 2003	LOWEST 2.34	APR 08, 2003	
PERIOD OF RECORD	HIGHEST +2.79	FEB 27, 2001	LOWEST 4.90	OCT 12, 1988	
	RECORD AVAILABLE FROM JUL 18, 1986 TO JUL 08, 2003				35 ENTRIES

SITE ID NUMBER: 413617087262001
 STATION NAME: USGS WELL C19 AT HAMMOND, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM (READINGS ABOVE LAND-SURFACE INDICATED BY "+")
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL				
APR 08	1.59				
PERIOD OF RECORD	HIGHEST +.61	MAR 18, 1993	LOWEST 3.83	SEP 05, 2002	
	RECORD AVAILABLE FROM DEC 15, 1986 TO APR 08, 2003				47 ENTRIES

SITE ID NUMBER: 413557087283901
 STATION NAME: USGS WELL C20 @ GARY, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM (READINGS ABOVE LAND-SURFACE INDICATED BY "+")
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL				
APR 08	.29				
PERIOD OF RECORD	HIGHEST +1.35	NOV 29, 1990	LOWEST 5.75	MAR 04, 1986	
	RECORD AVAILABLE FROM AUG 28, 1985 TO APR 08, 2003				51 ENTRIES

MISCELLANEOUS PROJECT DATA

GROUND-WATER AND SURFACE-WATER LEVELS IN NORTHERN LAKE COUNTY, IN--Continued

Table 3. Water-level records for observation wells in the Northern Lake County network, collected during water year 2003 and summary statistics.--Continued

SITE ID NUMBER: 413527087254301
STATION NAME: USGS WELL C25 AT GARY, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL			
APR 08	3.49	JUL 08	.91			
WATER YEAR 2003	HIGHEST	.91	JUL 08, 2003	LOWEST	3.49	APR 08, 2003
PERIOD OF RECORD	HIGHEST	.46	FEB 27, 2001	LOWEST	4.17	AUG 31, 1999
		RECORD AVAILABLE FROM DEC 05, 1985 TO JUL 08, 2003				61 ENTRIES

SITE ID NUMBER: 414052087291201
STATION NAME: USGS WELL D1 @ WHITING, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL			
APR 09	DRY	JUL 09	DRY			
WATER YEAR 2003	HIGHEST	--	LOWEST	--		
PERIOD OF RECORD	HIGHEST	6.76	AUG 25, 1985	LOWEST	9.09	SEP 08, 1992
		RECORD AVAILABLE FROM AUG 25, 1985 TO JUL 09, 2003				66 ENTRIES

SITE ID NUMBER: 414044087290801
STATION NAME: USGS WELL D5 AT WHITING, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL		WATER LEVEL	
APR 09	DRY	JUL 08	7.01	JUL 09	DRY	
WATER YEAR 2003	HIGHEST	7.01	JUL 08, 2003	LOWEST	7.01	JUL 08, 2003
PERIOD OF RECORD	HIGHEST	4.10	SEP 07, 1993	LOWEST	7.27	JUN 05, 2001
		RECORD AVAILABLE FROM AUG 28, 1985 TO JUL 09, 2003				64 ENTRIES

SITE ID NUMBER: 414043087290802
STATION NAME: USGS WELL D10 @ WHITING, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM
WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL			
APR 09	7.69	JUL 08	6.97			
WATER YEAR 2003	HIGHEST	6.97	JUL 08, 2003	LOWEST	7.69	APR 09, 2003
PERIOD OF RECORD	HIGHEST	4.12	SEP 07, 1993	LOWEST	8.38	JAN 06, 2000
		RECORD AVAILABLE FROM AUG 28, 1985 TO JUL 08, 2003				72 ENTRIES

MISCELLANEOUS PROJECT DATA

GROUND-WATER AND SURFACE-WATER LEVELS IN NORTHERN LAKE COUNTY, IN--Continued

Table 3. Water-level records for observation wells in the Northern Lake County network, collected during water year 2003 and summary statistics.--Continued

 SITE ID NUMBER: 414043087290801
 STATION NAME: USGS WELL D11 DEEP @ WHITING GARAGE @ WHITING, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL			
APR 09	7.55	JUL 08	6.82			
WATER YEAR 2003	HIGHEST	6.82	JUL 08, 2003	LOWEST	7.55	APR 09, 2003
PERIOD OF RECORD	HIGHEST	4.01	SEP 07, 1993	LOWEST	7.72	JAN 06, 2000
		RECORD AVAILABLE FROM JUN 11, 1987 TO JUL 08, 2003				56 ENTRIES

SITE ID NUMBER: 413941087292600
 STATION NAME: USGS WELL D21 @ AMOCO PARK @ HAMMOND, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL			
APR 09	3.06	JUL 08	3.06			
WATER YEAR 2003	HIGHEST	3.06	APR 09, 2003	JUL 08, 2003	LOWEST	3.06
PERIOD OF RECORD	HIGHEST	1.48	NOV 28, 1990	LOWEST	4.74	DEC 12, 1997
		RECORD AVAILABLE FROM JUL 17, 1987 TO JUL 08, 2003				55 ENTRIES

SITE ID NUMBER: 413804087291102
 STATION NAME: USGS WELL D-25 DICKY ROAD AT IHC WEST (RPD=96)

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL			
APR 09	6.48	JUL 08	5.84			
WATER YEAR 2003	HIGHEST	5.84	JUL 08, 2003	LOWEST	6.48	APR 09, 2003
PERIOD OF RECORD	HIGHEST	1.94	JUN 09, 1993	LOWEST	6.48	APR 09, 2003
		RECORD AVAILABLE FROM DEC 05, 1985 TO JUL 08, 2003				63 ENTRIES

SITE ID NUMBER: 413758087290702
 STATION NAME: USGS WELL D-30 DICKY ROAD AT IHC MIDDLE (RPD=96)

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL			
APR 09	6.19	JUL 08	5.97			
WATER YEAR 2003	HIGHEST	5.97	JUL 08, 2003	LOWEST	6.19	APR 09, 2003
PERIOD OF RECORD	HIGHEST	2.43	DEC 05, 1985	LOWEST	6.19	APR 09, 2003
		RECORD AVAILABLE FROM DEC 05, 1985 TO JUL 08, 2003				63 ENTRIES

MISCELLANEOUS PROJECT DATA

GROUND-WATER AND SURFACE-WATER LEVELS IN NORTHERN LAKE COUNTY, IN--Continued

Table 3. Water-level records for observation wells in the Northern Lake County network, collected during water year 2003 and summary statistics.--Continued

SITE ID NUMBER: 413907087275901

STATION NAME: USGS WELL D31 DEEP @ DICKY RD. @ EAST CHICAGO, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL				
APR 09	6.13	JUL 08	5.93				
WATER YEAR 2003	HIGHEST	5.93	JUL 08, 2003	LOWEST	6.13	APR 09, 2003	
PERIOD OF RECORD	HIGHEST	2.71	JUN 09, 1993	LOWEST	6.13	APR 09, 2003	
		RECORD AVAILABLE FROM JUL 16, 1987 TO JUL 08, 2003				53 ENTRIES	

SITE ID NUMBER: 413835087245101

STATION NAME: USGS WELL D40 @ E. CHICAGO, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL				
APR 09	3.27	JUL 09	2.67				
WATER YEAR 2003	HIGHEST	2.67	JUL 09, 2003	LOWEST	3.27	APR 09, 2003	
PERIOD OF RECORD	HIGHEST	.15	JUN 09, 1993	LOWEST	4.55	JUN 29, 1999	
		RECORD AVAILABLE FROM OCT 24, 1985 TO JUL 09, 2003				67 ENTRIES	

SITE ID NUMBER: 413812087270201

STATION NAME: USGS WELL D45 AT E. CHICAGO, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL				
APR 09	4.57	JUL 09	4.53				
WATER YEAR 2003	HIGHEST	4.53	JUL 09, 2003	LOWEST	4.57	APR 09, 2003	
PERIOD OF RECORD	HIGHEST	2.93	NOV 28, 1990	LOWEST	6.87	JUN 29, 1999	
		RECORD AVAILABLE FROM OCT 24, 1985 TO JUL 09, 2003				65 ENTRIES	

SITE ID NUMBER: 413800087285401

STATION NAME: USGS WELL D50 AT EAST CHICAGO, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL				
APR 09	7.00	JUL 09	6.76				
WATER YEAR 2003	HIGHEST	6.76	JUL 09, 2003	LOWEST	7.00	APR 09, 2003	
PERIOD OF RECORD	HIGHEST	5.98	JUN 10, 1993	LOWEST	7.46	SEP 08, 1992	
		RECORD AVAILABLE FROM DEC 13, 1985 TO JUL 09, 2003				57 ENTRIES	

MISCELLANEOUS PROJECT DATA

GROUND-WATER AND SURFACE-WATER LEVELS IN NORTHERN LAKE COUNTY, IN--Continued

Table 3. Water-level records for observation wells in the Northern Lake County network, collected during water year 2003 and summary statistics.--Continued

SITE ID NUMBER: 413758087281001
 STATION NAME: USGS WELL D-60 PHILLIPS PIPELINE MIDDLE (RPD=96)

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

WATER
 LEVEL

JUL 09 DRY

PERIOD OF RECORD HIGHEST 3.29 NOV 27, 1985 LOWEST 6.37 OCT 12, 1988
 RECORD AVAILABLE FROM OCT 29, 1985 TO JUL 09, 2003 40 ENTRIES

SITE ID NUMBER: 413654087274000
 STATION NAME: USGS WELL D66 @DUPONT, KENNEDY & GR. CAL. @ E. CHICAGO, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

WATER LEVEL WATER LEVEL

APR 08 5.87 JUL 09 5.76

WATER YEAR 2003 HIGHEST 5.76 JUL 09, 2003 LOWEST 5.87 APR 08, 2003
 PERIOD OF RECORD HIGHEST 4.76 JUN 27, 1997 LOWEST 6.68 MAR 28, 2000
 RECORD AVAILABLE FROM JUL 15, 1987 TO JUL 09, 2003 50 ENTRIES

SITE ID NUMBER: 413647087282502
 STATION NAME: USGS WELL D67 SHALLOW NIPSCO SUBSTA AT HAMMOND, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

WATER LEVEL WATER LEVEL

APR 08 5.12 JUL 08 4.98

WATER YEAR 2003 HIGHEST 4.98 JUL 08, 2003 LOWEST 5.12 APR 08, 2003
 PERIOD OF RECORD HIGHEST .34 NOV 28, 1990 LOWEST 6.21 SEP 04, 2002
 RECORD AVAILABLE FROM JUL 16, 1987 TO JUL 08, 2003 52 ENTRIES

SITE ID NUMBER: 413647087282501
 STATION NAME: USGS WELL D68 DEEP NIPSCO SUBSTA, AT HAMMOND, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

WATER LEVEL WATER LEVEL

APR 08 5.30 JUL 08 5.17

WATER YEAR 2003 HIGHEST 5.17 JUL 08, 2003 LOWEST 5.30 APR 08, 2003
 PERIOD OF RECORD HIGHEST .58 NOV 28, 1990 LOWEST 6.38 SEP 04, 2002
 RECORD AVAILABLE FROM JUL 16, 1987 TO JUL 08, 2003 52 ENTRIES

MISCELLANEOUS PROJECT DATA

GROUND-WATER AND SURFACE-WATER LEVELS IN NORTHERN LAKE COUNTY, IN--Continued

Table 3. Water-level records for observation wells in the Northern Lake County network, collected during water year 2003 and summary statistics.--Continued

SITE ID NUMBER: 413515087291401

STATION NAME: USGS WELL D70 AT HAMMOND, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL			
APR 08	4.12	JUL 08	3.86			
WATER YEAR 2003	HIGHEST	3.86	JUL 08, 2003	LOWEST	4.12	APR 08, 2003
PERIOD OF RECORD	HIGHEST	1.10	NOV 28, 1990	LOWEST	5.10	SEP 04, 2002
		RECORD AVAILABLE FROM JAN 07, 1986 TO JUL 08, 2003				58 ENTRIES

SITE ID NUMBER: 413435087291901

STATION NAME: USGS WELL D-75 @ HAMMOND, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL			
APR 08	4.45	JUL 08	3.99			
WATER YEAR 2003	HIGHEST	3.99	JUL 08, 2003	LOWEST	4.45	APR 08, 2003
PERIOD OF RECORD	HIGHEST	3.40	JUN 10, 1993	LOWEST	5.02	JUN 24, 1992 SEP 04, 2002
		RECORD AVAILABLE FROM JAN 07, 1986 TO JUL 08, 2003				63 ENTRIES

SITE ID NUMBER: 413844087310401

STATION NAME: USGS WELL E1 @ HAMMOND, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL			
APR 08	3.17	JUL 08	2.92			
WATER YEAR 2003	HIGHEST	2.92	JUL 08, 2003	LOWEST	3.17	APR 08, 2003
PERIOD OF RECORD	HIGHEST	1.08	JUL 18, 1996	LOWEST	3.97	OCT 12, 1988
		RECORD AVAILABLE FROM DEC 13, 1985 TO JUL 08, 2003				67 ENTRIES

SITE ID NUMBER: 414105087293900

STATION NAME: USGS WELL E2 @ WHIHALA BEACH PARK @ WHITING, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL			
APR 08	5.68	JUL 08	6.10			
WATER YEAR 2003	HIGHEST	5.68	APR 08, 2003	LOWEST	6.10	JUL 08, 2003
PERIOD OF RECORD	HIGHEST	2.95	JUN 09, 1987	LOWEST	6.20	JAN 06, 2000
		RECORD AVAILABLE FROM JUN 09, 1987 TO JUL 08, 2003				51 ENTRIES

MISCELLANEOUS PROJECT DATA

GROUND-WATER AND SURFACE-WATER LEVELS IN NORTHERN LAKE COUNTY, IN--Continued

Table 3. Water-level records for observation wells in the Northern Lake County network, collected during water year 2003 and summary statistics.--Continued

SITE ID NUMBER: 414013087303300
 STATION NAME: USGS WELL E3 @ WOLF LAKE PARK @ HAMMOND, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL		
APR 08	1.38	JUL 08	2.50		
WATER YEAR 2003	HIGHEST	1.38	APR 08, 2003	LOWEST	2.50 JUL 08, 2003
PERIOD OF RECORD	HIGHEST	.59	JUL 18, 1996	LOWEST	3.40 JUL 05, 1988
		RECORD AVAILABLE FROM JUN 22, 1987 TO JUL 08, 2003 58 ENTRIES			

SITE ID NUMBER: 413810087305201
 STATION NAME: USGS WELL E5 AT HAMMOND, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL		
APR 08	5.63	JUL 08	5.38		
WATER YEAR 2003	HIGHEST	5.38	JUL 08, 2003	LOWEST	5.63 APR 08, 2003
PERIOD OF RECORD	HIGHEST	3.60	JUL 10, 1993	LOWEST	5.98 SEP 06, 2001
		RECORD AVAILABLE FROM AUG 28, 1985 TO JUL 08, 2003 64 ENTRIES			

SITE ID NUMBER: 413938087304301
 STATION NAME: 8SGS WELL E6 @ 129TH & SHEFFIELD @ HAMMOND, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL		
APR 08	.52	JUL 08	1.35		
WATER YEAR 2003	HIGHEST	.52	APR 08, 2003	LOWEST	1.35 JUL 08, 2003
PERIOD OF RECORD	HIGHEST	.25	JUN 05, 2001	LOWEST	3.15 AUG 31, 1999
		RECORD AVAILABLE FROM JUN 22, 1987 TO JUL 08, 2003 55 ENTRIES			

SITE ID NUMBER: 413938087304302
 STATION NAME: USGS WELL E7 @ 129TH & SHEFFIELD @ HAMMOND, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL		
APR 08	.40	JUL 08	1.37		
WATER YEAR 2003	HIGHEST	.40	APR 08, 2003	LOWEST	1.37 JUL 08, 2003
PERIOD OF RECORD	HIGHEST	.08	JUN 05, 2001	LOWEST	2.88 JUL 05, 1988
		RECORD AVAILABLE FROM JUN 22, 1987 TO JUL 08, 2003 57 ENTRIES			

MISCELLANEOUS PROJECT DATA

GROUND-WATER AND SURFACE-WATER LEVELS IN NORTHERN LAKE COUNTY, IN--Continued

Table 3. Water-level records for observation wells in the Northern Lake County network, collected during water year 2003 and summary statistics.--Continued

SITE ID NUMBER: 413722087304101

STATION NAME: USGS WELL E-10 SPOHN SCHOOL NORTH (RPD=24)

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL			
APR 08	5.16	JUL 08	5.12			
WATER YEAR 2003	HIGHEST	5.12	JUL 08, 2003	LOWEST	5.16	APR 08, 2003
PERIOD OF RECORD	HIGHEST	2.46	JUN 10, 1993	LOWEST	6.11	SEP 06, 2001
		RECORD AVAILABLE FROM OCT 17, 1985 TO JUL 08, 2003				70 ENTRIES

SITE ID NUMBER: 413720087304201

STATION NAME: USGS WELL E-15 SPOHN SCHOOL SOUTH (RPD=24)

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL			
APR 08	3.79	JUL 08	3.80			
WATER YEAR 2003	HIGHEST	3.79	APR 08, 2003	LOWEST	3.80	JUL 08, 2003
PERIOD OF RECORD	HIGHEST	1.48	JUN 10, 1993	LOWEST	6.50	OCT 18, 1991
		RECORD AVAILABLE FROM OCT 30, 1985 TO JUL 08, 2003				57 ENTRIES

SITE ID NUMBER: 413627087310500

STATION NAME: USGS WELL E20 @ EGGERS SCHOOL @ HAMMOND, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL			
APR 08	3.60	JUL 08	3.69			
WATER YEAR 2003	HIGHEST	3.60	APR 08, 2003	LOWEST	3.69	JUL 08, 2003
PERIOD OF RECORD	HIGHEST	2.17	JUN 10, 1993	LOWEST	4.86	AUG 20, 1986 OCT 11, 1988
		RECORD AVAILABLE FROM AUG 28, 1985 TO JUL 08, 2003				63 ENTRIES

SITE ID NUMBER: 413706087171901

STATION NAME: USX WELL HWD2-19D, GARY, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL			
APR 10	15.76	JUL 09	15.15			
WATER YEAR 2003	HIGHEST	15.15	JUL 09, 2003	LOWEST	15.76	APR 10, 2003
PERIOD OF RECORD	HIGHEST	13.26	JUL 10, 1996	LOWEST	15.77	JUL 10, 2002
		RECORD AVAILABLE FROM JUL 18, 1995 TO JUL 09, 2003				19 ENTRIES

MISCELLANEOUS PROJECT DATA

GROUND-WATER AND SURFACE-WATER LEVELS IN NORTHERN LAKE COUNTY, IN--Continued

Table 3. Water-level records for observation wells in the Northern Lake County network, collected during water year 2003 and summary statistics.--Continued

SITE ID NUMBER: 413706087171902
 STATION NAME: USX WELL HWD-2-19S, AT GARY, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL	
APR 10	DRY		JUL 10	DRY
WATER YEAR 2003	HIGHEST	--	LOWEST	--
PERIOD OF RECORD	HIGHEST	13.04	MAR 24, 1998	LOWEST 15.64 JUL 10, 2002
		RECORD AVAILABLE FROM JUL 18, 1995 TO JUL 10, 2003 20 ENTRIES		

SITE ID NUMBER: 413703087171501
 STATION NAME: USX WELL HWD-2-20D, AT GARY, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL	
APR 10	32.23		JUL 09	31.08
WATER YEAR 2003	HIGHEST	31.08	JUL 09, 2003	LOWEST 32.23 APR 10, 2003
PERIOD OF RECORD	HIGHEST	29.93	JUL 01, 1999	LOWEST 32.23 APR 10, 2003
		RECORD AVAILABLE FROM JUL 10, 1996 TO JUL 09, 2003 18 ENTRIES		

SITE ID NUMBER: 413703087171502
 STATION NAME: USX WELL HWD-2-20S AT GARY, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL	
APR 10	32.41		JUL 09	31.25
WATER YEAR 2003	HIGHEST	31.25	JUL 09, 2003	LOWEST 32.41 APR 10, 2003
PERIOD OF RECORD	HIGHEST	30.10	JUL 01, 1999	LOWEST 32.41 APR 10, 2003
		RECORD AVAILABLE FROM JUL 10, 1996 TO JUL 09, 2003 18 ENTRIES		

SITE ID NUMBER: 413752087223501
 STATION NAME: USX WELL HWT2-9 AT GARY, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM (READINGS ABOVE LAND-SURFACE INDICATED BY "+")
 WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL	
APR 10	29.58		JUL 09	29.18
WATER YEAR 2003	HIGHEST	29.18	JUL 09, 2003	LOWEST 29.58 APR 10, 2003
PERIOD OF RECORD	HIGHEST	25.68	JUL 24, 1986	LOWEST 29.94 MAR 29, 2000
		RECORD AVAILABLE FROM DEC 10, 1985 TO JUL 09, 2003 57 ENTRIES		

MISCELLANEOUS PROJECT DATA

GROUND-WATER AND SURFACE-WATER LEVELS IN NORTHERN LAKE COUNTY, IN--Continued

Table 3. Water-level records for observation wells in the Northern Lake County network, collected during water year 2003 and summary statistics.--Continued

 SITE ID NUMBER: 413722087225501

STATION NAME: USX WELL HWT14-05 AT GARY, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL			
APR 08	4.95	JUL 07	4.83			
WATER YEAR 2003	HIGHEST	4.83	JUL 07, 2003	LOWEST	4.95	APR 08, 2003
PERIOD OF RECORD	HIGHEST	3.01	FEB 27, 1990	LOWEST	5.46	SEP 03, 2002
		RECORD AVAILABLE FROM DEC 10, 1985 TO JUL 07, 2003				43 ENTRIES

 SITE ID NUMBER: 413744087223901

STATION NAME: USX WELL P-4 AT GARY, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL			
APR 10	21.94	JUL 09	20.80			
WATER YEAR 2003	HIGHEST	20.80	JUL 09, 2003	LOWEST	21.94	APR 10, 2003
PERIOD OF RECORD	HIGHEST	18.39	JUN 08, 1993	LOWEST	22.59	MAR 29, 2000
		RECORD AVAILABLE FROM DEC 10, 1985 TO JUL 09, 2003				55 ENTRIES

 SITE ID NUMBER: 414144087304101

STATION NAME: USEPA WELL MW-1 AT HAMMOND, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL			
APR 09	13.66	JUL 08	13.26			
WATER YEAR 2003	HIGHEST	13.26	JUL 08, 2003	LOWEST	13.66	APR 09, 2003
PERIOD OF RECORD	HIGHEST	2.46	JUL 09, 2002	LOWEST	13.91	JAN 06, 2000
		RECORD AVAILABLE FROM MAR 17, 1993 TO JUL 08, 2003				25 ENTRIES

 SITE ID NUMBER: 414033087245501

STATION NAME: ISPAT INLAND STEEL WELL MW-1G, EAST CHICAGO, IN.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM

WATER YEAR OCTOBER 2002 TO SEPTEMBER 2003

	WATER LEVEL		WATER LEVEL			
APR 09	18.82	JUL 10	19.56			
WATER YEAR 2003	HIGHEST	18.82	APR 09, 2003	LOWEST	19.56	JUL 10, 2003
PERIOD OF RECORD	HIGHEST	5.80	DEC 16, 1998	LOWEST	19.56	JUL 10, 2003
		RECORD AVAILABLE FROM OCT 07, 1992 TO JUL 10, 2003				20 ENTRIES

MISCELLANEOUS PROJECT DATA

GROUND-WATER AND SURFACE-WATER LEVELS IN NORTHERN LAKE COUNTY, IN--Continued

Table 4. Location and description of surface-water stage measurement sites in Northern Lake County network measured during water year 2003.

Site name	Surface-water body	Latitude/longitude	USGS site identifier	Measurement location
S-1	Wolf Lake	41°40' 16"/87°30' 37"	414016087303701	Fishing pier in Wolf Lake Park, Hammond, IN.
S-8	Sewer	41°38' 08"/87°27' 05"	413808087270501	Sewer grate, Washington Park, East Chicago, IN.
S-13	Grand Calumet River	41°36' 32"/87°22' 18"	413632087221900	At Bridge Street bridge, Gary, IN.
E-16S	Grand Calumet River	41°37' 19"/87°30' 44"	413719087304302	Spohn School, Hammond, IN.

MISCELLANEOUS PROJECT DATA

GROUND-WATER AND SURFACE-WATER LEVELS IN NORTHERN LAKE COUNTY, IN--Continued

Table 5. Reference-point altitude and miscellaneous measurements of surface-water stage in the Northern Lake County network, water year 2003 and period of record.

ft, feet; LSD, land surface datum; --, not recorded; >, greater than

Site name	USGS site identifier	Period of record	Date	Depth to water surface below measuring point (ft)	Altitude of measuring point (ft above sea level) ¹
S-1	414016087303701	03-1986 through 07-2003	APR 08, 2003	1.74	581.49
			JUL 08, 2003	1.84	581.49
S-8	413808087270501	01-1986 through 09-2002	APR 09, 2003	1.40	581.56
			JUL 09, 2003	1.45	581.56
S-13	413632087221900	10-1988 through 09-2002	APR 07, 2003	18.02	600.02
			JUL 07, 2003	17.45	600.02
E-16S	413719087304302	12-1985 through 09-2002	APR 08, 2003	6.96	581.86
			JUL 08, 2003	6.11	582.86

¹ Several sites have multiple measuring points to accommodate changing site conditions.

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